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A Comparative Study of the Inclusion of Students with Visual and Hearing Impairment in Rwandan Universities

Patrick Suubi

A thesis submitted to the School of Education, Faculty of Humanities at the University of the Witwatersrand, Johannesburg, in fulfilment of the conditions for the degree of Doctor of Philosophy.

April 2013

Declaration

I hereby declare that the material contained in this thesis is my own original work. It has not been submitted for degree purposes to any other university.

Patrick Suubi



April 2013.

Dedication

To those who believe in and work towards equal access to quality education for all.

Acknowledgements

This work is the result of support and input from many individuals and institutions.

This study is the result of a scholarship provided by the Government of the Republic of Rwanda through the Rwanda Education Board, for which I am very grateful.

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Abstract

Over the past two decades, increasing attention has focused on inclusive education and how it can contribute to improved teaching and learning experiences and thus to the attainment of better learning outcomes for all learners, including those with special educational needs. Initially, attention centred on inclusion in primary and secondary schools, but increasing interest is now being shown to students with special educational needs and their inclusion in tertiary institutions of learning as well. Research on the inclusion of students with special educational needs has largely focused on either one particular group of students, such as students with a particular disability, or on students with disabilities in general, such that these findings are often either only applicable to a specific group or are too general. Not many studies have attempted to compare the experiences of students with different educational needs without being too general.

This study explores issues related to the experiences of deaf/hard of hearing and visually impaired students in relation to their inclusion in three Rwandan universities. Inclusive education as an educational policy has a very young history in Rwanda and there is insufficient empirical evidence about its implementation. This study therefore adds to the little knowledge there is about this subject.

The study addressed the following questions: what are the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities in terms of educational access and social inclusion in the university environment? What are the similarities and differences between the experiences of deaf/hard of hearing and visually impaired students? What are the underlying causes of these experiences? In what ways do these experiences, either negative or positive, influence the academic performance of these students? How do these experiences influence these students' perspectives, expectations and hopes for the future? How do the attitudes of students and lecturers in universities with deaf/hard of hearing and visually impaired students concerning inclusion influence the interaction between these students and lecturers on the one hand and the deaf/hard of hearing and visually impaired students on the other?

The study was conducted using the mixed methods research approach. Triangulation was the research design employed. Data were collected using questionnaires and interviews. Questionnaires were completed by 220 students who were neither deaf/hard of hearing nor visually impaired and 55 lecturers without disabilities from three of the five Rwandan universities with deaf/hard of hearing and visually

impaired students. Interviews were conducted with six deaf/hard of hearing students, nine visually impaired students, and three lecturers from the same universities.

The study found that deaf/hard of hearing and visually impaired students had both positive and negative experiences in their inclusion in Rwandan universities. There were, however, major differences between the perceptions of deaf/hard of hearing and visually impaired students concerning their inclusion in these universities. There were also differences between the deaf students and hard of hearing student about the level of their inclusion. Finally, there were significant differences between the efforts of the three universities to meet the needs of deaf/hard of hearing and visually impaired students.

This work concludes by making some recommendations for improving the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities, recommendations which could be useful to other higher institutions of learning as well in their efforts to include students with special educational needs.

Chapter 1
Contextualising the Study

1.1 Introduction

Over the past two decades, increasing attention has focused on inclusive education and how it can contribute to improving teaching and learning experiences and thus to the attainment of better learning outcomes for all learners, including those with special educational needs. Furthermore, the role of inclusive education in promoting more inclusive and caring societies has been noted (Skjørten, 2001). Attention initially centred on inclusion of students with special educational needs in primary and secondary schools; however, with more and more of these students taking up opportunities to study after school, the focus has moved to inclusion in tertiary institutions of learning as well.

Research on the experiences of students with special educational needs has largely focused on either one particular group of students, such as students with a particular disability, or on students with disabilities in general. Thus, the findings of such studies are often either limited to a particular group or are too general. Not many studies have attempted to compare the experiences of students with different educational needs without being too general in their approach. This study explores issues related to the experiences of deaf/hard of hearing and visually impaired students in relation to their inclusion in three Rwandan universities. By exploring the experiences of two groups of people whose physical needs seem diametrically opposed to each other this study broadens our thinking and understanding of teaching and learning practices in general and inclusive education in particular: certain teaching practices, such as the use of diverse teaching/learning methods and materials in class, are accepted as standard practice by most educators, including those with deaf/hard of hearing and visually impaired learners in their class. However, when both deaf/hard of hearing and visually impaired students experience difficulties in the learning environment, which is what this study found, one begins to question whether a fundamental problem does not lie within the actual management and practice of teaching and learning, despite educators' knowledge of appropriate teaching/learning approaches.

Inclusive education as an educational policy has a very young history in Rwanda. As such there is not much empirical evidence about its implementation. This study therefore adds to the sparse knowledge there is on inclusive education in Rwanda. In this study, a mixed methods research approach was employed to collect data from different groups of participants. By so doing, it was hoped that the resulting findings could be of use not only to the participating universities but also to other universities and schools wishing to promote the inclusion of students with varying needs.

This initial chapter deals with introductory matters relevant for the understanding of the study. Some information about Rwanda and special needs education in the country is provided. It is in this chapter that the research questions and objectives that guided this study are presented. The final sections of the chapter deal with the rationale for the study and an explanation of how this thesis is organised and arranged.

1.2 Background

Rwanda is a small landlocked mountainous country in Central Africa with an area of 26338 square kilometres (Foreign and Commonwealth Office, 2011), which makes it one of the smallest countries in sub-Saharan Africa (Karangwa, Miles and Lewis, 2010). Rwanda shares borders with Burundi, the Democratic Republic of Congo, Tanzania and Uganda. It currently has an estimated population of 9.3 million people (Foreign and Commonwealth Office, 2011).

According to the census conducted in Rwanda in 2002[1], the country had 8,128,553 inhabitants (Ministère des Finances et de la Planification Économique, 2004). According to this census, nearly five per cent of the population have a disability. Table 1.1 summarises the statistics on the prevalence of disability as provided by the census. The table shows that deaf/hard of hearing, visually impaired and mentally challenged people formed a small minority of the population while the physically disabled comprised nearly a quarter (21%) of the whole population of

[1]The most recent census was conducted in August 2012, but the results had not been published at the time of compiling this work.

Rwandans with disabilities. In other words, according to this census, there were some 24,386 deaf/hard of hearing Rwandans and 16,257 Rwandans with visual impairment in 2002. Unfortunately, the census data on disability were not disaggregated according to age, so it is not possible to say how many school-age children or, for the purposes of this study, university-age Rwandans, were reported to have a disability during the census.

Table 1.1: Percentage of Rwandans with and without disabilities.

Disability status	**As % of population**
Without disability	95.3
Physical disabilities	2.1
Other	1.1
Undefined	0.9
Deaf	0.3
Visual impairment	0.2
Mentally challenged	0.2

Source: Ministère des Finances et de la Planification Économique(2004).

The 2002 census statistics on disability have been viewed by some writers as underestimating the number of Rwandans with disabilities. Thomas (2005:15-16) gives three reasons why this could be so: firstly, it is possible that some families did not declare that some of their family members had a disability because of the stigma which is still attached to disability. Secondly, the categories of disability used during the census were quite narrow, such that some disabilities may not have been included. The categories used were 'upper limb' disabilities, 'lower limb' disabilities (these two have been combined in table 1.1 under the category of physical disabilities), 'others'[1], 'deaf/dumb', 'mental deficiency', 'blind', and 'trauma'[2]. Thirdly, the World Health Organisation estimates that 10 per cent of any country's population will have one form of disability or another (Thomas, 2005).

[1]This category combined very low incidence disabilities such as albinism.

[2] This category included people who had suffered severe psychological distress, such as during the 1994 war and Tutsi Genocide.

Moreover, during the 1994 Tutsi Genocide that took place in Rwanda, many people became disabled (SHIA, 2006) not only as a direct result of the violence perpetrated during the genocide but also due to the breakdown in health services (Lewis, 2009). Thus, it is quite possible that Rwanda has a far larger number of persons with disabilities, including the deaf/hard of hearing and visually impaired, than current indications show.

Most of the population of Rwanda lives in rural areas. The 2002 census showed that only 16.9% of the country's population resided in urban areas. Kigali, where this study took place, is the capital city of Rwanda. 44% of all Rwandans living in urban areas lived in Kigali, according to the 2002 census (Ministère des Finances et de la Planification Économique, 2004).

Table 1.2: A selection of Rwandan universities, their status and number of students.

University	**Acronym**	**Status**	**N^{o}. of students**
National University of Rwanda	NUR	Public	10,657
Kigali Institute of Science and Technology	KIST	Public	3,004
Kigali Institute of Education	KIE	Public	6,177
School of Finance and Banking	SFB	Public	2,810
Kigali Health Institute	KHI	Public	1,399
Kigali Independent University	ULK	Private	11,338
Independent Institute of Lay Adventists of Kigali	INILAK	Private	4,735
Kigali Institute of Management	KIM	Private	635
Catholic University of Rwanda	CUR	Private	703
Protestant Institute of Arts and Social Sciences	PIASS	Private	281

Source: Ministry of Education (2010).

The Rwandan Ministry of Education (2010) states that Rwanda has 30 institutions of higher education. Of these, 17 are public institutions while the rest are privately owned. The total number of university students in 2010 was 62,734. Of these, 31,564 attended public institutions of higher learning while 31,170 attended private tertiary institutions of education. However, not all of the institutions mentioned are universities. The list also includes some colleges. Table 1.2 shows a list of the universities with the highest numbers of students, their status and total number of students.

The number of students with special educational needs, including those with disabilities, in these universities is not known as there are no systematic data on this issue. The Ministry of Education's (2010) statistics on higher institutions of education, on which table 1.2 is based, only provide figures for male and female students. During the course of this study, I learned that there were a total of 56 students with severe disabilities, such as visual and hearing impairment and severe physical disabilities, in five of the public universities in Rwanda in 2010. The majority of them (21) were visually impaired followed by deaf/hard of hearing students (seven). It was not possible to establish the type of disabilities the remaining 28 students had. Deaf/hard of hearing and visually impaired students are distributed as shown in table 1.3.

Table 1.3: Number of deaf/hard of hearing and visually impaired students in Rwandan universities in 2010

University	N°. of deaf/hard of hearing students	N°. of visually impaired students
KIE	1	14
NUR		7
KIST	2	
SFB	3	
KHI	1	
Total	7	21

Table 1.3 shows that deaf/hard of hearing and visually impaired students form a very small proportion of students currently attending public tertiary institutions of learning. While deaf/hard of hearing people represent at least 0.3% of the total Rwandan population, they form only 0.02% of the total population of students in public universities. Similarly, while people with visual impairment are at least 0.2% of the population of Rwanda, they form only 0.07% of the total student population in public institutions of higher learning.

1.3 Special Needs Education in Rwanda

The genesis of special needs education in Rwanda can be traced to organisations with religious affiliations, particularly Roman Catholic ones (Suubi, 2012). They started the first special primary schools in the country in the 1960s, and even now virtually all special primary schools

in Rwanda are owned and managed by these religious organisations(see sections 2.6 and 2.7 of this work for a broader discussion on special needs education and inclusive education).

In 2005, Rwanda had approximately 20 special schools/centres serving 1,500 individuals with disabilities (Ministry of Education, Science, Technology and Scientific Research, 2005). According to the Ministry, only six of the 20 special schools/centres engaged exclusively in educational activities, while the rest placed more emphasis on medical activities such as physiotherapy. The mixed nature of the activities that take place in these institutions is what leads to the use of the term 'schools/centres' when referring to them. In 2010, the number of special schools/centres had risen to 34 (Karangwa et al, 2010). The situation of special schools/centres in Rwanda is summarised by the Ministry of Education, Science, Technology and Scientific Research (2005:9) in the following words:

> Most of the special schools/centers do not meet the minimum educational standards expected e.g. oral method is used in most special schools for deaf learners, deaf and blind learners are taught in the same class in one of the schools, most teachers do not have the needed training in SNE[1] and there is lack of educational materials in most schools.

In addition, in 2005, schools for the blind lacked enough braille writing equipment as well as braille textbooks. Most of the braille literature available consisted of texts transcribed into braille by teachers while braille training for the students was of a low level (consisting mainly of training in uncontracted braille) (Ministry of Education, Science, Technology and Scientific Research, 2005).

For a long time, access to secondary and tertiary levels of education was extremely limited for students with disabilities, especially those with sensory impairments. For instance, students with visual impairment had no access whatsoever to secondary school education until 1996 (Suubi, 2012). Before this time, visually impaired students were not allowed to sit for the end of primary examinations that would have allowed them to join secondary schools. After completing primary school, many visually impaired students returned to their homes or became beggars. A few

[1]Special Needs Education.

managed to get training in massage techniques and were thus able to find employment. It was only in 1996 that the first students with visual impairment were allowed to sit for the primary leaving examinations and thus to join secondary school (Suubi, 2012). Eight visually impaired students became the first to enter secondary school in Rwanda in 1997 (Karangwa et al, 2010). It was not until 2008 that the first visually impaired students gained admission to Rwandan universities. In that year, the government of Rwanda started facilitating disabled students to join tertiary institutions of learning (Lewis, 2009). As a result, six deaf/hard of hearing and 15 visually impaired students joined various public universities in the country (Lewis, 2009).

Access to secondary and tertiary educational institutions is still very limited for deaf/hard of hearing students as they are not allowed to register for the end of primary examinations while in their special education primary schools where they initially study. In order to be registered to sit for the primary leaving examinations, deaf/hard of hearing learners need to leave their special schools and join a mainstream school. In this way, a small number of deaf/hard of hearing students was able to make it to high school and then on to university. Those who had the opportunity were educated outside the country while a very small number joined local universities. However, there are no data related to the number of deaf/hard of hearing students who have been able to attend university in Rwanda so far. Neither is it known when the first deaf/hard of hearing students joined university.

It is not clear why deaf/hard of hearing and visually impaired students encountered such hurdles in their academic progress. There is no official explanation as to why deaf/hard of hearing students cannot sit for the primary school leaving examinations in special schools for the deaf, neither was there any explanation for denying visually impaired students the opportunity to sit for the same examinations until 1996. The answer can perhaps be found in Miles and Singal's (2010) argument that the attitude among some people that some groups of children are ineducable led to the emergence of separate thinking about disability. The corollary of this attitude was that disabled children were excluded from mainstream schools and left out of official efforts to promote the welfare of other disadvantaged groups. Rwanda's Special Needs Education Policy admits that "the capacity, ability and potential of learners who have special educational needs are generally overlooked and therefore little provision is provided for their

inclusion in the schools" (Ministry of Education, 2007b:10). One can therefore surmise that the difficulties encountered by deaf/hard of hearing and visually impaired students in accessing secondary and tertiary education may have had something to do with societal attitudes towards visual and hearing impairment: it is possible that it was thought that these two groups of people could not make it to high school and university.

Despite the foregoing, the government of Rwanda recognises the need to address issues related to special educational needs (Ministry of Education, Science, Technology and Scientific Research, 2005). Its commitment to the education of people with special educational needs, including the disabled, has been outlined in a number of important documents, including the Constitution of the Republic which was promulgated in 2003 (Republic of Rwanda, 2003). Article 40 of the Constitution states that "every person has the right to education", and further declares that "the State has the duty to take special measures to facilitate the education of disabled people." In 2007, the government of Rwanda passed Law Number 01/2007 of 20/01/2007 Relating to Protection of Disabled Persons in General (Republic of Rwanda, 2007). Chapter 2 of this law deals with the rights of disabled people in matters related to education. Among other things, this law affirms the right of a disabled person to an appropriate education that takes his/her disability into account and commits the government to taking the necessary steps to assist disabled people in their pursuit of education. The law also states that learners who cannot study in mainstream schools because of the nature of their disability shall be facilitated to study in special schools.

Prior to 2007 there was no official government policy to guide special needs education provision in Rwanda. In that year, the Ministry of Education drew up the Special Needs Education Policy with the aim of "minimizing the barriers to access and to optimal learning" (Ministry of Education, 2007b:1). The objectives of the Special Needs Education Policy, according to the Ministry of Education (2007b:1) are to:

- Ensure the conditions that permit learners with special educational needs to enrol in, remain in and complete school;
- Promote quality education for learners with special educational needs;

- Mobilise a coalition in support of education for learners with special educational needs;
- Establish mechanisms for planning and coordination of efforts to improve educational outcomes for learners with special educational needs;
- Establish a system of regular monitoring, evaluation and reporting on the implementation of the National Policy for learners with special educational needs;
- Improve quality of delivery by ensuring appropriate infrastructure as well as curriculum content and methodology and provision of appropriate learning materials.

The above discussion shows that the political will to promote the welfare of people with disabilities, including their education, exists in Rwanda. The effectiveness of such enunciations is yet to be demonstrated, however, as "so far, the inclusion of learners with disabilities is a reality on paper, but not in practice" (Karangwa et al, 2010:267).

As far as higher institutions of learning are concerned, it is important to mention here the National Equality and Diversity Policy for Higher Education (Ministry of Education, 2007a). This document avers that "Rwanda is committed to the principles of promoting equality of opportunity, recognising and valuing diversity, and being inclusive of all sectors of society in all aspects of Institute life" (p1). The purpose of the policy is to eliminate all forms of discrimination in higher institutions of education based on "gender, marital status, disability, ethnicity, HIV/AIDS status, religion or belief, age, socio-economic background, family circumstances, or any other irrelevant distinction" (p2). The policy declares its main focus as being

> …the promotion of equality, and it requires that all staff, students and visitors to higher education institutions behave in a non-discriminatory manager (sic) and support, implement and develop institutional practices and procedures that promote and reinforce equality of opportunities and fair treatment for all (p2).

As in the case of the other policies mentioned earlier, it is unclear how much effort has gone into ensuring the implementation and success of this policy. None of the participants in this study mentioned it, which raises questions about its effectiveness.

In this section, the state of special needs education in Rwanda has been briefly presented. The discussion presented here was by no means a comprehensive one, and neither was it meant to be

so. Its main purpose was to give the reader a general picture of the situation of special needs education in Rwanda, with a particular focus on the education of deaf/hard of hearing and visually impaired people. Various documents related to this topic have been introduced and discussed. In addition, policies which are meant to promote the implementation of special needs education and inclusive education in the country have been outlined. In spite of the lack of adequate information pertaining to the status of special needs education in Rwanda, an effort has been made to acquaint the reader as far as possible with the current state of affairs regarding this aspect. In the next section, the research questions which guided this study will be presented.

1.4 Research Questions

Currently, there are some deaf/hard of hearing and visually impaired students in several Rwandan universities. This study aimed to explore the experiences of these students in an environment where they study with non-disabled students, taught largely by non-disabled lecturers and served mainly by non-disabled administrators. The study focused on three public universities: University 1, University 2 and University 3 (see Chapter 3 of this work for details as to how these institutions were selected). To date, no study has been carried out to understand these experiences. Therefore, this study sought to shed light on and compare these experiences in order to get a broader picture of the nature of inclusive educational practices in these universities. These experiences were explored from two perspectives, that of visual impairment and that of hearing impairment. In particular, the study addressed the following research questions:

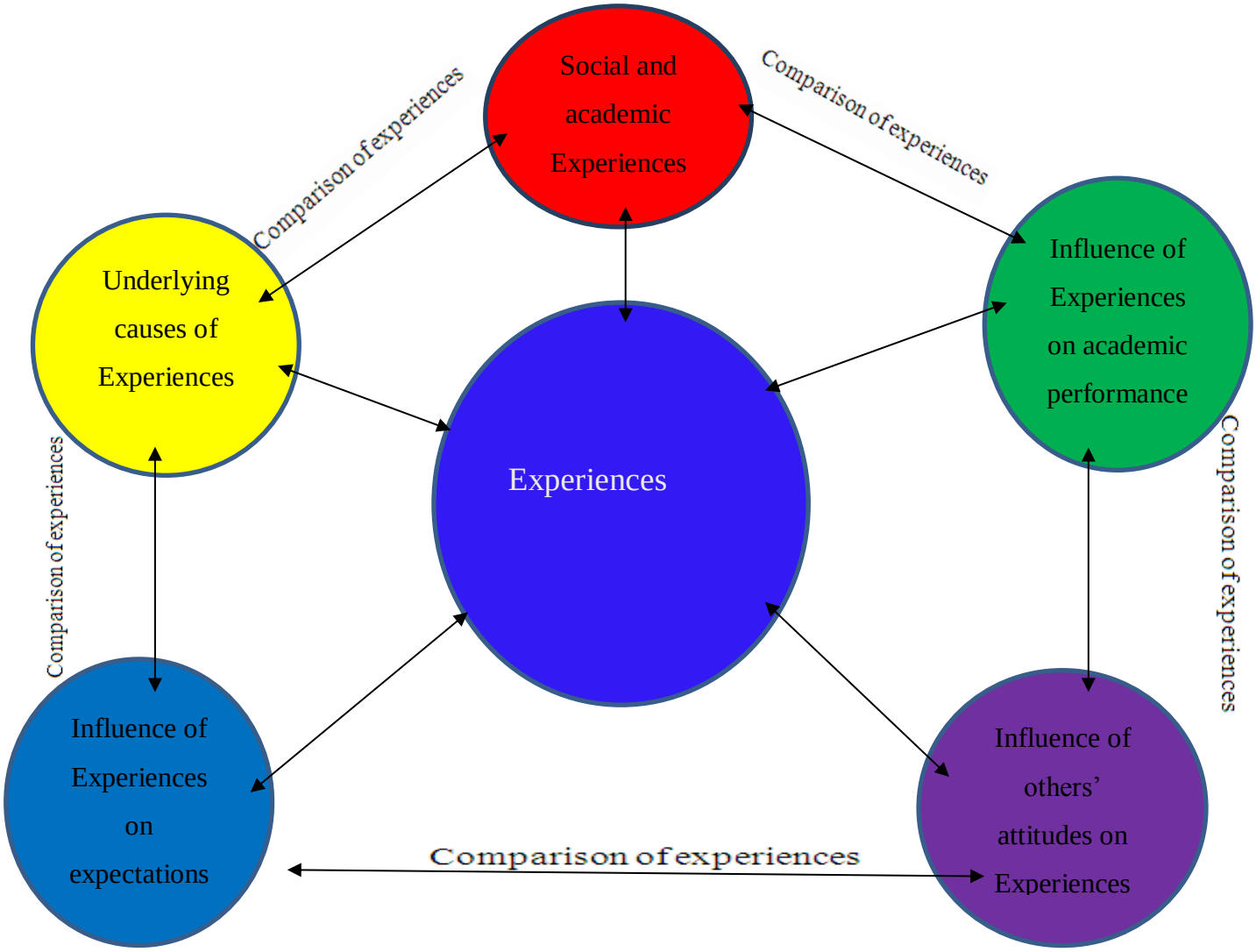
1. What are the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities in terms of educational access and social inclusion in the university environment?
2. What are the similarities and differences between the experiences of deaf/hard of hearing students and students with visual impairment?
3. What are the underlying causes of these experiences?
4. In what ways do these experiences, either negative or positive, influence the academic performance of these students?

5. How do these experiences influence these students' perspectives, expectations and hopes for the future?
6. How do the attitudes of students and lecturers in universities with deaf/hard of hearing and visually impaired students concerning inclusion influence the interaction between these students and lecturers on the one hand and the deaf/hard of hearing and visually impaired students on the other?

The relationship between these research questions is shown in Figure 1.1.

The focus of this study is on understanding the experiences of students who are deaf/hard of hearing or visually impaired in Rwandan universities. The study's research questions were formulated in order to get as broad a picture as possible of these experiences. Question one was meant to help shed light on the experiences of these students in terms of their social and academic inclusion in the universities where they study. This links directly to the main question of this research. However, experiences are mediated by a variety of factors, hence questions three and six. Question three sought to explore the factors that influence or lead to the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. Question six is closely related to the first question and is based on the fact that attitudes of non-disabled people towards disabled people and their inclusion in society influence the kind of interaction that takes place between these two groups (Milsom, 2006). This interaction will inevitably influence the social and academic inclusion of deaf/hard of hearing and visually impaired students in university and have a bearing on the whole spectrum of experiences of these students.

Figure 1.1: Relationship between the six research questions and the main research question.



Questions four and five explored the impact of the experiences of deaf/hard of hearing and visually impaired students on two major areas of life for a university student: academic performance and expectations and hopes for the future. After getting a picture of the experiences of deaf/hard of hearing and visually impaired students, I wanted to understand the ways in which these experiences affected their academic work and future plans.

Figure 1.1 shows that question two is not directly linked to the main question. But because this study is a comparison of the experiences of deaf/hard of hearing and visually impaired students,

this study would be incomplete without comparing the experiences of these two groups of students.

As the above discussion shows, the research questions for this study are linked to the main research question. They are also interrelated among themselves such that the more each question is understood the easier it is to find answers to the other questions. Finding comprehensive answers to these questions requires employing a variety of research methods. How this was achieved is the focus of chapter 3 of this work.

1.5 Research Objectives

Based on the research questions outlined above, a number of objectives were identified for this study. These objectives can be summarised as follows:

1. To explore and gain an understanding of the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. The emphasis was placed on social and academic inclusion of these students within university environments where most of the students and staff were non-disabled. This was achieved through the use of interviews which were conducted with deaf/hard of hearing and visually impaired students themselves and with some of their lecturers. Questionnaires provided to lecturers and students without disabilities in the universities where this research took place helped to shed more light on these experiences.
2. To try and uncover the underlying causes of the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. Interviews with deaf/hard of hearing and visually impaired students and their lecturers provided most of the information that helped in understanding some of the factors that shaped the experiences of deaf/hard of hearing and visually impaired students in universities in Rwanda.
3. Another objective of this study was to gain a better understanding of the ways in which the experiences of deaf/hard of hearing and visually impaired students affected their academic work. This was an important objective since the major preoccupation

of any university student is academic success. Getting an understanding of the relationship between the experiences of visually impaired and deaf/hard of hearing students and their academic performance would help in the process of improving the academic work of these students by suggesting ways in which their experiences could be improved. This objective was largely achieved through interviews with visually impaired and deaf/hard of hearing students and some of their lecturers.

4. Fourthly, this study had the objective of finding out whether the experiences of visually impaired and deaf/hard of hearing students in Rwandan universities had any effect on their future prospects, plans and aspirations. This objective was based on the assumption that people's expectations, aspirations and plans for the future are tempered to a greater or lesser degree by their past and present experiences. Interviews with deaf/hard of hearing and visually impaired students were the main source of information that helped in achieving this objective.
5. An important objective of this study was to understand whether the attitudes of lecturers and students towards inclusive education in the universities where this study took place in any way influenced the interaction that took place between these students and lecturers on the one hand and deaf/hard of hearing and visually impaired students on the other. This understanding would in turn lead to a better comprehension of the experiences of deaf/hard of hearing and visually impaired students since interaction is a major component of people's daily experiences. This objective was achieved through the use of questionnaires for both students and lecturers, and interviews with some lecturers as well as with visually impaired and deaf/hard of hearing students.
6. Finally, this study had an objective of comparing the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. The realisation of this objective would lead to a better understanding of inclusion as practised by Rwandan universities with students with disabilities since deaf/hard of hearing students and visually impaired students have different needs.

In this section, I have summarised the objectives that this study set forth to achieve. I have also explained why each objective was important for the study. I have also very briefly mentioned the

methods used to achieve these objectives. A detailed explanation of these methods is contained in chapter three of this work.

1.6 Rationale for the Study

In 2008, when the government of Rwanda became actively involved in efforts to admit disabled people in higher institutions of learning, a number of them joined university (Lewis, 2009). Those who enrolled in several public universities included deaf/hard of hearing, visually impaired and physically impaired students. Even before 2008, however, a few deaf/hard of hearing students had managed to graduate from Rwandan universities. For many of them, this was a herculean achievement, given the hurdles they encounter right from primary school. For instance, to be registered to sit for the end of primary level examinations, deaf/hard of hearing students have to transfer from the special schools where they first study and join ordinary schools. They have to attend ordinary secondary schools and study with hearing peers in environments that are not conducive to learning for deaf students. This practice continues once they enter university. For example, deaf students do not have sign language interpreters to facilitate communication between them and their lecturers and fellow students. The consequence of these challenges is that many deaf/hard of hearing students have to transfer from one university to another and from one faculty to another before they can find a university or faculty that they feel will enable them to attain academic success.

The situation has not been very different for students with visual impairment. They too were unable to join secondary school for a long time, and when they did eventually gain admission to secondary school it took another twelve years for the first visually impaired students to enter the gates of Rwandan universities as students.

Given these challenges in their pursuit of education, it is conceivable that these deaf/hard of hearing and visually impaired students have experiences and expectations that are different from those of students without disabilities in the institutions where they study. It is also conceivable, for example, that they may be concerned about their future after completing university; they may be worried about their abilities to perform at the same level as their non-disabled peers; or they

may be determined to succeed and prove that a hearing or visual impairment is not necessarily a barrier to academic success.

Knowing about and understanding these experiences, expectations, hopes and fears would be a necessary step towards helping universities become more accommodating to students with special educational needs. This would in turn make these universities more accessible and inclusive, leading to improved educational outcomes for students with disabilities. It would, moreover, provide policy makers and implementers with some ideas on how to make education more meaningful for students with disabilities in higher institutions of learning by addressing, for instance, such issues as the curriculum, learning and physical environments, lecturers' and students' attitudes towards disabled students, and so on.

Furthermore, the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities have not been well documented. In addition, no comparative study has been done to examine and compare the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. The lack of such studies gives relevance to the current study. The findings of this research will help in showing the way for the future provision of education for visually impaired and deaf/hard of hearing students in tertiary institutions of learning in Rwanda. By juxtaposing the experiences of deaf/hard of hearing and visually impaired students, a broader picture of inclusive practices in Rwandan universities is gained than would be the case by studying either group on its own. This gives this study a broader perspective on inclusive education because it examines inclusion from the points of view of both hearing impairment and visual impairment. Additionally, this research will provide informative reading for Rwandans, as it addresses many relevant issues concerning inclusive education in the country: for many Rwandans, inclusive education is still something of a myth.

The study I conducted for my Master's thesis provided further inspiration for carrying out the current research. That study involved conducting research to explore the experiences of the only secondary school in Rwanda to include visually impaired students (see Suubi, 2012). The study was concerned primarily with investigating the inclusion of students with low vision in that school. However, I also got to meet many of the blind students in the school. A number of these

students are now studying in two Rwandan universities, including the one where the current study was conducted. The current study provided me with an opportunity to meet them again and share their experiences, this time as undergraduate students.

In addition, in my work, first as a civil servant heading the Department of Special Needs Education in the Rwandan Ministry of Education and then as a lecturer at Kigali Institute of Education as well as a person who was involved in the work of disabled peoples' organisations in Rwanda, I got the opportunity to meet and engage with many deaf people on a broad range of issues, including their educational experiences. I therefore decided to make this research a study on the experiences of both deaf/hard of hearing and visually impaired students in Rwandan universities not only to give the study a broader perspective but also to make the whole process a better learning experience for myself because I had become acutely aware of how little I knew about deafness and the issues related to it. The knowledge thus gained would not only be useful for me as a lecturer but would also improve my abilities as someone who works a lot with disabled people's organisations in Rwanda.

In section 1.3, the hurdles faced by people with visual impairment in accessing secondary and tertiary education were discussed. The reader may therefore justifiably ask himself/herself how I, who am visually impaired myself, got to the stage where I am writing this document. This brings me to the last aspect of the considerations which led to the decision to undertake this study. Although a Rwandan by nationality, I was born in Uganda. I first tried unsuccessfully to attend a regular primary school near our home. Having failed in that attempt, I joined a school for the blind in Kenya. I was thus able to get through primary and secondary school. My undergraduate studies were a relatively smooth experience since Kenya had a good infrastructure for supporting students with visual impairment in its universities. When I joined the University of Oslo in Norway for my Master's studies, things were even better because of the advanced system that country has to support students with various special educational needs.

These experiences instigated my interest in the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. Support structures for these students are still in their nascent stages and I believe that a better understanding of the experiences of the students they

are expected to serve from a perspective of a person with different experiences would be one way of helping to improve these structures.

In this section, I have discussed the reasons that led to the decision to conduct the study reported in this work. Some of these reasons are academic, such as the lack of knowledge regarding the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities and the desire to understand the nature of inclusive practices in Rwandan institutions of higher learning. The study was however also motivated by personal reasons, particularly the desire to increase my own knowledge by adopting a cross-disability approach in the study.

A brief outline of the way in which this work is organised provides the focus for the following section.

1.7 Organisation of the Work

This work is organised into six chapters arranged thematically. Each chapter deals with a particular aspect of the report.

The current chapter provides a broad introduction to the study. It contains relevant background information about the study, including a brief introduction to the country of Rwanda, information about the state of special needs education in the country, as well as some details about higher education in Rwanda. In addition, this chapter also contains an outline of the research questions as well as the research objectives of this study.

Chapter two is concerned mainly with a review of the relevant literature related to this study. In this chapter, literature related to visual impairment and hearing impairment is reviewed, including relevant research in these areas. The chapter also examines issues related to adult learners in higher institutions of education. The conceptual framework guiding the study is also presented in chapter Two.

Chapter three deals principally with methodological issues related to the conduct of the study. The research paradigm employed, research methods and instruments used to collect data as well

as the manner in which those data were analysed are also discussed in this chapter. This is also the chapter in which such issues as the validity and reliability of the study and ethical considerations for the study are dealt with.

This study employed a mixed methods research approach, and both qualitative and quantitative research methods were used to collect data. The presentation and analysis of quantitative data provide the focus of chapter four while the presentation and analysis of qualitative data is dealt with in chapter five.

In chapter six, the data presented in chapters four and five is aggregated and discussed. Conclusions based on the findings of this study are also presented in this chapter. Relevant recommendations based on the findings of the study are also presented in chapter six.

The final part of this report consists of a number of appendices. These appendices contain some documents related to this study. These include questionnaires and interview protocols used in the study, consent forms for the participants in the study, authorisation letters from the institutions where this study took place, as well as an ethical clearance letter from the University of the Witwatersrand.

1.8 Summary

This introductory chapter was intended to set the scene for the study. Its objective was to provide the reader with some useful information about Rwanda, where this study took place, as well as information that is helpful in understanding the study. The information included in this chapter was selected because of its relevance to the study and is by no means a comprehensive discussion.

The chapter presented some background information about Rwanda, including its size and population. Some statistics on disability were also presented. The current state of special needs education in Rwanda was also discussed. The research questions and objectives that guided this study also formed an important aspect of this chapter. It was noted that the research focused mainly on the experiences of deaf/hard of hearing and visually impaired students in Rwandan

universities. The reasons which motivated this study were presented in section 1.6, while section 1.7 presented the reader with a brief outline of the chapters included in this work.

The next chapter is a review of the literature related to the key issues of this study, including hearing impairment, visual impairment, and inclusive education.

Chapter 2

Literature Review and Conceptual Framework

2.1 Introduction

This study is concerned with exploring the experiences and expectations of deaf/hard of hearing and visually impaired students in Rwandan institutions of higher education. I propose that these expectations will be dependent on and conditioned by these students' experiences prior to and after joining university. By virtue of their having deaf/hard of hearing and visually impaired students studying with their peers without special educational needs, the universities involved in the current study are presumed to be inclusive. Thus, this literature review and conceptual framework will focus primarily on areas of interest to our understanding of the issues explored in this study and which have an impact on the inclusion of deaf/hard of hearing and visually impaired students in institutions of higher learning. Specifically, this chapter will include discussions around the following areas:

- Visual impairment
- Hearing impairment
- Deaf/hard of hearing and visually impaired students in higher education
- Adult students in higher education
- Attitudes and disability
- Inclusive education
- Conceptual framework

2.2 Visual Impairment

2.2.1 Understanding Visual Impairment, Blindness, and Low vision

Since this study is concerned with persons who are visually impaired and those who are deaf/hard of hearing, it is imperative to examine here issues related to both visual impairment and hearing impairment. In this section, I will discuss the issues most pertinent to visual impairment, while issues concerning hearing impairment will be discussed in the next section.

Before commencing this discussion, it is necessary to point out here that visual function is an important aspect in understanding visual impairment (see Colenbrander, 2005 and Corn, 1986). Most definitions of the various aspects of visual impairment are based on this concept. Visual functions refer to the manner in which the eye works (Colenbrander, 2005:482). Aspects of visual function will include, for instance, structural conditions of the eye, reflexive reactions, eye movements, visual acuity, and visual field (Corn, 1986:100).

Visual impairment is a low incidence disability (Davis, 2003; Miller, 1996) and therefore affects a relatively small proportion of the world's population. Individuals referred to as 'visually impaired' form a diverse group of people ranging from those who are completely blind to those who have some vision (Landsberg, 2011; World Health Organisation, 2011a; Davis, 2003; Rogow, 1999; Hollins, 1989). Thus, for the purposes of this work, the term 'visual impairment' will be used generically to refer to all forms of vision loss ranging from blindness to low vision. In this sense, therefore, a person is said to be visually impaired if s/he has a severe enough visual restriction to require some sort of environmental modification in order to function effectively (Scholl, 1986). Understood thus, this term includes both blind people and persons with low vision.

'Blind' is a term used in most literature to refer to visually impaired people whose vision is reported as light perception or less (Warren, 1994). Thus, a person can be considered blind if s/he cannot perceive any light at all, or if s/he can perceive light but is unable to use his/her vision in any meaningful way (Suubi, 2012): most blind people are able to perceive some light (Davis, 2003; Hodgson, Clunies-Ross and Hegarty, 1984). Indeed, Hollins (1989) and Scholl (1986) estimate that as many as ninety per cent of all those persons labelled as 'blind' have some light perception whereas only ten per cent are totally without vision.

On the other hand, a person with low vision is one who

> …has difficulty accomplishing visual tasks, even with prescribed corrective lenses, but who can enhance his or her ability to accomplish these tasks with the use of compensatory visual strategies, low vision and other devices, and environmental modifications (Corn and Koenig, 1996:4).

To put it differently, a person with low vision experiences significantly greater difficulties than a person without visual impairment when performing tasks that require the use of sight. These difficulties may be slightly alleviated by the use of such devices as eyeglasses or contact lenses. Given the proper modifications to the environment, good use of his/her remaining vision, and other devices such as the spectacles mentioned above, a person with low vision can perform a variety of tasks using his/her vision (Suubi, 2012). This is especially true when one considers the fact that "20/20 (visual) acuity is not needed for visual function for most tasks or for orientation and mobility within most environments" (Heward and Orlansky, 1992:349).

Visual acuity of 20/200 means that a person, with the best possible correction with eye glasses or contact lenses, needs to be twenty feet away from an object in order to see it clearly while a person with standard vision (20/20 visual acuity) would see the same object clearly from two hundred feet (Davis, 2003; Corn and Koenig, 1996: Miller, 1996; Heward and Orlansky, 1992). These figures are sometimes expressed in metric rather than imperial terms, so that instead of using feet, metres are used: 20 feet are replaced by 6 metres. Thus, instead of 20/20, 6/6 visual acuity is used to refer to standard vision (Miller, 1996).

With the above discussion in mind, it is possible to classify people in the following way based on their vision (Davis, 2003:3):

- 6/6-6/18: normal vision
- 6/18-3/60: low vision
- <3/60: blind.

Visually impaired people can be further categorised into two distinct groups, depending on the age of onset of the impairment (Hollins, 1989). Those with congenital visual impairment are either born with the condition or acquire it early in life. Thus, they have no knowledge or recollection of normal vision. People with congenital blindness are sometimes said to have early-onset blindness (see, for instance, Stevens and Weaver, 2005). Those with adventitious or acquired visual impairment lose their sight at a later age and are therefore able to remember what

it is like to have normal vision. This makes the experiences of those people with acquired visual impairment different in some ways from those of people with congenital visual impairment.

Terms that one sometimes encounters in the literature on visual impairment are ‘legal blindness’ and ‘legal partial sight’. Legal blindness is defined as

> …central visual acuity of 20/200 or less in the better eye with corrective glasses or central visual acuity of more than 20/200 if there is a visual field defect in which the peripheral field is contracted to such an extent that the widest diameter of the visual field subtends an angular distance no greater than 20 degrees in the better eye (Corn and Koenig, 1996:6.).

Legal partial sight, although less commonly used than legal blindness, refers to people who have a visual acuity greater than 20/200 but less than 20/70 in the better eye with correction (Rogow, 1999).

According to the definition of legal blindness, a person qualifies to be legally blind if, first, his/her visual acuity is very limited, and/or, second, if his/her visual field is very narrow (Corn and Koenig, 1996; Hollins, 1989). The concept of legal blindness is used by some governments, such as that of the United States of America, and by some organisations such as the World Health Organisation, to specify the degree of visual impairment that qualifies an individual for state support.

Clearly, the definitions of legal blindness and legal partial sight differ from the other definitions given above. Whereas the other definitions take into account one’s use of vision, the definitions of legal blindness and legal partial sight are based on medical measurements and do not consider how an individual uses his/her vision. For example, two legally blind or partially sighted individuals with the same visual acuity or visual field can put their vision to very different uses, depending on how they have adapted to their visual impairment (Corn, 1986).

It is difficult to make an accurate estimate of the prevalence of visual impairment worldwide (Hollins, 1989). One reason for this is the fact that different countries use different definitions of terms such as ‘blindness’ and ‘low vision’, so that there is no one common understanding of the concept of visual impairment worldwide. Moreover, some countries have better methods of

collecting and organising data on visual impairment than others, such that it is difficult to compare data from countries (Hollins, 1989). The World Health Organisation (2011a) estimates that worldwide, approximately 284 million people are visually impaired. Of these, 39 million are blind and 245 million have low vision. Moreover, according to the World Health Organisation (2011a), some 90% of the world's visually impaired population live in developing countries. Another indication of the prevalence of visual impairment worldwide is provided by Keeffe (2005), whose statistics are summarised in the table below:

Table 2.1: The estimated prevalence of low vision worldwide

Age Range	**Prevalence (as % of population)**
Children	0.06-0.3
<65	<1
65-69	1.47
70-74	2.6
75-79	5.03
>80	23.73

Source: Keeffe (2005:168).

The table above shows the prevalence of low vision in the world. As the table shows, cases of low vision increase with age until they are almost one in every four persons aged over 80. The author was not specific as to the age range of 'children'. For the purposes of this table, visual impairment in children was defined as visual acuity of less than 6/18 while visual impairment for adults was defined as visual acuity of less than 6/12.

The vast majority of children with visual impairment attending school (up to 80%) have low vision (Miller, 1996; Heward and Orlansky, 1992). Some characteristics of people with low vision include bringing objects close to their eyes in order to see them, restricted central or peripheral vision, a blurring of texture and colour, a distortion of images, and so on (Rogow, 1999). A more detailed description of the behaviour, appearance and complaints common to learners with low vision is given by Landsberg (2011:372). Some of the behaviours likely to be associated with low vision include the following:

- Excessive rubbing of eyes
- Shutting or covering of one eye, tilting of head or throwing it forward
- Difficulty in reading or doing other work requiring close vision
- Unusual blinking or irritation when doing close work
- Inability to see distant objects clearly
- Squinting or frowning
- Clumsy movements, dragging of feet, and appearing to 'feel' with one's feet, stepping too high or too low when walking in the shade or climbing stairs
- Refusal to participate in ball games
- Moving of head when looking at pictures or when reading
- Tendency to lose one's place on a page when reading
- Confusing letters or numbers with similar shapes, such as B and D; R and P; 3 and 8; 5 and 6
- Holding reading materials unusually close to or far away from the eyes
- Inability to space properly when writing: words are too far apart or too close together.

The appearance of a learner with low vision is characterised by, among others:

- Crossed-eyes or squint
- Red-rimmed, encrusted or swollen eyelids
- Inflamed or watery eyes
- Recurring styes
- Pupils of uneven size
- Drooping eyelids
- One eye higher or lower in relation to the other
- Excessive eye movements to and fro.

A learner with low vision will have some of the following complaints:

- An itching, burning or scratchy feeling in the eyes

- The inability to see well
- Dizziness, headaches or nausea following close work
- Blurred or double vision
- An inability to see in bright light (See also Miller, 1996).

In the past, no distinction was made between students with low vision and those who were blind (Corn, 1986). According to this author, it was believed that using their sight would damage the vision of these students further and therefore they were made to function as if they were blind to preserve their remaining sight. Even though it is now known that this thinking was mistaken (Corn, 1986), it is still applied in some schools, as identified in a study of the inclusion of students with low vision in the only high school in Rwanda that admits students with visual impairment (Suubi, 2012). One of his findings was that the teachers of the school treated blind students and students with low vision in the same way, i.e. all students were treated as if they were blind. Students with low vision had no access to materials that enabled them to use their residual vision and even those who could use print with some modifications were made to use braille. Blind and low vision people have different characteristics and needs (Alves, Monteiro, Rabello, Gasparetto and Carvalho, 2009).

This subsection has introduced the reader to various aspects related to visual impairment. The term 'visual impairment' has been explained as well as the other two related terms, that is, 'low vision' and 'blind'. The next subsection discusses issues concerning the ways in which visual impairment may affect an individual.

2.2.2 Effects of Visual impairment

In this section, I would like to briefly examine the effects of visual impairment on an individual. The way visual impairment affects an individual will vary from one person to another depending on factors such as the age of onset (congenital versus acquired visual impairment), type of visual impairment (whether a person is blind or has low vision), family and community attitudes, as well as opportunities for education and habilitation (Rogow, 1999). It is important to note therefore that visual impairment alone is not responsible for the effects usually associated with it (Keeffe, 2005). There is a relationship and interaction between biological/nature factors and

environmental/nurture factors and the way they impact on socio-demographic, cognitive, emotional and societal aspects of the development of an individual, including one with a disability (Oberg, Bertrand, and Muret-Wagstaff, 1999:96) such as visual impairment. Furthermore, research in the development of children with visual impairment shows that there is no single characteristic pattern which can be associated with all visually impaired individuals (Warren, 1994). Thus, although it is possible to talk about general effects of visual impairment on an individual, it is much more difficult to generalise these effects to any particular individual or group of individuals with visual impairment.

Visual impairment can severely inhibit a child's development, especially if the child has congenital visual impairment (Miller, 1996). As this author explains, it is through vision that we get information about movement, form, depth, distance, space, colour, texture and shape. We use the information thus gained to recognise objects, copy actions, build visual memories, and develop spatial awareness. It therefore follows that lack of or limited vision will affect a person's abilities in relation to all these functions.

The effects associated with visual impairment are many and varied. Some of the aspects of life which may be affected by a visual impairment include language development (communication), physical and motor development, concept development, psychosocial development, cognitive development, perceptual development, and social and emotional development (Landsberg, 2011; Rogow, 1999). Keeffe (2005:169) identified six areas that were related to the psychosocial impact of visual impairment. These were: independence; self-actualisation; social relationships; emotional well-being; physical well-being; and planning, organisation and strategic development.

Research indicates that there are a number of factors which are essential for the social development of a child with visual impairment. These include early positive parent-child relationships, acquisition of social information, interpersonal skills, and learning to use visual and environmental cues (Rogow, 1999). Intervention strategies for visually impaired children should therefore focus on helping them acquire these skills. Many authors who have written about the effects of visual impairment on an individual's development concur that early

intervention can and does limit or even remove the negative effects of visual impairment (see, for example, Landsberg (2011); Davis (2003); Rogow (1999); Miller (1996); Hollins (1989)). In the words of Landsberg (2011:373), "Children with visual impairment need purposeful and planned support from birth to prevent their impairment from becoming a disability."

Researchers have investigated how visual impairment affects an individual by conducting research in various domains of life. Their research has covered all categories of visual impairment, that is to say congenital and acquired visual impairment as well as blindness and low vision. For instance, Clark and Stoner (2008) carried out a comparative study to compare the spelling skills of braille readers with those of sighted students. James and Stojanovik (2006) conducted a study to explore the communication skills of congenitally blind children. Wood et al (2009) conducted an experimental study to determine the impact of mild to moderate visual impairment on cognitive test performance. Stevens and Weaver (2005) carried out experimental research to find out the influence of visual impairment on auditory perception. Taking a slightly different view from the above examples which sought to identify the influence of visual impairment on an individual, Bambara, Wadley, Owsley, Martin, Porter and Dreer (2009) reviewed existing literature and research on the effects of low vision on the family of the individual with low vision.

The illustrations above are meant to show the diversity of research in the field of visual impairment and are by no means representative or exhaustive vis-á-vis the broad spectrum of research studies that have been done in this field. Below I will examine the findings of some of the studies cited above.

Communication and language development is one area in which the influence of a visual impairment on a person has been noted (Rogow, 1999; Miller, 1996). Rogow (1999) stated that studies of language use showed little difference between children with visual impairment and sighted ones, although children with severe visual impairment tend to ask more questions and rely more on verbal responses than sighted children. However, there is anecdotal evidence which seems to suggest that some children with visual impairment may use language inappropriately (James and Stojanovik, 2006). For example, blind children may ask many questions, some of

which may not be contextually relevant, or they may use words without knowing their real meaning (James and Stojanovik, 2006). These authors note that it is believed that such behaviours occur because blind children miss the visual cues that support appropriate use of language in conversation.

James and Stojanovik (2006) carried out a study "to explore the communication skills of a group of congenitally blind children" (p9). To do this, parents/carers of participating children were asked to fill in the Children's Communication Checklist 2 (CCC-2) (Bishop, 2003). These researchers found that a majority of the participants had communication difficulties. The participants generally had good speech and syntax abilities but had problems in pragmatics, which refers to the ability to use language in socially and contextually appropriate ways (James and Stojanovik, 2006). The researchers, however, had a very small number of participants (eight in total) and they were not able to prove that the sample was representative of children with congenital blindness.

Another area that is affected by visual impairment and which has received the attention of researchers is that of information processing. The speed and processing problems of persons with low vision are often explained by the fact that degrading an image slows or impairs the recognition and processing of that image. A hypothesis that has been put forward to explain this is that the processing and recognition of such a degraded image becomes cognitively more effortful and demanding, that is to say that the individual spends more effort trying to do this and thus diverts memory processing energies that could be spent on processing other more demanding tasks (Wood et al, 2009). Wood et al (2009) carried out an experimental study to investigate the impact of mild cataracts on the performance of some common cognitive tests. Cataracts are the leading cause of visual impairment in most parts of the world (Resnikoff et al, 2004). By simulating the effects of cataracts on the participants in their study, these researchers wanted to find out if and how visual impairment affected a person's performance in relation to information processing. They produced in 30 sighted young adults effects similar to those produced by mild cataracts with the aid of filters used for that effect. Static visual acuity and letter contrast were measured to assess the degree of simulated vision loss produced by the filters. The study found that degrading contrast sensitivity, even with only moderate effects on

visual acuity, significantly affected the speed, although not the accuracy, of cognitive performance. Based on the findings of this study, it is possible to conclude that low vision potentially affects a person's cognitive processing abilities and speed, though not necessarily increasing the errors committed.

Research suggests that visual impairment, especially early-onset blindness, results in enhanced perception across a range of auditory perceptual and cognitive functions (Stevens and Weaver, 2005). A comparative study to compare the accurate perceptual representation of auditory stimuli by sighted individuals and congenitally blind individuals was done by these authors. In general, the researchers found that congenitally blind participants performed better than their sighted colleagues across a range of auditory tasks. This research seems to suggest that visual impairment confers some advantages in relation to auditory perception. However, saying that individuals with visual impairment have an advantage with regard to hearing does not mean that visual impairment per se makes it possible for a person to hear better. According to Miller (1996), the myth that blindness imparts a special hearing talent is not true. Hollins (1989) explains that the senses are as sensitive as they ought to be, and that increased sensitivity would hinder rather than enhance their performance. Thus, the perceived advantages of visual impairment are actually the result of training and learning on the part of people with visual impairment because of their need to rely on the other senses to get information from the environment (Miller, 1996; Hollins, 1989).

One final issue I would like to discuss in relation to the effects of visual impairment is that of certain mannerisms that some children, and even adults, with visual impairment may exhibit. These include constant rocking of their bodies, poking their fingers into their eyes, repetitive hand movements, banging their heads, and so on (Landsberg, 2011; Hollins, 1989). While some of these can cause injury, all of them can hinder a child's normal development and social acceptance by putting off other people (Rogow, 1999). It seems these activities are engaged in because of lack of sufficient sensory stimulation, overstimulation, tiredness, anxiety, illness, concentration, restricted activity, and a need to block stressful situations (Landsberg, 2011; Miller, 1996; Hollins, 1989). With appropriate training and intervention, these mannerisms can be alleviated (Davis, 2003).

In this subsection, various ways in which visual impairment may affect an individual have been discussed. It has been emphasised that visual impairment alone is not responsible for the effects usually associated with it, and that it does not affect all visually impaired people in the same way: factors such as access to early intervention strategies, educational and habilitative services, and social acceptance interact with a visually impaired person's individual characteristics to determine the aggregate impact of visual impairment on a person. Several pieces of research on the effects of visual impairment have also been cited. In the next subsection, I explore access to information and visual impairment.

2.2.3 Visual impairment and Access to Information

In this section, I would like to discuss the various options available for persons with visual impairment to access information. These include alternatives for access to information in all formats and media, including print, digital, and any other representations of information.

"In order to survive and thrive in the information age," wrote Ferrell, Mason, Young, III and Cooney (2006:1), "people must be adept at accessing, examining, and exchanging information. Information is power…" Visual impairment greatly affects a person's ability to read printed materials, thus reducing his/her ability to gain information and thereby making him/her more dependent on others (Dunning, 2009) and, in the case of students, impacts on their ability to access educational materials. Therefore, the teaching of children with visual impairment requires that they be taught how to read and write braille as well as the use of computers (Rogow, 1999) in order to enable them to access information.

For a blind person to be able to read, the material must be presented to him/her in one of two forms: auditory or tactile (Hollins, 1989). Auditory media will include, among others, a friend reading printed matter to a visually impaired person, a hired reader, or the use of technology such as tape recorders, compact disks, or specialised computer software. Tactile materials will normally be in braille.

Braille is the most common form of representing text in a tactile form (Davis, 2003) and is the basic literacy tool for blind people (Omvig, 2002). Braille "is a system of representing letters by

patterns of raised dots" (Hollins, 1989:73). While braille is used widely by visually impaired people as a means of accessing the written word (Landsberg, 2011), Davis (2003) and Miller (1996) point out that visually impaired children with additional difficulties may be unable to use it efficiently and therefore a less complex system known as 'moon' is used for such children. Moon, unlike braille, is based on the print alphabet and was originally invented for people who lost their sight in adulthood (Miller, 1996). The relative dearth of reading materials in moon (Miller, 1996) makes it a less viable option for use than braille. Braille characters are larger than print letters and it is usually embossed on heavier paper than is normally used to write print on (Hollins, 1989). Thus, a braille version of a long print book can consist of several volumes in braille. To save space, according to Hollins (1989), some words can be represented as abbreviated forms. This kind of braille is said to be contracted and is known as Grade 2 braille.

Whereas a lot of research efforts have been expended in trying to understand the spelling abilities of sighted children (Clark-Bischke and Stoner, 2009), there has been relatively little research directed towards understanding spelling development among visually impaired children or which compares the literacy skills of visually impaired persons with that of sighted peers (Clark-Bischke and Stoner, 2009; Clark and Stoner, 2008). Some of the existing research about the use of braille, literacy and spelling among visually impaired persons was reviewed by Ferrell et al (2006), who concluded that only about nine per cent of all legally blind students in the United States of America used braille as their principal reading method. Large print for those with low vision, audio cassettes (and other voice recording media), word processors and screen reading software are some of the other options used by visually impaired people (Papadopoulos and Koutsoklenis, 2009) to access information. This is despite the assertions of Ryles (1996) that visually impaired people who use braille achieve better educational levels, have higher employment opportunities and better financial prospects, and have higher levels of self-esteem. Reading and writing are very important functions in the modern world as they provide opportunities to social and economic development (Ferrell et al, 2006). After analysing some research findings concerning the literacy development of braille users, Clark and Stoner (2008) concluded that research evidence appears to show that literacy skills of visually impaired children are the same as those of sighted children. Clark-Bischke and Stoner (2009) reached the same conclusion from their own analysis of existing research.

Clark and Stoner (2008) carried out a study to compare the spelling skills of 23 braille using students with those of print using peers. The conclusion of this study was that spelling abilities of students using braille were generally similar to those of print using peers. In his study, however, Suubi (2012) found that the braille notes taken by students with low vision had many errors because they had to depend on their colleagues to read for them as "there were practically no textbooks in braille" (p53) in the school where the study was done. In this finding Suubi (2012) echoed what had been found almost two decades earlier by Hodgson, Clunies-Ross and Hegarty (1984) that there was a general lack of braille texts for students using this mode. The lack of access to reading materials for visually impaired people means that they find it more difficult to develop adequate writing skills.

Although the significance of braille as a means of accessing the written word for people with visual impairment is generally recognised, computers and assistive technologies are becoming increasingly important in helping people with visual impairment access information (Papadopoulos and Koutsoklenis, 2009). The use of computers and assistive technology can greatly enhance a visually impaired person's independence and improve his/her educational and employment opportunities (Landsberg, 2011: Papadopoulos and Koutsoklenis, 2009). This is especially true given that the use of information technology, including the internet, is a common phenomenon in institutions of higher learning (Fichten, Asuncion, Barile, Ferraro and Wolforth, 2009). Landsberg (2011:379) mentions a number of devices that can be used by visually impaired people to access information: scanners for scanning printed materials such as books so that a visually impaired person can access them using a computer; refreshable braille displays which can be used instead of a computer screen; portable note-takers designed specifically for visually impaired persons; screen-reading computer software that can read aloud what is displayed on a computer screen, thus enabling a person with visual impairment to use the computer and surf the internet. The high prices of these applications, however, mean that they are beyond the reach of many people who need them (Suubi, 2012; Landsberg, 2011).

In the context of this discussion, however, technology should be considered as subsuming but not limited to computers and computer-based technologies. The simple tape recorder and cassette

tape is an example of an audio tool that can be used by visually impaired persons to access information (Suubi, 2012; Miller, 1996).

Braille and the assistive technologies discussed above can be used both by individuals with low vision and by blind people. In a study conducted in Greece to determine the use of various kinds of reading media by university students and graduates, Papadopoulos and Koutsoklenis (2009:774) found that 53.8% of the participants used braille to some extent. Similarly, 73.1% of the participants used audio cassettes to some extent.

In addition to the options discussed above, there are other means available for individuals with low vision to access information. They can benefit from using large print materials, as well as low vision aids (Davis, 2003). Davis (2003:101-102) gives some examples of low vision aids, including hand-held and stand magnifiers; hand-held and spectacle-mounted telescopes; overhead projectors; closed-circuit televisions; appropriate lighting; colour filters; reading stands; and computer packages to adapt text. For a person with low vision to use print effectively, some modifications may have to be done either to the print or to the environment s/he is working in (Suubi, 2012: Landsberg, 2011).

As most visually impaired students in the mainstream education system will have some functional vision, the most likely medium used will be print (Miller, 1996). According to this author, the kind of print materials used by the student will depend on several factors, including the child's eye condition, cognitive and conceptual functioning, age, and task being performed. Depending on these factors, the print size can be made larger or smaller, the density of the print line can be increased, the layout of the printed document can be altered, and so on.

This subsection has attempted to give the reader an understanding of the broad range of choices available for people with visual impairment to access information, despite their limitations in accessing ordinary printed or digital information.

In this section, various issues related to visual impairment have been presented, including its definition, the effects of visual impairment, and, lastly, issues related to access to information. The next section of this chapter discusses issues related to deafness.

2.3 Hearing Impairment

2.3.1 Understanding Hearing Impairment

Deaf studies is a relatively young field, and academics are still grappling with issues of defining deaf people "as an aggregate of sorts - be it social, linguistic, or even just medical or psychological" (Thoutenhoofd, 2000:261). Deaf people form a distinctive group with their own language and culture but living within a world of primarily hearing individuals (Arnold, 1999). Since deafness is an invisible impairment (Ahmad, 2003), it is often misunderstood. Consequently, its effects on the deaf individual and his/her family are underestimated (Storbeck, 2011). Perhaps it is because of this that Easterbrooks (2008) noted that deaf people have traditionally been marginalised. A view similar to this has been expressed by Thoutenhoofd (2000), who claims that the most powerful uniting factor for all deaf people is the experience of varying forms of oppression throughout the ages.

Authors such as Storbeck (2011), Magongwa (2008) and Andrews, Leigh and Weiner (2004) note that there are two prominent views apropos the understanding of deafness and hearing loss: the socio-cultural perspective, and the medical/audiological perspective. These authors posit that the terminologies that a person uses to describe deaf people reflect his/her ideological position regarding Deaf Culture and Deaf identity. Proponents of Deaf Culture, including a section of the deaf community, differentiate between 'Deaf' with a capital D, which denotes an affiliation to Deaf Culture or the Deaf World (Tucker, 1998), and 'deaf' with a small d, which refers to the medical/audiological condition of being deaf.

Deaf people object to the use of such terms as 'auditory handicap', 'hearing impaired', 'handicapped', 'disabled', or 'having a hearing loss' because such terms focus on the impairment and not on the individual (Andrews et al, 2004). They prefer to be called 'Deaf'. Because they use sign language as an alternative means of communication, they consider themselves as a distinct cultural and linguistic group (Tucker, 1998) needing equal access to social services such as education, communication and employment opportunities, just like other minorities in society. Indeed, Smith and Campbell (1997:438) noted the increasing awareness of both professionals in the area of hearing impairment and the general public about the civil rights due to deaf people as

a “cultural minority”. In this perspective, sign language is considered as a natural language equal to spoken languages (Storbeck, 2011: Andrews et al, 2004; Stokoe, 2001; Stokoe, 1972). Referring to the Deaf community in the United States, Reagan (1990) says that competence in American Sign Language (ASL) is a key consideration in determining membership to the Deaf community there. There are deaf people, however, who, despite having a hearing loss, “have assimilated into hearing society and do not view themselves as members of a separate culture” (Tucker, 1998:6). But Whyte and Guiffrida (2008) assert that being born deaf or becoming deaf later in life confers upon an individual the right to belong to Deaf culture.

In past times, terms such as ‘deaf and dumb’ and ‘deaf-mute’ were used to refer to deaf people (Andrews et al, 2004; Cockayne, 2003). Cockayne (2003) explains that in early modern England these terms were usually used to refer to prelingually deaf people.

However, not all writers in the area of deaf studies use the terms ‘Deaf’ and ‘deaf’ with either the cultural or medical paradigms in mind. Therefore, for the purposes of this study the term ‘hearing impairment’ will be used to refer to the condition of having a hearing loss while the term ‘deaf/hard of hearing’ will be used to refer to persons who are deaf or who are hard of hearing. The word ‘Deaf’ with an upper-case D will be used with reference to ‘Deaf Culture’ and its adherents.

Hearing impairment occurs in two ways: a person can be either deaf or hard of hearing. Andrews et al (2004:16) explain the term ‘deaf’ as referring to “individuals with hearing loss that precludes the understanding of speech through hearing alone, with or without the use of auditory amplification”. In other words, even with the use of hearing aids, a deaf person cannot rely on speech alone for communication. On the other hand, the term ‘hard of hearing’ is used with reference to individuals with a hearing loss who can primarily use their residual hearing as the means of receiving speech (Andrews et al, 2004). The term ‘deaf’ is used to encompass these two aspects of hearing loss, i.e. deaf and hard of hearing, and the two terms are only used separately when there is a need to distinguish between them.

Hearing impairment results from the presence of some degree of hearing loss (Andrews et al, 2004). Hearing levels, expressed in decibels (dB), are measured by obtaining the average of a

person's responses to pure tones generated at different frequencies (Andrews et al, 2004; Rogers and Clarke, 1980) ranging from 250 to 8000 hertz (Hz) (Paul and Whitelaw, 2011). Based on these measurements, the following levels of hearing and the degree of hearing loss involved have been identified (table 2.3):

Table 2.2: Levels of hearing loss.

Hearing level	**Hearing loss**
0-26 dB	Hearing person
27-40 dB	Slight hearing loss
41-54 dB	Mild hearing loss
55-69 dB	Moderate hearing loss
70-89 dB	Severe hearing loss
>90 dB	Profound hearing loss

Source: Paul and Whitelaw (2011:5-6).

If hearing loss occurs before birth or soon after birth, it is referred to as congenital hearing impairment. If it occurs some time after birth, it is referred to as acquired hearing loss (Storbeck, 2011). Deafness which occurs before the acquisition of spoken language skills is termed prelingual deafness (Fellinger et al, 2005) while deafness occurring after the acquisition of spoken language skills is referred to as postlingual deafness (Storbeck, 2011; Cockayne, 2003; Heward and Orlansky, 1992; Rogers and Clarke, 1980). Prelingual and postlingual deafness have different consequences for and implications on the deaf individual and different intervention measures are needed for each kind of deafness (Storbeck, 2011).

This subsection has focused on understanding deafness. The cultural and medical perspectives of deafness have been presented. Various types of deafness such as congenital and acquired deafness, and prelingual and postlingual deafness have also been discussed. In the next subsection, we examine deafness and its educational implications.

2.3.2 Educational Implications of Deafness

A subsequent section of this chapter will be devoted to a discussion of deaf/hard of hearing and visually impaired individuals and their access to higher education. This subsection examines general educational issues in relation to hearing impairment.

The educational achievements of deaf students generally appear to lag behind those of their hearing counterparts (Johnson and Mertens, 2006; Andrews et al, 2004; Thoutenhoofd, 2000). Reasons for this underachievement are many and include language and other communication challenges faced by deaf students when they have to use spoken languages such as English instead of sign language; teachers' and other professionals' lack of awareness about the specific needs of deaf/hard of hearing learners; and societal attitudes towards deaf/hard of hearing people. Johnson, Liddell and Erting (1989) noted that educators of deaf/hard of hearing learners did not have high expectations of them. This point was strengthened by results from a study done by Magongwa (2008) about the experiences of deaf students at the University of the Witwatersrand. This study showed that hearing teachers of deaf/hard of hearing students do not seem to have much faith in the abilities of their deaf students. One of the participants in this research told the researcher,

> Hearing teachers from other schools for the Deaf as well would be surprised to see us. At first they didn't believe that as Deaf people we were qualified teachers. Some had the guts to approach us and ask questions like; Are you qualified? Have you studied to become a teacher before? I would say; yes I am qualified, so what? (p101)

Controversy in the education of deaf learners has revolved around three issues: how, where, and what to teach them (Moores, 1990; Moores, Cerney and Garcia, 1990). The 'how' question regards the methods that should be used in education and concerns mainly the issue of language use: whether to use speech and residual hearing, or sign language and fingerspelling. The 'where' question is largely one of placement, i.e. whether to educate deaf learners in mainstream or in specialised schools. The 'what' question refers to the curriculum that should be taught to deaf students: whether it should be the curriculum used in mainstream schools or whether it should be a special curriculum (Moores, 1990). Of these, communication is perhaps the most important, as the choice of the method of communication to be used may also influence the

choice about school placement and the curriculum to be taught. Indeed, Moores and Martin (2006) stress that these three issues are interrelated and that they should not be viewed as discrete discourses.

Communication mode and the education method entailed by the choice of a particular communication mode is a contested issue in deaf education (Storbeck, 2011). There are two major communication and educational approaches in deaf education: oralism and sign language (Storbeck, 2011; Johnson, 2006). Oralism stresses the exclusive use of speech by deaf individuals (Magongwa, 2008; Johnson, 2006; Arnold, 1999). It emphasises the use of speech, residual hearing and lip reading for deaf/hard of hearing people (Storbeck, 2011; Adoyo, 2002). Oralists argue that technological advances in areas such as sound amplification make it possible for most deaf children to learn to speak (Smith and Campbell, 1997). Oralism is based, inter alia, upon the following premises: the majority of children with hearing loss have residual hearing left which can be utilised to enable the child to receive speech primarily through hearing; a child should be encouraged to use audition from an early age, otherwise its benefits will be lost; audition enables the child to learn to communicate effectively by being able to both hear others and himself/herself; audition is the most natural way through which a child can acquire language; by using the oral approach, parents do not need to adapt unnatural or unusual ways to communicate with their deaf children (Smith and Campbell, 1997:447). Oralism is an educational approach that is usually associated with the medical paradigm of viewing hearing impairment (Storbeck, 2011).

The second approach to teaching deaf/hard of hearing learners, sign language, or 'manualism', as it is sometimes called, lays emphasis on a deaf child's exposure to and use of sign language from the earliest possible time (Storbeck, 2011; Johnson, 2006). Storbeck (2011) points out that this mode is associated with the Deaf Culture movement. It is now accepted that deaf people should be viewed primarily as a linguistic and cultural minority rather than as people with an audiological disability (Parasnis, 1997). Culturally Deaf people see the use of spoken language in deaf education as oppression and feel that deaf people have a right to be taught in sign language (Andrews et al, 2004). Furthermore, deaf children exposed to sign language from an early age

acquire language skills at a normal pace and find it easier to learn spoken language (Storbeck, 2011), especially its written form.

Criticisms and counter criticisms have been exchanged between the oralist and the manualist camps for a long time (Johnson, 2006), criticisms which have been based upon and reflected different ideological and philosophical constructions of hearing impairment (Baynton, 1992). Baynton (1992) further notes that oralists were accused of wishful thinking and of being ignorant about deaf people. Sign language, according to Baynton (1992), was accused of preventing deaf individuals from learning to communicate using speech, while parents who clung to the wish to communicate with their deaf children through speech insisted on using the oral approach.

Not surprisingly, the arguments and counterarguments in support of each mode of educating deaf children ended up in attempts to find an eclectic approach that blended the strengths of both the oral and manual approaches and this resulted in a third approach to teaching deaf learners, namely total communication (Storbeck, 2011). Total communication, which is sometimes called simultaneous communication, gives teachers the freedom to use all means at their disposal to communicate with the deaf student (Adoyo, 2002). In total communication, therefore, a mixture of signs, fingerspelling and speech are used. Total communication, however, disappointed many, including some of its proponents, as it did not lead to the expected improvements in the performance of deaf children (Smith and Campbell, 1997; Johnson et al, 1989). Some of the criticisms levelled against total communication include the fact that it is difficult to combine signs and speech at the same time and therefore deaf learners get very little of the message they are supposed to get. Furthermore, total communication demands too much of the learner's attention because of the mixture of communication methods used (Storbeck, 2011; Adoyo, 2002; Smith and Campbell, 1997). It was also felt by some that total communication was nothing more than a turning back to oralism whereby sign language was merely used to support the acquisition of spoken language (Swanwick, 2010). Despite these criticisms and the failure of total communication to yield the expected results, its adoption as a teaching approach for deaf/hard of hearing learners was an important milestone in deaf education because it indicated a recognition by educators of deaf people that sign language was an essential part of deaf education (Storbeck, 2011).

Many practitioners in the field of deaf education now believe that the bilingual approach to deaf education provides the best option to solving the educational challenges faced by deaf learners (Swanwick, 2010; Magongwa, 2008). The bilingual approach to deaf education stresses the importance of sign language as the first and natural language of a deaf child and gives it precedence (Storbeck, 2011; Johnson et al, 1989). Sign bilingualism gives deaf/hard of hearing children a chance to learn sign language as well as to acquire skills in spoken and written language. Spoken languages are taught as second languages. Emphasis is on the recognition of both languages as equal languages and giving them equal importance (Storbeck, 2011; Swanwick, 2010; Stewart, 2006; Andrews et al, 2004).

Disagreements among deaf educators also exist around the question of where to educate deaf learners. Currently, deaf/hard of hearing students are either educated in special schools for the deaf or in regular schools (Storbeck, 2011; Marschark, Pelz, Convertino, Sapere, Arndt and Seewagen, 2005; Moores et al, 1990). In mainstream schools, deaf learners may attend classes for deaf learners, they may receive itinerant teacher support, or they may be totally mainstreamed with no additional support. Moores et al (1990) observed that the use of sign language interpreters in regular classrooms in schools in the United States of America has led to increased numbers of learners with profound hearing loss attending regular classes for at least part of the time. There is no agreement among experts as to the best educational placement for deaf/hard of hearing students. While the general benefits of inclusive education are acknowledged (see, for instance, Oliver and Barnes (2010); Abosi and Koay (2008); UNESCO (1994)), its suitability for deaf/hard of hearing students is not (Andrews et al, 2004). The specific needs of learners who cannot hear and who will need to use sign language, which is a language different from that used in a regular school, mean that inclusive education may not be the best alternative for deaf learners (Magongwa, 2008; Marschark et al, 2006). The Deaf community has argued that Deaf learners should be educated in schools for the Deaf where they share a common language and culture with their teachers (Armstrong, Armstrong and Spandagou, 2010). The assumption by educators in mainstream schools, according to Marschark, Convertino and LaRock (2006), that deaf students are just like any other students except for the lack of hearing and speech, while sounding nice for purposes of equity, may do more harm than good to deaf students. On the other hand, Kristensen, Omagor-Loican, Onen and Okot (2006) have implied that with enough

resources and trained personnel, inclusive education is possible and beneficial for deaf/hard of hearing learners. These could include, among others, trained teachers, sign language interpreters, and assistive devices.

Deaf/hard of hearing learners in inclusive educational settings require support services such as the availability of a resource room (or, where it is not available, an itinerant teacher): specialised teachers in the resource room provide additional support to deaf/hard of hearing students either individually or in groups. Itinerant teachers are specialised teachers who move from school to school offering support to teachers where there are not enough students with special needs to warrant a resource room teacher for each school. They provide consultation and support services to deaf/hard of hearing students (as well as other students with special educational needs) and their teachers (Andrews et al, 2004). Deaf/hard of hearing learners in mainstream schools will also require sign language interpreters to translate from and to sign language (Marschark et al, 2005); and technological assistive devices (Magongwa, 2008; Andrews et al, 2004), of which a wide range exist. These range from visual technologies such as real-time captioning, captioning software, and note-taking software. Other systems such as computer-assisted note-taking (CAN) and communication access real-time translation (CART) can be used in a variety of environments, including the classroom, to provide verbal transcription of proceedings in whole or in summary form (Andrews et al, 2004). In addition, environmental conditions need to be right to enable the deaf/hard of hearing learner maximise the use of his/her senses. For example, there should be enough lighting in the classroom while unnecessary sounds that could distract a learner with hearing loss using sound amplification should be avoided (Storbeck, 2011).

Writing about the situation in the United States of America, Marschark et al (2005) noted that it is assumed that when deaf students who use sign language attend inclusive schools they will have skilled interpreters who will provide them with equal access to classroom communication. However, this is not always the case, according to these authors. There is a shortage of qualified educational interpreters, and many deaf students, especially in secondary and postsecondary educational institutions, have a hard time when they cannot get sign language interpreters. Interpreters often do not have the necessary background knowledge in areas such as mathematics, science and technology to provide adequate interpretation in postsecondary

education. At times, interpreters do not perform up to expected standards (Marschark et al, 2006). Furthermore, using sign language interpreters has its own drawbacks since it portends having the deaf student dividing his/her attention between the teacher, interpreter, and any other visual materials that may be used in class (Marschark et al, 2005). Technological assistive devices such as captioning also have limitations associated with their use, these authors go on to argue, because the reading abilities of deaf students may be slower than the speed of the captioning. This could be one reason why research suggests, according to Marschark et al (2005) that deaf students in mainstream schools performed less well than hearing students.

While arguments concerning best educational placement for deaf/hard of hearing learners rage on fiercely (Angelides and Aravi, 2006; Moores et al, 1990), Marschark et al (2006) concluded that there is no single appropriate placement for all deaf students and noted that there are examples of bad special schools and bad inclusive schools. The best solution is to make sure that the appropriate setting and programme for each child is chosen, with emphasis on access both to the classroom and the curriculum (Marschark et al, 2006; Moores et al, 1990).

The controversies mentioned above have had an impact on what is taught to deaf/hard of hearing learners, i.e. the curriculum followed in deaf education. As such, some of the polemics discussed above are pertinent to this debate. For example, the choice of the language through which to present the curriculum also implies having that language as a key component of the curriculum. As has been mentioned, for instance, oralists stress using and teaching spoken language while manualists emphasise the importance of using and teaching sign language. Johnson et al (1989) underscored the importance of sign language as a means for deaf/hard of hearing learners to access curriculum content and argued that spoken languages should be taught to deaf/hard of hearing students as second languages.

Placement may also determine the type of curriculum presented to deaf/hard of hearing learners and how it is presented to them. For example, Angelides and Aravi (2006:478) reported that prior to 2005 the school for the deaf in Cyprus had the “right to use an easier curriculum” while mainstream schools offered the same curriculum material for deaf/hard of hearing and hearing students; however, the lack of any special measures to meet the specific learning needs of

deaf/hard of hearing students in these schools made it more challenging for them to access curriculum content. Kimani (2012) reported that in Kenya some special classes in mainstream schools offered multi-grade lessons for learners of different grades in the same classroom, whereas in other mainstream schools each grade had its own special class.

Deaf learners are expected to follow the same curriculum as hearing learners (Moores and Martin, 2006). This is the case, for instance, in the United States of America (Moores, 2010) and Kenya (Kimani, 2012). Ensuring access for deaf learners to the general curriculum poses challenges to educators (particularly in mainstream schools) as many deaf learners may not be as proficient as hearing learners in English (Moores and Martin, 2006) and other spoken languages.

When developing the curriculum for deaf/hard of hearing learners, it is essential to consider their different learning styles (Kimani, 2012) and communication needs (Andrews et al, 2004). Thus, even though they may follow the same curriculum as their hearing counterparts, deaf/hard of hearing learners may also need additional or differentiated instruction in other areas based on their needs. For example, Kimani (2012) observed that deaf/hard of hearing students may need instruction in deaf studies. Johnson et al (1989:15-19) outlined some key guiding principles to consider in developing a curriculum suited to the needs of deaf/hard of hearing learners. These include the use of sign language as the main language of instruction as a means of ensuring access to curriculum content; the presence of adult deaf models to help students learn sign language and develop positive self-esteem; deaf learners should not be seen as "defective models' of hearing children; deaf children are as capable of learning as other children provided they have full and proper access to the curriculum; there is nothing inherently wrong with being deaf. These principles can make it possible for deaf/hard of hearing learners to have full access to the curriculum.

In this subsection, three key issues related to deaf education have been examined: how, where and what to teach deaf learners. The arguments surrounding the suitability or otherwise of inclusive and special schools for deaf learners have been presented. The question of the most appropriate method of communication for deaf learners has also been discussed. Considerations

for determining the curriculum for deaf learners were also presented. In the next subsection, the question of how hearing loss affects an individual will be discussed.

2.3.3 Effects of Hearing Impairment

This subsection discusses some of the possible effects of hearing loss on an individual. It should be borne in mind however that deaf people are not a homogeneous population: there is great diversity within it (Parasnis, 1997). The effects of hearing loss discussed below should not therefore be construed as applying to all or even the majority of deaf individuals. This subsection merely attempts to describe ways in which deafness may potentially affect a person. It is also worth pointing out here that although the present study focused on students in tertiary institutions of learning, literature referring to children will be included in this discussion because of the influence the early years may have on an individual's subsequent development.

Deaf people form a unique population within hearing society (Arnold, 1999). Approximately 90% of deaf children have hearing parents (Storbeck, 2011; Whyte and Guiffrida, 2008; Spencer and Meadow-Orlans, 1996) and are therefore born into two worlds, the hearing world and the world of the deaf (Arnold, 1999). The remaining proportion of deaf people is born to deaf parents. This is an important point to remember since deaf children of deaf parents are reported to fare better than deaf children of hearing parents (Hauser, O'Hearn, McKee, Steider and Thew, 2010; Andrews et al, 2004; Johnson et al, 1989): most deaf children of hearing parents lack an effective means of communication, which delays their development (Marschark, 2006). In contrast, deaf children of deaf parents who use sign language develop language skills and school preparedness at the same rate as hearing children (Hauser et al, 2010). The explanation for this is that many hearing parents of deaf children may not know sign language and cannot therefore communicate effectively with them (Marschark, 2006). Deaf children are unable to access auditory information, and if they are not exposed to visually encoded information they develop language delays (Spencer and Meadow-Orlans, 1996). The corollary of this is that these children are unable to acquire adequate language skills and by the time they join school they are at least two years behind their age-mates, a lag which becomes worse with age (Marschark, 2006).

The above discussion suggests that the early years have an influence on later functioning for deaf and hard of hearing people. Teaching the deaf child language skills early in life – whether signed or spoken – ensures that the child develops better socially (Andrews et al, 2004). This is especially true since many developmental and academic challenges facing deaf people are a result of their poorly developed language skills (Marschark et al, 2006). Language training can be done by peers, parents, early intervention staff, and so on. For maximum effect, early intervention needs to start at the time of detection of the hearing loss (Andrews et al, 2004).

Patterns of onset of deafness have implications for the psychological development and functioning of deaf children and adults. This is especially so if there are other additional limitations a person may have depending on the aetiology of deafness (Andrews et al, 2004). Marschark (2006) states that approximately 30-40% of all deaf individuals have other syndromic or non-syndromic conditions that may affect learning.

Congenital moderate to profound hearing loss may have far-reaching effects on an individual, his/her family and society (Bess, Dodd-Murphy and Parker, 1998). Areas affected, according to Bess et al (1998), may include communication skills, academic performance, psychosocial behaviour, and emotional development. According to Jacobs (2010), mental health professionals have provided anecdotal evidence of low levels of psychosocial competence in adults who are deaf. Marschark (2006) explained that the use of inappropriate intelligence tests has led to some people believing that deafness leads to reduced cognitive abilities. Marschark (2006:83) expands on this issue by writing,

> When non-verbal, performance intelligence tests are used, deaf and hearing individuals generally perform similarly. Verbal intelligence tests developed for hearing individuals may not be appropriate for use with deaf individuals, but not only because of the language barrier involved. To the extent that deaf children have different patterns of early socialisation and diversity of experiences from hearing peers, as well as exposure to variable quality in academic instruction, standardised verbal intelligence tests may not be `culture fair'.

Arlinger (2003) also noted that there is no evidence directly linking hearing loss to reduced cognitive functioning.

According to Fellinger, Holzinger, Gerich and Goldberg (2007), hard of hearing individuals tend to have more restricted social lives as compared to people who are profoundly deaf. The hard of hearing discussed by Fellinger et al (2007) are those who do not use sign language. Using a variety of instruments, these authors conducted a comparative study to compare levels of psychological distress and quality of life of hard of hearing, signing deaf, and hearing people. The results of this study indicated that the hard of hearing were worse off in terms of social relationships than the signing deaf, and scored below their hearing counterparts in all areas measured. Fellinger et al (2007) concluded that the hard of hearing people (who did not use sign language) who took part in their study were dissatisfied with their social lives because they lacked the support the signing deaf got from other deaf people and that they were also disadvantaged by the hearing environment in which they lived. However, according to Spencer and Marschark (2010), in comparison to existing knowledge about deafness, not enough is known about hard of hearing people. Children with mild to severe hearing loss have even been referred to as 'forgotten' (Jamieson, 2010:376). Spencer and Marschark (2010) urged that more research should be done in this area.

Three policies recently implemented in the United Kingdom have affected the way deaf children have been socialised: mainstreaming of deaf children and the accompanying closure of deaf schools, and cochlear implants. The overall benefits of these policies are yet to be demonstrated (Thoutenhoofd, 2000).

Research indicates that hearing people often hold negative and stereotypical attitudes towards deaf people, attitudes which deaf people may internalise and which may affect their feelings of self-worth and negatively affect their personality (Nikolaraizi and Makri, 2004). These authors go on to argue that hearing people's negative attitudes towards deaf people eventually beget similarly negative and stereotypical attitudes by deaf people towards hearing people. Factors that contribute to hearing people's attitudes towards deaf individuals include hearing people's lack of information and knowledge about deafness and Deaf culture, communication barriers between hearing people and deaf people, lack of opportunities to learn about deafness, insufficient interaction between deaf people and hearing communities, and cultural differences between deaf people and hearing people (Nikolaraizi and Makri, 2004). This situation is further aggravated by

the fact that many professionals, such as psychotherapists, still pathologise deafness, an attitude which is then passed on to society in general (Andrews et al, 2004).

Another area in which deafness may affect a person is that of identity and self-concept. Martinez and Silvestre (1995:306) have described three possible types of identity patterns among deaf people: those deaf people who feel a closer affinity to other deaf people; the deaf who associate themselves with the hearing; and the deaf who have a dual identity, i.e. those who associate themselves with both the Deaf and the hearing world. Andrews et al (2004) refer to this latter group as bicultural and point out that there are other deaf people who can even associate themselves with more than two cultures (multicultural deaf) depending on the environment they live in. In addition to these three identity patterns, Cornell and Lyness (2004) add a fourth category, that of deaf people who neither identify themselves with the hearing nor the Deaf world. Magongwa (2008) gives an example of this identity pattern when he describes one of the participants in his study, who was hard of hearing, as not identifying herself with either the hearing community or the deaf community. According to Magongwa (2008:80), this participant "does not identify herself with Deaf students and their culture. She does not identify herself with hearing students…" Bicultural and deaf individuals who identify themselves with other deaf people are the most well psychologically adjusted (Andrews et al, 2004). In a research conducted to explore the interrelationship between deaf identity and self-concept, Cornell and Lyness (2004) found that bicultural deaf people had the most positive self-concept whereas those deaf people who felt themselves to be part of neither the Deaf nor the hearing world had the most negative self-concept.

Research has concentrated on those areas where deaf people are seen to have limitations in comparison with their hearing peers, but little effort has gone into exploring those areas where deaf people have certain advantages in relation to hearing people (Marschark, 2006). This author says that deafness confers certain advantages to the individual, especially in the performance of visual-spatial tasks. Some of these advantages are not the direct result of deafness per se but are rather related to the use of sign language, which affects the performance of visual-spatial tasks in several areas (Marschark, 2006).

This section has explored a number of subjects related to deafness; some issues which are of relevance to understanding deafness and hearing loss have been presented. Concepts and debates related to deaf education have also been explored in this section. Possible ways in which deafness may affect a person provided the final topic of discussion for this section. The following section will focus on deaf/hard of hearing and visually impaired students in higher institutions of learning.

2.4 Deaf/Hard of Hearing and Visually Impaired Students in Higher Education

So far, I have discussed various issues related to visual impairment and hearing impairment. I have talked in general about these issues and in certain instances reference has been made to deaf/hard of hearing children and children with visual impairment. The focus of this research was on students with visual impairment and deaf/hard of hearing students and their inclusion in university in the Rwandan context. It therefore follows that an examination of the literature concerning this subject should be made. In this section therefore, I will examine the issue of deaf/hard of hearing students and students with visual impairment in higher institutions of learning and examine what the existing literature says about it. It will be necessary in some cases to talk generically about students with disabilities[1]because some of the literature reviewed here containing information on deaf/hard of hearing and visually impaired students in higher education is literature that deals generally with disabled students in such institutions. In such cases, only those issues relevant to deafness and visual impairment will be discussed.

For a long time, educational authorities in many countries, such as the United States of America, focused on providing primary and secondary school education for people with disabilities (Fairweather and Shaver, 1990). Consequently, people considered to have significant disabilities were excluded from tertiary educational institutions (Causton-Theoharis, Ashby and DeClouette, 2009). Now however, many countries, such as the United Kingdom, Israel, Australia and the United States of America, have legislation in place that recognises the needs and rights of

[1] Although, as discussed earlier in this chapter, members of the Deaf Community do not see themselves as having a disability, they are sometimes included in literature discussing disability-related issues.

students with disabilities in higher institutions of learning (Fuller, Healey, Bradley and Hall, 2004). These authors note that such legislation has had some positive impact on the education of students with disabilities in higher educational institutions: for instance, universities have been encouraged to consider reasonable adjustments in their approach to teaching, learning and assessing such students. Moreover, disability issues are now being discussed at all levels in universities, including departmental and course levels (Fuller et al, 2004).

There is a belief that participation in higher education benefits both the individual and society in general (Richardson and Roy, 2002). For many people, postsecondary education is the key to success in life, and collegiate and vocational training is associated with employment and the development of personal value systems (Causton-Theoharis et al, 2009; Fairweather and Shaver, 1990). For students with disabilities, including those who are deaf/hard of hearing or visually impaired, university education has added significance because "For disabled students participation in higher education is a matter of equal opportunities and empowerment" (Fuller et al, 2004:303). Omvig (2002) views university or college education as offering a visually impaired person not only academic knowledge but also the opportunity to learn how to cope with the challenges of life. In the opinion of Omvig (2002), too few people with visual impairment take advantage of this opportunity.

There is an assumption that people with visual impairment are not adequately represented in higher institutions of learning due to their poor academic performance at the secondary school level (Richardson and Roy, 2002; Bruce, McKennell and Walker, 1991). Those who do join university tend to do so with lower entrance grades than those of non-disabled students (Richardson and Roy, 2002). The number of deaf/hard of hearing students in higher educational institutions is much lower compared to the number of deaf/hard of hearing people in the general population (Thoutenhoofd, 2000). In Kenya, only a small minority of deaf/hard of hearing people who enrol in primary schools make it to secondary school and then on to university (Kimani, 2012). Of those deaf/hard of hearing persons who make it to four-year postsecondary institutions in the United States, only a quarter manage to graduate (Marschark et al, 2005). Research in the United Kingdom shows that although students with disabilities may enter university with similar grades to their non-disabled counterparts, they tend to encounter more educational barriers and

end up with poorer outcomes (Fuller et al, 2004). Despite this state of affairs, however, the numbers of deaf/hard of hearing people attending colleges and universities is increasing (Whyte and Guiffrida, 2008).

Factors which influence participation in postsecondary education for disabled people, including deaf/hard of hearing and visually impaired students, are the same as for non-disabled people, and include level of parental education, income, and high school graduation status (Fairweather and Shaver, 1990).

In subsection 2.3.2 it was mentioned that deaf/hard of hearing students in mainstream schools require support services, which may be provided in a resource room. Such services are also required by students with visual impairment, and many universities have institutional measures in place to support students with special needs. For example, Coventry University has a Disability Office as one of its organs mandated to support disabled students (Orsini-Jones, 2009). Omvig (2002) argues that although such disabled students' offices may be beneficial to students with other disabilities, they contribute to making visually impaired students more dependent. The author's argument is that by doing everything for the visually impaired students, including getting textbooks, hiring readers, registering for courses, and even arranging for examinations, these offices lead to a student developing learned dependence.

There are many barriers which deaf/hard of hearing and visually impaired students face in higher educational institutions. While some of these barriers are common to both deaf/hard of hearing and visually impaired students, others are specific to each group. A common barrier is mentioned by Gray and Wilkins (2005), who note that there is a lack of expertise on the part of staff in universities to meet the needs of disabled students. These writers also mention a barrier that is specific to students with visual impairment in universities: the ubiquitous use of visual materials and aids in university teaching. The use of such materials, according to the authors, prevents the effective inclusion of visually impaired students in higher educational institutions. Magongwa (2008) observed that many lecturers assume that everyone in class can hear, and that all deaf people were capable of lip-reading. This suggests that deaf/hard of hearing students in higher educational institutions may not have full access to education. Like other college students,

deaf/hard of hearing college students face a number of psychosocial and developmental challenges when adjusting to college life (Whyte and Guiffrida, 2008). In addition, however, Whyte and Guiffrida (2008) observed that deaf college students encounter certain challenges that are unique to them as deaf students. These include communication barriers between the deaf students and the hearing community in universities, such that sign language interpreters are required to facilitate communication between the deaf students and hearing staff and students. This makes it difficult to form social relationships. In addition, according to Whyte and Guiffrida (2008) there are significant cultural differences between the hearing community and the deaf students, such as language differences, social relationships, and identity.

Fuller et al (2004) conducted a ground-breaking research in a university in the United Kingdom to identify and assess the experiences of disabled students vis-à-vis teaching, learning and assessment with the intention of making recommendations about improving practice. This study, according to its authors, was one of the first to give a voice to disabled students themselves to express their views about their experiences in higher educational institutions. Some of the study's findings were the following:

- 12% of the participants took their disability into consideration when choosing their courses.
- More than half of the deaf/hard of hearing participants had consulted the Disability Coordinator (whose roles include development of policies and practices regarding students with disabilities, as well as providing support to students with disabilities).
- As far as teaching was concerned, 44% of the participants reported experiencing barriers to learning during lectures, 22% reported experiencing barriers in other on-campus learning activities, 21% encountered barriers during off-campus activities, while 17% had experienced barriers in using the university's information technology facilities.
- With regard to assessment, 34% of the participants reported encountering barriers in written coursework, 30% had experienced barriers in examinations, and 12% reported barriers in oral presentations.

- Sometimes staff failed to make the necessary accommodation for students' disabilities. In some cases this was due to staff ignorance about the student's disability, but in other instances staff failed to be understanding even when they were aware of the disability.
- However, there were also instances of positive and helpful attitudes and support from both the teaching and non-teaching staff.

Based on their findings, Fuller et al (2004) made four recommendations relating to the accommodation of the various needs of disabled students: first, there is need for flexibility and variety in all aspects of the teaching and learning exercise; second, the need to ensure quality and equity of access to education for students with disabilities relative to their non-disabled colleagues; third, in order to achieve the two previous goals, access to information regarding various aspects of disability is important both for disabled students and lecturers; fourth, the attitudes of staff are important for the achievement of inclusive universities.

Orsini-Jones (2009:28) conducted research at Coventry University in the United Kingdom to find out "whether a robust local infrastructure supporting the experience of disabled students would be sufficient to cater for the needs of visually impaired and blind students reading languages". She used three students as case studies, one blind and the other two with low vision. She used a variety of instruments and informants, including staff at the university, to get data. Orsini-Jones (2009) concluded that although having a strong infrastructure in place to support students with disabilities did help the visually impaired participants in the study, it was possible to do more for them. Another finding of the study was that visually impaired students were sometimes averse to attracting attention to themselves and their disability, such that they were at times willing to forego some of the rights due to them as students with disabilities. This attitude sometimes caused friction between visually impaired students and their lecturers, who felt that the students should take full advantage of all the opportunities available to them in order to gain better marks. Some of the recommendations of the author were that any ad hoc measures and individualised educational plans made to support the visually impaired students should be taken after prior consultation with the concerned students; that there should be measures in place to accommodate unforeseen events, such as the breaking down of a braille

embosser; that staff (including teaching staff, technicians, and so on) should collaborate to provide a conducive and safe environment for the disabled students.

There is insufficient research concerning the experiences of visually impaired people in tertiary institutions of learning (Klinkosz, Sekowski and Brambring, 2006). There is also a general lack of empirical evidence regarding education and other areas of the experiences of deaf/hard of hearing people (Thoutenhoofd, 2000). Africa in particular suffers from a dearth of research regarding hearing impairment, especially research concerning the experiences of deaf/hard of hearing students in tertiary institutions of learning (Magongwa, 2008). One such study was conducted by Magongwa (2008). He carried out research among deaf and hard of hearing students at the University of the Witwatersrand in South Africa to explore their experiences as deaf students in an inclusive environment. He interviewed twelve deaf/hard of hearing students to find out their views on a range of issues related to their university experiences, including social integration, support services offered at the university, and educational provision. He found that levels of social participation by deaf/hard of hearing students were low, a key reason for this being the communication barrier between them and hearing students. He also found high levels of academic competitiveness among the research participants, who were driven by a keen desire to improve the education of deaf/hard of hearing people in South Africa. Another finding from this study was that although the university provided some support services for deaf/hard of hearing students, such as South African Sign Language (SASL) interpreters in class, these services were not enough and a lack of effective coordination made them less effective than they could potentially have been.

In conclusion, it can be said that existing literature suggests that visually impaired and deaf/hard of hearing people seem to be underrepresented in tertiary institutions of education. More and more of them are however enrolling in these institutions, some of which have measures in place to facilitate the learning of students with special educational needs. Furthermore, the relative lack of empirical evidence about the experiences of these students calls for more research focusing on them, especially research done in an African context and from an African perspective.

This section has highlighted issues related to students with visual impairment and deaf/hard of hearing students in higher institutions of learning. Some literature, including research, about this topic has been presented. The next section will concern itself with adult students in higher education.

2.5 Adult Learners in Higher Education

Although there is no written evidence as to the exact number of students with disabilities in Rwandan universities, my inquiries revealed that in 2010 there were at least seven deaf/hard of hearing students and 14 visually impaired students in Rwandan public universities. The majority, if not all, of them would fall into the category of adult learners, especially because many of them had to wait for long periods before joining university. As such, it is necessary here to say something about adult education and adult learning and how it may have a bearing on the experiences of the participants in this research.

Adult education has been receiving increased priority due to the social and personal benefits that are believed to accrue from it (Blair, McPake and Munn, 1995). One can find a variety of definitions of 'adult education' by different scholars (Nafukho, Amutabi and Otunga, 2005). In its broadest definition, adult education can be construed as referring to "all education for adults" (Tight, 1996:60). As such, according to this author, adult education includes within its ambit all forms of post-compulsory education, which may even include less institutionalised forms of educational provision. To put it differently, Merriam and Brockett (1997:13), quoted by Nafukho et al (2005:6) define adult education as "activities intentionally designed for the purpose of bringing about learning among those whose age, social roles, or self-perception define them as adults."

The above definitions of adult education suggest that university education can be considered as falling under adult education because it follows post-compulsory educational provision, and also because many learners in university would, either because of their age or social responsibilities and self-concept, consider themselves and be considered by others as adults.

The number of adults attending tertiary institutions of learning has increased dramatically in the past few decades (Blair et al, 1995; Kasworm, 1993). It is worth noting the difference between what some authors refer to as 'traditional-age' learners (see, for example, Hansman (2006) and Pascarella and Terenzini (2005)) and adult learners in universities. Traditional-age students would refer to adolescents and young adults in universities (Pascarella and Terenzini, 2005). These would normally join university immediately after completing high school. The university adult learner is one whose age is 25 years and above or who has certain other characteristics such as having delayed to join university or having work and/or parental responsibilities at the time of joining university (Hansman, 2006). Kasworm (1993:412-413) outlines several characteristics of adult learners in higher institutions of learning. These include:

- Adult students who enter or re-enter higher education with a prior major break in their formal involvement in learning; these individuals seek a focused academic study, an assessment of advanced knowledge, and subsequent award of a degree, certificate or credential of advanced specialised expertise
- Students enrolled in academic studies who represent specific chronological age categories, most often defined by a lower age limit of 21 years, 25 years, or 30 years of age or older. This age categorisation for adult university students is somewhat arbitrary, but is often used to identify groups of adult students who have interrupted their 'schooling' and pursued adult roles
- Adult students who enter higher education with mature life experiences reflecting past major full-time responsibilities in work roles, in family provider/sustainer roles, in apprenticeship training, or in military service roles
- Adult students who have completed a higher education program or degree of studies, left the higher education environment, and now re-enter to pursue a second academic knowledge expertise as a 'second degree seeker,' certificate seeker, or professional development course student.

If the visually impaired and deaf/hard of hearing participants in this study were to be characterised using the above criteria, many of them would qualify as adult learners; they would fit into the first, second or third set of adult students as outlined above.

The attempt to understand the adult university learner is further complicated by the fact that the concept of 'adult' itself is not as clear-cut as one may assume. As the preceding discussion has shown, 'adulthood' is not dependent only on age, but on other factors as well. These include cultural, legal, physical and psychological considerations (Fasokun, Katahoire and Oduaran, 2005; Nafukho et al, 2005; Tight, 1996). Hence, in their discussions of college learners, Pascarella and Terenzini (2005) distinguish between traditional-age students, comprising of adolescents and young adults on one hand, and older adult students on the other. For the purposes of this discussion, students will be considered as adults if they meet any of the characteristics proffered by Kasworm (1993) as cited above.

Research concerning adult learners in higher institutions of learning has focused on areas such as student persistence in education, counselling for adult students, lack of support or approval by family and/or peers, lack of attention and respect for the needs of adult students, differences between traditional-age students and adult students, adult students as at-risk groups, marginalisation of adult learners, and so on (Hansman, 2006). While this range of topics shows that a wide range of issues of interest to adult education has been given considerable attention by researchers, it also shows that issues related to adult learners with special educational needs, including those with disabilities, have not been as well addressed as other issues. Furthermore, discussions about groups marginalised by traditional education systems give examples of groups such as ethnic minorities, the urban poor, the unemployed and women as being among the most disadvantaged groups (see, for example, Schuetze and Slowey (2002); Blair et al (1995)). Persons with disabilities, including deaf/hard of hearing and visually impaired people, are not included in such discussions.

Canipe and Decker (2004:20) identified several principles of adult education. These include the following: adults are willing to learn if the learning is meaningful to them; adults generally accept responsibility for assuming control of their lives; the adult learner's experience plays an important role in his/her learning; and, both internal and external factors motivate adults to learn. These principles are reflected in the insights into adult education and adult learners provided by van der Kamp (1992:191-192) after reviewing literature on adult education. These insights are:

1. All adults have an ability to learn
2. Adults want to learn and learn effectively when they have a strong inner motivation. Intrinsic motivation is a key factor in effective learning
3. Adults resist learning when they are told they must learn something
4. Adults tend to learn effectively if they consider the material relevant to their needs and interests
5. Adults tend to learn what can be applied: they are generally problem-oriented learners
6. Adults value information which is meaningful and useful to them: information related to their expectations and previous experience
7. Adults have a desire to know the outcomes of their learning efforts: they require positive reinforcement and performance feedback
8. Differences in learning abilities are larger within than between age cohorts. Older people tend to learn a little slower, but often learn more meticulously and with more intensity than young people
9. Learning abilities are determined more by previous experience of education and experience of work than by age
10. Different educational needs are associated with different stages in life and career
11. Adults exhibit diverse learning styles, that is, the unique ways and means by which individual learners gather, process, and internalise information
12. Previous learning experience can influence current learning both positively and negatively. The readiness of adults to learn depends on their previous learning experience.

In addition to these factors which are important in enhancing the learning of adult learners, a variety of reasons motivate adults to learn. These range from psychological to socio-economic to political factors (Fasokun et al, 2005). Blair et al (1995) conceptualise the participation of adults in higher education as being the outcome of the interaction of two factors: goals and conditions. Goals include the purposes adults have for resuming their studies, the expected outcomes of these studies, and the achievements they hope to gain. Conditions refer to "those circumstances which both affect and are a product of adults' lives (such as age, school experience, family

situation and employment status)" (Blair et al, 1995:637). In a study of African American female adult learners, Coker (2003) found that the participants in her study were primarily motivated by a desire for development, which was at three levels: personal development, family development, and community development. Although this research focused on African American women, its findings are important for this study because African Americans in general and women in particular have experienced marginalisation, just like persons with disabilities.

Literature on adult learning also contains references to barriers or hindrances to effective learning by adult students. Effective learning of adults depends on how well these barriers are anticipated and dealt with in the learning environment (Fasokun et al, 2005). Cross (1984) quoted in van der Kamp (1992) identified three types of barriers to effective adult participation in education: situational, institutional, and dispositional barriers. Situational barriers are caused by the adult individual's circumstances in life at a given period, such as lack of money or time; institutional barriers stem from the nature of the institution providing the education, such as its accessibility, policies and approach towards adult education; dispositional barriers generally cover psychological barriers to learning, such as fear and lack of confidence (van der Kamp, 1992).

In Coker's (2003) study of African American female adult learners mentioned above, the participants identified a number of challenges in their studies, which can be interpreted in the same context of barriers to adult learning. These included racism, sexism, discrimination, negative stereotypes, prejudice, cultural misunderstanding, and marginalisation as adult learners. Because this study concerned a group of learners who were perceived as different from other learners in more than simply being adults (they were African Americans, and they were female, both of which exposed them to discrimination) it is of particular interest to the study presented here. The main participants of this study, apart from being adults, were exposed to certain additional challenges and barriers because of their disability. It is therefore possible to make comparisons between the experiences of the participants in Coker's (2003) study and the experiences of the participants in the present study.

In summary, adult learners are different from and face different learning challenges than those faced by traditional-age learners. There are a variety of factors which enhance the learning of adults as well as reasons that motivate adults to learn. Key to these is the prior experience of the adult learner before joining university, either in school or other environments. Blair et al (1995) aver that positive experiences in educational settings lead to a desire for more education. The concept of adult learning therefore provides one perspective from which to understand the experiences of the deaf/hard of hearing and visually impaired students in this study.

In the next section, I discuss the issue of attitudes towards disability and how these attitudes affect the inclusion of students with disabilities, including those who are deaf/hard of hearing or visually impaired, in society in general and in school in particular.

2.6 Attitudes and Disability

In this section, I would like to discuss attitudes towards disability and how they affect the education and inclusion of students with disabilities, including those who are deaf/hard of hearing or visually impaired. As has been done elsewhere in this work, some literature referring to attitudes towards disability in general will be used to support the arguments in this section as there is a lot to be found in such literature that is relevant to deaf/hard of hearing and visually impaired students.

People with disabilities often face challenges in their daily lives due to attitudinal barriers related to their disability (Milsom, 2006). Attitudes towards disability influence the way people with disabilities are treated in society. Negative attitudes towards persons with disabilities may result in disabled people receiving negative treatment from the community (World Health Organisation, 2011b). Conversely, positive attitudes lead to better treatment for people with disabilities. Furthermore, negative attitudes, according to the World Health Organisation (2011b), have a negative impact on people with disabilities themselves. For example, they may result in their having low self-esteem.

Attitudes are portrayed in a number of ways, one of which is language. According to Skjørten (2001) there is a relationship between language and attitude. In many areas of the world,

including Africa and Rwanda, derogatory and often dehumanising terms are used to refer to people with disabilities (Karangwa et al, 2010; Lewis, 2009; Thomas, 2005). Although such words may not always convey negative attitudes, they may be interpreted as indications that societies using them do not attach much value to people with disabilities.

After conducting a study about disability in Rwanda, Thomas (2005:21) summarised the attitude of Rwandan society to people with disabilities in these words:

> All the informants reported that a negative attitude towards disabled people among Rwandan society (sic). Disability is a source of shame in a family. Disabled people are underestimated, being seen as useless, meaningless, recipients of charity who need to be cared for because they cannot do things for themselves. Such attitudes consign disabled people to the role of passive victim. In such a climate of negativity, disabled people themselves begin to doubt their abilities and potential.

The 1990-1994 civil war and 1994 Tutsi genocide that took place in Rwanda resulted in an increase in the number of Rwandans with disabilities and thus in their increased visibility in society. This led to an improvement in attitudes towards disabled persons, although this improvement did not benefit deaf/hard of hearing and visually impaired people in any significant way: individuals with physical disabilities, especially amputees, were the main beneficiaries of this change (Lewis, 2009: Thomas, 2005). Kiyaga and Moores (2009) noted that attitudes towards deaf people in Rwanda were quite negative while Thomas (2005) observed that blind people in Rwanda were thought of as being especially vulnerable and helpless.

Research suggests that attitudes towards disability as well as other factors which have no relationship to academics such as stigmatisation of disabled students are related to the academic performance of students with disabilities in higher institutions of learning (Trammell, 2009): positive attitudes lead to better academic performance while negative attitudes adversely affect the academic performance of students with disabilities.

The effects of attitudes towards people with disabilities in general also extend to deaf/hard of hearing and visually impaired people. Nikolaraizi and Makri (2004) posit that hearing people tend to have negative attitudes towards deaf people, attitudes which may permanently damage a deaf individual's personality and harm his/her feelings of self-worth. Negative attitudes of

teachers and peers towards deaf/hard of hearing students pose a barrier to their effective inclusion and participation within the mainstream school (Israelite, Ower and Goldstein, 2002). According to Roe (2008), positive attitudes towards visual impairment lead to better inclusive practices for learners who are visually impaired. Richardson and Roy (2002) observed that visually impaired students in higher institutions of learning were able to perform well despite the attitudinal barriers they faced in their education, a fact that these authors found surprising.

Although both attitudes towards people with disabilities and attitudes towards inclusion affect how learners with disabilities are included in institutions of learning and their educational and social outcomes, the two are not identical and it is not clear how they impact on each other. It is quite likely however that they are related to each other (Milsom, 2006). Attitudes to inclusion will feature more in the remaining sections of this chapter.

This section has provided a brief discussion about attitudes to disability. As the current study was concerned with the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities, the next section concentrates on inclusion and inclusive education.

2.7 Inclusive Education

2.7.1 Inclusion

The successful education of students with and without special educational needs, including disabilities, in the same environment will depend on the adoption and implementation of inclusive practices in education. It is therefore imperative here to discuss the concept of inclusive education.

Inclusive education is part of the wider philosophy of inclusion (Mărgărițoiu, 2010). Inclusion started gaining ground as part of the wider movement towards increased human rights and democracy (Johnsen, 2001). In the words of Booth (2005:1), "…inclusion involves an approach to … society concerned with increasing the participation of all and reducing all forms of discrimination and exclusion." Inclusion has been linked to such events as the 'Prague spring' of 1968 and the struggle of African Americans in the 1960s for equal rights (Johnsen, 2001). The

spirit of inclusion is also reflected in such seminal United Nations declarations as the United Nations Declaration of Human Rights (1948), the United Nations Convention on the rights of the Child (1989), the Standard Rules on the Equalisation of Opportunities for Persons with Disabilities (1994), and UNESCO's Salamanca Statement on Inclusive education (1994) (Johnsen, 2001; Skjørten, 2001). The Salamanca Statement emphasised, inter alia, the right of all children, including those with special needs, for educational adjustment in order for them to attend school; the right of all children to attend school in their home communities in inclusive classes and to receive a child-centred education meeting individual needs; and the belief that inclusive education would ultimately lead to inclusive societies (Swart and Pettipher, 2011; Skjørten, 2001).

The latest and perhaps most important document to aver the right of persons with disabilities to education in an inclusive setting, according to the World Health Organisation (2011b), is the United Nations Convention on the Rights of Persons with Disabilities (CRPD) (2006). The CRPD's Article 24 binds signatories to, among other things, promote inclusive education at all levels and ensure that persons with disabilities are not excluded from the general education system on the basis of their disability; provide reasonable accommodation meeting individual needs; facilitate the learning of braille and sign language; ensure that education for blind, deaf and deafblind individuals is provided in the most appropriate language and mode; ensure that persons with disabilities have equal access to general tertiary education without discrimination (United Nations, 2006).

Inclusion is based on the premise that everyone, even though s/he may be different from the majority, belongs to the same community (Suubi, 2012). It results from a realisation that "We have been created equal though different. No matter gender, looks, ability, health or function, we have been created into one society … A normal society is characterised by its multiplicity and diversity – not by sameness" (Skjørten, 2001:28).

Inclusion therefore stems from an appreciation of differences between people and the understanding that these differences should be accommodated: that they should be a source of unity and not disunity, that diversity should be celebrated and not viewed as an obstacle (César

and Santos, 2006). It thus advocates for the inclusion into society of groups of people who had previously been excluded on the basis of such differences as gender, race, religious beliefs, and ability (Dei, 2005; Skjørten, 2001). Consequently, inclusive practices promote inclusion as opposed to exclusion. The present study focuses on the inclusion in higher education of people with special educational needs, with particular emphasis on deaf/hard of hearing and visually impaired learners.

2.7.2 Inclusive Education

There is no commonly agreed definition of the term 'inclusive education' (Armstrong et al, 2010). These authors note that different ideological and theoretical approaches to the implementation of inclusion often influence the definition of inclusive education adopted. Miles and Singal (2010) have further theorised that the differences in the conceptualisation and implementation of inclusive education could also be influenced by the different contexts in which it is implemented.

Hussein (2008) and Dei (2005) view inclusive education as a process which should lead to the integration of people and groups marginalised on the bases of religion, race, ethnicity, gender, ability, social background, culture, language, class, and so on into the mainstream education system: it involves a wide range of practices aimed at ensuring access to education by sections of the population whose ability to access education would otherwise be jeopardised. Thus, inclusive education is educational provision that responds to all manner of diversity, including but not limited to that caused by disabilities (Dei, 2005). Inclusive education should prepare individuals to be active participants in all aspects of life in their communities, be they political, social, or educational. This gives a holistic view to inclusive education, where it is viewed in wider terms than just an educational process that occurs in the classroom or in a school and involving only learners with disabilities, and which has no relationship to the broader society in which it occurs. The engendering of a sense of community and belonging in people with special educational needs in the mainstream school is important for successful inclusion to occur (Frederickson, Simmonds, Evans and Soulsby, 2007). Moreover, as Mărgărițoiu (2010:82) puts it,

> Inclusive schools are the most effective means of combating discriminatory attitudes, building an inclusive society. Inclusion in society is the highest level of social acceptance, and occurs when the child with special needs acquire (sic) the sense of belonging and full participation in community life.

It is important to point out that inclusive education does not only benefit learners with special educational needs; it is beneficial for all learners involved (World Health Organisation, 2011b; Krüger and Yorke, 2010; Skjørten, 2001).

In addition to being part of the wider movement towards inclusion, the development of inclusive education came about as a reaction to criticisms levelled against traditional institutions catering for people with special educational needs (Söder, 1997) and the perceived segregationist practices of special schools (Skjørten, 2001), which were for a long time the mainstay of educational provision for learners with special educational needs, including those with disabilities (Meijer, Pijl, and Hegarty, 1997:151). Moreover, special schools have been criticised for failing to provide disabled children with the necessary skills for adult life (Oliver and Barnes, 2010).

Having discussed inclusion and inclusive education in a general manner, I will now discuss some of the research that has been done in the area of inclusive education and the issues that emanate from it.

2.7.3 Research in Inclusive Education

A lot of research has been done in order to understand inclusive education. Researchers have looked at this subject from a variety of angles. For instance, some researchers, such as De Schauwer, Van Hove, Mortier and Loots (2008), Frederickson et al (2007), and Jones (2005), have looked at inclusion in pre-school and primary school levels. Other researchers such as Suubi (2012), Fore, Hagan-Burke, Burke, Boon and Smith (2008), and Hussein (2008) have looked at inclusion in secondary schools. Other researchers, including Causton-Theoharis (2009) and Magongwa (2008) have explored inclusion in tertiary institutions of learning. In general, however, the majority of research done has focused on primary and secondary schools. More research needs to be done in higher education institutions in order to get a better understanding of inclusion and how it is implemented in the specific contexts of these institutions. There is also

the need for more research giving an African perspective on inclusive education. Most of the research currently available is from the developed world and is sometimes difficult to apply to an African context.

Apart from looking at inclusive education at different levels of education, researchers have also looked at various aspects of inclusive education. Frederickson et al (2007) examined the social and affective outcomes of inclusion, arguing that these areas have not been sufficiently examined. These authors carried out a study to determine the social and affective outcomes of inclusive education on students in 14 inclusive schools in the UK. The ages of the participants ranged from 8-11 years, a range normally associated with primary school education. As far as special needs were concerned, the study focused on students with social and communication difficulties who had attended special school before transferring to inclusive schools. However, none of the study participants had either a hearing or visual impairment, although four students in the study had unspecified "physical and sensory" special educational needs (Frederickson et al, 2007:108).

In this study, Frederickson et al (2007) found that students with special educational needs who were formerly in special schools were more socially accepted than those students with special educational needs who had never attended special schools. The authors conjecture that this was due to two possible reasons: students from special schools could have benefitted from intervention strategies which were not available to other students with special educational needs. The other possible explanation may be related to the behaviour profiles of the two groups: former students from special schools are seen as shy, while the students with special educational needs who never attended special school were seen as uncooperative. Therefore the perceived social benefits of associating with pupils who are uncooperative are likely to be lower. This study also concluded that students from former special schools were seen as more susceptible to seeking help. At the same time, they were more likely to find students willing to work with them than students with special educational needs who never attended special schools.

The study outlined above raises some questions about the relevance of special schools in providing educational services to students with special educational needs. Overall, students from

special schools seemed to fare better than their counterparts with special needs in mainstream schools who had not attended special school. However, this advantage seems to be based on certain attributes that are not necessarily desirable, such as being shy, which were attributed to students from special schools. Flewitt and Nind (2007) suggest that parents who are interested in the social development of their children with special educational needs tend to prefer inclusive settings, while parents who are more interested in academic development tend to favour a continuum of services, including special schools. But according to Kristensen et al (2006), inclusive education should be the preferred option for all learners with special educational needs where possible, except for those with severe disabilities, including deafness, which make it difficult for them to study effectively in such settings without the necessary adjustments and accommodations to meet their needs.

Research in inclusive education has also focused on the attitudes of teachers towards inclusive education. The rationale for this kind of research is that the attitudes of professionals are an important factor in determining the success or failure of new or innovative programmes such as inclusive education (Avramidis, Bayliss, and Burden, 2000). Avramidis et al (2000) outline a research study they conducted in the United Kingdom to find out the attitudes of student teachers towards inclusion. The participants in this study were secondary school student teachers. The research investigated whether significant differences in attitude exist by examining the relationship of attitudes and independent variables such as gender, age, grade level taught, type of school, and class size. The research also wanted to find out how teachers felt when they were required to teach or deal with a student with a special need, and what the respondents felt should be done to make the school more inclusive and favourable to the needs of all children.

In this research, Avramidis et al (2000) found that teacher trainees held generally positive attitudes towards inclusion although female prospective teachers were more positive to inclusion than male teachers. Furthermore, teachers taking science courses were significantly less positive to inclusion than those taking humanities courses. The research also found that student teachers did not have enough confidence in their ability to meet the individual educational planning requirements of students with special educational needs, and this level of confidence decreased even further with the increase in the severity of the students' needs. Avramidis et al (2000) found

that other independent demographic and situational variables such as age and phase taught, which were also examined in this study, did not significantly affect student teachers' attitudes to inclusion.

Whereas this research illustrates the fact that teachers do not necessarily have negative attitudes towards inclusion of students with special educational needs, it nevertheless shows that they do have concerns about being able to meet the learning requirements of learners with varied learning needs. Miller (1996:5) states that children with low incidence disabilities pose special challenges to teachers, and that when faced with such students teachers often ask such questions as, "How can the child manage if she can't see the blackboard?" "How is my experience as a teacher going to help this child?" "Can the child be cured?" "Shouldn't they all be in special schools?"

Early exposure to inclusive educational theory and practice for teacher trainees can be one way of improving teachers' attitudes and increasing their confidence of working in inclusive classrooms and schools (Avramidis et al, 2000). This is especially important since research suggests that students with special educational needs, just like other students, value teachers who understand them (De Schauwer et al, 2008). Furthermore, there is evidence suggesting that parents of children with special educational needs are apprehensive about taking these children to inclusive schools because of the fear that inclusive teachers would not understand the children's special needs (Flewitt and Nind, 2007). Giving teachers a good foundation in inclusive education would go some way towards allaying such reservations.

Research on inclusive education has also focused on the academic performance of students with special educational needs, sometimes comparing it with that of their peers without special educational needs. This kind of research usually aims at finding out how and whether the implementation of inclusive practices affects the academic performance of students with special educational needs. Fore et al (2008) carried out research to determine whether placement in inclusive (general) classes or segregated (special) classes had any impact on the academic performance of learners with Specific Learning Disorders (SLD). Their conclusion was that there was no significant difference between the academic performance of learners with SLD in

inclusive and special classes. However, Flewitt and Nind (2007) posit that special placements are better for the academic performance of learners with special educational needs.

The idea expressed by Flewitt and Nind (2007) that special schools lead to better academic performance is based on the assumption that such schools have enough teachers trained in special needs education, enough resources, and the general wherewithal to cater for the special needs of students. This is not always the case, especially for developing countries. In a survey of 15 special schools in Uganda, Kristensen et al (2006:140) noted that

> ...total inclusion of all learners with severe disabilities, including learners who are deaf is at present not possible in Uganda due to lack of sufficient educational materials; lack of sufficient numbers of teachers trained in special needs education; high pupil-teacher ratios; and long distances between home and school for some learners.

These authors found that special schools had a whole range of shortcomings, including lack of enough trained teachers (some schools had teachers who were not even trained as teachers); lack of appropriate facilities for learners with special needs (where such materials were available some of it had fallen into disrepair); use of inappropriate teaching methods and materials; lack of proper assessment strategies to determine student needs; and other similar problems. This suggests that special schools do not always provide the answer to improved academic performance for learners with special educational needs.

The purpose of the education system is to provide quality education to individuals so that they can realise their full potential and be able to contribute to and participate fully in the life of their communities (Kristensen et al, 2006). This means that individuals with and without special needs should be able to pursue their education as far as possible. Education for persons with special educational needs is associated with efforts to reduce barriers to learning which may result from both the effects of the special needs on the individual and environmental (social and physical) factors. This is especially important because studies in almost every economic indicator show persons with disabilities lagging behind.

Fairweather and Shaver (1990) note that in addition to primary and secondary education, participation in post-secondary education is necessary to prepare an individual with special needs

for full social and economic independence. These authors reported on partial results from the National Longitudinal Transition Study of Special Education Students, which was a five-year study done in the United States, to follow secondary-level students with special educational needs from high school to early adulthood. Fairweather and Shaver's (1990) focus was on the participation of youth with special educational needs in post-secondary education.

In their analysis of the results of the study mentioned above, Fairweather and Shaver (1990) found that youths with sensory impairments (hearing and visual impairment) and those with speech or other health impairments showed the highest level of participation in postsecondary education. Youths with visual impairment showed the highest level of participation in four-year colleges while deaf/hard of hearing youth tended to attend community colleges. The participation of these youths in postsecondary education neared but did not reach that of non-disabled youth. Furthermore, the participation of disabled youth from the most socially and economically disadvantaged sections of the population in postsecondary education is well below that of non-disabled youth from the same socio-economic group.

As noted above, this study was concerned with the participation of youth with special educational needs in post-secondary education, and not inclusive education per se. However, it raises important questions for any discussion of inclusive education. The authors discuss participation in general post-secondary education, not special educational provision in segregated settings. Why the participation of youth with special educational needs in post-secondary education is below that of youth without special educational needs is a question that in itself can be discussed endlessly but whose discussion cannot avoid bringing up issues of inclusion. One can ask, for example, whether there is a relationship between low levels of participation by disabled youth in tertiary institutions of learning and levels of inclusive practices in those institutions.

In this subsection, I have cited some research findings that shed some light on current practices and debates within the field of inclusive education. As this discussion has illustrated, research in inclusive education has covered a broad range of topics. The issues discussed in this subsection, such as the attitudes of teachers to inclusive education and the inadequate levels of participation

in university education by persons with special educational needs, have been selected because of their pertinence to the present study.

2.8 Conceptual Framework

So far in this chapter, various concepts pertinent to the understanding of the salient themes of this study have been presented. In this section, I examine the two overarching concepts that guided this study, namely inclusive education and special needs education. This study was concerned with exploring the experiences of visually impaired and deaf/hard of hearing students in Rwandan institutions of higher education. These students study in an environment where they constitute part of the wider university community. It is therefore logical to interpret their experiences from the point of view of inclusion. Furthermore, deaf/hard of hearing and visually impaired students can be considered as having special educational needs, hence the need to interpret their experiences from the perspective of special needs education.

2.8.1 Inclusive Education

In section 2.6 the concept of inclusive education was discussed in some detail. It was noted that inclusive education emphasises high quality education for all learners, including those with special educational needs; in addition, however, inclusive education emphasises the importance of all learners being recognised as part of the school community, with opportunities to participate fully in all aspects of school life being accorded to all.

In discussions of inclusive education, one usually encounters two other common terms. These are ‘integrated education’ and ‘mainstreaming’. I will briefly discuss these concepts in relation to inclusive education.

The concepts of integrated education and mainstreaming are often used synonymously (Swart and Pettipher, 2011). Looking at these concepts side by side with inclusive education, it is clear that significant differences exist between inclusive education on the one hand, and integration and mainstreaming on the other. The differences between these approaches lie both in their practical implementation as well as in their philosophical underpinnings.

Inclusive education and integrated education both refer to educational provision in which learners with special educational needs learn with their peers without special educational needs. Allan (2008) explains that integrated education was meant to increase the propinquity of learners with special needs (in locational, functional or social terms) to their peers without special needs. The processes of integration and inclusion, however, are distinguished from each other by the degree of interaction that occurs. Integration sets limits to the extent to which students with and without special educational needs interact (Suubi, 2012). Integrated education can be viewed as representing a continuum along which a student with special educational needs will be offered a place in the regular school according to his/her needs and circumstances (Avramidis et al, 2000). Hence, there are different levels of integration, and the level adopted by a school will determine the level of interaction that occurs in that school and the extent to which a learner's needs will be met. Pijl and Meijer (1997:11) list several variants or levels of integration, including the following:

1. Regular class, no support
2. Regular class, in-class support for teacher and/or learner
3. Regular class, pull-out support
4. Regular class as basis, part-time special class
5. Special class as basis, part-time regular class
6. Full-time special class in a regular school
7. Part-time special school, part-time regular school.

The philosophical orientation of inclusive education is also different from the philosophical orientation of integrated education. According to Avramidis et al (2000:278), integration aims at "fitting the child to existing provision (with necessary support and individualised modifications to curriculum, teaching processes, etc.)" In integrated education, therefore, it is the student with special educational needs who is expected to change and adjust in order to fit into the system. In inclusive education, however,

> …One is ready to change and adjust the system, environment and activities in relation to and in consideration of all users' needs. It is no longer the child with impairment who

> makes all adjustments in order to fit into the existing setting. This requires flexibility, creativity and sensitivity (Skjørten, 2001:38).

Whereas integrated education puts the onus to adapt and adjust on the student's shoulders, inclusive education puts the responsibility on the system to be accommodating and responsive to the needs of all students.

In discourses of inclusion and integration the terms 'mainstream schools' and 'mainstreaming' often feature. While the term 'mainstream school' is used to refer to the 'ordinary' or 'regular' school, as opposed to the special school (see, for instance, De Schauwer et al (2008); Frederickson et al (2007) and Avramidis et al (2000) to illustrate this point), there is some ambiguity and confusion about the meaning of 'mainstreaming' beyond its obvious association with mainstream schools. The explanation of mainstreaming offered by Andrews et al (2004) suggests that there are no differences between integration and mainstreaming. According to them, mainstreaming implies that the child will adapt to the regular classroom environment. However, it offers a broader range of options to the child than pure inclusion. For instance, there are possibilities for having special classes for the learner with special needs, having a resource room, team teaching possibilities, and itinerant teachers. The student does not necessarily spend the whole day in the regular classroom. This fits into some of the variants of integration mentioned above. Therefore, for the purposes of this study, integration and mainstreaming should be understood as similar concepts.

Inclusion can only be appropriate for a student if his/her individual needs are addressed (Andrews et al, 2004). This is true for any student regardless of the nature of special educational needs s/he may have, just as it is true for students without special educational needs. After all, inclusion was not intended for learners with special educational needs only, but for all learners (Allan, 2008).

Inclusive education was adopted due to a number of reasons. One such reason was that special schools were perceived to be isolating in nature, thus denying students the chance to interact with their peers (Skjørten, 2001). The World Health Organisation (2011b) provides the following reasons for adopting inclusive education: because inclusive education means consideration of all

learners' diverse needs, schools will have to develop strategies to do so, and such strategies will be beneficial to all learners, not just those with special educational needs; by educating all learners together, schools can help to reduce negative attitudes towards people with special needs and thus create a more caring society; having all learners in the same school is more cost-effective than having separate systems serving different groups of learners. Miles and Singal (2010) have also noted that the number of students with disabilities is so large that special schools cannot satisfy their need for education, not to mention the vast numbers of children in regular classrooms who fail because of the lack of inclusive classroom practices.

And yet, despite these advantages, Miles and Singal (2010) have argued that implementation of inclusive education is hampered by the lack of a common understanding of what it actually means and implies. Thus, these authors postulate, it becomes difficult to formulate and implement coherent and sustainable policies and practices that are culturally and contextually appropriate.

In focusing on the experiences of deaf/hard of hearing and visually impaired students in higher institutions of learning in Rwanda, institutions which, by virtue of having students with and without special educational needs studying together, should be presumed to be inclusive, this study sought to find out whether the individual needs of these students, including their educational needs, were being met.

2.8.2 Special Needs Education and Special Educational Needs

Another relevant concept for this study is that of special needs education. Since both deaf/hard of hearing and visually impaired students are considered to have special educational needs, a special needs education approach is an important element in interpreting and understanding their experiences in an inclusive educational setting such as the universities where this study took place.

In the past, students with disabilities were mainly educated in special schools (World Health Organisation, 2011b; Skjørten, 2001). This is what is commonly known as 'special education'. There were, and still are, special schools for the blind, special schools for the deaf, and so on.

There are, however, as Kristensen et al's (2006) research showed, special schools that have students with different disabilities studying together. Special education and special schools were premised on the assumption that only students with disabilities needed special educational provision and that this could only be offered in separate and specialised environments. Educational failure and achievement were viewed in terms of a person's disability. This view of disability is sometimes referred to as the psycho-medical view of disability (see, for example, Skjørten (2001) and Avramidis et al (2000)).

In recent years, there has been a paradigm shift away from the psycho-medical view of disability. It has been replaced by the social model, which is also referred to as the interactive or organisational paradigm (Flewitt and Nind, 2007). This paradigm acknowledges differences among individuals, but does not believe that these are sufficient in themselves to account for student failures. Instead, the model emphasises the importance of the environment in which an individual is placed in determining whether his/her individual differences will be a source of difficulties or not (Avramidis et al, 2000). Indeed, Clark, Dyson, Millward and Robson (1999:158) have theorised that special educational needs are "artefacts" of the ordinary school/class practices which are themselves related to the school's organisation. According to these writers, the barriers faced by students are not a reflection of deficits in the learners themselves but are created by the school in which they study. Clark et al (1999) further argue that it is possible for schools to change and be more accommodating for all learners, which would obviate the need for special schools, which are themselves a convenient alternative for schools that do not wish to meet the varying needs of all learners.

The shift away from emphasis on disability was accompanied by the recognition that students other than those with disabilities also face serious educational challenges and difficulties, depending on their different circumstances. UNESCO (1994:6) lists examples of children who may have special educational needs, and these include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalised areas or groups.

Educational provision that caters for the diverse learning needs of learners, including but not limited to those with disabilities, is referred to as special needs education, while the different barriers to learning that students face are considered to be special educational needs (Skjørten, 2001).

In this section, I have looked at the concepts of inclusion and special needs education and special educational needs as the concepts that guided this study. Inclusion has been examined because deaf/hard of hearing and visually impaired students are studying together with peers who have no disabilities in universities in Rwanda. Their experiences therefore need to be interpreted from a perspective that takes this into account. To do this, I chose the inclusion framework. Special needs education and special educational needs were chosen as guiding concepts for this research because students with visual impairment and deaf/hard of hearing students fall in the category of learners with special educational needs. The provision of special needs education is required for them to be able to access the full range of educational provision offered in higher institutions of learning. Having a clear understanding of these two concepts is therefore central to comprehending the experiences of students with special educational needs, including those who are deaf/hard of hearing or visually impaired, and who were the focus of this study.

2.9 Conclusion

This study compared the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. This chapter has therefore focused on areas that were considered relevant to our understanding of the education and inclusion of deaf/hard of hearing and visually impaired students. The literature review has by no means been exhaustive but rather an attempt to provide the reader with an idea of the discussions and debates currently going on with respect to visual impairment and deafness. Some of the existing literature related to the various aspects of this study has been reviewed. I have briefly discussed both the issues of visual impairment and hearing impairment as reflected in some of the available literature. Several germane writings on inclusive education have been presented and discussed. In addition, issues related to adult learners in higher institutions of learning have been discussed due to the belief that the participants in this study qualify to be considered as adult learners. Furthermore, attitudes

towards disability, including hearing and visual impairment, have been discussed because of the likely impact such attitudes can have on inclusion. This study is underpinned by the concepts of inclusive education and special needs education, which provide its conceptual framework. These two concepts have therefore been discussed in this chapter. In the next chapter, I present and discuss the methodology that was employed in carrying out this study.

Chapter 3
Research Methodology

3.1 Introduction

The purpose of this research was to explore the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. As these students are included in the same universities with peers with no special educational needs, these experiences were explored from the perspectives of inclusive education and special needs education. Data were collected from three Rwandan universities: University 1, University 2 and University 3.

In this chapter, the methodology used in this research is described and the research approach and research design employed are outlined, after which the data collection methods and instruments are discussed in detail. This is followed by an explanation of the way in which data obtained were analysed. The possible limitations of this study are explored. A number of issues related to validity and reliability that may have impinged on the conduct of this study are addressed in this chapter. The chapter concludes with a discussion of ethical considerations that were pertinent to the conduct of this study.

3.2 Research Approach and Design

3.2.1 Qualitative and Quantitative Research

The literature on research methods tends to converge on an agreement that there are, broadly speaking, two research approaches: the quantitative research approach and the qualitative research approach (see, for instance, Gelo, Braakmann and Benetka, 2008; McMillan and Schumacher, 2006; Gall, Borg and Gall, 1996). These approaches are distinguished from each other at two levels: the nature of knowledge, that is to say the philosophical and epistemological underpinnings of the understanding of how one conceives the world and the purpose of research; and, secondly, at the methodological level, that is to say how data are collected, analysed, and applied (Gelo et al, 2008; Bryman, 2006; McMillan and Schumacher, 2006).

In order to understand the differences between qualitative and quantitative research, it is essential here to briefly say something about the different philosophical assumptions espoused by these two paradigms. These assumptions influence the different epistemological and ontological perspectives of qualitative and quantitative researchers and thus shape the different worldviews of these two paradigms. These worldviews in turn influence the way qualitative and quantitative research is conducted (Cohen, Manion and Morrison, 2000; Gall et al, 1996).

Generally speaking, researchers can either adopt a positivist or constructivist interpretation of reality. According to Gall et al (1996) the former interpretation is associated with quantitative research while the latter is associated with qualitative research. As a philosophy, positivism assumes that the world and reality are independent entities governed by natural laws which can be understood through objective investigation (Henning, Van Rensburg and Smit, 2004; Gall et al, 1996). On the other hand, constructivism postulates that reality is constructed by individuals and that it is subjective (Creswell, 2009; Gall et al, 1996). Constructivists believe that individuals, through their experiences, interpret and give meaning to reality. Cohen et al (2000:6-7) discuss the implications of different worldviews for the conduct of research in the following words:

> …the contrasting ontologies, epistemologies and models of human beings will in turn demand different research methods. Investigators adopting an objectivist (or positivist) approach to the social world and who treat it like the world of natural phenomena as being hard, real and external to the individual will choose from a range of traditional options – surveys, experiments, and the like. Others favouring the more subjectivist (or anti-positivist) approach and who view the social world as being of a much softer, personal and humanly created kind will select from a comparable range of recent and emerging techniques – accounts, participant observation and personal constructs, for example.

To illustrate these points further, some salient features of and differences between the qualitative and quantitative research approaches are discussed below.

Qualitative research is broad and complex (Brantlinger, Jimenez, Klingner, Pugach and Richardson, 2005) and encompasses a variety of research traditions such as the case study, phenomenological research, and ethnography. Brantlinger et al (2005:195) define qualitative research as "a systematic approach to understanding qualities, or the essential nature, of a

phenomenon within a particular context." Qualitative research therefore entails the examination or exploration of the qualities, characteristics and properties of the phenomenon or phenomena being studied in order to understand and explain these phenomena (Henning et al, 2004) in the context in which they exist. It focuses on the exploration of attitudes, behaviour and experiences (Dawson, 2007).

Creswell (2009:5) explains that quantitative research is "a means for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures." Because quantitative research implies measuring or determining how much of an entity there is (Gelo et al, 2008), it usually results in the generation of statistical data (Dawson, 2007). Surveys and experiments are two research designs traditionally associated with quantitative research.

Gall et al (1996:30) outlined the major differences between qualitative researchers and quantitative researchers. These differences are shown in table 3.1 below.

The differences between quantitative and qualitative research have led to and sustained a debate between quantitative researchers on the one hand and qualitative researchers on the other (Gelo et al, 2008; Johnson and Onwuegbuzie, 2004) concerning the merits and demerits of each approach and which approach is better and more scientific than the other (Dawson, 2007). The arguments between the proponents of qualitative and quantitative research approaches were sometimes so heated that some writers refer to them as 'paradigm wars' (Bryman, 2006). However, each research approach has its strong points and weak points (Dawson, 2007) and, generally speaking, the weaknesses of the quantitative research approach are the strengths of the qualitative research approach, and vice versa (Gelo et al, 2008). After an analysis of the views of some writers on quantitative and qualitative research approaches, Gall et al (1996) concluded that there is no firm evidence to claim that either of the two approaches is better than the other. The view of writers such as Creswell (2009) is that rather than viewing quantitative and qualitative research as two distinct approaches, they should be viewed as two ends of a continuum of research approaches. According to Creswell (2009) a piece of research is neither exclusively quantitative nor exclusively qualitative, but rather it is more quantitative than

qualitative or vice versa. Indeed, the current trend is to combine both quantitative and qualitative approaches in the same research in order to avoid the weaknesses inherent in each of these approaches and to take full advantage of their combined strengths, an approach that has become known as mixed methods research, or MMR in short (Gelo et al, 2008; McMillan and Schumacher, 2006).

Table 3.1: Main differences between the foci of quantitative and qualitative researchers

Quantitative researchers	**Qualitative researchers**
Assume an objective social reality	Assume that social reality is constructed by the participants in it
Assume that social reality is relatively constant across time and settings	Assume that social reality is continuously constructed in local situations
View causal relationships among social phenomena from a mechanistic perspective	Assign human intentions a major role in explaining causal relationships among social phenomena
Take an objective, detached stance toward research participants and their setting	Become personally involved with research participants, to the point of sharing perspectives and assuming a caring attitude
Study populations or samples that represent populations	Study cases
Study behaviour and other observable phenomena	Study the meanings that individuals create and other internal phenomena
Study human behaviour in natural or contrived settings	Study human actions in natural settings
Analyse social reality into variables	Make holistic observations of the total context within which social action occurs
Use preconceived concepts and theories to determine what data will be collected	Discover concepts and theories after data have been collected
Generate numerical data to represent the social environment	Generate verbal and pictorial data to represent the social environment
Use statistical methods to analyse data	Use analytic induction to analyse data
Use statistical inference procedures to generalise findings from a sample to a defined population	Generalise case findings by searching for other similar cases
Prepare impersonal, objective reports of research findings	Prepare interpretive reports that reflect researchers' constructions of the data and an awareness that readers will form their own constructions from what is reported

Source: Gall et al (1996:30).

Because of the possibilities offered by MMR to combine both qualitative and quantitative research approaches in the same study, a better understanding of the phenomenon being investigated is gained. This made it an ideal approach to use in conducting this study. Below, some distinguishing features of MMR and the reasons for its use in the current study are discussed.

3.2.2 Mixed Methods Research

As a distinct research approach or paradigm, mixed methods research, or MMR in short, is a relatively new field (Harwell, 2011), although studies combining quantitative and qualitative research approaches are not (Johnson, Onwuegbuzie and Turner, 2007). Johnson and Onwuegbuzie (2004:17) define mixed methods research (MMR) as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study." In other words, MMR "is a synthesis that includes ideas from qualitative and quantitative research" (Johnson et al, 2007:113). Johnson et al (2007) consider MMR to be the middle ground between the two opposite ends of research methods represented by the quantitative research paradigm and the qualitative research paradigm. Because MMR involves using both quantitative and qualitative research techniques, the resulting findings are stronger than they would be if only one research approach were used (Creswell, 2009; Johnson and Onwuegbuzie, 2004).

Collins, Onwuegbuzie and Sutton (2006:76) have discussed four rationales for using MMR. These include:

- **Participant enrichment**, that is to say variety in the range of participants, e.g. questionnaire respondents in quantitative research and interview participants in qualitative research.
- **Instrument fidelity**, that is to say by using MMR the researcher ensures that the instruments used are more useful and appropriate.
- **Treatment integrity**, that is to say the use of MMR helps the researcher to assesses and use interventions or treatments which are appropriate, useful, and in accordance with the study's intentions and plans.

- **Significance enhancement**, that is to say using MMR increases the significance of a study's findings because of the use of a range of methods.

Just as positivist and constructivist philosophies influence the worldviews and conduct of quantitative and qualitative researchers respectively, MMR is influenced by pragmatist philosophical orientations (Mertens, 2010; Creswell, 2009; Johnson et al, 2007; Johnson and Onwuegbuzie, 2004) and the transformative paradigm (Mertens, 2010). Pragmatism as a philosophy has many variations (Morgan, 2007). As it applies to MMR, pragmatism emphasises the importance of the research problem rather than research methods in conducting research (Creswell, 2009). Thus, the practical choice of methods that will best suit the research problem rather than adherence to particular research approaches and methods is the primary concern for pragmatic mixed methods researchers.

The transformative paradigm as described by Mertens (2010) seems synonymous with the philosophical stance that Creswell (2009) terms the 'advocacy and participatory worldview'. Both these worldviews lay emphasis not only on the conduct of research but also on the ultimate use of the research findings: researchers are conscious of ethical issues related to their research and are interested in research that will be beneficial to research participants. In this sense, for example, the transformative paradigm differs from the positivist paradigm, which values knowledge for its own sake (Mertens, 2010).

MMR, in addition to being able to fuse together qualitative and quantitative methods, has the advantage of allowing for several worldviews (Gelo et al, 2008), which enables a researcher to ask more complex questions and look for more complex explanations to phenomena (Gelo et al, 2008; McMillan and Schumacher, 2006). I explored the experiences of deaf/hard of hearing students and students with visual impairment in Rwandan universities; I wished to understand these experiences from the perspective of these students: this point of view is referred to as the 'emic perspective', which, as Gall et al (1996:478) explain, is "the primacy of the participants' viewpoint rather than the researcher's viewpoint." This is an important cornerstone of qualitative research. At the same time, however, I wished to study the inclusiveness of Rwandan universities as it objectively is, and this is a viewpoint most commonly associated with quantitative research.

In short, the purpose of this research was to gain an understanding of both the subjective and the objective realities of inclusion in Rwandan universities. This helped to provide a better and more holistic understanding of the phenomenon being investigated. Thus, MMR was the best approach to use in carrying out this research as it was the only one which could help in the achievement of this objective.

In addition, one's research questions are an important consideration in determining the research approach to use (Bryman, 2006). Some research questions are more amenable to quantitative research, others to qualitative research, while others can be addressed by using either quantitative or qualitative research approaches. The particular research questions addressed by this study were outlined in section 1.4 of this work. Some of these questions are best answered by a qualitative research approach, while others can be answered by either a qualitative or quantitative research approach. After weighing the benefits of using either of the two traditional research methods on one hand, and using MMR on the other, I decided to use MMR.

The value of the qualitative data obtained in this research lies in the qualities of qualitative research as "interactive, face-to-face research ... Data collection strategies focus on what the phenomenon means to participants... Most qualitative studies ... aim to understand people's views of their world." (McMillan and Schumacher, 2006:340). As such, the researcher looks for information-rich informants who will provide the most revealing information about the phenomenon of interest (McMillan and Schumacher, 2006). Thus, it is the depth of information provided by informants rather than the number of participants that is of prime concern to the researcher. It is possible to work with small numbers of participants as long as they are able to provide deeper insights into the phenomenon. This is why qualitative data were sought from deaf/hard of hearing students, visually impaired students, and some lecturers in this study. Quantitative data on the other hand were sought because of the ability of quantitative research to reach many more people than is possible with qualitative research, even though the data thus obtained may be of a more general nature due to the kind of questions asked by quantitative researchers. Quantitative research was intended to provide a broader understanding of the views of the general student and lecturer population in the participating universities concerning the inclusion of deaf/hard of hearing and visually impaired students.

3.2.3 Research Design

Creswell (2009:206) describes four important considerations in choosing an MMR design:

- **Timing**, which entails consideration of and decisions about whether the study will be conducted in one phase or two phases (see below).
- **Weighting**, which involves decisions about whether qualitative or quantitative data will be given more weight than the other, or whether both qualitative and quantitative data will be given equal weight.
- **Mixing,** which involves decisions about when and how to merge qualitative data during the research process.
- **Theorising,** which involves decisions about how theory will influence the study: whether, for example, the whole study will be guided by one general theory or framework.

Consideration of these factors determines the way an MMR study will be conducted and the research design to use.

A number of research designs exist for conducting mixed methods research. Gelo et al (2008) and McMillan and Schumacher (2006) outline three common MMR designs: triangulation, explanatory, and exploratory designs. Gelo et al (2008) add a fourth research design, namely the embedded research design (see also Creswell, 2009). Another MMR design is the transformative strategy (Creswell, 2009). Triangulation research design is a one-phase design while exploratory and explanatory research designs are usually conducted in two phases, that is a researcher conducts a qualitative or quantitative study first, and then conducts the other type of research after analysing the results of the first phase. Embedded and transformative designs can be one- or two-phase studies (Creswell, 2009; Gelo et al, 2008).

The research design used in this study was the triangulation design. In triangulation,

> The researcher simultaneously gathers both quantitative and qualitative data, merges them using both quantitative and qualitative data analysis methods, and then interprets the results together to provide a better understanding of a phenomenon of interest.

> Approximately equal emphasis is given to each method... (McMillan and Schumacher, 2006:404).

MMR triangulation was selected based on several considerations which made it ideal for this study: first, due to some constraints faced during the conduct of this study, not least among which was the limited time in which to collect data, the research was conducted in one phase. This eliminated the possibility of using either the explanatory or the exploratory design. The embedded design was ruled out because it involves having one data set playing a secondary role to the other set (Gelo et al, 2008). For the purposes of this study, both qualitative and quantitative data were treated equally and given approximately equal significance during data analysis. Another reason why triangulation was used in this study was that, as Creswell (2009) noted, it allows the researcher to compare different sets of data from different sources, which provides a better understanding of the phenomenon being investigated and increases the credibility of the study's findings. By using triangulation, it was possible to get quantitative data from students without disabilities and their lecturers as well as qualitative data from deaf/hard of hearing and visually impaired students and some lecturers and thus get a broader picture of the practice of inclusion in the participating universities.

Triangulation design has several varieties, and Gelo et al (2008) mention three of these: the data transformation model, the validating quantitative data model, and the multilevel model. The multilevel variant was used in this study. The multilevel model in triangulation is used when a researcher wants to investigate different levels within a system. Different approaches are then used to collect data from different levels, after which the data are merged and interpreted (Gelo et al, 2008).

This study had the purpose of exploring the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. In addition to being interested in the opinions of these students, I was also interested in the opinions of fellow students as well as lecturers who shared the same university environment with them. These different groups of people were considered to be levels within a university system, hence the use of the multilevel model.

3.3 Sampling

This section consists of a discussion about how and why participants in this study were selected. Since this was a mixed methods research, both quantitative and qualitative sampling strategies were used to select the participants who took part in the study. The study was conducted in three Rwandan universities, namely University 1, University 2, and University 3. The quantitative aspect of this study was a survey of 220 students without disabilities and 55 lecturers from these three universities. The qualitative part of this study involved interviews with all six deaf/hard of hearing students in the participating universities and nine of the ten second and third year students with visual impairment in University 1, as well as interviews with three lecturers from University 1 who worked with the visually impaired students. The difference in sample sizes between participants in the quantitative and qualitative aspects of this study was due in part to the difference in focus of the qualitative and quantitative approaches. A qualitative researcher studies a less restricted set of experiences with a limited number of participants, seeking depth, while a quantitative researcher studies a specific set of experiences with a large number of participants, seeking breadth (Gall et al, 1996). I sought depth with the interviewees and breadth with the survey participants. The small number of potential participants to choose from also meant that the participants in the qualitative part of the study were few. The following paragraphs describe the sampling strategies which were used to select the participants.

3.3.1 Target Population

The target population, sometimes known simply as the population or universe, is defined by McMillan and Schumacher (2006:119) as "a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which we intend to generalize the results of the research." As this study investigated the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities, its target population comprised of lecturers and students from the five Rwandan universities with deaf/hard of hearing and/or visually impaired students at the time of conducting this study (see table 1.3 for a list of these universities). Although these five universities provided the target population for the study, the

findings cannot be automatically generalised to all of them as will be explained later in this chapter.

3.3.2 Sampling Frame

The sampling frame, also known as the survey population, is that section of the target population from which the actual sample for the research is drawn (McMillan and Schumacher, 2006; Gall et al, 1996). Out of the five universities with deaf/hard of hearing and visually impaired students, three universities, namely University 1, University 2, and University 3 were selected to participate in the study. The sampling frame for this study therefore consisted of students and lecturers from these three universities (see table 4.1 for details of the total number of lecturers and students (i.e. the sampling frame) in these universities). The three institutions were selected because they had the largest number of deaf/hard of hearing and visually impaired students in the country: University 1 had 14 of the 21 visually impaired students in Rwandan universities and one deaf student; University 2 had two deaf students, while University 3 had three deaf/hard of hearing students. There were seven deaf/hard of hearing students in Rwandan universities at the time of conducting this study (see table 1.3 for details of the distribution of deaf/hard of hearing and visually impaired students in Rwandan universities at the time of doing this research).

3.3.3 Sample

The sample for this study was drawn from three different groups of people: the first group was that of deaf/hard of hearing and visually impaired students. This sample comprised of six deaf/hard of hearing students and nine students with visual impairment. The second group was that of students who were neither deaf/hard of hearing nor visually impaired, but who may or may not have had other special educational needs. As the focus of the study was the inclusion of deaf/hard of hearing and visually impaired students, it was felt that special needs other than deafness or visual impairment would not affect its findings. 100 students from each institution had been expected to participate in the study. Ultimately, a total of 220 students, including 79 students from University 1, 45 students from University 2, and 96 students from University 3 participated in the study. The third sample was drawn from the lecturers in the three universities where the study took place. It had been planned that a total of 136 lecturers would take part in

the survey, but the final sample comprised of 35 lecturers from University 1, nine lecturers from University 3, and 11 lecturers from University 2, adding up to a total of 55 lecturers (see table 4.2 for details of issued and returned questionnaires). A further three lecturers from University 1 were interviewed. Decisions about the quantitative sample size were informed in part by the size of the sampling frames (table 4.1) and by the need to select sample sizes that could realistically be reached. As table 4.2 shows, even with this caution, it was not possible to get responses from all the selected respondents. Table 3.2 shows the sample for this study by research approach and participant group.

Table 3.2: Sample for this study by research approach and participant group.

Research approach/ Participants	**Qualitative**	**Quantitative**
Visually impaired	9	
Deaf/hard of hearing	6	
Students without disabilities		220
Lecturers	3	55
Total	18	275

In order to be included in the sample, potential participants had to meet some criteria that had been determined before the study was conducted. These criteria are outlined below.

All the deaf/hard of hearing students in the participating universities were included in the sample by virtue of their being deaf. The only criterion used to select visually impaired students, apart from the presence of a visual impairment, was that they had to be in the second or third year of their studies. This was because there were no visually impaired students in the fourth year at the time of collecting data for this study. Students from the first year were excluded because it was felt that they had not spent sufficient time in university to provide the rich information and considered opinions required.

Ideally, students who participated in the quantitative part of this study should have had some meaningful contact with deaf/hard of hearing or visually impaired students by, for example, sharing some common courses with them. The same holds true for lecturers who completed questionnaires for this study. Lecturers who had taught visually impaired or deaf/hard of hearing students would have made ideal questionnaire respondents. Unfortunately, this proved to be impractical and this criterion had to be waived because the very small numbers of deaf/hard of hearing students in the participating universities meant that it was difficult, if not impossible, to obtain sufficient numbers of both students and lecturers who would have satisfied this criterion: one of the reasons why no lecturers from University 2 and University 3 were interviewed was that many lecturers claimed that they did not have deaf/hard of hearing students in their courses. It would have been possible to get respondents from University 1 who fulfilled this criterion, but this would have resulted in differences between the samples from this institution and the other two, differences that could have potentially affected the study's validity and reliability in an adverse way. Consequently, no specific criteria were used to delimit student and lecturer participants for the quantitative part of this study. However, the lecturers who were interviewed were selected from those lecturers who had the closest interaction with students with visual impairment by, for instance, having taught them for sufficient periods of time to be able to understand their circumstances or having some kind of connection with the resource room in University 1 (see Chapters Five and Six for information about the role of the resource room).

3.3.4 Sampling Techniques

Broadly speaking, there are two classes of sampling techniques a researcher can choose from: probability (or random) sampling techniques and nonprobability (or purposive) sampling techniques (Dawson, 2007; Onwuegbuzie and Collins, 2007; Vogt, 2007; Cohen et al, 2000). Onwuegbuzie and Collins (2007) noted that there has been a false impression given that probability sampling techniques are a preserve of quantitative research while nonprobability sampling schemes are used mainly by qualitative researchers. This is not true, as Onwuegbuzie and Collins (2007) explain. They cite several quantitative studies in which nonprobability sampling schemes were used as well as some qualitative studies which employed probability

sampling techniques. Indeed, nonprobability sampling is the most commonly used sampling method in educational research, according to McMillan and Schumacher (2006).

A researcher's objectives in conducting the study are important considerations in the process of determining the sampling scheme to use. Apropos this issue, Onwuegbuzie and Collins (2007:285-7) explained,

> …if the objective of the study is to generalize the quantitative and/or qualitative findings to the population from which the sample was drawn (i.e., make inferences), then the researcher should attempt to select a sample for that component that is random … If the goal is not to generalize to a population but to obtain insights into a phenomenon, individuals, or events (as will often be the case in the qualitative component of a mixed methods study), then the researcher purposefully selects individuals, groups, and settings for this phase that maximize understanding of the underlying phenomenon.

The purpose of this study, as was explained in section 1.4, was to understand the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities by exploring their experiences in these universities. Thus, generalisation was not the overriding concern for this study but the understanding of the inclusive experiences of deaf/hard of hearing and visually impaired students. Nonprobability sampling techniques were therefore used in this study because they were the most suited to the achievement of this objective.

Nonprobability sampling is based on getting participants from the accessible population or on the need to get participants who represent certain characteristics of interest to the researcher and who, in the words of Creswell (2009:217), "have experienced the central phenomenon". This fits in well with the purpose of this study. The study was carried out in universities which have either deaf/hard of hearing or visually impaired students; an effort was made to include in the sample participants who could give considered responses in interviews and questionnaires. This consideration led to the selection of nonprobability sampling as the best method of obtaining the desired samples for the study.

Nonprobability sampling techniques have two weaknesses: first, the samples are not representative of the larger population, such that generalisation of a study's findings to the larger population from which the sample is drawn is not possible (Cohen et al, 2000). Secondly, a

nonprobability sample could be biased, leading to faulty conclusions (McMillan and Schumacher (2006). Mindful of these criticisms, I employed, to the greatest extent possible, sampling strategies that enabled the selection of as varied a sample as possible in the case of students without disabilities and the lecturers who participated in the quantitative part of the study. It should also be borne in mind that, as has already been explained, understanding the phenomenon being investigated was more important for this study than the need to generalise findings. Furthermore, even with the difficulties involved in generalising findings resulting from the use of nonprobability sampling, readers of a research report are able to determine what elements in it are applicable or similar to their own situation (Henning et al, 2004).

There are as many as 19 types of nonprobability sampling techniques (Onwuegbuzie and Collins, 2007). Three examples include convenience sampling, purposeful sampling, and quota sampling. In this study, purposeful sampling and convenience sampling techniques were used to select participants. Purposeful sampling was used to obtain student samples for both the qualitative and quantitative elements of this study because of the same reasons that influenced the choice of nonprobability sampling methods. In purposeful sampling, the sample is selected on the basis of its representativeness of particular characteristics or its ability to provide particular information of interest to the researcher (McMillan and Schumacher, 2006). The criteria for the selection of the samples of students for this study were largely guided by the need to get information that would be relevant to the study rather than by a desire to have completely representative samples.

The weaknesses of nonprobability sampling methods, and, by extension, purposeful sampling techniques, have already been mentioned. The selection of the samples, especially those involved with the quantitative aspects of the study, took these limitations into account. The use of triangulation in this study was partly influenced by a desire to widen the sample because of the limitations of using purposeful sampling. Thus, drawing samples from students of three different universities was intended to strengthen the study's findings.

Whereas purposeful sampling was used to get student samples, convenience sampling was used to select samples of the lecturers. Given the absence of any specific delimiting variables for this group of participants (except for those who were interviewed), it was theoretically possible to

use probability sampling techniques to obtain samples. However, given the variety of activities that take place in universities, there was always the risk of the researcher not being able to find the selected sample at the appropriate time.

Convenience sampling is based on selecting participants on the basis of accessibility or expediency (McMillan and Schumacher, 2006). It is worth pointing out that the limitations of nonprobability sampling mentioned earlier apply to this kind of sampling technique as well. Nevertheless, the fact that the samples were drawn from three different universities helped to offset these weaknesses.

3.4 Data Collection and Analysis

Since this study was conducted using a mixed methods research approach, both quantitative and qualitative research designs were used in data collection and data analysis. Quantitative data collection and analysis methods were used with regard to data collected from students without disabilities and lecturers. Data from deaf/hard of hearing and visually impaired students as well as from the three lecturers who were interviewed were collected and analysed using qualitative methods.

Broadly speaking, this study was a survey. According to McMillan and Schumacher (2006), survey research is a research study which uses either questionnaires or interviews to gather data from selected samples. Survey research can be used to get information about a particular population's values, attitudes, beliefs, behaviour, and so on (Royse, 2011; McMillan and Schumacher, 2006). Furthermore, according to McMillan and Schumacher (2006), surveys can be used to describe characteristics of a given population, explore relationships between variables, or explain certain characteristics in the population. This means that surveys can be undertaken in both quantitative and qualitative research, which is why this research, although employing the MMR approach, used survey research methods.

This research had the aim of exploring the experiences of deaf/hard of hearing and visually impaired students in Rwandan tertiary institutions of learning, and to compare these experiences with the objective of understanding the nature of the inclusion of these students in these

institutions. Thus, the study can be viewed as both descriptive and exploratory: descriptive in that it tried to describe the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities, and exploratory in that it set out to try and understand the nature of the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities and the underlying factors that influence the nature of this inclusion. In addition, the study had an explanatory aspect, as one of its research questions involved exploring any possible relationships between the experiences of deaf/hard of hearing and visually impaired students and the attitudes of students without disabilities and lecturers towards inclusive education. The survey, as a tool for understanding values, attitudes, beliefs, behaviour, and characteristics of a population, proved ideal as a research design to help achieve this study's objectives.

As has been mentioned above, surveys use questionnaires or interviews to collect data. These were the main techniques used in collecting data for this study. Questionnaires were used to gather data from lecturers and students without disabilities, while interviews were used to get data from deaf/hard of hearing and visually impaired students and three lecturers. The questionnaire for students without disabilities and lecturers was used because of the need to get and compare responses from relatively large samples. In-depth interviews on the other hand, were used in order to get deeper insights about the experiences of deaf/hard of hearing and visually impaired students and some lecturers who had interacted closely with these students.

Data collection instruments used included questionnaires, which largely comprised of closed questions, including some Likert scale items, and a few open-ended ones, and interview guides. Two questionnaires were used, one for the lecturers (Appendix A3), and one for the students without disabilities (Appendix A4). Two interview guides were used, one for deaf/hard of hearing and visually impaired students (Appendix A1), and another one for the three lecturers who were interviewed (Appendix A2).

A tape recorder was used to record the interviews with students with visual impairment, lecturers, and one hard of hearing student who used verbal communication. A video recorder was used to record interviews with deaf students. Using a video recorder was necessary because the interviews with deaf students were conducted in sign language, which is a visual language. This

made it necessary to video-record them. Informed consent was sought from all participants before using these recording devices. In addition, questionnaire respondents were supplied with a participant information sheet which informed them about the aims of the study and requested them to participate in it (see Appendix B for all consent forms and the participant information sheet).

Questionnaires were given to respondents to complete in their various institutions. They were then collected after one week although there were participants who returned them much sooner. Interviews were conducted in places chosen by the participants. The three lecturers chose to be interviewed in their offices while all students but one chose to be interviewed in the resource room in University 1. The remaining student chose to be interviewed at his home.

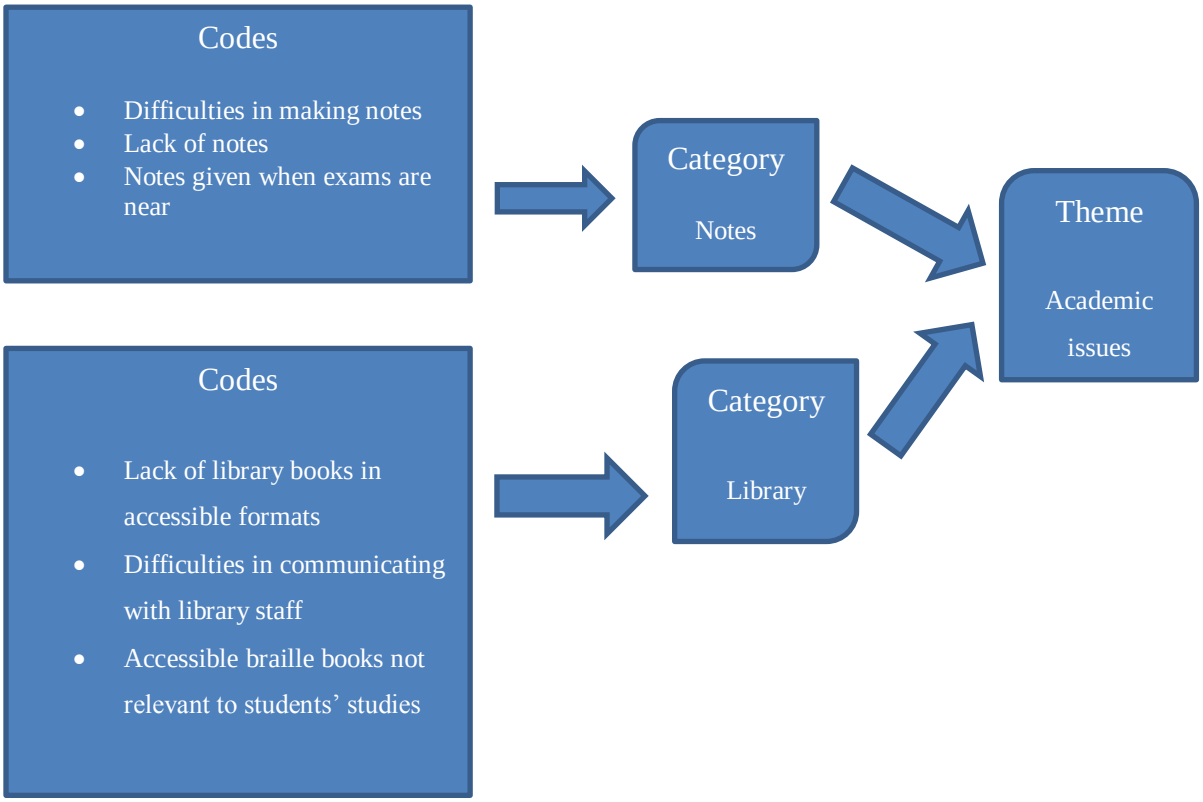
As was the case with data collection, data analysis was conducted using both quantitative methods and qualitative methods, depending on the nature of the data. Data from questionnaires were analysed quantitatively while data from interviews were analysed qualitatively.

Descriptive statistics were used to analyse and interpret quantitative data. Because I was interested in exploring possible similarities and differences in the inclusive practices of the participating universities, frequency distributions and percentages were used to arrange, interpret and present data that resulted from closed questionnaire items in order to highlight these similarities and differences. Although information about such variables as age, gender and course taught (in the case of lecturers) or studied (in the case of students) were included in the questionnaires, the relationship between these variables and participants' responses were not examined. This information is however provided in order to give the reader an idea of the variations found in the samples of this study. Further, more advanced bivariate and multivariate statistics were not employed because of the risk of their obscuring important differences among the three universities.

Both the questionnaires for lecturers and students contained several open-ended questions. The data obtained from these questions were treated in the same way that qualitative data were handled (see below).

All interviews were transcribed verbatim before the process of analysing them started. The transcribed data were analysed using a process described by, among others, Henning et al (2004) and Gall et al (1996). Data were divided into meaningful units and then coded. Related codes were grouped into larger units of meaning, referred to as categories. There were codes which fitted in more than one category, and when this happened these codes were included in all the categories where they fitted. Relationships among categories, referred to as patterns (McMillan and Schumacher, 2006), were sought as a way of interpreting and understanding the data. Various themes thus emerged and were used as the bases for presenting the interview data (Chapter Five). The figure below illustrates the process by which codes were combined to create categories and how the categories them became themes.

Figure 3.1: Examples of how codes, categories and themes were identified



The process of analysing interview data was generally an inductive one: categories and themes identified in this study were generated from the data themselves. Thus, although the interview schedules used guided the interviews and influenced the resulting data to a certain extent, there were no predetermined categories or themes which were used in analysing the data.

3.5 Validity and Reliability

Validity and reliability are important facets of any research design (Vogt, 2007) and feature in quantitative, qualitative and MMR research methods. Validity and reliability are important because they help to determine the value of a piece of research (Vogt, 2007). There are various types of validity and reliability, and there are also different terminologies used for these concepts, depending on whether the research is quantitative or qualitative (McMillan and Schumacher, 2006; Gall et al, 1996). These differences are based on and influenced by the differences between quantitative and qualitative research approaches discussed earlier in this chapter. For example, whereas reliability in quantitative research refers to the extent to which a piece of research can be replicated, in qualitative research it refers to the accuracy and plausibility of findings (Royse, 2011).

Although MMR as an established approach to conducting research is still fairly young and some of its methodological aspects still have to be worked out, researchers using this approach also strive for validity and reliability in their work (Gelo et al, 2008). However, there is a lack of clarity about criteria which can be used to determine the quality of research done using MMR. For instance, Sale and Brazil (2004) reviewed several internet journal databases in search of criteria which could be used to evaluate MMR and concluded that such criteria were missing. It should also be pointed out here that a variety of terms are used by different writers to refer to what can be construed as the general ideas of validity and reliability in MMR. For instance, Sale and Brazil (2004) talk of ‘appraisal criteria’ while Bryman (2006) refers to ‘quality criteria’; Johnson and Onwuegbuzie (2004) talk of ‘legitimation’ in relation to establishing the validity of MMR findings.

Despite the widespread discussion of issues related to validity in the literature on MMR (Gelo et al, 2008), different writers proffer different ideas about how to obtain it. For instance, Bryman (2006) suggests three possible ways of assuring the quality of MMR: applying a common set of criteria to evaluate both the qualitative and quantitative aspects of research; using quantitative criteria to evaluate quantitative aspects and qualitative criteria to evaluate qualitative aspects (a suggestion also made by Creswell, 2009); and developing new criteria specifically designed for MMR. Creswell (2009) adds that it is important to examine validity issues that may arise due to the use of MMR such as, for example, having contradictory data from quantitative and qualitative aspects of the research.

The purpose of the foregoing is to illustrate the fact that there is no straightforward way of approaching the issues of validity and reliability in MMR. In the following paragraphs, I will discuss several measures which were taken in order to improve the quality of this research. The final section of this chapter outlines some limitations of this study, which may also have had a bearing on its quality.

The instruments used in this study were designed with the study's specific research questions and objectives in mind. They targeted specific areas of interest for the research. These instruments were therefore new and had not been tried before. In order to refine the instruments and ensure that they were understood in the same way by all participants, they were piloted before being used in the actual study. This is because piloting research instruments offers the researcher a chance to detect potential problems and errors in the instruments and therefore enables him/her to correct them. In this way, a researcher ensures that the instruments help him/her to get the required information (Dawson, 2007).

The questionnaires were piloted using Rwandan students at the University of the Witwatersrand. Some of these were trained teachers and lecturers in Rwanda and were therefore ideally suitable as participants in the pilot study. Questionnaires for students were given to six people who volunteered to take part in the pilot study. Similarly, questionnaires for lecturers were given to six other volunteer participants. All the 12 volunteers were requested to comment on the questionnaires after completing them.

Interview schedules were also piloted in order to improve them, but using different participants. The interview schedule for lecturers was piloted using three lecturers from University 1 (who were not interviewed in the actual study) and the interview schedule for deaf/hard of hearing and visually impaired students was piloted using four visually impaired students from the National University of Rwanda. It was not possible to include deaf/hard of hearing participants in the pilot sample: all but one of the deaf/hard of hearing students participated in the actual study and, given the proximity of the three universities with deaf/hard of hearing students, it was felt that including the remaining student in the pilot sample could have had unforeseen consequences for the study since there was the likelihood of this student discussing the interview with his colleagues. After each interview, discussions were held with the participant regarding the form and content of the questions.

The pilot study helped in the process of refining the research instruments by pointing out potential sources of misunderstanding. For instance, items which seemed to have different meanings were refined while multiple items that seemed to have the same meaning were merged. The pilot study was thus a key element in improving the quality of this study.

Another important measure that was taken to increase this research's validity and reliability concerned having interview participants confirm the veracity and accuracy of interview transcriptions. For this purpose, each interviewee received transcripts of their interview to confirm whether they reflected their intended meanings. In this way errors in the transcription of data were detected and corrected.

The use of triangulation as a research design was mentioned earlier on in this chapter. Triangulation was intended to contribute to increase the validity and reliability of the research. By collecting information from different people using different instruments, and by comparing the results from the information generated by these different instruments, the study's findings became more credible than would have been the case if only one group of participants had been used or if only one method had been used to collect data.

This section has focused on issues related to how the quality of this study was ensured – issues of validity and reliability. The pilot study, verification of interview transcriptions, and the use of

triangulation have been mentioned as key factors that contributed to the quality of this study. In the next section ethical considerations for the study are examined.

3.6 Ethical Issues

Issues of ethics have become increasingly important in social science research (Cohen et al, 2000), such that ethical concerns are an important consideration in any research undertaking. They are even more important in educational research because it deals with human participants (McMillan and Schumacher, 2006). Ethical issues were even more relevant for this study because it was concerned mainly with people who have disabilities and who may therefore be considered by society to be vulnerable. Respect and concern for vulnerable groups should be prime concerns of any researcher (Mertens, 2010; Creswell, 2009).

It is important for a researcher to take into account a variety of ethical concerns that may result from the conduct of a particular research. Royse (2011:57-61) outlined four guidelines for consideration vis-à-vis ethical matters in research. These are:

- Participation in research must be voluntary.
- Potential research participants should be given sufficient information about the study to determine any possible risks or discomfort as well as any possible benefits that may result from participating in the study.
- Participants should come to no harm as a result of participating in the study.
- Sensitive information shall be protected.

These guidelines provided a framework which enabled this study to meet ethical standards and requirements. The steps which were taken to ensure that this research conformed to ethical standards included the following:

The anonymity of participants was guaranteed and maintained. Fictitious names have been used in presenting the findings from interview data. The utmost care has been taken to ensure that any information that may be used to identify any participant has not been included in the research report. Similarly, the questionnaires did not include personal details such as names of

participants that could be used to identify individuals. This did not only help to ensure that participants' anonymity and privacy is protected, it also encouraged them to air their views freely in the knowledge that the information they provided would not be traced directly back to them. Similarly, an effort was made to protect the identity of the universities which participated in this study. Therefore, the labels 'University 1', 'University 2' and 'University 3' have been used in lieu of the institutions' real names except on those occasions where using the institutions' real names would not lead directly to their identification.

Participation in this research was entirely voluntary. Participants were informed that agreeing to be interviewed or completing the questionnaires was voluntary and that they had the option to withdraw from participating in the research at any time during the data collection process.

The issues discussed in the preceding two paragraphs were incorporated into the informed consent form (see Appendix B1) given to all interview participants and in the participant information sheet (see Appendix B4) that accompanied all the questionnaires distributed during the research process.

In addition to the above ethical considerations, permission to carry out the research was sought (see Appendix C2 for the letter written to the participating institutions requesting for permission to conduct the study) and obtained from the relevant authorities in the three universities where the research was conducted. This move was also based on practical considerations because it meant that in case of any unforeseen complications during the study it was possible to seek help from these authorities.

Mertens (2010) stressed the importance of linking research to the furtherance of human rights (this is especially an issue of concern to researchers who subscribe to the transformative philosophy). A researcher therefore needs to be conscious of the uses to which his/her research will be put. In this respect, this research was not just interested in exploring the inclusiveness of Rwandan universities through the experiences of deaf/hard of hearing and visually impaired students; it had the ultimate goal of helping to make these universities more inclusive and therefore more responsive to the needs of all (see sections 2.6 and 2.7 for a full discussion of inclusion and inclusive education).

In this section, the importance of ethical considerations in the conduct of research has been discussed. Various ethical concerns that were relevant to the conduct of this study have been presented. In the next section some limitations of the study are discussed.

3.7 Limitations of the Study

In section 3.5, validity and reliability as they pertain to this study were discussed. In this section, some limitations of this study, which may also have had an effect on its quality, are discussed. The steps that were taken to reduce the potentially adverse effects of these limitations are also outlined.

The limitations encountered in carrying out this study can be classified into two groups: methodological limitations, and practical/contextual limitations. These limitations and the measures taken to offset their possible impact on the study are discussed below.

With regard to the former set of limitations, the drawbacks associated with the use of nonprobability sampling techniques and the use of triangulation in this study to compensate for these drawbacks have already been discussed.

There are several challenges which may arise from the use of MMR paradigms. Johnson and Onwuegbuzie (2004) outline some key weaknesses of these approaches. These flaws mainly stem from the fact that a researcher has to combine a variety of research methods. The limitations identified by these authors include the fact that MMR is more expensive to carry out than either quantitative or qualitative research; it further requires more time to carry out; it may be more difficult for one researcher to conduct, especially if a concurrent design is used, i.e. conducting both qualitative and quantitative aspects of the research at the same time; the need for a researcher to be conversant with both qualitative and quantitative methods; and last, but certainly not least, the fact that some of the details of MMR methods are still unclear, such as the issues of how to deal with conflicting results and how to analyse qualitative data quantitatively and vice versa.

These are methodological limitations that are, for now, likely to affect any research conducted using MMR designs. However, being aware of them enables a researcher to take appropriate steps to reduce their likely impact on the quality of the research. For instance, the issue of a researcher having to be conversant with both qualitative and quantitative approaches can be dealt with by a researcher using peers to check his instruments and results and by honing one's knowledge and skills in the various research designs that one intends to use in a study.

With respect to the second set of limitations, the fact that I conducted this study in an environment I am familiar with and on a topic about which I have particular experiences and opinions had the potential to pose certain challenges in the conduct of this study, especially in the process of interviewing participants: there was the risk that these subjective opinions could interfere with my desire to let the participants' voices be clearly heard. The issue of objectivity versus subjectivity in research is viewed differently by quantitative and qualitative researchers. Quantitative researchers assume that the researcher and the object of inquiry are two different entities (Sale and Brazil, 2004), such that a completely objective inquiry is thought to be possible. There are qualitative researchers, particularly those on the positivist side of a qualitative-quantitative continuum, who also view subjectivity "...as a problem that interferes with research validity. They may attempt to bracket their subjectivity by taking inventory of, and attempting to control, assumptions and biases when collecting and analyzing data" (Brantlinger et al, 2005:198). In contrast, Brantlinger et al (2005) further observed, there are many qualitative researchers who hold the view that subjectivity cannot be completely controlled in research. Many qualitative researchers agree that instead of attempting to be neutral, distant and objective, it is better to acknowledge one's personal positions, perspectives and value orientations (Brantlinger et al, 2005). Indeed, Henning et al (2004) argue that the qualitative researcher is the main research instrument and that s/he makes meaning of research data by interacting with the research process.

The approach used in this study was based on the premise that subjectivity is unavoidable in research. I was however conscious of the possible effects of this subjectivity on the conduct and eventual outcome of the study and made every effort to ensure that it did not get in the way of the actual research process. Being aware of my personal prejudices and how they could affect the

study helped me to avoid mixing them with research issues. My own experiences and how they influenced the decision to embark on this study were mentioned in section 1.6 in order to clarify my personal position in this research.

The final limitation of this study was related to the actual situation encountered in the field during the conduct of the study. The situation on the ground turned out to be different from that which had been envisaged during the planning stages of the study. The study was planned based on the assumption that it would be possible to find the required samples that conformed to certain predetermined criteria. As was explained in section 3.3 samples meeting these criteria proved impossible to get and some of these criteria had therefore to be abandoned. In addition, the original plan for this study had been to interview three lecturers from each of the three universities involved in the study. In two of the three universities lecturers said they were unaware of the presence of deaf/hard of hearing students and that they had no relevant information to offer. Thus, interviews were conducted with only three lecturers from one university. The adverse effects resulting from the inability to obtain ideal samples and interview sufficient numbers of lecturers were however mitigated by the information obtained from open-ended items which had been included in questionnaires for lecturers. Responses to these items proved to be rich sources of information for this study.

In this section, several factors which could potentially have reduced the current study's ability to realise its stated objectives have been discussed. In addition, the ways in which these limitations were dealt with in order to reduce their possible impact have been presented.

This chapter has focused on methodological issues related to the conduct of this study. The decision to use the MMR research approach and the reasons for this decision have been discussed. Other methodological issues such as the choice of participants for the study and data collection and analysis strategies have also been presented. The chapter also dealt with issues of validity and reliability as well as a discussion of possible limitations of this study. The chapter also outlined how this study strived to meet ethical standards.

In the following chapters, the study's findings are presented and discussed. First to be presented in the next chapter are the findings of the quantitative part of the study.

Chapter 4

Presentation of Quantitative Data

4.1 Introduction

This chapter presents the findings of the quantitative research component of this study. As described in the previous chapter, data were collected by means of two different questionnaires: one questionnaire was completed by students without disabilities from the three participating universities, i.e. University 1, University 2 and University 3. The second questionnaire was distributed among the lecturers of the three participating universities mentioned above.

The chapter is divided into three broad sections: the first section contains some general information about the institutions where the study was conducted. The second section is a presentation of the data from students while the third section comprises of data obtained from the lecturers. A subsequent chapter in this work will present a general discussion of the data as presented in this chapter and the next.

4.2 Institutional Information

Information about the participating institutions was obtained through discussions with various academic and administrative personnel in the institutions. Academic personnel included deans of faculties as well as assistant deans and heads of department. Administrative staff included human resource officers, deans of students, and staff in the office of academic registrars. Additional information about University 3 was sourced from its website. More information about University 1 was obtained from a booklet that contained statistics for this institution for the academic year 2010 and which was made available to the researcher. University 2's 2012-2013 prospectus provided further information about this institution.

The table below shows the number of students and lecturers in the three institutions where this study was conducted. The table also shows the number of deaf/hard of hearing and visually impaired students in the universities. None of the institutions had any statistics concerning the

number of students with special educational needs, including those with hearing and vision loss, studying in them.

Table 4.1: Number of students and lecturers in 2010 in the institutions which participated in this study.

Number/ Institute	Total number of students			Deaf/hard of hearing students			Visually impaired students			Lecturers		
	M	F	T	M	F	T	M	F	T	M	F	T
University 1	3126	1097	4223	0	1	1	10	4	14	156	35	191
University 2	2250	753	3003	1	1	2				130	23	153
University 3	1494	1316	2810	2	1	3				42	11	53

Source: field notes and Kigali Institute of Education (2010).

University 1

University 1 is located in Gasabo district in the city of Kigali. It was set up in 1999. Its initial mandate was, and still is, to produce qualified graduate teachers, although it has diversified its activities somewhat since its establishment. According to this university's Directorate of Planning and Cooperation, the university has three separate programmes: Day, Evening and Distance Training programmes. The number of students provided in the table above is for the Day programme only. The Evening programme has 230 male and 553 female students, making a total of 783 students. Figures for the Distance Training Programme were not readily available. University 1 has four faculties: the Faculty of Science; the Faculty of Social Sciences and Business Studies; the Faculty of Arts and Languages; and the Faculty of Education. One of the highlights of University 1's action plan for the year 2010-2011 as set out by University 1's Directorate of Planning and Cooperation was to equip the Special Needs Resource Room in this university.

University 2

University 2 was established in 1997 in Nyarugenge district, Kigali city, as a technological institute of higher learning. Its main area of focus is therefore science and technology. It has

three faculties, the Faculty of Engineering, the Faculty of Applied Sciences, and the Faculty of Architecture and Environmental Design. University 2 offers a variety of courses for full-time and part-time undergraduate students in a variety of fields of Science and Engineering. In addition, University 2 offers Master's programmes in partnership with some international institutions.

University 3

Located in Kicukiro District in the city of Kigali, this institute of higher learning was established in 2002, and its first batch of students started their courses in 2004. It offers courses in the fields of Banking, Finance, Accounting, Business Management, Human Resource Management, Project Management, Marketing, and other related fields. In addition to offering degree courses, it has a variety of short courses for interested people.

In the next section, data from the students will be presented. Table 4.2 below shows the total number of questionnaires that were issued both for the students and the lecturers, and the number of questionnaires that were returned.

Table 4.2: Number of issued and returned questionnaires

Questionnaires/ Institution	**Students**			**Lecturers**		
	Issued	**Returned**	**% returned**	**Issued**	**Returned**	**% returned**
University 3	100	96	96	22	9	40.9
University 2	100	45	45	54	11	20.4
University 1	100	79	79	60	35	58.3
Total	300	220	73	136	55	40.4

University 2 returned the lowest number of questionnaires for both students (45%) and lecturers (20.4%). In the case of students, I was informed that my questionnaires came at a time when students were preoccupied with financial matters since the questionnaires got to that institution at a time when the government had decided to end the provision of student loans for living expenses to most students. In the case of lecturers, I was told by several potential respondents that they did not even know that University 2 had deaf/hard of hearing students and that therefore there was no point in them filling out the questionnaires since there was nothing they could tell

me. The low number of lecturers from University 2 who responded contributed to the overall drop in the percentage of lecturers who filled out the questionnaires (40.4%).

4.3 Data from Students' Questionnaires

In this section, the data obtained from questionnaires filled in by non-disabled students in the three universities is presented. The students' questionnaire (see Appendix A4) had four sections: the first section related to personal information, requesting participants to state their age, institution where they study, courses studied, and gender. The second section consisted of a series of questions which sought to find out whether the participants were aware of certain issues such as the presence of deaf/hard of hearing or visually impaired students in their institution. Participants were requested to choose one of three possible answers: 'No', 'Yes' or 'Not sure'. The third section sought to find out the opinions of the respondents concerning certain issues, such as whether or not deaf/hard of hearing or visually impaired students should be educated with other students with similar disabilities. Participants were requested to rate the statements in this section on a five-point Likert scale ranging from 'Strongly disagree' to 'Strongly agree', with 'Undecided' in the middle. The last section comprised of three open-ended questions seeking the views of participants. This section also had an additional purpose of gauging the awareness of the participants about issues related to deafness and visual impairment.

Table 4.3 shows the number of students without disabilities who took part in this study by institution, gender and courses studied. As there was a plethora of courses indicated by the respondents, it was decided for purposes of convenience to group them into two broad categories, namely Arts and Sciences. University 2 is an institution offering science-based courses, which explains the absence of students studying humanities courses in the sample from this institution. On the other hand, University 3 focuses mostly on the humanities. That is why there are no students doing science subjects in the sample shown below. University 1 has both humanities and science-based courses. One participant from University 1 did not indicate their gender. This explains the difference between the totals of the 'gender' and 'course' columns in the table below where the total for 'gender' is 219 while the total for 'course' is 220.

Table 4.3: Student participants by institution, gender and course studied.

Institution	Gender			Course		
	Male	**Female**	**Total**	**Arts**	**Sciences**	**Total**
University 1	59	19	78	43	36	**79**
University 2	36	9	45	0	45	**45**
University 3	49	47	96	96	0	**96**
Total	**144**	**75**	**219**	**138**	**81**	**220**

Figure 4.1: Age distribution of student participants.

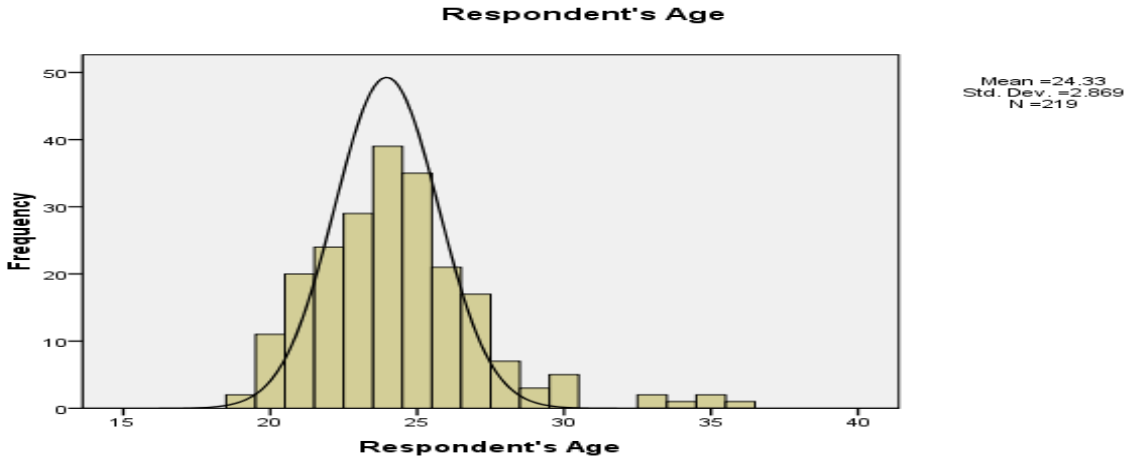


Figure 4.1 shows the age distribution of the students who participated in the study. The youngest students (two of them) were 19 years old while the oldest student was 36 years of age. One participant did not indicate their age.

Before embarking on the presentation of data from the second part of the student questionnaire, some explanations to help the reader understand the tables in this chapter are in order. Table 4.4 below will be used as an example. The figures in the tables are based, first, on the number of participants from each institution and, second, on the number of participants who answered each question. Thus, in table 4.4, 47 students from University 3 said they were familiar with the concept of inclusive education (the row labelled **'count'**. This represents 49% of the 96 participants from University 3 (the row labelled '% within institution'. The row **'% familiar**

with the concept of inclusive education' represents the respondents from each institution who answered the item in a particular manner as a percentage of the total number of respondents who gave the same response. Thus, a total of 89 participants said they were familiar with the concept of inclusive education, and the 47 participants from University 3 mentioned above represent 52.8% of this sum. This row compares institutions by representing participants from each institution as a proportion of the total number of participants who gave the same answer. The row **'% of total'** represents the number of participants who gave a particular response as a percentage of the total number of participants. Thus, the 47 participants in this example comprise 21.4% of the total 220 student participants. This row helps us to compare responses from each institution with the total number of respondents.

The first question put to the students who participated in the study was whether or not they were familiar with the concept of inclusive education. Their responses are outlined in table 4.4. Only 40.5% of the respondents were positive that they were familiar with inclusive education. The rest were either unaware of it or were unsure. Due to the nature of the question, it was not possible to gauge the depth of the respondents' knowledge concerning inclusive education.

Table 4.4: Students' familiarity with inclusive education by Institution.

		Familiar with the concept of inclusive education			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	29	18	32	**79**
	% within Institution	36.7%	22.8%	40.5%	**100.0%**
	% Familiar with the concept of inclusive education	42.0%	20.2%	51.6%	**35.9%**
	% of Total	13.2%	8.2%	14.5%	**35.9%**
University 2	Count	10	24	11	**45**
	% within Institution	22.2%	53.3%	24.4%	**100.0%**
	% Familiar with the concept of inclusive education	14.5%	27.0%	17.7%	**20.5%**
	% of Total	4.5%	10.9%	5.0%	**20.5%**
University 3	Count	30	47	19	**96**
	% within Institution	31.3%	49.0%	19.8%	**100.0%**
	% Familiar with the concept of inclusive education	43.5%	52.8%	30.6%	**43.6%**
	% of Total	13.6%	21.4%	8.6%	**43.6%**
Total	Count	69	89	62	**220**
	% within Institution	31.4%	40.5%	28.2%	**100.0%**
	% Familiar with the concept of inclusive education	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**31.4%**	**40.5%**	**28.2%**	**100.0%**

Student participants were also asked if they were aware that their institutions had deaf/hard of hearing or visually impaired students. Their responses are shown in table 4.5. The vast majority of respondents from University 1 were aware of the presence of deaf/hard of hearing and visually impaired students in their institution. The lower levels of awareness in University 2 and University 3 could be attributed in part to the fact that there were fewer deaf/hard of hearing students in these universities and to the fact that it is not always possible to tell that one has a hearing impairment just by looking at him/her, unless they sign or have hearing aids. At the time of conducting this study, University 1 had one deaf student and 14 visually impaired students out of a total student population of 4223; University 2 had two deaf students out of a total student population of 3003; and University 3 had three deaf students in a total student population of 2810.

Table 4.5: Student participants' awareness of the presence of deaf/hard of hearing or visually impaired students in their institutions

		Aware that institution has deaf or blind students			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	4	75	0	**79**
	% within Institution	5.1%	94.9%	.0%	**100.0%**
	% of Aware that institution has deaf or blind students	5.6%	70.1%	.0%	**35.9%**
	% of Total	1.8%	34.1%	.0%	**35.9%**
University 2	Count	17	12	16	**45**
	% within Institution	37.8%	26.7%	35.6%	**100.0%**
	% of Aware that institution has deaf or blind students	23.9%	11.2%	38.1%	**20.5%**
	% of Total	7.7%	5.5%	7.3%	**20.5%**
University 3	Count	50	20	26	**96**
	% within Institution	52.1%	20.8%	27.1%	**100.0%**
	% of Aware that institution has deaf or blind students	70.4%	18.7%	61.9%	**43.6%**
	% of Total	22.7%	9.1%	11.8%	**43.6%**
Total	Count	71	107	42	**220**
	% within Institution	32.3%	48.6%	19.1%	**100.0%**
	% of Aware that institution has deaf or blind students	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**32.3%**	**48.6%**	**19.1%**	**100.0%**

Students were asked if they attended any courses together with deaf/hard of hearing or visually impaired students. Table 4.6 shows their responses. In University 1, there are some core courses related to education and teaching which are compulsory for all students. This may explain the high number of respondents from University 1 who shared courses with visually impaired students.

Table 4.6: Students' awareness of shared courses with deaf or blind students

		Awareness of shared courses with deaf or blind students			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	6	69	4	**79**
	% within Institution	7.6%	87.3%	5.1%	**100.0%**
	% of Awareness of shared courses with deaf or blind students	6.5%	72.6%	12.1%	**35.9%**
	% of Total	2.7%	31.4%	1.8%	**35.9%**
University 2	Count	27	6	12	**45**
	% within Institution	60.0%	13.3%	26.7%	**100.0%**
	% of Awareness of shared courses with deaf or blind students	29.3%	6.3%	36.4%	**20.5%**
	% of Total	12.3%	2.7%	5.5%	**20.5%**
University 3	Count	59	20	17	**96**
	% within Institution	61.5%	20.8%	17.7%	**100.0%**
	% of Awareness of shared courses with deaf or blind students	64.1%	21.1%	51.5%	**43.6%**
	% of Total	26.8%	9.1%	7.7%	**43.6%**
Total	Count	92	95	33	**220**
	% within Institution	41.8%	43.2%	15.0%	**100.0%**
	% of Awareness of shared courses with deaf or blind students	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**41.8%**	**43.2%**	**15.0%**	**100.0%**

Participants were asked whether the university authorities had made any efforts to help the student community understand the needs of deaf/hard of hearing or visually impaired students in their institutions. Their responses are shown in table 4.7 below. Exactly half of the respondents said their institutions had made efforts to make them aware of the needs of deaf/hard of hearing or visually impaired students. It was not possible to establish what these efforts were, however, as this aspect was not included in the student questionnaire. 21.8% of the respondents said they were not sure, which means that these efforts did not reach them.

Table 4.7: Responses concerning universities' efforts to familiarise students about the needs of deaf or blind students

		University authorities' efforts			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	2	75	2	**79**
	% within Institution	2.5%	94.9%	2.5%	**100.0%**
	% of University authorities' efforts	3.2%	68.2%	4.2%	**35.9%**
	% of Total	.9%	34.1%	.9%	**35.9%**
University 2	Count	22	5	18	**45**
	% within Institution	48.9%	11.1%	40.0%	**100.0%**
	% of University authorities' efforts	35.5%	4.5%	37.5%	**20.5%**
	% of Total	10.0%	2.3%	8.2%	**20.5%**
University 3	Count	38	30	28	**96**
	% within Institution	39.6%	31.3%	29.2%	**100.0%**
	% of University authorities' efforts	61.3%	27.3%	58.3%	**43.6%**
	% of Total	17.3%	13.6%	12.7%	**43.6%**
Total	Count	62	110	48	**220**
	% within Institution	28.2%	50.0%	21.8%	**100.0%**
	% of University authorities' efforts	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**28.2%**	**50.0%**	**21.8%**	**100.0%**

Student participants were further asked whether they had taken time to inform themselves about the needs of deaf/hard of hearing or visually impaired students. Table 4.8 shows their responses. The vast majority of respondents from University 1 responded in the affirmative while the majority of respondents from both University 2 and University 3 had either not taken the time to inform themselves about the needs of deaf/hard of hearing or blind students or, rather strangely, were not sure if they had done so.

Table 4.8: Participants' initiative to inform themselves about the needs of deaf or blind students

		Have you taken time to inform yourself about the needs of deaf or blind students?			
		No	**Yes**	**Not sure**	**Total**
University 1	**Count**	**2**	**74**	**3**	**79**
	% within Institution	2.5%	93.7%	3.8%	**100.0%**
	% Who have taken time to inform themselves about the needs of deaf or blind students	2.8%	60.7%	11.1%	**35.9%**
	% of Total	.9%	33.6%	1.4%	**35.9%**
University 2	Count	24	12	9	**45**
	% within Institution	53.3%	26.7%	20.0%	**100.0%**
	% Who have taken time to inform themselves about the needs of deaf or blind students	33.8%	9.8%	33.3%	**20.5%**
	% of Total	10.9%	5.5%	4.1%	**20.5%**
University 3	Count	45	36	15	**96**
	% within Institution	46.9%	37.5%	15.6%	**100.0%**
	% Who have taken time to inform themselves about the needs of deaf or blind students	63.4%	29.5%	55.6%	**43.6%**
	% of Total	20.5%	16.4%	6.8%	**43.6%**
Total	Count	71	122	27	**220**
	% within Institution	32.3%	55.5%	12.3%	**100.0%**
	% Who have taken time to inform themselves about the needs of deaf or blind students	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**32.3%**	**55.5%**	**12.3%**	**100.0%**

The researcher sought to find out whether or not the participants had had any interaction with deaf/hard of hearing or visually impaired students in their institutions. Their responses are presented in table 4.9 below. The least interaction between non-disabled students and deaf/hard of hearing or visually impaired students appears to occur in University 2 while all but one participant in University 1 had had some form of interaction with deaf/hard of hearing or visually impaired students.

Table 4.9: Students' interaction with deaf or blind students

		Have you had any interaction with a deaf or blind student of this university?			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	1	78	0	**79**
	% within Institution	1.3%	98.7%	.0%	**100.0%**
	% Who have had any interaction with a deaf or blind student of the university	1.1%	68.4%	.0%	**35.9%**
	% of Total	.5%	35.5%	.0%	**35.9%**
University 2	Count	30	8	7	**45**
	% within Institution	66.7%	17.8%	15.6%	**100.0%**
	% Who have had any interaction with a deaf or blind student of the university	34.1%	7.0%	38.9%	**20.5%**
	% of Total	13.6%	3.6%	3.2%	**20.5%**
University 3	Count	57	28	11	**96**
	% within Institution	59.4%	29.2%	11.5%	**100.0%**
	% Who have had any interaction with a deaf or blind student of the university	64.8%	24.6%	61.1%	**43.6%**
	% of Total	25.9%	12.7%	5.0%	**43.6%**
Total	Count	88	114	18	**220**
	% within Institution	40.0%	51.8%	8.2%	**100.0%**
	% Who have had any interaction with a deaf or blind student of the university	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**40.0%**	**51.8%**	**8.2%**	**100.0%**

Another question put to the student participants and which is in a way related to the question presented above (that of interaction between deaf/hard of hearing and visually impaired students and students without disabilities) sought to find out whether or not the participants had been approached personally and asked for any form of assistance by a deaf/hard of hearing or visually impaired colleague. Through this question, the researcher wanted to establish if deaf/hard of hearing and visually impaired students tried to reach out to their colleagues and whether there were any forms of collaboration between the two groups of students. Table 4.10 outlines their responses. As the table shows, response patterns to this question follow the same general trend as that observed in table 4.9.

Table 4.10: Responses concerning whether or not participants had been requested for help by deaf or blind students

		Has a deaf or blind student of this university approached you personally for assistance of any kind?			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	1	77	1	**79**
	% within Institution	1.3%	97.5%	1.3%	**100.0%**
	% Who have been personally approached by a deaf or blind student in the university for assistance of any kind	1.0%	77.8%	4.3%	**35.9%**
	% of Total	.5%	35.0%	.5%	**35.9%**
University 2	Count	29	5	11	**45**
	% within Institution	64.4%	11.1%	24.4%	**100.0%**
	% Who have been personally approached by a deaf or blind student in the university for assistance of any kind	29.6%	5.1%	47.8%	**20.5%**
	% of Total	13.2%	2.3%	5.0%	**20.5%**
University 3	Count	68	17	11	**96**
	% within Institution	70.8%	17.7%	11.5%	**100.0%**
	% Who have been personally approached by a deaf or blind student in the university for assistance of any kind	69.4%	17.2%	47.8%	**43.6%**
	% of Total	30.9%	7.7%	5.0%	**43.6%**
Total	Count	98	99	23	**220**
	% within Institution	44.5%	45.0%	10.5%	**100.0%**
	% Who have been personally approached by a deaf or blind student in the university for assistance of any kind	100.0%	100.0%	100.0%	**100.0%**
	% of Total	44.5%	45.0%	10.5%	100.0%

Student respondents were also asked whether any of their deaf/hard of hearing or visually impaired colleagues were their friends. As table 4.11 below shows, 49.1% of the respondents answered ‘yes’, with 70.4% of all positive respondents being from University 1.

Table 4.11: Friendship between respondents and deaf and blind students

		Are any of the deaf or blind students in this university your friend?			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	1	76	2	**79**
	% within Institution	1.3%	96.2%	2.5%	**100.0%**
	% Who have deaf or blind students in their university as friends	1.2%	70.4%	7.4%	**35.9%**
	% of Total	.5%	34.5%	.9%	**35.9%**
University 2	Count	25	8	12	**45**
	% within Institution	55.6%	17.8%	26.7%	**100.0%**
	% Who have deaf or blind students in their university as friends	29.4%	7.4%	44.4%	**20.5%**
	% of Total	11.4%	3.6%	5.5%	**20.5%**
University 3	Count	59	24	13	**96**
	% within Institution	61.5%	25.0%	13.5%	**100.0%**
	% Who have deaf or blind students in their university as friends	69.4%	22.2%	48.1%	**43.6%**
	% of Total	26.8%	10.9%	5.9%	**43.6%**
Total	Count	85	108	27	**220**
	% within Institution	38.6%	49.1%	12.3%	**100.0%**
	% Who have deaf or blind students in their university as friends	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**38.6%**	**49.1%**	**12.3%**	**100.0%**

Participants were asked whether they treated deaf or blind students in the same way they treated the rest of the students in their institutions. Although 30% of respondents said 'no' and 15.5% of them were not sure (table 4.12) it is not possible to infer what the actual difference is between the way respondents treat deaf or blind colleagues and the way they treat the rest of the students.

Table 4.12: Students' perceptions about how they treated deaf or blind students

		Do you treat the deaf or blind students in the same way you treat the rest of the students?			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	1	76	2	**79**
	% within Institution	1.3%	96.2%	2.5%	**100.0%**
	% Who treat the deaf or blind students in the same way they treat the rest of the students	1.5%	63.3%	5.9%	**35.9%**
	% of Total	.5%	34.5%	.9%	**35.9%**
University 2	Count	19	11	15	**45**
	% within Institution	42.2%	24.4%	33.3%	**100.0%**
	% Who treat the deaf or blind students in the same way they treat the rest of the students	28.8%	9.2%	44.1%	**20.5%**
	% of Total	8.6%	5.0%	6.8%	**20.5%**
University 3	Count	46	33	17	**96**
	% within Institution	47.9%	34.4%	17.7%	**100.0%**
	% Who treat the deaf or blind students in the same way they treat the rest of the students	69.7%	27.5%	50.0%	**43.6%**
	% of Total	20.9%	15.0%	7.7%	**43.6%**
Total	Count	66	120	34	**220**
	% within Institution	30.0%	54.5%	15.5%	**100.0%**
	% Who treat the deaf or blind students in the same way they treat the rest of the students	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**30.0%**	**54.5%**	**15.5%**	**100.0%**

The final question in this particular section of the questionnaire related to participants' opinions regarding whether or not lecturers in their institutions made sufficient efforts to help deaf/hard of hearing or visually impaired students in their institutions learn. Table 4.13 below outlines their responses. While the majority of respondents from University 1 answered in the affirmative, the majority of respondents from University 2 and University 3 either answered in the negative or were not sure.

Table 4.13: Participants' perceptions about the efforts made by lecturers to help deaf or blind students learn

		Do you think the lecturers here make enough efforts to help the deaf or blind students learn?			
		No	**Yes**	**Not sure**	**Total**
University 1	Count	2	72	5	**79**
	% within Institution	2.5%	91.1%	6.3%	**100.0%**
	% Who think the lecturers in their university make enough efforts to help the deaf or blind students learn	4.5%	63.2%	8.1%	**35.9%**
	% of Total	.9%	32.7%	2.3%	**35.9%**
University 2	Count	14	9	22	**45**
	% within Institution	31.1%	20.0%	48.9%	**100.0%**
	% Who think the lecturers in their university make enough efforts to help the deaf or blind students learn	31.8%	7.9%	35.5%	**20.5%**
	% of Total	6.4%	4.1%	10.0%	**20.5%**
University 3	Count	28	33	35	**96**
	% within Institution	29.2%	34.4%	36.5%	**100.0%**
	% Who think the lecturers in their university make enough efforts to help the deaf or blind students learn	63.6%	28.9%	56.5%	**43.6%**
	% of Total	12.7%	15.0%	15.9%	**43.6%**
Total	Count	44	114	62	**220**
	% within Institution	20.0%	51.8%	28.2%	**100.0%**
	% Who think the lecturers in their university make enough efforts to help the deaf or blind students learn	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**20.0%**	**51.8%**	**28.2%**	**100.0%**

As mentioned earlier, the next section of the student questionnaire comprised of a series of statements to which respondents were expected to indicate their level of agreement or disagreement using a five-point scale. The first of these statements sought to find out what the participants thought of educating deaf/hard of hearing and visually impaired students together with other deaf/hard of hearing or visually impaired students. Their responses are displayed in table 4.14 below. Nearly 38% of the participants agreed or strongly agreed that deaf or blind students should be educated together with other students with similar disabilities, with a further 9.6% declaring that they were undecided. One participant did not answer this question.

Table 4.14: Students' perceptions on where to educate deaf or blind students.

		Deaf or blind students should be taught together with other deaf or blind students					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	38	28	0	4	9	**79**
	% within Institution	48.1%	35.4%	.0%	5.1%	11.4%	**100.0%**
	% of Deaf or blind students should be taught together with other deaf or blind students	61.3%	52.8%	.0%	9.3%	22.5%	**36.1%**
	% of Total	17.4%	12.8%	.0%	1.8%	4.1%	**36.1%**
University 2	Count	9	7	8	13	8	**45**
	% within Institution	20.0%	15.6%	17.8%	28.9%	17.8%	**100.0%**
	% of Deaf or blind students should be taught together with other deaf or blind students	14.5%	13.2%	38.1%	30.2%	20.0%	**20.5%**
	% of Total	4.1%	3.2%	3.7%	5.9%	3.7%	**20.5%**
University 3	Count	15	18	13	26	23	**95**
	% within Institution	15.8%	18.9%	13.7%	27.4%	24.2%	**100.0%**
	% of Deaf or blind students should be taught together with other deaf or blind students	24.2%	34.0%	61.9%	60.5%	57.5%	**43.4%**
	% of Total	6.8%	8.2%	5.9%	11.9%	10.5%	**43.4%**
Total	Count	62	53	21	43	40	**219**
	% within Institution	28.3%	24.2%	9.6%	19.6%	18.3%	**100.0%**
	% of Deaf or blind students should be taught together with other deaf or blind students	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	**28.3%**	**24.2%**	**9.6%**	**19.6%**	**18.3%**	**100.0%**

Another statement about which student participants were asked to give an opinion was that deaf/hard of hearing and visually impaired students had the same academic potential as students without disabilities. Participants' responses are portrayed in table 4.15. 26.9% of the respondents disagreed with the statement while 9.1% of them were undecided.

Table 4.15: Students' views about whether or not deaf and blind students have the same academic potential as other students without disabilities

		Deaf and blind students have the same academic potential as other students					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	2	14	4	48	11	**79**
	% within Institution	2.5%	17.7%	5.1%	60.8%	13.9%	**100.0%**
	% who believe deaf and blind students have the same academic potential as other students	10.5%	36.8%	20.0%	49.5%	23.9%	**35.9%**
	% of Total	.9%	6.4%	1.8%	21.8%	5.0%	**35.9%**
University 2	Count	5	10	5	19	6	**45**
	% within Institution	11.1%	22.2%	11.1%	42.2%	13.3%	**100.0%**
	% who believe deaf and blind students have the same academic potential as other students	26.3%	26.3%	25.0%	19.6%	13.0%	**20.5%**
	% of Total	2.3%	4.5%	2.3%	8.6%	2.7%	**20.5%**
University 3	Count	12	14	11	30	29	**96**
	% within Institution	12.5%	14.6%	11.5%	31.3%	30.2%	**100.0%**
	% who believe deaf and blind students have the same academic potential as other students	63.2%	36.8%	55.0%	30.9%	63.0%	**43.6%**
	% of Total	5.5%	6.4%	5.0%	13.6%	13.2%	**43.6%**
Total	Count	19	38	20	97	46	**220**
	% within Institution	8.6%	17.3%	9.1%	44.1%	20.9%	**100.0%**
	% who believe deaf and blind students have the same academic potential as other students	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**8.6%**	**17.3%**	**9.1%**	**44.1%**	**20.9%**	**100.0%**

Students were asked what they thought of the suggestion that deaf/hard of hearing and visually impaired students in their institutions found it more difficult than non-disabled students to cope with their academic work. Their responses are displayed in table 4.16. While the majority of respondents from University 1 disagreed or disagreed strongly with this sentiment, responses from University 2 and University 3 were less clear-cut. Significant numbers of respondents from University 2 and University 3 professed to be undecided about the issue.

Table 4.16: Responses to whether deaf and blind students find it more difficult than non-disabled students to cope with their academic work.

		Deaf and blind students find it more difficult than other students to cope with academic work					
		Strongly agree	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**	**Total**
University 1	Count	1	21	5	40	12	**79**
	% within Institution	1.3%	26.6%	6.3%	50.6%	15.2%	**100.0%**
	% who believe deaf and blind students find it more difficult than other students to cope with academic work	7.1%	40.4%	11.6%	53.3%	33.3%	**35.9%**
	% of Total%	.5%	9.5%	2.3%	18.2%	5.5%	**35.9%**
University 2	Count	6	7	13	13	6	**45**
	% within Institution	13.3%	15.6%	28.9%	28.9%	13.3%	**100.0%**
	% who believe deaf and blind students find it more difficult than other students to cope with academic work	42.9%	13.5%	30.2%	17.3%	16.7%	**20.5%**
	% of Total	2.7%	3.2%	5.9%	5.9%	2.7%	**20.5%**
University 3	Count	7	24	25	22	18	**96**
	% within Institution	7.3%	25.0%	26.0%	22.9%	18.8%	**100.0%**
	% who believe deaf and blind students find it more difficult than other students to cope with academic work	50.0%	46.2%	58.1%	29.3%	50.0%	**43.6%**
	% of Total	3.2%	10.9%	11.4%	10.0%	8.2%	**43.6%**
Total	Count	14	52	43	75	36	**220**
	% within Institution	6.4%	23.6%	19.5%	34.1%	16.4%	**100.0%**
	% who believe deaf and blind students find it more difficult than other students to cope with academic work	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**6.4%**	**23.6%**	**19.5%**	**34.1%**	**16.4%**	**100.0%**

Another issue concerning which student participants' views were sought related to the possibility of deaf/hard of hearing and blind students being able to find employment once they graduated. Responses to the statement that it was unlikely that deaf and blind students would be able to find employment once they graduated are shown in table 4.17. Only a quarter of the participants either strongly disagreed or disagreed with this statement while another 26.4% responded by ticking the 'undecided' check-box.

Table 4.17: Responses to the statement that it was unlikely that deaf and blind students would be able to find employment after graduating

		It is unlikely that deaf and blind students will be able to find employment after graduating					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	3	6	30	28	12	**79**
	% within Institution	3.8%	7.6%	38.0%	35.4%	15.2%	**100.0%**
	% who believe it is unlikely that deaf and blind students will be able to find employment after graduating	12.0%	19.4%	51.7%	40.0%	33.3%	**35.9%**
	% of Total	1.4%	2.7%	13.6%	12.7%	5.5%	**35.9%**
University 2	Count	6	9	11	15	4	**45**
	% within Institution	13.3%	20.0%	24.4%	33.3%	8.9%	**100.0%**
	% who believe it is unlikely that deaf and blind students will be able to find employment after graduating	24.0%	29.0%	19.0%	21.4%	11.1%	**20.5%**
	% of Total	2.7%	4.1%	5.0%	6.8%	1.8%	**20.5%**
University 3	Count	16	16	17	27	20	**96**
	% within Institution	16.7%	16.7%	17.7%	28.1%	20.8%	**100.0%**
	% who believe it is unlikely that deaf and blind students will be able to find employment after graduating	64.0%	51.6%	29.3%	38.6%	55.6%	**43.6%**
	% of Total	7.3%	7.3%	7.7%	12.3%	9.1%	**43.6%**
Total	Count	25	31	58	70	36	**220**
	% within Institution	11.4%	14.1%	26.4%	31.8%	16.4%	**100.0%**
	% who believe it is unlikely that deaf and blind students will be able to find employment after graduating	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**11.4%**	**14.1%**	**26.4%**	**31.8%**	**16.4%**	**100.0%**

Students who participated in the survey were further asked whether they thought their institutions had done enough to enable deaf and blind students realise their full potential. Table 4.18 shows the responses to this question. While a large majority of participants from University 1 agreed that their institution had done enough to ensure that deaf and blind students could realise their full potential, far fewer respondents from University 2 and University 3 felt that this was the case. These two institutions were also marked by large numbers of undecided respondents.

Table 4.18: Students' reaction to the suggestion that their institutions had done enough to help deaf and blind students realise their full potential

		The university has done enough to help deaf and blind students realise their full potential					
		Strongly disagree	**disagree**	**Undecided**	**Agree**	**Strongly agree**	Total
University 1	Count	0	2	13	51	13	79
	% within Institution	.0%	2.5%	16.5%	64.6%	16.5%	100.0%
	% Who believe the university has done enough to help deaf and blind students realise their full potential	.0%	7.1%	21.0%	64.6%	52.0%	35.9%
	% of Total	.0%	.9%	5.9%	23.2%	5.9%	35.9%
University 2	Count	7	11	17	8	2	45
	% within Institution	15.6%	24.4%	37.8%	17.8%	4.4%	100.0%
	% Who believe the university has done enough to help deaf and blind students realise their full potential	26.9%	39.3%	27.4%	10.1%	8.0%	20.5%
	% of Total	3.2%	5.0%	7.7%	3.6%	.9%	20.5%
University 3	Count	19	15	32	20	10	96
	% within Institution	19.8%	15.6%	33.3%	20.8%	10.4%	100.0%
	% Who believe the university has done enough to help deaf and blind students realise their full potential	73.1%	53.6%	51.6%	25.3%	40.0%	43.6%
	% of Total	8.6%	6.8%	14.5%	9.1%	4.5%	43.6%
Total	Count	26	28	62	79	25	220
	% within Institution	11.8%	12.7%	28.2%	35.9%	11.4%	100.0%
	% Who believe the university has done enough to help deaf and blind students realise their full potential	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	**11.8%**	**12.7%**	**28.2%**	**35.9%**	**11.4%**	100.0%

Student participants were further asked whether they thought that lecturers did their best to help deaf/hard of hearing and visually impaired students in their universities. As table 4.19 shows, responses were relatively similar to those presented in table 4.18, with the majority of students from University 1 responding positively while those of University 2 and University 3 were more inclined to disagree or to declare themselves as being undecided.

Table 4.19: Students' responses to the statement that lecturers in their institutions do their best to help deaf and blind students

		Lecturers do their best to help deaf and blind students					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	2	8	9	53	7	**79**
	% within Institution	2.5%	10.1%	11.4%	67.1%	8.9%	**100.0 %**
	% who believe lecturers do their best to help deaf and blind students	9.1%	16.7%	17.0%	64.6%	46.7%	**35.9%**
	% of Total	.9%	3.6%	4.1%	24.1%	3.2%	**35.9%**
University 2	Count	5	18	14	7	1	**45**
	% within Institution	11.1%	40.0%	31.1%	15.6%	2.2%	**100.0 %**
	% who believe lecturers do their best to help deaf and blind students	22.7%	37.5%	26.4%	8.5%	6.7%	**20.5%**
	% of Total	2.3%	8.2%	6.4%	3.2%	.5%	**20.5%**
University 3	Count	15	22	30	22	7	**96**
	% within Institution	15.6%	22.9%	31.3%	22.9%	7.3%	**100.0 %**
	% who believe lecturers do their best to help deaf and blind students	68.2%	45.8%	56.6%	26.8%	46.7%	**43.6%**
	% of Total	6.8%	10.0%	13.6%	10.0%	3.2%	**43.6%**
Total	Count	22	48	53	82	15	**220**
	% within Institution	10.0%	21.8%	24.1%	37.3%	6.8%	**100.0 %**
	% who believe lecturers do their best to help deaf and blind students	100.0%	100.0%	100.0%	100.0 %	100.0%	**100.0 %**
	% of Total	**10.0%**	**21.8%**	**24.1%**	**37.3%**	**6.8%**	**100.0 %**

Respondents were asked about the willingness of non-disabled students to help their deaf or blind counterparts. Students' responses to the suggestion that non-disabled students are on the whole willing to help their deaf or blind colleagues are displayed in table 4.20. Just over half of the participants in the study were positive that non-disabled students were willing to help their deaf and blind colleagues while almost one quarter of them were undecided.

Table 4.20: Students' responses concerning the willingness of non-disabled students to help their deaf or blind colleagues

		Students are willing to help deaf and blind students					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	3	4	8	53	11	**79**
	% within Institution	3.8%	5.1%	10.1%	67.1%	13.9%	**100.0%**
	% who believe students are willing to help deaf and blind students	16.7%	10.8%	14.8%	59.6%	50.0%	**35.9%**
	% of Total	1.4%	1.8%	3.6%	24.1%	5.0%	**35.9%**
University 2	Count	4	8	16	15	2	**45**
	% within Institution	8.9%	17.8%	35.6%	33.3%	4.4%	**100.0%**
	% who believe students are willing to help deaf and blind students	22.2%	21.6%	29.6%	16.9%	9.1%	**20.5%**
	% of Total	1.8%	3.6%	7.3%	6.8%	.9%	**20.5%**
University 3	Count	11	25	30	21	9	**96**
	% within Institution	11.5%	26.0%	31.3%	21.9%	9.4%	**100.0%**
	% who believe students are willing to help deaf and blind students	61.1%	67.6%	55.6%	23.6%	40.9%	**43.6%**
	% of Total	5.0%	11.4%	13.6%	9.5%	4.1%	**43.6%**
Total	Count	18	37	54	89	22	**220**
	% within Institution	8.2%	16.8%	24.5%	40.5%	10.0%	**100.0%**
	% who believe students are willing to help deaf and blind students	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**8.2%**	**16.8%**	**24.5%**	**40.5%**	**10.0%**	**100.0%**

Another issue about which students were asked was related to the ease with which non-disabled students interacted with deaf and blind students. As table 4.21 shows, 62.1% of all respondents from University 1 disagreed with the statement that most non-disabled students did not know what to do when they were together with a deaf or blind student whereas 42.2% and 41.7% of all the respondents from University 2 and University 3 respectively agreed with it.

Table 4.21: Responses to the statement that most students do not know what to do when together with a deaf or blind student

		Most students do not know what to do when together with a deaf or blind student					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	19	30	11	19	0	**79**
	% within Institution	24.1%	38.0%	13.9%	24.1%	.0%	**100.0%**
	% who believe most students do not know what to do when together with a deaf or blind student	48.7%	50.0%	25.6%	33.9%	.0%	**35.9%**
	% of Total	8.6%	13.6%	5.0%	8.6%	.0%	**35.9%**
University 2	Count	7	10	9	13	6	**45**
	% within Institution	15.6%	22.2%	20.0%	28.9%	13.3%	**100.0%**
	% who believe most students do not know what to do when together with a deaf or blind student	17.9%	16.7%	20.9%	23.2%	27.3%	**20.5%**
	% of Total	3.2%	4.5%	4.1%	5.9%	2.7%	**20.5%**
University 3	Count	13	20	23	24	16	**96**
	% within Institution	13.5%	20.8%	24.0%	25.0%	16.7%	**100.0%**
	% who believe most students do not know what to do when together with a deaf or blind student	33.3%	33.3%	53.5%	42.9%	72.7%	**43.6%**
	% of Total	5.9%	9.1%	10.5%	10.9%	7.3%	**43.6%**
Total	Count	39	60	43	56	22	**220**
	% within Institution	17.7%	27.3%	19.5%	25.5%	10.0%	**100.0%**
	% who believe most students do not know what to do when together with a deaf or blind student	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**17.7%**	**27.3%**	**19.5%**	**25.5%**	**10.0%**	**100.0%**

Participants were requested to respond to the statement that when compared with other students, deaf and blind students do not make sufficient efforts to cope with their academic work. Table 4.22 summarises their responses. Most participants tended to disagree with the statement but there were also significant numbers of respondents who were undecided.

Table 4.22: Responses to the suggestion that when compared with other students, deaf and blind students do not make sufficient efforts to cope with their academic work.

		Deaf and blind students do not make sufficient efforts to cope with their academic work.					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	14	34	28	3	0	79
	% within Institution	17.7%	43.0%	35.4%	3.8%	.0%	100.0%
	% who believe deaf and blind students do not make sufficient efforts to cope with their academic work.	35.9%	40.0%	49.1%	11.5%	.0%	35.9%
	% of Total	6.4%	15.5%	12.7%	1.4%	.0%	35.9%
University 2	Count	7	20	12	4	2	45
	% within Institution	15.6%	44.4%	26.7%	8.9%	4.4%	100.0%
	% who believe deaf and blind students do not make sufficient efforts to cope with their academic work.	17.9%	23.5%	21.1%	15.4%	15.4%	20.5%
	% of Total	3.2%	9.1%	5.5%	1.8%	.9%	20.5%
University 3	Count	18	31	17	19	11	96
	% within Institution	18.8%	32.3%	17.7%	19.8%	11.5%	100.0%
	% who believe deaf and blind students do not make sufficient efforts to cope with their academic work.	46.2%	36.5%	29.8%	73.1%	84.6%	43.6%
	% of Total	8.2%	14.1%	7.7%	8.6%	5.0%	43.6%
Total	Count	39	85	57	26	13	220
	% within Institution	17.7%	38.6%	25.9%	11.8%	5.9%	100.0%
	% who believe deaf and blind students do not make sufficient efforts to cope with their academic work.	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	**17.7%**	**38.6%**	**25.9%**	**11.8%**	**5.9%**	**100.0%**

Table 4.23 shows how student participants reacted to the suggestion that deaf and blind students do not make sufficient efforts to be integrated into the university community. The majority of participants disagreed, although those from University 3 were less inclined to disagree than those from University 1 and University 2.

Table 4.23: Responses to the statement that deaf and blind students do not make sufficient efforts to be integrated into the university community

		Deaf and blind students do not make sufficient efforts to be integrated into the university community					
		Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	**Total**
University 1	Count	17	38	16	4	4	**79**
	% within Institution	21.5%	48.1%	20.3%	5.1%	5.1%	**100.0%**
	% who believe deaf and blind students do not make sufficient efforts to be integrated into the university community	38.6%	46.9%	37.2%	12.5%	20.0%	**35.9%**
	% of Total	7.7%	17.3%	7.3%	1.8%	1.8%	**35.9%**
University 2	Count	9	17	12	6	1	**45**
	% within Institution	20.0%	37.8%	26.7%	13.3%	2.2%	**100.0%**
	% who believe deaf and blind students do not make sufficient efforts to be integrated into the university community	20.5%	21.0%	27.9%	18.8%	5.0%	**20.5%**
	% of Total	4.1%	7.7%	5.5%	2.7%	.5%	**20.5%**
University 3	Count	18	26	15	22	15	**96**
	% within Institution	18.8%	27.1%	15.6%	22.9%	15.6%	**100.0%**
	% who believe deaf and blind students do not make sufficient efforts to be integrated into the university community	40.9%	32.1%	34.9%	68.8%	75.0%	**43.6%**
	% of Total	8.2%	11.8%	6.8%	10.0%	6.8%	**43.6%**
Total	Count	44	81	43	32	20	**220**
	% within Institution	20.0%	36.8%	19.5%	14.5%	9.1%	**100.0%**
	% who believe deaf and blind students do not make sufficient efforts to be integrated into the university community	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
	% of Total	**20.0%**	**36.8%**	**19.5%**	**14.5%**	**9.1%**	**100.0%**

The final section of the students' questionnaire consisted of three open-ended questions. In the first question respondents were asked what they thought were the challenges faced by deaf/hard of hearing and visually impaired students in their institutions. The second question concerned the challenges faced by non-disabled students in their interaction with deaf/hard of hearing and

visually impaired students in their institutions. Finally, participants were asked what they thought their institutions should do to help deaf/hard of hearing and visually impaired students learn better.

As a way of starting to present the data from this last section of the student questionnaire, it is worth mentioning that a significant proportion of respondents did not answer the three questions mentioned above. Thirty-six per cent of the respondents, mainly from University 2 and University 3, said their institutions had no deaf/hard of hearing or visually impaired students. A further 9% of all respondents said that they had never seen a deaf/hard of hearing or visually impaired student in their institutions but answered the questions based on their knowledge of deafness and blindness.

With respect to the challenges facing deaf/hard of hearing and visually impaired students in the participating institutions, respondents mentioned a lot of issues which are summarised in table 4.24. They are arranged according to the frequency with which they were mentioned, with the first one being the most frequently recurring and the last being the one that was mentioned by the least number of participants. There are many challenges which were mentioned in relation to both deaf/hard of hearing and visually impaired students. Participants used different expressions to say the same things, so in table 4.24 one phrase may express ideas that were stated differently by different participants. For instance, in the case of visually impaired students, "inappropriate teaching methods" was used when participants used such phrases as "lecturers write on the blackboard which blind students cannot see", and "use of overhead projectors in class during lectures". In relation to challenges faced by deaf students, statements like "they cannot hear what is said in class", "they do not ask questions in class", and "they find it difficult to follow what is going on in class" were interpreted as meaning "lack of sign language interpretation in class". Statements such as "they (deaf/hard of hearing students) cannot talk to us (students without disabilities)", "no one understands them" and "they have problems communicating with others" were labelled "communication". Sometimes respondents answered by writing one word, and when no category could be found to fit such a word it was entered as an entry on its own. This was the case with the entry "discrimination".

Table 4.24: Challenges faced by deaf/hard of hearing and visually impaired students as perceived by non-disabled student participants

Deaf/hard of hearing	Frequency	Visually impaired	Frequency
Communication	58	Lack of appropriate materials (books, writing equipment, etc.)	68
Lack of training and necessary knowledge on the part of lecturers to teach deaf/hard of hearing students/ Inappropriate teaching methods	47	Isolation/they do not socialise with other students	57
Isolation/they do not know how to socialise with non-disabled students	43	Discrimination	56
Lack of sign language interpretation in class	41	Inappropriate teaching methods	52
Discrimination	29	Lack of awareness concerning their abilities and needs	37
There is no one responsible for dealing with issues related to their student life/Lack of support	27	Lack of training and necessary knowledge on the part of lecturers to teach visually impaired students	34
Lack of awareness concerning their abilities and needs	15	Difficulties with mobility and orientation, especially for new students	31
Lack of appropriate materials for their use	14	Difficulties finding appropriate courses.	27
Inability/unwillingness to integrate into the general society	11	Difficulties in finding employment	18
Low self-esteem	9	Limited/lack of participation in social and extracurricular activities such as sports	17
Lack of cooperation with non-disabled students	7		
They are not allowed to study with other students without disabilities	6		
Difficulties finding appropriate courses	4		

It is interesting to note that six respondents said that deaf/hard of hearing students were not allowed to study together with other students without disabilities. This is a misconception that may have existed in the minds of some of the participants who said that they had never seen a deaf student in their university.

In addition to asking participants to state the challenges faced by deaf/hard of hearing and visually impaired students in their institutions, respondents were also requested to outline the challenges faced by students without disabilities in their interaction with deaf/hard of hearing and visually impaired students in their institutions. Respondents were almost unanimous in their answers. All the issues raised with regard to challenges faced by non-disabled students in their

interaction with deaf/hard of hearing students hinged around the issue of communication. Respondents mentioned that their lack of knowledge of sign language (some participants used words such as “symbols”, “signs” and “gestures”) posed the most serious challenge to meaningful interaction. Lack of a common language meant that the two groups could not understand each other and therefore could not participate in shared activities or share and exchange information. In addition, some participants mentioned that some non-disabled students were afraid of deaf/hard of hearing students, a fear which may also be attributed to the absence of meaningful communication between the two groups. Some participants also said that non-disabled students did not know how to approach or initiate contact with a deaf/hard of hearing student.

Concerning the challenges faced by non-disabled students in their interaction with visually impaired students, many respondents mentioned being hampered by a lack of knowledge about the needs and the best way to help or approach a visually impaired person. Socio-cultural attitudes towards and stereotyping of visually impaired persons were also mentioned as barriers to interaction between non-disabled and visually impaired students.

The final question in the non-disabled students’ questionnaire asked participants what they thought their universities should do to help their visually impaired and deaf/hard of hearing students learn better. Respondents’ suggestions are shown in table 4.25. Responses are listed in order of the frequency with which they were mentioned, with the most frequently mentioned suggestion coming first.

Table 4.25: Respondents' views about what their institutions should do to help deaf/hard of hearing and visually impaired students learn better

Deaf/hard of hearing	Frequency	Visually impaired	Frequency
Train lecturers in deaf education	84	Train lecturers in teaching visually impaired students	71
Sensitise students and lecturers about the needs of deaf/hard of hearing students	79	Provide them with more materials, books and equipment	61
Provide them with equipment such as hearing aids	34	Sensitise students and lecturers about the needs of visually impaired students	53
Stop discriminatory practices	31	Motivate and encourage them	42
Create a department responsible for them	30	Make the built environment friendly for their mobility and orientation	35
Give them extra lessons	22	They should be represented on university councils/boards/committees	17
Appoint one of them to represent them on university organs/boards/councils	17	Provide them with financial support	8
Admit more deaf/hard of hearing students to reduce their isolation	16	Provide accommodation for them	6
Find classes where deaf students can learn by themselves	9	Give them food	5
Establish a mechanism for identifying them	9		
Establish a mechanism for informing lecturers that they have such a student in their class	7		
Encourage them to participate in shared activities with other students	7		
Provide them with accommodation	5		

In this section, data from the questionnaire for students without disabilities has been presented. In the next section, data obtained from questionnaires completed by lecturers is presented.

4.4 Data from Lecturers' Questionnaires

In this section, data obtained from questionnaires completed by lecturers from the three universities which participated in the study is presented. The lecturers' questionnaire (see Appendix A3) had four sections: the first section related to personal information, requesting participants to state their age, institution where they work, courses taught, gender, and university teaching experience. The second section consisted of a series of questions which sought to find out whether the participants were aware of certain issues such as the presence of deaf/hard of

hearing or visually impaired students in their institution. Participants were requested to choose one of three possible answers: 'No', 'Yes' and 'Not sure'. The third section sought to find out the opinions of the respondents concerning certain issues, such as whether or not deaf/hard of hearing or visually impaired students should be educated with other students with similar disabilities. Participants were requested to rate the statements in this section on a five-point Likert scale as follows: 'Strongly disagree', 'Disagree', 'Undecided', 'Agree' and 'Strongly agree'. The last section comprised of three open-ended questions seeking the views of participants. This section also had an additional purpose of gauging the awareness of the participants about issues related to deafness and visual impairment.

Table 4.26 shows the number of lecturers who participated in this study by institution, gender and courses taught. Since the courses indicated by the lecturers were too many to allow for easy tabulation and analysis, it was decided for purposes of convenience to group them under two broad categories: 'Arts' and 'Sciences'.

Table 4.26: Lecturer participants by institution, gender and courses taught

Institution	**Gender**			**Courses**		
	Male	**Female**	**Total**	**Arts**	**Sciences**	**Total**
University 1	22	13	35	25	10	35
University 2	8	3	11	0	11	11
University 3	4	5	9	9	0	9
Total	**34**	**21**	**55**	**34**	**21**	**55**

As mentioned in section 4.3, University 2 is an institution offering science-based courses, which explains why there were no lecturers teaching arts subjects in the sample from this institute. The fact that there were lecturers who teach only arts courses from University 3 was due to the fact that this university offers arts-based subjects. Because University 1 has both arts and science-based courses, both subject areas were represented in its sample.

Figure 4.2 below shows the age range of the lecturers who took part in the study. The youngest participant was 25 years old while the oldest was 70. The mean age of the lecturers was 40.64 years.

Figure 4.2: Age distribution of the lecturers who participated in the study

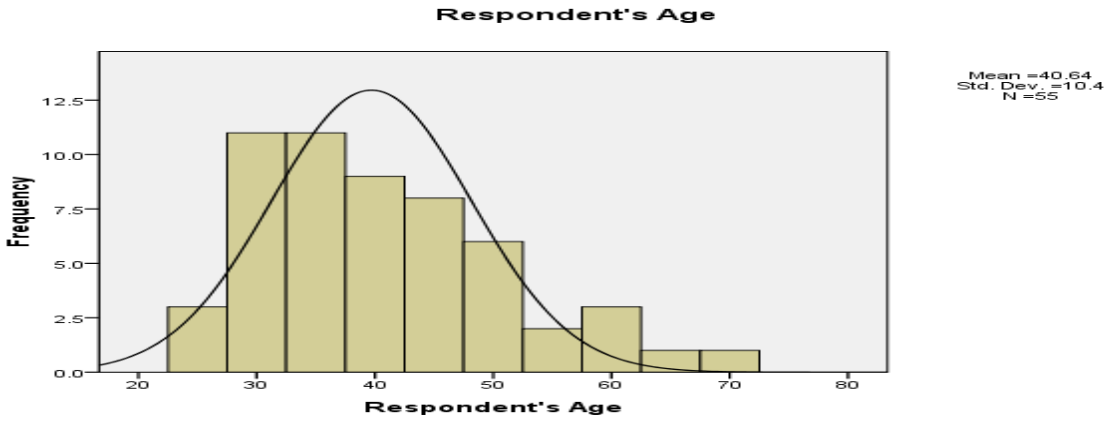
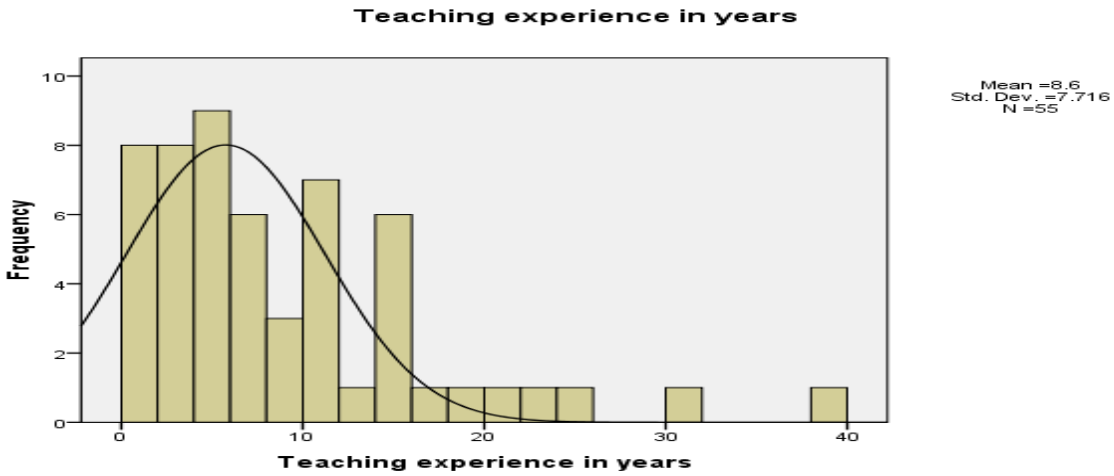


Figure 4.3 below shows the university teaching experience of the lecturers involved in this study. Eight lecturers indicated that they had one year's teaching experience. The lecturer who had the longest teaching experience had taught for 38 years. The average teaching experience of the lecturers was 8.6 years.

Figure 4.3: Respondents' teaching experience in years



The second section of the lecturers' questionnaire consisted of eight questions to which respondents were expected to choose one of three possible answers: 'yes', 'no', and 'not sure'.

In the first of these questions, participants were asked whether they were familiar with the concept of inclusive education. Their responses are shown in table 4.27 below. The majority of respondents from University 1 were familiar with inclusive education while more than half of the participants from University 2 were either unfamiliar with it or were not sure. As the question required participants to give a simple no/yes/not sure response, it was impossible to judge the depth of understanding of those participants who professed knowledge of inclusive education.

Table 4.27: Respondents' familiarity with inclusive education.

			Familiar with the concept of inclusive education			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	4	27	4	**35**
		% within Institution	11.4%	77.1%	11.4%	**100.0%**
		% Familiar with the concept of inclusive education	44.4%	73.0%	44.4%	**63.6%**
		% of Total	7.3%	49.1%	7.3%	**63.6%**
	University 2	Count	2	5	4	**11**
		% within Institution	18.2%	45.5%	36.4%	**100.0%**
		% Familiar with the concept of inclusive education	22.2%	13.5%	44.4%	**20.0%**
		% of Total	3.6%	9.1%	7.3%	**20.0%**
	University 3	Count	3	5	1	**9**
		% within Institution	33.3%	55.6%	11.1%	**100.0%**
		% Familiar with the concept of inclusive education	33.3%	13.5%	11.1%	**16.4%**
		% of Total	5.5%	9.1%	1.8%	**16.4%**
Total		Count	9	37	9	**55**
		% within Institution	16.4%	67.3%	16.4%	**100.0%**
		% Familiar with the concept of inclusive education	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**16.4%**	**67.3%**	**16.4%**	**100.0%**

Participants were then asked whether they had ever taught students with severe special educational needs in their teaching career. Table 4.28 summarises their responses. No respondent ticked the ‘not sure’ checkbox. The phrase ‘severe special educational needs’ was not explained to the participants. It is therefore possible that participants did not understand it in the same way.

Table 4.28: Lecturers' responses as to whether or not they had taught students with severe special educational needs

			Taught students with severe special educational needs		Total
			No	**Yes**	
	University 1	**Count**	9	26	**35**
		% within Institution	25.7%	74.3%	**100.0%**
		% Who have taught students with severe special educational needs	40.9%	78.8%	**63.6%**
		% of Total	16.4%	47.3%	**63.6%**
	University 2	**Count**	8	3	**11**
		% within Institution	72.7%	27.3%	**100.0%**
		% Who have taught students with severe special educational needs	36.4%	9.1%	**20.0%**
		% of Total	14.5%	5.5%	**20.0%**
	University 3	**Count**	5	4	**9**
		% within Institution	55.6%	44.4%	**100.0%**
		% Who have taught students with severe special educational needs	22.7%	12.1%	**16.4%**
		% of Total	9.1%	7.3%	**16.4%**
Total		**Count**	22	33	**55**
		% within Institution	40.0%	60.0%	**100.0%**
		% Who have taught students with severe special educational needs	100.0%	100.0%	**100.0%**
		% of Total	**40.0%**	**60.0%**	**100.0%**

Lecturers were then asked if they were aware that their institution had deaf/hard of hearing or visually impaired students. As table 4.29 below shows, all the respondents from University 2 were either unaware or were not sure that their university had deaf/hard of hearing or visually impaired students.

Table 4.29: Lecturer participants' awareness of the presence of deaf or blind students in their institutions.

			Aware that institution has deaf or blind students			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	1	33	1	**35**
		% within Institution	2.9%	94.3%	2.9%	**100.0%**
		% Who are aware that their institution has deaf or blind students	10.0%	86.8%	14.3%	**63.6%**
		% of Total	1.8%	60.0%	1.8%	**63.6%**
	University 2	Count	6	0	5	**11**
		% within Institution	54.5%	.0%	45.5%	**100.0%**
		% Who are aware that their institution has deaf or blind students	60.0%	.0%	71.4%	**20.0%**
		% of Total	10.9%	.0%	9.1%	**20.0%**
	University 3	Count	3	5	1	**9**
		% within Institution	33.3%	55.6%	11.1%	**100.0%**
		% Who are aware that their institution has deaf or blind students	30.0%	13.2%	14.3%	**16.4%**
		% of Total	5.5%	9.1%	1.8%	**16.4%**
Total		Count	10	38	7	**55**
		% within Institution	18.2%	69.1%	12.7%	**100.0%**
		% Who are aware that their institution has deaf or blind students	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**18.2%**	**69.1%**	**12.7%**	**100.0%**

The lecturers who took part in this study were also asked if their institutions had at any time arranged for them any kind of orientation or induction regarding how to meet the special needs of deaf/hard of hearing and visually impaired students, including teaching them. As table 4.30

shows, only 36.4% of the respondents were aware of such activities, including one respondent apiece from University 2 and University 3.

Table 4.30: Responses as to whether or not universities had arranged any induction or orientation for their lecturers regarding meeting of the needs of deaf and blind students

			Has the university arranged any form of induction or orientation			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	15	18	2	**35**
		% within Institution	42.9%	51.4%	5.7%	**100.0%**
		% Who believe the university has arranged some form of induction or orientation for lecturers	51.7%	90.0%	33.3%	**63.6%**
		% of Total	27.3%	32.7%	3.6%	**63.6%**
	University 2	Count	8	1	2	**11**
		% within Institution	72.7%	9.1%	18.2%	**100.0%**
		% Who believe the university has arranged some form of induction or orientation for lecturers	27.6%	5.0%	33.3%	**20.0%**
		% of Total	14.5%	1.8%	3.6%	**20.0%**
	University 3	Count	6	1	2	**9**
		% within Institution	66.7%	11.1%	22.2%	**100.0%**
		% Who believe the university has arranged some form of induction or orientation for lecturers	20.7%	5.0%	33.3%	**16.4%**
		% of Total	10.9%	1.8%	3.6%	**16.4%**
Total		Count	29	20	6	**55**
		% within Institution	52.7%	36.4%	10.9%	**100.0%**
		% Who believe the university has arranged some form of induction or orientation for lecturers	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**52.7%**	**36.4%**	**10.9%**	**100.0%**

Another issue regarding which lecturers were asked concerned whether or not they had taken time to inform themselves about the needs of deaf/hard of hearing and visually impaired students. Their responses are shown in table 4.31. Although 58.2% of all respondents declared that they had taken time to inform themselves about hearing impairment and visual impairment, three quarters (75%) of them were lecturers from University 1.

Table 2.31: Respondents who had taken the time to inform themselves about the needs of deaf/hard of hearing and visually impaired students

			Have you taken time to inform yourself about the needs of deaf or blind students?			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	7	24	4	**35**
		% within Institution	20.0%	68.6%	11.4%	**100.0%**
		% Who have taken time to inform themselves about the needs of deaf or blind students	38.9%	75.0%	80.0%	**63.6%**
		% of Total	12.7%	43.6%	7.3%	**63.6%**
	University 2	Count	5	5	1	**11**
		% within Institution	45.5%	45.5%	9.1%	**100.0%**
		% Who have taken time to inform themselves about the needs of deaf or blind students	27.8%	15.6%	20.0%	**20.0%**
		% of Total	9.1%	9.1%	1.8%	**20.0%**
	University 3	Count	6	3	0	**9**
		% within Institution	66.7%	33.3%	.0%	**100.0%**
		% Who have taken time to inform themselves about the needs of deaf or blind students	33.3%	9.4%	.0%	**16.4%**
		% of Total	10.9%	5.5%	.0%	**16.4%**
Total		Count	18	32	5	**55**
		% within Institution	32.7%	58.2%	9.1%	**100.0%**
		% Who have taken time to inform themselves about the needs of deaf or blind students	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**32.7%**	**58.2%**	**9.1%**	**100.0%**

Table 4.32 below summarises lecturers' responses to the question whether participants had had any interaction with deaf/hard of hearing or visually impaired students in their institutions. Only

one participant from University 2 had had any such interaction while 85.7% and 44.4% of the respondents from University 1 and University 3 respectively said they had had such interactions.

Table 4.32: Responses as to whether or not participants had had any interaction with deaf or blind students in their institutions

			Have you had any interaction with a deaf or blind student of this university?			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	5	30	0	**35**
		% within Institution	14.3%	85.7%	.0%	**100.0%**
		% Who have had any interaction with a deaf or blind student of their university	26.3%	85.7%	.0%	**63.6%**
		% of Total	9.1%	54.5%	.0%	**63.6%**
	University 2	Count	9	1	1	**11**
		% within Institution	81.8%	9.1%	9.1%	**100.0%**
		% Who have had any interaction with a deaf or blind student of their university	47.4%	2.9%	100.0%	**20.0%**
		% of Total	16.4%	1.8%	1.8%	**20.0%**
	University 3	Count	5	4	0	**9**
		% within Institution	55.6%	44.4%	.0%	**100.0%**
		% Who have had any interaction with a deaf or blind student of their university	26.3%	11.4%	.0%	**16.4%**
		% of Total	9.1%	7.3%	.0%	**16.4%**
Total		Count	19	35	1	**55**
		% within Institution	34.5%	63.6%	1.8%	**100.0%**
		% Who have had any interaction with a deaf or blind student of their university	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**34.5%**	**63.6%**	**1.8%**	**100.0%**

Lecturers were further asked whether a deaf/hard of hearing or visually impaired student in their institutions had ever approached them personally for help regarding academic matters. Perhaps not surprisingly, as table 4.33 shows, the response pattern to this question closely resembled that of the previous question (table 4.32).

Table 4.33: Lecturers' responses to whether they had been approached for assistance by deaf/hard of hearing or visually impaired students in their institutions

			Has a deaf or blind student of this university approached you personally for assistance?			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	8	27	0	**35**
		% within Institution	22.9%	77.1%	.0%	**100.0%**
		% Who have been approached personally for assistance by a deaf or blind student of their university	36.4%	84.4%	.0%	**63.6%**
		% of Total	14.5%	49.1%	.0%	**63.6%**
	University 2	Count	9	1	1	**11**
		% within Institution	81.8%	9.1%	9.1%	**100.0%**
		% Who have been approached personally for assistance by a deaf or blind student of their university	40.9%	3.1%	100.0%	**20.0%**
		% of Total	16.4%	1.8%	1.8%	**20.0%**
	University 3	Count	5	4	0	**9**
		% within Institution	55.6%	44.4%	.0%	**100.0%**
		% Who have been approached personally for assistance by a deaf or blind student of their university	22.7%	12.5%	.0%	**16.4%**
		% of Total	9.1%	7.3%	.0%	**16.4%**
Total		Count	22	32	1	**55**
		% within Institution	40.0%	58.2%	1.8%	**100.0%**
		% Who have been approached personally for assistance by a deaf or blind student of their university	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**40.0%**	**58.2%**	**1.8%**	**100.0%**

The final question in this section of the lecturers' questionnaire sought to find out if the three universities had someone responsible for the wellbeing of deaf/hard of hearing and visually impaired students. The purpose of the question was to establish whether the lecturers had someone they could consult if there was an issue about deafness or blindness concerning which they needed advice. As table 4.34 shows, no one from University 3 gave a positive response to this question while only one lecturer from University 2 said their institute had such a person.

Table 4.34: Responses to whether the three universities had someone responsible for the wellbeing of deaf/hard of hearing and visually impaired students.

			Is someone responsible for the wellbeing of deaf and blind students in the university?			**Total**
			No	**Yes**	**Not sure**	
	University 1	Count	4	29	2	**35**
		% within Institution	11.4%	82.9%	5.7%	**100.0%**
		% Who know there is someone responsible for the wellbeing of deaf or blind students in their university	44.4%	96.7%	12.5%	**63.6%**
		% of Total	7.3%	52.7%	3.6%	**63.6%**
	University 2	Count	0	1	10	**11**
		% within Institution	.0%	9.1%	90.9%	**100.0%**
		% Who know there is someone responsible for the wellbeing of deaf or blind students in their university	.0%	3.3%	62.5%	**20.0%**
		% of Total	.0%	1.8%	18.2%	**20.0%**
	University 3	Count	5	0	4	**9**
		% within Institution	55.6%	.0%	44.4%	**100.0%**
		% Who know there is someone responsible for the wellbeing of deaf or blind students in their university	55.6%	.0%	25.0%	**16.4%**
		% of Total	9.1%	.0%	7.3%	**16.4%**
Total		Count	9	30	16	**55**
		% within Institution	16.4%	54.5%	29.1%	**100.0%**
		% Who know there is someone responsible for the wellbeing of deaf or blind students in their university	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**16.4%**	**54.5%**	**29.1%**	**100.0%**

The third section of the lecturers' questionnaire consisted of nine Likert scale items to which participants were expected to choose one of five possible responses: 'strongly disagree', 'disagree', 'undecided', 'agree', and 'strongly agree'. The items were phrased as statements intended to gauge the opinions of respondents towards a range of issues.

The first of these statements suggested that it was best to educate deaf/hard of hearing and visually impaired students together with other students with similar disabilities. Responses are portrayed in table 4.35. Generally speaking, the majority of respondents seemed to agree with this sentiment: 47.3% either agreed or strongly agreed, with a further 14.5% declaring that they were undecided.

Table 4.35: Responses to the statement that it was best to educate deaf and blind students with other students with similar disabilities

			Deaf or blind students should be taught together with other deaf or blind students					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	10	5	2	7	11	**35**
		% within Institution	28.6%	14.3%	5.7%	20.0%	31.4%	**100.0%**
		% who believe deaf or blind students should be taught together with other deaf or blind students	76.9%	62.5%	25.0%	63.6%	73.3%	**63.6%**
		% of Total	18.2%	9.1%	3.6%	12.7%	20.0%	**63.6%**
	University 2	Count	1	1	5	2	2	**11**
		% within Institution	9.1%	9.1%	45.5%	18.2%	18.2%	**100.0%**
		% who believe deaf or blind students should be taught together with other deaf or blind students	7.7%	12.5%	62.5%	18.2%	13.3%	**20.0%**
		% of Total	1.8%	1.8%	9.1%	3.6%	3.6%	**20.0%**
	University 3	Count	2	2	1	2	2	**9**
		% within Institution	22.2%	22.2%	11.1%	22.2%	22.2%	**100.0%**
		% who believe deaf or blind students should be taught together with other deaf or blind students	15.4%	25.0%	12.5%	18.2%	13.3%	**16.4%**
		% of Total	3.6%	3.6%	1.8%	3.6%	3.6%	**16.4%**
Total		Count	13	8	8	11	15	**55**
		% within Institution	23.6%	14.5%	14.5%	20.0%	27.3%	**100.0%**
		% who believe deaf or blind students should be taught together with other deaf or blind students	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**23.6%**	**14.5%**	**14.5%**	**20.0%**	**27.3%**	**100.0%**

Lecturers were also asked to give their opinions to the statement that deaf/hard of hearing and visually impaired students had the same academic potential as other students without disabilities. As table 4.36 shows, only 18.2% of participants disagreed in some way with this statement while a further 9.1% expressed no opinion either way. It was not possible to establish whether those

who disagreed or strongly disagreed did so because they thought deaf/hard of hearing and visually impaired students were worse or better academically than students without disabilities.

Table 4.36: Lecturers' opinions concerning the academic potential of deaf/hard of hearing and visually impaired students

			Deaf or blind students have the same academic potential as other students without disabilities					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	6	3	3	8	15	**35**
		% within Institution	17.1%	8.6%	8.6%	22.9%	42.9%	**100.0%**
		% who believe deaf or blind students have the same academic potential as other students without disabilities	100.0%	75.0%	60.0%	50.0%	62.5%	**63.6%**
		% of Total	10.9%	5.5%	5.5%	14.5%	27.3%	**63.6%**
	University 2	Count	0	1	2	5	3	**11**
		% within Institution	.0%	9.1%	18.2%	45.5%	27.3%	**100.0%**
		% who believe deaf or blind students have the same academic potential as other students without disabilities	.0%	25.0%	40.0%	31.3%	12.5%	**20.0%**
		% of Total	.0%	1.8%	3.6%	9.1%	5.5%	**20.0%**
	University 3	Count	0	0	0	3	6	**9**
		% within Institution	.0%	.0%	.0%	33.3%	66.7%	**100.0%**
		% who believe deaf or blind students have the same academic potential as other students without disabilities	.0%	.0%	.0%	18.8%	25.0%	**16.4%**
		% of Total	.0%	.0%	.0%	5.5%	10.9%	**16.4%**
Total		Count	6	4	5	16	24	**55**
		% within Institution	10.9%	7.3%	9.1%	29.1%	43.6%	**100.0%**
		% who believe deaf or blind students have the same academic potential as other students without disabilities	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**10.9%**	**7.3%**	**9.1%**	**29.1%**	**43.6%**	**100.0%**

Respondents were asked what they thought of the suggestion that deaf/hard of hearing and visually impaired students found it more difficult than students without disabilities to cope with their academic work. Participants were more or less evenly divided in their responses with just over half of all respondents disagreeing, disagreeing strongly or being undecided while just under half of the respondents agreed with the statement (table 4.37).

Table 4.37: Responses to the statement that deaf and blind students find it more difficult than other students to cope with their academic work

			Deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	4	6	7	11	7	**35**
		% within Institution	11.4%	17.1%	20.0%	31.4%	20.0%	**100.0%**
		% who believe deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	80.0%	60.0%	53.8%	68.8%	63.6%	**63.6%**
		% of Total	7.3%	10.9%	12.7%	20.0%	12.7%	**63.6%**
	University 2	Count	1	2	4	3	1	**11**
		% within Institution	9.1%	18.2%	36.4%	27.3%	9.1%	**100.0%**
		% who believe deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	20.0%	20.0%	30.8%	18.8%	9.1%	**20.0%**
		% of Total	1.8%	3.6%	7.3%	5.5%	1.8%	**20.0%**
	University 3	Count	0	2	2	2	3	**9**
		% within Institution	.0%	22.2%	22.2%	22.2%	33.3%	**100.0%**
		% who believe deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	.0%	20.0%	15.4%	12.5%	27.3%	**16.4%**
		% of Total	.0%	3.6%	3.6%	3.6%	5.5%	**16.4%**
Total		Count	5	10	13	16	11	**55**
		% within Institution	9.1%	18.2%	23.6%	29.1%	20.0%	**100.0%**
		% who believe deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**9.1%**	**18.2%**	**23.6%**	**29.1%**	**20.0%**	**100.0%**

Another issue concerning which lecturer participants' views were sought related to the employment opportunities available to deaf/hard of hearing and visually impaired students on completing their university education. Responses to the suggestion that it was unlikely that deaf/hard of hearing and visually impaired students would be able to find employment once they graduated are displayed in table 4.38. Although the majority of participants disagreed with the statement, a significant proportion of them (just over one third) said they were unsure.

Table 4.38: Responses to the suggestion that deaf and blind students were unlikely to find employment on completing university

			It is unlikely that deaf or blind students will be able to find employment once they graduate.					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	3	16	11	5	0	**35**
		% within Institution	8.6%	45.7%	31.4%	14.3%	.0%	**100.0%**
		% who believe it is unlikely that deaf or blind students will be able to find employment once they graduate.	50.0%	88.9%	57.9%	45.5%	.0%	**63.6%**
		% of Total	5.5%	29.1%	20.0%	9.1%	.0%	**63.6%**
	University 2	Count	1	1	5	3	1	**11**
		% within Institution	9.1%	9.1%	45.5%	27.3%	9.1%	**100.0%**
		% who believe it is unlikely that deaf or blind students will be able to find employment once they graduate.	16.7%	5.6%	26.3%	27.3%	100.0%	**20.0%**
		% of Total	1.8%	1.8%	9.1%	5.5%	1.8%	**20.0%**
	University 3	Count	2	1	3	3	0	**9**
		% within Institution	22.2%	11.1%	33.3%	33.3%	.0%	**100.0%**
		% who believe it is unlikely that deaf or blind students will be able to find employment once they graduate.	33.3%	5.6%	15.8%	27.3%	.0%	**16.4%**
		% of Total	3.6%	1.8%	5.5%	5.5%	.0%	**16.4%**
Total		Count	6	18	19	11	1	**55**
		% within Institution	10.9%	32.7%	34.5%	20.0%	1.8%	**100.0%**
		% who believe it is unlikely that deaf or blind students will be able to find employment once they graduate.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**10.9%**	**32.7%**	**34.5%**	**20.0%**	**1.8%**	**100.0%**

Participants were also asked if they thought that their institutions had done enough to ensure that deaf/hard of hearing and visually impaired students could realise their full potential. As table 4.39 shows, the majority of respondents from University 1 answered in the affirmative while the majority of respondents from University 2 and University 3 either answered in the negative or

Table 4.39: Views on whether the universities had done enough to enable their deaf and blind students realise their full potential

			This university has done enough to ensure that deaf or blind students can realise their full potential.					**Total**
			Strongly disagree	**disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	1	6	7	15	6	**35**
		% within Institution	2.9%	17.1%	20.0%	42.9%	17.1%	**100.0%**
		% who believe this university has done enough to ensure that deaf or blind students can realise their full potential.	25.0%	75.0%	46.7%	75.0%	75.0%	**63.6%**
		% of Total	1.8%	10.9%	12.7%	27.3%	10.9%	**63.6%**
	University 2	Count	1	1	5	3	1	**11**
		% within Institution	9.1%	9.1%	45.5%	27.3%	9.1%	**100.0%**
		% who believe this university has done enough to ensure that deaf or blind students can realise their full potential.	25.0%	12.5%	33.3%	15.0%	12.5%	**20.0%**
		% of Total	1.8%	1.8%	9.1%	5.5%	1.8%	**20.0%**
	University 3	Count	2	1	3	2	1	**9**
		% within Institution	22.2%	11.1%	33.3%	22.2%	11.1%	**100.0%**
		% who believe this university has done enough to ensure that deaf or blind students can realise their full potential.	50.0%	12.5%	20.0%	10.0%	12.5%	**16.4%**
		% of Total	3.6%	1.8%	5.5%	3.6%	1.8%	**16.4%**
Total		Count	4	8	15	20	8	**55**
		% within Institution	7.3%	14.5%	27.3%	36.4%	14.5%	**100.0%**
		% who believe this university has done enough to ensure that deaf or blind students can realise their full potential.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**7.3%**	**14.5%**	**27.3%**	**36.4%**	**14.5%**	**100.0%**

were not sure. Respondents were not asked to say what the institutions had done, so it was not possible to get concrete examples of these actions.

Lecturers who took part in this study were requested to react to the suggestion that lecturers in their institutions did their best to help deaf/hard of hearing and visually impaired students. The general tendency, as table 4.40 below shows, was to answer in the positive, although there were some who said they were not sure as well as some negative responses.

Table 4.40: Respondents' views as to whether or not lecturers do their best to help deaf and blind students

			Lecturers in this university do their best to help deaf or blind students.					**Total**
			Strongly disagree	**Disagree**	**undecided**	**Agree**	**Strongly agree**	
	University 1	Count	0	3	6	19	7	**35**
		% within Institution	.0%	8.6%	17.1%	54.3%	20.0%	**100.0%**
		% who believe lecturers in this university do their best to help deaf or blind students.	.0%	75.0%	50.0%	70.4%	63.6%	**63.6%**
		% of Total	.0%	5.5%	10.9%	34.5%	12.7%	**63.6%**
	University 2	Count	0	0	6	4	1	**11**
		% within Institution	.0%	.0%	54.5%	36.4%	9.1%	**100.0%**
		% who believe lecturers in this university do their best to help deaf or blind students.	.0%	.0%	50.0%	14.8%	9.1%	**20.0%**
		% of Total	.0%	.0%	10.9%	7.3%	1.8%	**20.0%**
	University 3	Count	1	1	0	4	3	**9**
		% within Institution	11.1%	11.1%	.0%	44.4%	33.3%	**100.0%**
		% who believe lecturers in this university do their best to help deaf or blind students.	100.0%	25.0%	.0%	14.8%	27.3%	**16.4%**
		% of Total	1.8%	1.8%	.0%	7.3%	5.5%	**16.4%**
Total		Count	1	4	12	27	11	**55**
		% within Institution	1.8%	7.3%	21.8%	49.1%	20.0%	**100.0%**
		% who believe lecturers in this university do their best to help deaf or blind students.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**1.8%**	**7.3%**	**21.8%**	**49.1%**	**20.0%**	**100.0%**

Asked to respond to the suggestion that it was the responsibility of the lecturer to make sure that deaf/hard of hearing and visually impaired students, as people with severe barriers to learning, benefit fully from the teaching and learning process, most lecturers either agreed or strongly

agreed that this was so. According to table 4.41 below, 78.2% of all respondents gave a positive answer while 12.7% were undecided and 9.1% gave a negative response.

Table 4.41: Responses to the statement that it was the lecturer's responsibility to ensure that deaf and blind students benefitted from the teaching and learning experience

			It is the responsibility of the lecturer to make sure that deaf or blind students benefit fully from the teaching and learning process					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	4	1	2	15	13	**35**
		% within Institution	11.4%	2.9%	5.7%	42.9%	37.1%	**100.0%**
		% who believe it is the responsibility of the lecturer to make sure that deaf or blind students benefit fully from the teaching and learning process	100.0%	100.0%	28.6%	65.2%	65.0%	**63.6%**
		% of Total	7.3%	1.8%	3.6%	27.3%	23.6%	**63.6%**
	University 2	Count	0	0	4	4	3	**11**
		% within Institution	.0%	.0%	36.4%	36.4%	27.3%	**100.0%**
		% who believe it is the responsibility of the lecturer to make sure that deaf or blind students benefit fully from the teaching and learning process	.0%	.0%	57.1%	17.4%	15.0%	**20.0%**
		% of Total	.0%	.0%	7.3%	7.3%	5.5%	**20.0%**
	University 3	Count	0	0	1	4	4	**9**
		% within Institution	.0%	.0%	11.1%	44.4%	44.4%	**100.0%**
		% who believe it is the responsibility of the lecturer to make sure that deaf or blind students benefit fully from the teaching and learning process	.0%	.0%	14.3%	17.4%	20.0%	**16.4%**
		% of Total	.0%	.0%	1.8%	7.3%	7.3%	**16.4%**
Total		Count	4	1	7	23	20	**55**
		% within Institution	7.3%	1.8%	12.7%	41.8%	36.4%	**100.0%**
		% who believe it is the responsibility of the lecturer to make sure that deaf or blind students benefit fully from the teaching and learning process	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**7.3%**	**1.8%**	**12.7%**	**41.8%**	**36.4%**	**100.0%**

Lecturers who took part in the study were also requested to respond to the statement that most lecturers do not know what to do when faced with a deaf/hard of hearing or visually impaired

student in their classroom or office. Their responses are shown in table 4.42. While most of the respondents from University 2 and University 3 tended on the whole to agree with this statement, respondents from University 1 tended to disagree, although 53% of them either agreed with the statement or were undecided.

Table 4.42: Views about whether or not lecturers knew what to do when face to face with a deaf or blind student

			Most lecturers do not know what to do when they are together with a deaf or blind student.					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	2	14	7	11	1	**35**
		% within Institution	5.7%	40.0%	20.0%	31.4%	2.9%	**100.0%**
		% who believe most lecturers do not know what to do when they are together with a deaf or blind student.	100.0%	77.8%	63.6%	73.3%	11.1%	**63.6%**
		% of Total	3.6%	25.5%	12.7%	20.0%	1.8%	**63.6%**
	University 2	Count	0	2	3	3	3	**11**
		% within Institution	.0%	18.2%	27.3%	27.3%	27.3%	**100.0%**
		% who believe most lecturers do not know what to do when they are together with a deaf or blind student.	.0%	11.1%	27.3%	20.0%	33.3%	**20.0%**
		% of Total	.0%	3.6%	5.5%	5.5%	5.5%	**20.0%**
	University 3	Count	0	2	1	1	5	**9**
		% within Institution	.0%	22.2%	11.1%	11.1%	55.6%	**100.0%**
		% who believe most lecturers do not know what to do when they are together with a deaf or blind student.	.0%	11.1%	9.1%	6.7%	55.6%	**16.4%**
		% of Total	.0%	3.6%	1.8%	1.8%	9.1%	**16.4%**
Total		Count	2	18	11	15	9	**55**
		% within Institution	3.6%	32.7%	20.0%	27.3%	16.4%	**100.0%**
		% who believe most lecturers do not know what to do when they are together with a deaf or blind student.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**3.6%**	**32.7%**	**20.0%**	**27.3%**	**16.4%**	**100.0%**

The final statement in this section of the lecturers' questionnaire asked participants to respond to the statement that when compared with other students, deaf/hard of hearing and visually impaired students did not make sufficient efforts to cope with their academic work. Responses

are displayed in table 4.43 below. Participants from all three institutions generally disagreed or strongly disagreed with the statement.

Table 4.43: Respondents' views about whether or not deaf and blind students put enough effort into their academic work.

			When compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.					**Total**
			Strongly disagree	**Disagree**	**Undecided**	**Agree**	**Strongly agree**	
	University 1	Count	13	18	2	1	1	**35**
		% within Institution	37.1%	51.4%	5.7%	2.9%	2.9%	**100.0%**
		% who believe that when compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	72.2%	75.0%	25.0%	33.3%	50.0%	**63.6%**
		% of Total	23.6%	32.7%	3.6%	1.8%	1.8%	**63.6%**
	University 2	Count	3	3	4	0	1	**11**
		% within Institution	27.3%	27.3%	36.4%	.0%	9.1%	**100.0%**
		% who believe that when compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	16.7%	12.5%	50.0%	.0%	50.0%	**20.0%**
		% of Total	5.5%	5.5%	7.3%	.0%	1.8%	**20.0%**
	University 3	Count	2	3	2	2	0	**9**
		% within Institution	22.2%	33.3%	22.2%	22.2%	.0%	**100.0%**
		% who believe that when compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	11.1%	12.5%	25.0%	66.7%	.0%	**16.4%**
		% of Total	3.6%	5.5%	3.6%	3.6%	.0%	**16.4%**
Total		Count	18	24	8	3	2	**55**
		% within Institution	32.7%	43.6%	14.5%	5.5%	3.6%	**100.0%**
		% who believe that when compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**
		% of Total	**32.7%**	**43.6%**	**14.5%**	**5.5%**	**3.6%**	**100.0%**

The final section of the lecturers' questionnaire consisted of three open-ended questions intended to shed some light on how well the participants understood or were aware of certain issues

related to deafness and visual impairment. In the first question, lecturers were asked to outline the challenges they thought faced deaf/hard of hearing and visually impaired students in their universities. In the second item, participants were asked to explain the challenges faced by lecturers who taught deaf/hard of hearing and visually impaired students in their universities. Finally, respondents were asked to say what they thought their universities could do to help their deaf/hard of hearing and visually impaired students learn better.

The lecturers mentioned that there were many challenges facing deaf/hard of hearing and visually impaired students in their institutions. As was the case with the student questionnaire, challenges mentioned by different participants but which had the same general meaning were grouped under one label for purposes of easing their presentation. For instance, in the case of challenges facing deaf/hard of hearing students, the label 'lack of trained personnel' was used in lieu of certain expressions such as "academic staff are not trained in educating deaf students", "administrative and academic staff do not know how to help deaf students", and so on. In the case of students with visual impairment, the phrase "problems with mobility and orientation/inaccessible infrastructure" was used when respondents used such statements as "the environment is not conducive to their movements", "they find it difficult to climb stairs with their white canes", "sometimes they fall into uncovered ditches", and so on. The challenges facing deaf/hard of hearing and visually impaired students as perceived by lecturers who took part in this study are summarised in table 4.44 below. Four lecturers (three from University 2 and one from University 3) said that their institutions did not have deaf/hard of hearing students.

Table 4.44: Challenges facing deaf and blind students as perceived by lecturer participants

Deaf/hard of hearing	Frequency	Visually impaired	Frequency
Lack of trained personnel	37	Insufficient study materials such as braille books and audio books	34
Insufficient materials such as hearing aids	28	Lecturers do not know how to meet their educational needs	29
Lack of sign language interpreters	24	Problems with mobility and orientation/inaccessible infrastructure	18
Lack of institutional guidelines on how to meet their needs	9	They have an inferiority complex/sighted students do not readily accept them as part of the student community	9
There is no one to advise/counsel them and advise lecturers about their needs	7	They have difficulties doing group assignments or participating effectively in class discussions because they cannot see (e.g. they cannot see what is on the blackboard or read print assignments)	8
They are not readily accepted by hearing colleagues	7	Cultural barriers/stereotyping (e.g. they are expected to be beggars, they are not expected to go to school)	7
They have difficulties doing group assignments because they cannot hear	6		
Cultural barriers (e.g. they are expected to be beggars)	5		

Lecturers were also asked to say what they thought were the challenges that faced lecturers in teaching deaf/hard of hearing and visually impaired students. For both deaf/hard of hearing and visually impaired students, the challenges most commonly mentioned were related to insufficient training of the lecturers concerning how to meet the needs of these students. Another common challenge was that posed by large classes which not only make it difficult to pay much attention to students with special educational needs but even to know that they are in the class in the first place. The challenge mentioned most often in relation to teaching deaf/hard of hearing students was that of communication while that mentioned most consistently in connection with teaching visually impaired students related to the lack of specific skills in the use of braille. Table 4.45 summarises the challenges faced by lecturers in teaching deaf/hard of hearing and visually impaired students as expressed by lecturers who participated in this study.

Table 4.45: Challenges faced by lecturers in teaching deaf/hard of hearing and visually impaired students as perceived by lecturer participants

Deaf/hard of hearing	Frequency	Visually impaired	Frequency
Lack of skills in teaching deaf students	43	Lack of/insufficient knowledge about teaching students who are visually impaired	31
Inability to communicate with them	41	Insufficient teaching materials	29
Inadequate facilities	24	When classes are large it is difficult to give them individual attention	25
When classes are large it is difficult to give them individual attention	20	It is difficult to adopt some teaching materials to their use, e.g. specialised tables used in accounting	19
Difficult to understand their way of life	17	Lecturers are too busy to devote them the special attention they need	15
They are few and we sometimes don't even know that they are there	7	Students come to class with insufficient prior knowledge of the course	11
Teaching deaf students is a hard job	2	We cannot mark their examinations and tests because they are written in braille	8
		We do not have time to set them the special exams they need in keeping with their disability	7
		Some lecturers assume that they learn in the same way as other students	4

The lecturer participants were finally asked to give suggestions about what their universities could do to help their deaf/hard of hearing and visually impaired students learn better. Many of the participants agreed on the need for their universities to train their staff so that they could meet the needs of deaf/hard of hearing and visually impaired students. Respondents also stressed the need to have appropriate and adequate materials which they could use in teaching students with special needs. Table 4.46 summarises the suggestions made by lecturers concerning what they thought their universities could do to enable deaf/hard of hearing and visually impaired students learn better.

Table 4.46: Lecturers' suggestions concerning what their universities could do to help deaf and blind students learn better

Deaf/hard of hearing	Frequency	Visually impaired	Frequency
Provide training for lecturers and other staff in teaching deaf students and in sign language	51	Put more resources in the resource room, such as braille books and audio materials	32
Provide lecturers with teaching aids and materials suitable for teaching deaf students, e.g. videos	44	Train lecturers and other staff in meeting the needs of these students	30
Put someone in charge of their education/establish a unit for them	37	Raise awareness in the student community about the best way of living with them	27
Sensitise the student community about how they can live with them	24	Extra lessons/tutorials should be organised for them to help them learn better and keep up with the other students	15
Provide them with counselling services	18	Give them financial assistance	7
Ensure that they have the same rights as other students/ensure they have the same access to information as other students	16	Give them free accommodation in university hostels	4
Get them their own lecturers/educate them in their own institutions	8	Adapt the infrastructure to make it more accessible for them	4
Give them financial support	6	Empower them through counselling, seminars, workshops and visits to successful inclusive universities	4
Provide them with transport to school	4		

In this chapter, data from the quantitative aspect of this study have been presented. This has involved the presentation of two sets of data obtained from two different questionnaires distributed to two groups of participants, students without disabilities and lecturers in the three universities which participated in the study. Data from the students were presented first followed by data from the lecturers. In the next chapter, qualitative data from this study will be presented.

Chapter 5

In Their Own Words: Voices of the Participants

5.1 Introduction

As the reader may recall, this study was conducted using a mixed methods research approach. In the previous chapter, data from the quantitative aspect of this study were presented. This chapter presents the qualitative data obtained from the study.

The qualitative data for this study were collected by means of interviews with respondents from the three universities which participated in the study, that is University 1, University 2, and University 3 (see Appendix A1 and A2 for the complete interview schedules used to collect data). Interviews were conducted with the following samples from the three institutions:

- Nine visually impaired students from University 1
- One deaf/hard of hearing student from University 1
- Three deaf/hard of hearing students from University 3
- Two deaf/hard of hearing students from University 2
- Three lecturers from University 1.

The following paragraphs provide some general information about the participants. Because of the need to protect the participants' anonymity and maintain confidentiality, any information that may lead to their identification has been withheld. For the same reason, pseudonyms have been used throughout this chapter instead of the participants' real names.

Of the nine students with visual impairment from University 1 who participated in this study, five were studying education with history, two were studying education with English, one was doing Education with Business and one was doing Education with English and Swahili. Three of these students were in their second year while the rest were in their third year. Three participants had low vision while the other six were blind. Six participants were male while three were female. The pseudonyms Charlotte, Phoebe and Victoria will be used to identify the female

participants while the male participants will be referred to by the pseudonyms of Alex, Ben, Ignatius, Samuel, Simon and Titus.

Of the six deaf/hard of hearing student participants, two were in the first year of their studies, one was in the second year, two were in the third year while one was in the fourth year. Two students were studying Computer Science, one was studying Human Resource Management, one was doing Office Administration, and the other two were studying Economics and Finance. Five participants were profoundly deaf while the other one was hard of hearing and used hearing aids. Four of the participants used sign language. The other two participants, including the one who was hard of hearing, did not use sign language. Three of the deaf/hard of hearing participants were male while the other three were female. I will use the pseudonyms of Barbara, Jacqueline and Naomi to refer to the female deaf/hard of hearing participants while the male participants will be called Eddy, Elias and Tony.

All three lecturers who were interviewed for this study were in the Faculty of Education. All of them had therefore taught students with visual impairment and were more likely than the other lecturers to be acquainted with them and their experiences in University 1. One of the lecturers interviewed was female while the other two were male. I will refer to the female lecturer as Brenda and to the male lecturers as Adam and John.

In the following sections, data obtained from the interviews held with the participants are presented. A number of themes emerged during the process of analysing the qualitative data. These themes will be the bases for the following presentations. These themes should not however be seen as discrete and independent from each other. A close relationship exists between all the themes and the fact that they are discussed separately is merely for convenience as this helps in guiding and giving coherence to the discussion. For example, the theme of ‘attitude’ permeated all the discussions held during the interview process, while that of ‘communication’ was ubiquitous throughout all the discussions held with deaf/hard of hearing participants.

5.2 Data from Students with Visual Impairment

Data were collected by means of personal interviews with nine visually impaired students. An interview schedule containing 15 questions was used to guide the interviews (see Appendix A1). In the process of analysing data obtained from these interviews, a number of themes were identified, and it is these themes that will be used to present the data rather than discussing each question in the interview schedule on its own. The themes identified are the following:

- Impact of visual impairment on experiences
- Inclusion
- Academic issues
- Institutional efforts
- Future prospects
- Attitudes
- Experiences.

I will now discuss each of these themes in turn.

5.2.1 Impact of Visual Impairment on Experiences

The way visual impairment affected the participants either in their day-to-day lives as students or in their dealings with other members of the university community emerged as an important theme in the study. Participants' perceptions of how having a visual impairment impacted on them in general were grouped under this theme.

All the participants concurred that having a visual loss did indeed have an effect on their lives. However, most of them stressed that a good many of these effects were not caused by the visual impairment per se but by attitudinal, social and other kinds of barriers put in the way of visually impaired people. Participants told me, for instance, that they sometimes performed poorly in their exams, not because they were visually impaired, but because they lacked study materials such as lecture notes and text books in accessible formats such as braille or recorded materials. As Samuel succinctly put it,

> How can we perform like the others when we don't have the same amount of resources they have? If we had books to read, got our notes in time, and had access to all the avenues of accessing information that the other students have, we could perform as well as anybody in this place!

The participants felt that because having a visual impairment limited their access to information, it made them more dependent on their colleagues since they had to ask them to read for them sometimes. It also meant that they had access to less information than the other students. And finally students with visual impairment said they tended to spend much more time and effort studying than their colleagues because of the need to find readers and supplementary reading materials.

Two participants also told me that their visual impairment imposed extra financial expenses on them. As an example they said that they had to pay people to do their laundry for them because it was not easy to find the hang lines for their clothes and that they found it difficult to retrieve their clothes after drying them. One of these participants said that sighted students were able to find part-time jobs during vacations but that this was not possible for a visually impaired student, which made their financial problems even worse.

Some participants also felt that a visual impairment imposed limitations on the degree and quality of interaction between a person with a visual impairment and one without it. Ben explained it thus:

> … Again – I think even others know this – the reason why you can talk and sustain a conversation and interact with others is eye contact. When you talk with someone without seeing him I think there's not much motivation. You talk, yes, but you find that the discussion you have is lacking something.

Speaking about how being visually impaired affected her interaction with her lecturers, Charlotte said,

> Usually it's the student who should greet the lecturer when they meet. But you can come across a lecturer and not greet him because you haven't seen him, and he in turn will not greet you. But if you can see you can initiate a conversation by greeting him, and then you can talk.

One participant also said that being visually impaired made him vulnerable to unscrupulous individuals. There are people, he said as an example, who could give less change to a blind customer because they know that he cannot see how much money he has been given.

Since three participants in this study had low vision, its effects on these participants were also discussed. While participants agreed that it did help when you had low vision, they agreed that it did not make much difference in the general scheme of things. One participant said low vision did help in enhancing communication and interaction with other people while another said that it was possible to get access to more books and other reading materials because it was not necessary to rely on braille alone, but that this was not always easy since using eyes to read for long periods was stressful to the eyes. In general, therefore, the participants with low vision felt that there was not much difference between them and their blind colleagues.

5.2.2 Inclusion

Issues related to the participants' perception of being included or excluded from the university community are discussed under this theme. Participants' feelings of acceptance – or rejection – by the community in which they lived and studied were considered to be indicators of the participants' judgment about the nature of their inclusion in the community. Issues such as levels of interaction and friendships between participants and other members of the community were grouped under this theme.

Although all participants agreed that they were to some extent included in the community, they differed markedly in their perceptions of the level of this inclusion. There were those who felt that they were completely included in the community while others felt that they were not as included as they would like. Charlotte was one participant who felt quite included:

> I study with sighted students, and I think it's good because we feel part of them; we become integrated into the university community with the same rights. We request them for certain services and they help us, and they in their turn if they need something from us they tell us and we help them. We help each other in everything. I see no problem at all, there is no problem at all. I think it's very good. For example, they help us in our studies: when we have not yet got our notes they read theirs for us and we are therefore able to know the general trend in our various subjects so that we are able to study well. … I feel that I'm fully included, and I feel that when I complete my studies I'll have no problems

> in the general society, especially since I'm preparing to live in the outside world together with other members of the community.

Those who felt dissatisfied with the degree of inclusion in the university – and they were the majority – said that prejudice and attitudinal issues stood in the way of their full inclusion. Other barriers mentioned included the fact that many members of the community did not understand visual impairment as well as culturally generated misconceptions and attitudes concerning disability. Participants also said that they thought that the community members had not fully understood or appreciated the principles of inclusion.

Participants gave some examples of not being accepted by their fellow students and lecturers. Some mentioned the fact that there are some students and lecturers who refuse to help a visually impaired person when he requests for help. Others mentioned that no visually impaired student could be elected to a leadership position in the student representative council except as someone representing disabled people. Others mentioned feelings of being treated as if they were different from and inferior to other people.

All of the participants said they had friends among their sighted colleagues and that not all members of the university community treated them in the same way: some people were more accommodating than others. Participants gave some reasons why they thought there were people who were more inclined to be inclusive in their behaviour. One reason was that special needs education was taught in the university as a compulsory course and that this helped the student community to understand issues related to disability. Another reason given was that many students in the university were mature and that as such were more disposed to accept differences among people than younger students. Participants also mentioned that they thought the university administration was committed to the implementation of inclusive education and that this commitment somehow made their inclusion more possible.

Some participants made a distinction between their acceptance by the student community on the one hand and their acceptance by their lecturers on the other. On the whole, students were seen as more responsive and helpful to the participants than the lecturers. After telling me that she

thought about half of the student community understood her as a person with a visual impairment, I asked Phoebe about her lecturers. Her response was this:

> Eeeh! The lecturers! That's a different matter altogether. In my opinion, it is very difficult for the lecturers to understand us. Except for a very small, small number who try to understand your problem if you talk to them. There are those you tell your problems to and they ignore you completely. In short, in my opinion the lecturers do not understand us well. Those who try to understand us are few.

At the same time, participants told me that there was not much interaction between them and their lecturers and that whatever interaction there was was based mostly around academic issues and discussions.

One participant said that he felt more comfortable interacting with visually impaired colleagues than he did with sighted students. This is what Alex told me:

> … When I'm with another visually impaired person I feel free with him, we discuss and share everything. But when I'm with a sighted person I don't feel as free, I don't feel as if we have much in common because we did not spend enough time interacting or talking together for me to feel that I'm part of them. In fact, I don't talk very much with sighted people. I was influenced heavily by the community of visually impaired people I stayed with for most of my earlier days. When I'm with sighted people I don't really feel as if I'm part of them. It's just that we share the same institution and courses of study. … I see no problem with that. That's the way I can have a meaningful social life.

All participants felt that with the passage of time the university community was becoming more and more inclusive as people gradually got used to having visually impaired students in their midst. They also suggested that more sensitisation and training for the students and lecturers about the needs of persons with visual impairment could help in making the community more inclusive.

5.2.3 Academic Issues

All the data related to academic issues were grouped together under this theme. The theme contains data about matters such as participants' views about their academic performance, lecturer and student support to participants, coping strategies used by participants to enhance

their academic performance, teaching methods and their effects on participants, and participants' access to information.

All the participants expressed confidence in their academic abilities. No participant was in any doubt about their ability to perform as well academically as their sighted counterparts. However, they admitted that they did not perform as well as they would have liked due to some obstacles which impeded them. With regard to what others thought about their academic abilities, the participants said there were some who believed that they were able while others thought that they were not able to perform on a par with them academically. According to the participants, most people in the university knew nothing about visual impairment and how visually impaired people study. As such there were people who had no confidence in the ability of visually impaired students to perform well academically. As Victoria told me,

> We only joined university for the first time in 2008. That was the first time anybody in this country saw a blind person in the university. They have no idea how we read, how we write, how we walk … they even ask themselves how we got through secondary school! How can you expect people with such thoughts to believe in you? There are some people who even think that having us here is some form of charity by University 1 or the government!

Participants gave a number of reasons for their not performing as well as they wanted. One such reason was that some classes had very large numbers of students. In such cases, if a visually impaired student arrived late in class it was quite possible to find himself/herself sitting at the very back of the class where it was difficult to hear well. "And the way they teach here, if you are unable to hear the lecturer and you are blind, then you might as well have missed the lecture!" is how Samuel summarised the situation. The participants conceded that even sighted students would face a similar problem but added that the situation was worse for visually impaired students due to their greater reliance on hearing.

Participants also mentioned that they had very limited sources of information and that this contributed to their academic difficulties. The only source of study materials they were sure of was lecturers' notes and hand-outs. But even these, according to the participants, had their own problems. A participant said that sometimes notes were given to them a day or two before the examinations, making it hard for them to revise effectively. Sometimes they only got partial

notes in a particular subject so that they did not have all the necessary information about that subject. There were other lecturers who did not give any notes to students. One participant said she found it difficult to take her own notes in class because of the manner in which lectures were delivered: the fast pace of lectures, often accompanied with the use of the chalkboard or other visual displays, put visually impaired students at a disadvantage. The same student also said that the option of recording the lectures was cumbersome because one had to spend so much time listening to the lecture again and that the storage capacity of the recording equipment sometimes ran out in the middle of a lecture. But there were other participants who said they used these recorders, braille note-takers as well as other braille writing devices to make their own notes during lectures.

All the participants also agreed that they were unable to use the library in any meaningful way. The library lacked any books or reading materials in a format that they could use independently. The very few braille books in the library, the participants told me, were completely irrelevant to their studies. Simon put it in these words:

> Another thing has to do with the library. It is very difficult for me to access the library. Why? Not because I don't know where it is, not because maybe I don't like the library staff, but because I can't find anything there that I can use as a blind person. In the first instance there are no braille books there, and that is the format I use. I saw two or three braille books in there once but they had nothing to do with the course I'm studying. To make matters worse, a university student is characterised by getting a little information from the lecturer and being able to supplement it with research. He is characterised by reading widely. That is why for me achieving knowledge as I told you is difficult because being able to read a lot and finding other varieties of resources is very difficult for me. So these factors result in some negative impacts.

This limited access to information made Phoebe wonder how she was going to conduct her research during her fourth year:

> … Now we're in our third year and they say we should do research and write research reports. To me that's really like a dream; to think that I can undertake research, looking for all the relevant documents ... really I think I can't manage to do that.

Some of the teaching methods used by lecturers did not help matters, according to participants. The tendency by lecturers to use the chalkboard and overhead projectors was mentioned

especially as leading to visually impaired students missing a lot of information because they cannot see these teaching aids and thus failing to acquire skills such as writing and spelling. Ben explained it in these words:

> Usually when lecturers are teaching - especially those who don't know that there is a person with a visual impairment in class or who don't know how they can meet the learning needs of a person with a visual problem - they tend to write on the blackboard or use an overhead projector in front of the class. This means that I can't access these things. Even if you can hear what they are saying, you do not fully understand and you cannot develop writing skills, you cannot know that the word they are writing or projecting is written in such a manner or know the structure or form of whatever they are showing in front of the class. Even if you hear what they're saying, the fact is that there is a lot that you miss. This of course reduces your ability to perform well in exams.

To overcome these challenges and enhance their academic performance, participants used a number of coping strategies. The two strategies that were mentioned most often were the use of friends and working in study groups.

Participants told me that their friends were very helpful as readers for them. They read books they borrowed from the library and notes from lecturers or from other sources. Some participants felt however that this made them more dependent on others. Another problem that participants mentioned in connection with using their friends as readers was that a person could not always get someone to read for them when there was a need. Furthermore, some participants felt that many of their colleagues did not want to read for them while others were often too busy to give them this form of assistance.

Participants mentioned that they also joined study groups in order to benefit from the academic discussions such groups usually engaged in. Such groups, some participants felt, also served to inform their colleagues about the abilities of students with visual impairment.

When asked to assess the support they got from their fellow students and their lecturers, participants agreed that some lecturers and students were very supportive but others were not. Some went as far as saying that only a very small minority was supportive. A number of participants suggested that this was because the community did not know or understand the needs of visually impaired people. They suggested that training for both lecturers and students

could help improve the situation and raise the academic performance of visually impaired students in University 1.

5.2.4 Future Prospects

In the interviews with visually impaired participants, they talked about their future prospects, hopes, plans and fears. All matters related to the future as perceived by the participants were grouped together into this theme. The main aspect of the theme was the issue of employment and the feelings generated by it.

Students with visual impairment who participated in this study were in a university that is primarily a teacher training institute. All of them therefore expected to be teachers after completing their studies although some preferred other jobs to teaching. Two participants mentioned a desire to continue their studies after getting their bachelor's degrees.

Participants can be divided into two groups based on how they considered their future prospects. There were those participants who felt that they could face the future with confidence and that while in university they were gaining the necessary skills to enable them to do so. The other group of participants expressed certain levels of concern about the future.

Only two participants said they had no misgivings whatsoever about their future. They were confident that they would find employment and that they had the ability to fulfil their professional obligations. Simon expressed this confidence in the following manner:

> Since the course I'm taking is preparing me to teach, I'd like to be a teacher. But that is not to say that I can't do something else. I usually notice that many people I talk to ask me what a blind person can do and I tell them that from my point of view the only job a blind person can't do is to drive a car.

The remaining participants expressed varying degrees of concern about the future. These concerns took two different directions. Some participants had confidence in their own abilities to work but were concerned that societal attitudes and prejudices may act as barriers in their efforts to find and maintain a job. Ignatius expressed these fears in the following words. Speaking about educated people who have negative attitudes towards people with disabilities, he said,

> This becomes a big problem to us because even when we get employed … you see, these are the same people who are involved in employing others. We fear that their attitude may cause us problems in getting employment. Even if there are a few who understand us and we may meet them out there, you may not be lucky when you get employed to work with someone who understands you. This is a major worry for us. If our own lecturers don't understand us, we may have bosses who don't understand us in our places of work. We are afraid that this may happen.

The other group of participants were not only worried about societal barriers but were also uneasy about their ability to work in a work environment designed for sighted people. One participant mentioned a list of schools where she hoped to find a job, but all the schools she mentioned were special schools. When I asked her if she did not consider the possibility of teaching in a mainstream school, she said she could not teach in such a school because she would not be able to write on the chalkboard. In fact a number of participants mentioned the issue of writing on the chalkboard as posing the biggest challenge to their ability to teach. Another issue which some participants found intimidating about teaching in mainstream schools was the thought of having to mark the test and examination papers of sighted students. They were worried that they may not be able to do so.

Another issue worth mentioning here is that a number of participants' future plans were influenced by their experiences before and after joining university. One participant said that rather than go to teach in a school he would prefer to do a job that would give him an opportunity to inform the public about disability and issues related to it.

The participants felt that for a visually impaired person to work effectively in the current Rwandan job market, a lot of sensitisation needed to be done so that the public's awareness of the potential of people with visual impairment could be raised.

5.2.5 Institutional Efforts

In this theme, I discuss what the university had done, as reported by the participants, in order to improve conditions for students with visual impairment and make their studies more meaningful. Things that the university could do but had not done are also discussed under this theme.

Participants paid a lot of tribute to the efforts of University 1 to accommodate them. Alex's words summarise their attitudes towards their university:

> I think University 1 has really tried to make our educational experience a good one. I think it is the best university for visually impaired students, and I think it is the one where they feel most comfortable. They have really tried.

All the participants agreed that the university had the will to help and accommodate them and that it had taken some action towards meeting this objective. Several instances of such actions were mentioned: One of these was that the university tried to make the environment safer for them. They gave an example of how, when they first arrived at the institution, there were a lot of open ditches that made walking hazardous for them. When they informed the authorities about this, the ditches were covered. Some participants also mentioned that students with disabilities, including those with visual impairment, paid less rent for their stay in university hostels. Whereas students usually paid 3.000 Rwandan francs per month for accommodation, students with disabilities paid 2.000 francs. Two participants however said that they wished they could have free accommodation due to the fact that they incurred additional expenses because of their visual impairment. For example, the fact that these students had to pay someone to do their laundry has already been mentioned.

Staff who provided various services in the university was also reported to be very helpful to students with visual impairment. Two examples of such assistance mentioned were staff in the university cafeteria and the dispensary. In the cafeteria, participants said they did not have to queue for food or look for people to sign their meal cards for them. Staff there helped them with all the necessary tasks that had to be done. The same case happened in the dispensary where staff helped the participants to complete necessary forms and other relevant activities that one had to do before getting treatment. However, the participants could not tell me whether this assistance was provided by staff on their own initiative or as a result of directives from the university administration.

Participants mentioned the resource room as another indication of University 1's efforts to help them learn better. The resource room was furnished with various kinds of equipment, including computers with different types of assistive software installed in them, reading devices, voice

recording equipment, and other assistive devices useful to a visually impaired person. The participants told me that they did most of their work, including exams, in the resource room. According to some participants, the lecturers and students who went to the resource room and saw visually impaired students working developed a better understanding of issues related to vision loss and that in this way the resource room helped to change attitudes for the better in the university.

After joining university some participants had acquired skills in using computers and other forms of information and communication technology, including assistive devices. These participants were very proud of these skills. These skills were learnt through a number of ways, including a course in using computers that all students in the university had to study, as well as training offered to visually impaired students in the resource room by an expert in computer literacy for visually impaired people. The latter training was offered through collaboration between University 1 and the Rwanda Country Office of the World Bank. There were participants however who felt that they did not have enough skills in using the equipment in the resource room and that they needed more training in order to be able to maximise their use of it. As Simon said, "We have some of the equipment such as Victor Readers[1] which help us to record lectures, we have computers, but especially for computers it's clear that we do not have enough knowledge to make full use of them."

The participants also felt that there was not enough equipment, especially as each year more and more students with visual impairment were being admitted to the university. Participants said that they had to share equipment that was meant to be used by one person and that this inconvenienced them because it was not always possible to have a certain device when one needed it. Participants with low vision also said there was not enough equipment specifically suited to their needs and that what was there was often inappropriate and did not work well. As one participant with low vision told me[2], "They gave us some magnifiers but using them is

[1]A device for digitally recording sound and playing digital files such as MP3 recordings.
[2]Due to the particular nature of this information, even the participant's pseudonym cannot be given here because doing so may compromise their anonymity.

difficult. If you use it for a long time your eyes start to hurt, it skips lines and makes it difficult to focus, and it's generally an unstable thing."

Although participants were glad to have the resource room, some also expressed the view that it had the effect of segregating them from the rest of the university community. Samuel summarised this view in these words:

> … We have a resource room here. When I go to the resource room to use the equipment there some people interpret it as a form of exclusion. If there were laptops which we could use with other students … for instance if we were doing exams I could use the laptop to write my exams together with the other students where they can see me. Because they ask themselves, "where do they write their exams?" "How do they do their exams?" But if I had a laptop and sit in class like any other student and write my exams with it … I'm not sure how it can be done, but if it can be done … if we sat together and did our exams with other students and performed like the others they would see that we are just like them and that would help them to feel that we are part of the community. … Of course we feel that we are doing the exams, but we are being excluded at the same time. But if we are with others they get used to us and see that we are just like them. That's my opinion.

Participants who expressed this view wished that a way could be found to make them do their work in places that would bring them into closer proximity to their colleagues.

5.2.6 Attitude

The reader may have noticed that attitudes towards disability run through the whole of the foregoing discussion. This subsection focuses on the perceived thoughts, opinions and feelings of the participants about themselves and on the participants' perception of the feelings, opinions and thoughts of the wider university community in which they lived towards them.

There were both negative and positive attitudes expressed by the participants, both in terms of their own attitudes towards themselves and in what they perceived to be the attitudes of other people towards them.

Generally speaking, participants had a positive attitude towards themselves. They expressed confidence in themselves and their abilities. They admitted that there were some limitations to what they could achieve because of the interplay between their disability and socially

constructed barriers, but stressed that given a fair chance they could achieve what anybody else could. To use Victoria's words,

> I believe in myself and my abilities. I believe I can achieve good grades and work as well as anyone if I could find a job. The problem is that there are so many odds against me. There is so much that has to change in our society before a visually impaired person can be able to realise her full potential and maximise her talents.

The experiences that these participants went through sometimes led them to develop negative feelings about themselves. Ignatius told me how he sometimes felt that he had an inferiority complex and how this sometimes affected his actions:

> But the barriers I encounter in my studies … when others are writing with their hands and for me when I need to write I have to go and look for a computer, which bothers me … it causes me to get a slight inferiority complex because I don't have that ability while it is a necessary competence to have. I cannot also fail to talk about the lecturers. When a lecturer shows me that he does not care about my work I become negligent, I tend to neglect it because I fear that he may tell me bad things or that if I make him angry problems might arise because he is my lecturer, he is my superior. So I become very careful about what I do, to the extent that I may forego some of my rights to avoid causing the lecturer any problem that may lead to me having a problem with him.

An example of how diffident students with visual impairment could be is illustrated by the following conversation between Titus and myself. We were talking about the need to raise awareness among the student community about visual impairment:

Titus: It is very necessary! Because those students who do not share courses with us also need to know how we live. Actually in an institute of some 5.000 students not all of them know us. So sensitisation among the sighted students is very much needed.
Interviewer: Why haven't you requested for it?
Titus: There is a reason for not requesting for it. No one in authority has ever approached us to ask us for our wishes.
Interviewer: Well, if they don't approach you, you should approach them.
Titus: Eeh, how can you approach them? As whom!
Interviewer: As a student with special needs.
Titus: No! But maybe if we went through the resource room maybe it would make sense.

As this conversation shows, most participants merely implied rather than stated these feelings; only a small number of participants openly gave voice to them. Participants were however more vocal when it came to expressing what they believed were the attitudes of others towards them. Participants thought that a small minority of people in University 1, including both lecturers and students, had a positive attitude towards them. Some participants said that people in the university who had worked with persons with disabilities tended to have positive attitudes towards them. One participant also said that in some instances maturity tended to influence people's attitudes for the better, at least in the case of their fellow students. Since participants seemed to interpret others' actions to them as manifestations and consequences of their attitudes to them, positive actions such as willingness to help, companionship and understanding were viewed by participants as being possessed by people who had positive attitudes towards them.

In general, participants seemed to feel that the majority of people in their community had a negative attitude towards people with visual impairment. Many participants said that many of their fellow students and lecturers did not "understand" them and seemed to show no desire to do so. Sometimes, participants felt that they were either being patronised or despised. Samuel expressed it thus:

> When you speak they think it is extraordinary or they clap their hands … when I first arrived here they used to clap when I answered a question in class. That tells you that there is a problem. Or if you answer a question they congratulate you when you leave the class after the lecture. There will have been many others who answered questions, but it is only you who would be congratulated. So that shows you the kind of mentality those people have. That can be very discouraging. Even if that kind of attitude is slowly changing, but by the time it ends you are already discouraged.

Participants gave many reasons which contributed to this state of affairs. Cultural beliefs about disability, which are generally negative, were mentioned as a contributing factor. Stereotyping of disabled persons and people's experiences of particular types of disabled people was another: when people got used to seeing visually impaired people begging, one participant told me, it was difficult for them to imagine a visually impaired person in a university.

Another major reason why people had negative attitudes towards visually impaired people, according to the participants, was because they were ignorant about them. They did not know or

think that they could study or learn; if a visually impaired person did anything that would seem ordinary when performed by any other person, some people thought that it was a miracle and praised God for it. People thought that visually impaired people worked in mysterious, incomprehensible ways. Instead of seeing braille as another form of writing, they saw it as something beyond the comprehension of ordinary people. Such beliefs, the participants told me, ended up generating and perpetuating negative attitudes towards them.

Participants suggested that some awareness raising activities for their lecturers and fellow students could help improve people's attitudes towards people with visual impairment.

5.2.7 Experiences

Although this whole work is about the experiences of visually impaired and deaf/hard of hearing students in Rwandan universities, the label 'experiences' as used here (and in the rest of this chapter as the label of a theme) refers to issues that emerged from the study which could not quite fit into the other themes mentioned above. Issues related to the participants' general judgement and perception of the nature of the experiences of visually impaired and deaf/hard of hearing students are discussed under this theme. In this subsection I will focus on the experiences of students with visual impairment.

Most visually impaired participants interviewed noted that they had had both positive and negative experiences during their stay at the university. Among the positive experiences they cited were learning new things and skills, being taught by lecturers who were visually impaired[1] and who served as role models for them, expanded horizons in terms of the range of experiences and exposure gained in the university, and general intellectual growth and development. Most participants gave as an example how learning to use computers and the related assistive technology software and other devices had enhanced their ability to perform many tasks and thus increased their independence. It is in University 1 that many visually impaired students began to

[1]At the time of conducting this study, University 1 had two lecturers with visual impairment.

learn braille grade 2. Prior to their joining university, they had only used braille grade 1. Talking to me about these experiences, Ben said,

> My experiences here … speaking on my own account, I can say that I'm a person who has managed to master the use of the computer ... to have access to technology. That's something very useful which I can say I have experience in; if you can go to a computer and work it means you have had a certain benefit and a certain experience in using it. Another thing is that I learned braille grade 2. That makes the whole process of making and keeping notes a whole lot easier. That is another important experience for me.

As has already been noted, however, not all participants had the same confidence in their ability to use computers.

With regard to role models and their influence on the participants, Victoria said,

> To be honest with you, before joining university, and even during the first few months here, I wondered whether I was going to be able to teach. But when I discovered that some of my lecturers were visually impaired, I felt very encouraged. No sighted students complained that they had not understood because the lecturer could not see. When I saw them doing all those things that lecturers do … you know, giving us notes, supervising students who were writing their research reports, that kind of thing … I began to tell myself that I could also surely do that!

There were also instances of negative experiences given by the participants. Participants talked about experiencing overt as well as subtle forms of discrimination. Two young male participants talked about their challenges in finding girlfriends and attributed these experiences to discrimination. As Simon told me,

> When you are interacting maybe he will not treat you completely as an equal. You may try to talk, but there are times ... like when you're many people, he may think, "he can't see us..." or "let's try to make him talk so we can hear what he will say." Or "Let's get away from him." All this shows that they feel that you're slightly different from them. They can't treat you one hundred per cent like their equal, such that you can talk freely or do things freely. For example, the girls here, even when you're talking with a girl – now I'm talking in relation to the opposite sex – it's an issue that hasn't been well understood, because when you talk to a girl and then you separate when she goes the others will be very curious and they will ask her, "what were you discussing with that person?" … "How terrible! … Was that the person who wanted to date you?" … it's like all the other relationships, it has obstacles: when she comes to visit you, people will be curious: "What

> were they discussing?" "Does a blind person have a girlfriend?" "How did that girl come to love him?" you know, those kinds of questions.

These negative experiences led one participant, Ignatius, to become sceptical about the role of education in forming attitudes about social issues such as disability:

> … We were shocked and hurt to find that a learned person such as a doctor or a professor couldn't understand that a fellow human being could have a problem and be able to help him or at least accept him as he is. Just accepting someone is enough for even the necessary support to be found. You find that someone with a PhD, who is supposed to be learned, is surprised when he sees a visually impaired person next to him!

Participants also talked about their pre-university experiences and the impact that these had on their university life. All the participants went to the same inclusive secondary school, and most of them felt that their experiences in this school helped them cope with life in an inclusive university. In particular, students mentioned the social benefits they got from being in an inclusive school: they interacted with students from different backgrounds and this experience helped them in their academic and social interactions with their fellow students in university.

Another aspect of pre-university experiences had to do with the fact that most of the participants spent considerable periods of time between completion of high school and joining university. Many of the visually impaired students who joined university in 2008 had completed high school some years earlier but had been unable to join university. Titus explained that their joining university was the result of a long process:

> I should tell you at the very outset that even to go to secondary school was very difficult for us, it was not like what happens with others. It took a long process, and again after completing secondary school it took another long process involving discussions with the government as it had happened with secondary school.

One participant told me that he spent that time training in massage and that this increased his chances of getting employment once he graduated because, in addition to his bachelor's degree, he also had a certificate as a masseur.

Another aspect of experiences which was mentioned by all the participants was the effect of having students with visual impairment on the university community. Participants observed that

their presence in University 1 was an eye-opener to many members of the community. According to them, there had been a gradual improvement in their situation and the quality of their experiences from the time of their joining university up to the time of conducting the study. Participants told me that when their lecturers and fellow students saw them performing well academically, moving around the campus and generally living their lives as any other member of the community, their behaviour towards them changed gradually and became more positive. As Phoebe put it,

> When we first came here, even your roommates did not know what you could do or could not do. But now you can see that there has been progress. For example in class, our classmates who are close to us … you see that there are improvements in our interaction with them. I'm sure things will get even better so that those who will come after us will have an easier time because our sighted colleagues will see them as any other people.

While all participants felt that positive change was indeed taking place, there were those who felt that this change was taking place at too slow a pace.

In this section, data obtained from interviews with students with visual impairment have been presented. In the next section, data from interviews with deaf/hard of hearing students will be presented. I would however like to conclude this section with a passionate plea from Ignatius, one of the participants in this study:

> There's something I'd like to say to those who will maybe get this message. I've a strong plea or thought that I feel I should tell people. A person becomes what he is because of where he is. When it is decided to imprison someone he is imprisoned, and in fact long ago before the whole issue of human rights came up if it was decided that someone's leg should be cut off it was and he would become disabled. He would become what they had made him become. I therefore believe that … in principle I saw that if people wanted a blind person to see he would see: not because his eyes would be seeing, but because others had agreed that he should see he sees … I also believe that if we wanted someone to talk he can talk. Because we will be at the same level with him, we will be able to move with him in whatever he is doing. So people who are deaf or blind or who are physically disabled … if you accept and understand him and try to understand the way he lives he will become what you want him to become. I therefore wish that the people we encounter every day, be it in class, at work or wherever … they should really help us and try not to turn us into blind things because that is what turns us into blind people. We are not without vision but if they make us visionless we will be so, even if we may not want that. So I really want to plead with them to understand us and to realise that we also wish the best for ourselves just like they wish the best for themselves. In that way we can be

> able to move together as one community. Even in the absence of technology or such other things I know it is possible. That is what I wanted to request people who will read your work or other people we encounter on a daily basis … As the Rwandan proverb says, "two (people) killed one (person)". It is not necessarily that they beat him to death, but rather the way they conferred to make him, the pressures they put on him to become is what he became. So I really want to make Rwandans or others understand that what they want us to become is what we will become. But that is not how we wish to be, we don't want to have bad lives. If they want us to have good lives we will have good lives.

5.3 Data from Deaf/Hard of Hearing Students

As I explained earlier, data were collected from five deaf students and one hard of hearing student from the three participating universities using an interview schedule that had 15 items (see Appendix A1). As was the case with visually impaired students, the interviews were conducted individually with each student.

During the process of analysing this data, the following themes were identified, and it is these themes which will form the bases of the following presentation:

- Impact of hearing loss on experiences
- Communication
- Inclusion
- Academic issues
- Institutional efforts
- Future prospects
- Attitudes
- Experiences.

I will now discuss each of these themes one by one.

5.3.1 Impact of Hearing Impairment on Experiences

The way hearing loss affected the participants either in their day-to-day lives as students or in their dealings with other members of the university community was an important theme which

emerged from the analysis of interviews with deaf/hard of hearing participants. Participants' perceptions of how having a hearing loss impacted on them were grouped under this theme.

Participants were keen to emphasise that, on the whole, having a hearing loss should not have any impact on either the quality of their social life or academic performance. They said that the impact of the hearing loss on their lives was caused by factors which were not related to the hearing loss but rather were caused by the society in which they lived.

Almost all the participants said that most of their lecturers did not know that they were deaf. As Eddy put it,

> But when I'm not using sign language they (lecturers) can go out without knowing that there's a deaf student in their class. It is very easy to recognise a blind person because you'll see him walking with a white cane, but deaf people, it is not very easy to recognise them because they'll sit in class and no one will know that they are there.

This caused some problems to the deaf/hard of hearing students because if lecturers did not know that there was a deaf student in their class they could not make the necessary modifications to their teaching methods and strategies.

Participants mentioned that because they could not hear and other people did not know or use sign language, they missed a lot of information both in class and in their daily interaction with others. This sometimes led to uncomfortable situations, as Elias illustrated:

> Last month we had a lecturer with funny rules. During one lesson he gave us a short break and said that we should be back in class after twenty minutes. Anyone who came late should remain outside. I did not hear this, and my fellow students forgot to ask me if I had heard. I came back after thirty minutes. When I got to class I found that they were doing a quiz. That was the first time the lecturer had come to our class and he was not aware of my problem. He was very angry and forced me to get out of the class. I was at a loss and didn't know what to do. After the test I asked the other students what had happened, and they told me that they were sorry they forgot to tell me about the duration of the break the lecturer had given us.

Another effect of missing crucial information on the participants was that they had to work harder than most other students in order to keep pace with their studies. All the participants mentioned that they did not have time to participate in leisure activities because they had to work

very hard at their studies. A participant told me that he did not even have time to go to church on Sunday or to visit friends. None of these participants belonged to any club in their university, and part of the reason for this was lack of time.

Another effect hearing loss had on the participants was that they sometimes felt inferior to other people because they could not hear and thus missed a lot of information. Tony told me,

> There are times I get an inferiority complex and feel that I'm not the same as them, I'm not equal to them because there are lots of things that pass me by. There are a lot of useful things that go on without me being aware of everything, and when I ask my friends they do not have enough time to explain everything to me, they just explain things in summary.

This feeling was more acute when the participants were still new in university, they said, and added that it grew less and less as time went by and they became used to the university environment.

Participants also said that their hearing loss made them more reliant on others. Eddy told me how he had to rely on friends to answer his mobile phone when someone called him:

> Sometimes I can have my phone and somebody calls me, but I need somebody to interpret for me. And I can't find someone to do this because people don't know sign language. And you see, because someone is calling you, you give your phone to your friend but your friend doesn't know sign language. After talking to the person you ask him what he has been told but because he does not know sign language you end up getting nothing.

The participant who was hard of hearing said that he thought this gave him an advantage in his life. He said he did not miss as much information as his deaf colleagues and that his hearing aid helped him a lot.

5.3.2 Communication

Participants felt very strongly that their experiences were conditioned by the way they communicated with other people who were not deaf. The issue of communication came up again and again during the interviews, and this data was grouped together into this theme, which is labelled 'communication'.

All the participants mentioned experiencing difficulties in their efforts to communicate with their hearing counterparts and lecturers. In fact, they felt that communication was their main problem and that if this were solved then all of their difficulties would end. Jacqueline told me,

> I would like to tell you that my problem is lack of a sign language interpreter. If we have a sign language interpreter I'll pass very well. All things are very fine, but we're missing interpretation. That's where there is a problem.

The problem was exacerbated by the fact that there were very few deaf/hard of hearing students in the universities; deaf/hard of hearing students usually found themselves with very few people with whom they could comfortably communicate. Barbara explained it thus:

> You know, I'm the only deaf person around, and I'm not happy with it because my communication with the others is not really good and I need to communicate with others who are deaf. So I don't really feel included here.

Another challenge related to communication that the participants mentioned was the use of English. This was especially the case in situations where the participants wanted to communicate with their lecturers or during lectures. Rwanda has recently adopted English as the medium of instruction, replacing French, which had been used previously for instructional purposes in schools. In primary and secondary school, deaf students had studied using the oral method, which means that they had learnt French. The new language policy meant that they had to learn and use English. The participants said that they found having to learn and communicate in English was a big challenge. Elias said the fact that some lecturers were expatriates who could not speak the local language, Kinyarwanda, did not help matters:

> The majority of lecturers here are non-Rwandans. As such the usual language of communication with them is English. English is very difficult for a deaf person. So the only way for us is to send the class representative who tries to communicate with the lecturers, and if he can't then he leaves matters be. Language, especially English, is a big problem to us.

Participants used several methods to communicate with other people who did not know sign language. One such method was exchanging notes with colleagues and lecturers. Lip-reading and finger-spelling were also mentioned as strategies used to communicate with others. Participants also talked of indirect communication, whereby hearing people sometimes talked to deaf

students through their friends rather than the deaf students themselves. Deaf students also used their friends to communicate with their lecturers.

All these difficulties in communication led participants to sometimes feel frustrated, or even to withdraw from the rest of the students. As Jacqueline said,

> It's very frustrating to try to talk to people who don't seem to want to talk to you or who are not interested in you. When you try several times and the reaction is the same you give up. You just talk to the few who are interested and leave the others alone.

Participants felt that their situation with regard to communication would improve a lot if their institutions could find sign language interpreters for them. They felt that in the absence of sign language interpreters in their universities deaf/hard of hearing students could not really feel part of the community. Some participants told me that they had requested their institutions to provide them with sign language interpreters but that the institutions had provided various excuses for not providing them. Elias summarised what they had been told:

> We requested for sign language interpreters and we were told that it would mean having another person in class in addition to the lecturer. We were also told that it was not feasible since it would entail having a sign language interpreter for each student, and furthermore that it would be difficult to have one sign language interpreter interpreting all the subjects for a student, thus adding budgetary concerns to the issue. We were also told that having a sign language interpreter was not possible because no research had been done to show that sign language interpreting was possible in Rwandan schools.

Let me end this subsection with some interesting remarks by Eddy about the impact the lack of sign language interpreters was having on the education of deaf/hard of hearing students:

> I'd like to tell you that at school the main thing is that if you can hear that's the vital thing because you'll be getting each and everything from the teacher or from the lecturer. But if you don't hear that's a big problem! Like, we deaf people, we don't hear, and that's where we find problems of getting what the lecturer is saying. For instance, if you bring a hearing student in a classroom of deaf people and the lecturer is deaf, can the hearing student understand what is going on? He can't get anything. And he can't even ask questions. He can't get questions, he can't ask anything, because he won't understand what is going on. Likewise for deaf people. So we can't ask and they can't ask us because we use sign language and they don't know sign language. So there is a problem of communication barrier.

5.3.3 Inclusion

This theme covers issues related to the participants' feelings and perceptions of inclusion in or exclusion from the university community. During the interviews with participants they were asked questions related to their inclusion in the university community (Appendix A1). They were also asked about how they interacted with other members of the university community, particularly with lecturers and other students. The information that responses to these questions generated contained references to issues such as friendship between deaf and hearing students, participants' perception of being part of or separate from the rest of the university community, and so on. All of these issues are considered under this theme.

Participants did not feel very included in their universities. Their general feeling was that they were actually excluded. When I asked Jacqueline whether she felt included in the university community, her initial response was, "No, no, no! They don't include me!" Naomi said, "We're not included. They think that I'm like other hearing students, but I'm not hearing, I'm deaf." In general that is how all the participants but one assessed their inclusion. The participant who was hard of hearing was the only one who thought he was quite included in the university community. The fact that the hard of hearing participant could speak and hear might explain his satisfaction with his inclusion in the university.

The lack of any meaningful communication between the deaf students on the one hand and hearing students and lecturers on the other seemed to lie at the heart of the participants' feelings of exclusion. In Eddy's words,

> I would like to tell you that we need to know sign language; we need the university to be aware about sign language. If there's no sign language so many deaf people will drop out of school. For instance, you can speak Kinyarwanda, you can speak English, but the problem is that we deaf people use sign language. And how will hearing people communicate with us if they do not know sign language? So that's the problem with this university, and it can create some barriers regarding the inclusion of deaf people here.

Participants mentioned that they had some friends among the hearing students, but such friendships were few and were mostly with students who could use sign language. One participant said she had only one friend, and this friend was someone she had studied with in

secondary school, so that she had come to learn sign language, which they used to communicate. Participants talked of feeling "left out" and alone. Jacqueline explained it thus:

> So many times I feel left out. For instance, sometimes students can have a group and then they discuss so many things, they interact with each other, but because I don't speak I will do nothing, I will say nothing. That is why I say that sometimes I feel alone. And it is really hard … I'd like to tell you that the time I've spent here in this university I've been so quiet. I do not interact with so many students.

Apart from the communication barrier, which makes the inclusion of deaf students in the universities difficult, participants also mentioned that hearing people developed wrong ideas about deaf students. When trying to explain to me why hearing students did not talk to her, Barbara said, "They fear me. They fear me. They think that I'm stubborn, they think that I don't understand. That's it. They think that talking to me is not easy. That's why they fear me a lot."

There was therefore very little interaction that took place between the deaf students and their hearing counterparts. There was even less interaction between the deaf students and the lecturers. The communication difficulties discussed in the previous section meant that interaction was a difficult process. One participant said that when her schoolmates wanted to talk to her they did so through her friends rather than directly communicating with her. A participant told me that she found it comforting to interact with the visually impaired students in her university even if she could not directly talk to them. She felt closer to them, she said, because she felt that as people with disabilities they belonged to the same family. The limited interaction between deaf students and the rest of the university community served to further increase their feeling of isolation.

5.3.4 Academic Issues

In this theme, data related to academic issues are presented. The theme examines data related to such matters as participants' views about their academic performance, lecturer and student support to participants, coping strategies used by participants to improve their academic performance, teaching methods and strategies employed by the lecturers and their effects on participants, and participants' access to information.

Participants had different views about how hard their studies were. Two participants said they found their studies to be quite easy, two said they were very hard, and the other two said they found the studies neither too hard nor too easy. However, all of them agreed that there were many factors external to themselves which made their academic work more difficult than it ought to be. These factors related to the challenges they faced as deaf people. They felt that being deaf should have nothing to do with their academic performance but they said that it did because being deaf meant that they encountered a lot of barriers that hearing students did not encounter. Some of these barriers have already been discussed, such as the problems related to communication between deaf/hard of hearing students and the rest of the university community and the challenges arising from these difficulties, and discussing them again here will merely lead to unnecessary iteration.

Participants mentioned a number of challenges they encountered in their studies as deaf people that made their academic life more difficult. Many participants mentioned that they did not have enough support from the lecturers. In fact, Elias felt that lecturers were the main source of their problems. In his view, "…most of the problems stem from the lecturer." Naomi said that lecturers would ask her questions in class before they knew that she was deaf but that after finding out that she was they would simply ignore her:

> You know, when our lecturers are teaching they try to focus on me like asking me and wanting me to do things like answering questions, but my friends will tell them, "This one is deaf. You won't get anything from her, she will not reply to you." Then the lecturer will just drop me. They will just leave me because I'm deaf.

In other instances, participants said their lecturers neglected their responsibilities as teachers and advised them to ask their friends for help about issues they did not understand. Naomi explained,

> The lecturers just leave me aside. Sometimes they say that my friends will help me. So they don't focus on me more. And ... what they do if they want me to get something, they'll write it on the blackboard and then say, "We don't have time to write for you each and everything, to explain each and everything on the blackboard. We don't have enough time." And they'll tell me, "You try to get a friend to support you in this course unit."

Even when the lecturers discovered that they had a deaf student in their class their behaviour did not change, according to the participants. Barbara's case illustrated this point:

> They know that I'm deaf but they don't bother. Most of them know that I'm deaf but they don't bother. They just continue with their lectures. They don't help me at all. But they know that I'm deaf. It's really bad. It's so bad.

According to the participants, lecturers used the excuse of having too little time to pay individual attention to them. Although participants felt that their fellow students were on the whole more disposed towards helping them than their lecturers, they too did not have enough time to help.

The fact that lecturers also had large numbers of students to teach made matters worse. One participant told me that at one time she shared a course with 400 other students. In such circumstances it was very difficult to get a lecturer to pay any attention to an individual student, even if he were willing to do so. Even though this was a challenge faced by hearing students as well, it affected deaf/hard of hearing students more because they had more special needs than hearing students.

Participants also found the teaching methods and strategies used by lecturers mostly to be not conducive to their learning as deaf or hard of hearing students. Tony said of these teaching methods,

> … There are so many times when we sit in class but we don't get anything from the lecturer. So, deaf people sometimes have to find their own ways of studying. We sit in class, the lecturer will lecture, and I won't get anything. And you know, sometimes the lecturers do not project things or write them on the blackboard. They'll just talk. And you come out of the lecture room without getting anything.

Participants talked of lecturers who would write on the blackboard while talking or who would talk for long periods without looking at the students. This meant that those deaf students who could use lip-reading as a way to get information could not make use of this skill. Most of the participants had been educated for long periods of time or entirely in mainstream schools and were used to using this technique in class. Other lecturers dictated notes rather than giving them to students, and this also made it impossible for deaf students to make their own notes.

Participants also took issue with the way examinations and tests were administered. There were cases where students were expected to do surprise tests, and this put deaf/hard of hearing students at a disadvantage because they needed more time to revise and prepare for examinations

and tests given the odds they faced in class. There were lecturers who had a tendency of examining students about things they had talked about in class but about which they had given no notes. When such questions were asked, participants said they invariably got very low scores. Elias explained another problem related to examinations:

> Another problem we find is related to the awarding of scores. There are some subjects in which we feel that a person gets scores that do not reflect a student's true performance. For instance, in English it is difficult for a deaf person to pronounce or read English words. English tests have about three sections: the first section is a written exam, the second one is an oral test where the lecturer gives you a topic to talk about in front of your fellow students. A deaf person will do a written exam and pass, say, with 13/20. But he cannot do the spoken exam, so the lecturer will give him, say, 5/20 just like that. We feel that the deaf student should get only the marks for the written exam and not be awarded an arbitrary score for an exam he did not do because he can't do it.

I asked the participants if they ever discussed these issues and concerns with their lecturers to see if ways of resolving them could be found. Naomi's response to this was as follows:

> Yes, I've talked to them! I've entered in their offices and I've told them, "please, I have problems, I have problems. Sometimes you dictate, but I don't understand. What you are doing is for hearing students." Sometimes I request them, "If you have free time you tell me so that I can meet you and discuss more before you go to teach ... before you go to the lecture room." Then they'll say, "No, we don't have time. You can consult your friends." So they're really not positive. They just tell me to go and visit my friends so that they can explain to me. They tell me that they don't have time.

Getting access to information was also another challenge that participants mentioned in relation to their academic work. If any information, such as the announcement of a pending examination or test, was made by word of mouth, participants said they sometimes never got such information unless their friends remembered to tell them. Participants talked of instances when they went to class only to find that they were going to do a test which had been announced but about which they knew nothing.

As a result of all these difficulties encountered in their academic life, some deaf participants felt that going to class was a waste of time. One participant said she sometimes skipped classes so that she could have more time to read and copy notes since her going to class made no difference. Many participants were also afraid of failing their examinations and the consequences

of such failure, such as having to do supplementary examinations or repeating courses. Tony explained these fears:

> The rules say that if you fail an examination you have to do a supplementary examination. If you fail a supplementary exam you need to study that course again. If you have only one course to repeat you go on to the following academic year but you have to repeat the course you failed in the previous academic year. Since coming to this university I've not had to repeat a course, but I'm afraid that should such a situation occur it would cause me a lot of difficulties in my studies. It would be very difficult to mix my studies of the current year with studies from the previous year, especially given the problems I've already told you about.

Some participants, including some of those who said they found their studies easy, expressed uncertainty about how they expected their studies to end. Barbara said, "I'd like to tell you that during the past two years I performed well, but I don't know about the coming years. But I know that I can. Now, if I fail, what can I do? I can do nothing."

In order to improve their chances of succeeding in their academic work, participants had developed a number of coping strategies to overcome the challenges they faced. Most of these have already been alluded to earlier in this section and will only be mentioned here in passing. Participants borrowed and copied their friends' notes, they got their friends to explain things that they did not get in class, and they put extra efforts into their studies. These strategies were not without their drawbacks, however. The extra effort meant that deaf/hard of hearing students had to forfeit their leisure time and social activities in order to find time to study. Copying notes from friends meant that deaf students copied any errors that their friends had made. Asking for assistance from friends was not always effective since their friends were not always available to help. Moreover, due to lack of time, these friends sometimes summarised the information they gave to their deaf colleagues, which meant that sometimes potentially useful information was omitted.

A number of suggestions were given by the participants about what their universities could do to help them learn better. Participants felt that having sign language interpreters in class would help them greatly in their learning. They also said that if their lecturers could adapt their teaching methods to include them as deaf students their learning experience would be much better. Some

participants further suggested that if a way could be found to give them laptops they would facilitate their studies since there were lecturers who gave notes in electronic format, notes which deaf students could not access because they had no way of getting computers. Finally, participants mentioned that they wished their universities could give them special consideration in situations where they failed examinations due to circumstances that were beyond their control. They felt that their universities should take into account the special conditions under which deaf/hard of hearing students learnt before deciding that they had failed their examinations.

5.3.5 Future Prospects

This theme covers issues related to the participants' views about their future. Discussions about the future inevitably ended up focusing on the participants' employment prospects and the kind of jobs they wanted as well as the possibility of their getting employed. The data that emerged based on these discussions is the subject of discussion in this theme.

All the participants except one were confident that they would find jobs upon completion of their studies. The other participant was not sure whether or not she would get employed on graduating, although she hoped she would.

All the participants took their hearing loss into account when making their future plans. They all expressed concern about the processes involved in applying for and getting a job. Of particular concern to the participants was the issue of interviewing job applicants; participants felt that this was a practice that was unfair for deaf people and that it put them at a disadvantage. Elias said concerning this issue:

> It is difficult, very difficult for a deaf person. Every time you go to ask for a job they require you to do an exam or even an interview. They may ask you to explain some things; we deaf people have problems communicating with hearing people.

The participants were also worried that society's negative attitudes towards deaf/hard of hearing people could pose a significant barrier in their search for employment. Tony summarised the hurdles he expected to encounter in his search for a job in the following words:

> There are a lot of hurdles involved in looking for a job. In looking for a job there is writing the application letter, after that doing the written examinations, and then the interviews. What would cause me problems is the interview. Unless I were to do an interview with people who know my problem or get a recommendation letter. That would really help me. Otherwise you can see that there are a lot of problems. And you see, many employers do not like to employ deaf people. They are worried that a deaf person would not be able to perform the tasks demanded by the post in question. That is still a big problem here in Rwanda.

In order to avoid such problems and those that would arise because of the communication barriers between deaf people and hearing people, four of the deaf participants said they preferred to work with other deaf people. This desire was also influenced by a wish to help deaf people, whom the participants felt were not receiving enough attention from the rest of society. Eddy's future plans were expressed in these words:

> After getting my degree I want to work with deaf people because deaf people are my family. I can communicate with deaf people because I'm a deaf person. That's where there's my communication. So I want to see that I improve the lives of deaf people.

When I asked him whether he did not think that working only with deaf people would be a form of self-imposed exclusion, Eddy replied,

> You know, the problem with hearing people is that they don't understand our culture. Sometimes we want to work with them, but they say, "How will we communicate with you? We don't know how we can talk to you, so it is very hard for us to talk to you." That is why sometimes deaf people decide to work with deaf people. Because hearing people say that they can't communicate with them. And this makes us to leave the hearing community and focus on the deaf community. Maybe we can have some programmes with hearing people, we can collaborate with hearing people regarding different activities or different programmes. I can do that.

The participants who expressed a preference to work with other deaf people did not however rule out the prospect of working with hearing people if it became necessary. I asked Barbara which job she would choose if she got two job offers, one with the deaf and one with hearing people. She said she would choose to work with deaf people. I then asked her whether she thought she could find a job elsewhere if she could not find one with deaf people, and she replied, "I think I can get the job, but the problem is communication. But I think I can get a job in another place but the problem is communication. That's where there's a problem."

In summary, participants' future prospects, hopes and plans were influenced by several considerations: their being deaf or hard of hearing and the challenges they expected to encounter because of this, especially those related to communication; their interpretation of the conditions of deaf people in general in the country and the resulting desire to help them; societal attitudes to disability in general and deafness in particular; and their different academic pursuits and the employment avenues open to them based on these pursuits.

5.3.6 Institutional Efforts

Matters related to participants' perceptions of what their institutions had done or failed to do in order to accommodate them as students with special needs are discussed under this theme. The actions discussed here are those that would be primarily undertaken at an institutional and administrative level and not actions that would result from individual initiatives.

Of the six deaf/hard of hearing participants interviewed, only the participant who was hard of hearing was positive that the university where he was studying had done anything for him as a hard of hearing student. He explained how the university helped him in the following words:

> The university is aware of my problem. If there is a problem between me and a lecturer and we can't resolve it, I approach the university administration and explain the nature of the problem to them and they try to talk to the lecturers. That's how the university helps me.

Another deaf student, Elias, explained his university's efforts to help the deaf students there in the following words:

> They try (to help us). For example, they discuss our problems in their meetings, and I suppose they know how they will solve them. For instance, in our first year one lady called us and told us to make a list of our problems, which we did. But we never got any response. A copy of the list was given to the Computer Science department because they said it is responsible for us and that they would solve them. We waited, but nothing was done. They're still probably thinking of how to solve them.

Elias was almost completing his second year studies at the time this interview was conducted.

Apart from these two instances, and the latter can hardly be considered as an endorsement of the institutions' efforts to help their deaf students, all the other participants said that their institutions had done nothing to help them. Many participants said (and the preceding quote is an example of this issue) that their institutions were aware of their problems but that they did nothing about them.

There were some things which the universities did for students with disabilities in general, which might explain why the participants did not see them as applying to them because they were mentioned in relation to other issues and not to what the universities had done for them. For example, all the three universities gave priority to students with disabilities, including deaf/hard of hearing students, when providing accommodation in university hostels. As such it was easier for the participants to get accommodation in university residences than students without disabilities. However, at least three of the participants in this study were not residing in university hostels, preferring instead to stay at home.

There was also a student who represented other students with disabilities on the student representative council of at least one of the universities, but the participant who mentioned this issue said that deaf students felt that this person did not represent them adequately.

Participants from both University 2 and University 3 said these institutions did not have any personnel who were responsible for students with special needs. Neither did they have a place such as a resource room that deaf/hard of hearing students could use. When I asked Eddy whether there was any kind of resource room in their university which deaf students could use, he replied, "I've never seen anything like that there. Never. And even my friends have never told me that there is any resource centre for deaf people or for any other people with other categories of disabilities." The participant from University 1 was hopeful that this university was showing interest in special needs education and hoped deaf people would benefit from this interest:

> I'd like to tell you that University 1 right now is very responsive regarding special needs education. There are so many deaf people who are coming to University 1 because they hear that it is trying to develop the special needs department. So if they can train sign language to lecturers of University 1 I think things would be good.

She said she had heard that there were plans to offer training to interested people in sign language, and hoped that this would take place soon. She added that she had been told that financial constraints were the main reason why these plans had not yet been undertaken.

The main thing that all the participants wished their institutions could do for them was to hire sign language interpreters for them because they felt that their main problem was in the area of communication and their inability to access information. As I have already mentioned, participants told me that they had been informed that financial limitations were the main reason the universities gave for not hiring sign language interpreters.

5.3.7 Attitude

Because of their perception that their main challenge as students was communication, the issue of attitude did not feature as strongly in the interviews with deaf/hard of hearing participants as it did in the interviews with visually impaired participants. But attitudes were implied in many of the things the participants said and it was clear that the theme of attitude cut across all the other issues discussed in this section.

Attitude as a theme covers the participants' perceptions, feelings and thoughts about themselves as well as what they thought other people's feelings, perceptions and thoughts about them were. It also includes participants' feelings, thoughts and perceptions about the rest of the society in which they lived.

During the interviews, participants indicated a variety of attitudes towards themselves. Some of these were positive while others were negative. The negative attitudes generally resulted from negative experiences in their interaction with hearing members of society.

The negative attitudes that participants expressed towards themselves were few and in most cases participants mentioned having experienced them during their initial entry into university. One participant said he started by feeling ashamed of himself when he found himself in a place where everybody else could hear and he could not. The attention that the other students paid to him made him feel ashamed. However, this feeling had vanished with the passage of time.

Another participant, Tony, mentioned feeling inferior to others when he thought of all the information that he missed. He explained, "Sometimes I get an inferiority complex and feel that I'm not the same as other people because my inability to hear means that a lot of things pass me by."

Apart from such instances when the participants were discouraged into having bad feelings about themselves, they were very positive about themselves and their abilities. Many of them felt very proud of their academic achievements in spite of the many challenges they faced.

Participants also talked about the attitudes of both their lecturers and fellow students. They indicated that in both groups there were those who had negative attitudes and those who had positive attitudes. As I have already mentioned, participants rarely mentioned the word 'attitude'. Thus, the nature of attitude being suggested was inferred from what was said.

There were both students and lecturers who had negative attitudes towards deaf/hard of hearing students. These attitudes were manifested through such actions as refusing to help participants when they requested for help and generally ignoring participants or making negative remarks about them. Eddy observed that it was clear to both lecturers and students that deaf/hard of hearing students were doing well but because of their negative mentality they could not accept this fact:

> They (lecturers and students) know that I'm bright, they know that I can perform well, but they have this mentality of saying that deaf people can't. But they know that I can because for a deaf person to be at the university it means that he is capable of passing well and doing it well. So they know that I'm capable of doing it.

Talking about his fellow students, Elias said, "But not all students bother, others just don't care. Some say we're disturbing them, and so do not take the time to help us."

The participants felt that although there were negative attitudes among both lecturers and students, the students were more positive and helpful than the lecturers. Most of the participants' negative comments were indeed reserved for the lecturers. Eddy mentioned that their lecturers simply ignored deaf students in their classes:

> You know, sometimes lecturers say that if they focused more on deaf people they'll be wasting their time. Because you find that there's only one deaf student and there are a thousand or one hundred hearing students in class; so they focus more on hearing students.

Jacqueline said that even when her lecturers knew that she was deaf, they did not change their teaching style in order to include her:

> They would ask my friends why they talked and I did not. My friends explained to the lecturers that I was deaf. Thus the lecturers became aware about me. But this did not change anything, as they said that my friends should continue to explain each and everything to me.

Eddy could not understand why his university had not found a member of staff to be permanently available to help deaf students when the university seemed to have so many personnel who were idle most of the time. He even felt that sometimes university personnel laughed at deaf students instead of helping them:

> And they have so many employees at the university but they don't support us. We just see them like cleaners and others, but they can't do anything for us, just laughing at us ... And you know, we ask them, sometimes we have problems and we ask them for help, but they'll say, "We don't have time, just be patient. Maybe tomorrow, maybe another day." So they only show us negative attitudes.

Participants also spoke of positive attitudes, especially among the students. Barbara explained how her classmates sometimes tried to speak out for her during lectures:

> You know, some students here feel sympathy for me. They feel that ... they see me as a deaf person, and they wonder how I manage to study. Sometimes they tell the lecturers, "You have a deaf student. How can we help her?" So the students are very good. They try to see how they can help me.

There were fewer positive remarks about the lecturers. The deaf participants generally felt that lecturers were not concerned about them. Naomi gave me one example of a lecturer who gave her some advice:

> But there is only one lecturer who is so supportive, who says that "you should go and advocate to the Ministry of Education. You should go to government to see that you request for sign language interpreters, you ask the government to bring for you sign

> language interpreters because you need sign language interpreters. If there is no sign language interpreter you won't learn anything." Because the lecturer would say, "You know I'm dictating and I'm explaining but you're not getting anything. If you had a sign language interpreter you will understand each and everything."

The negative attitudes experienced by the participants led them to view their lecturers in a negative light. As Naomi explained,

> When I enter in a lecture room I feel negative because nothing I'm getting (sic). Sometimes I see the lecturer and I see him as nothing because nothing I'm getting (sic) from him. Just talking. So I'm not getting anything, so I feel negative. I feel negative.

Although not many participants expressed such a view in such strong terms, many of the participants did mention that they got nothing from being in class. I have already mentioned the example of the student who sometimes decided to skip lectures. This suggests that the student had decided that the lecturers were not interested in her.

The participant who was hard of hearing differed from his colleagues about the attitudes of his lecturers and fellow students. According to him, the attitudes of his lecturers and colleagues were very positive. He had never experienced any negative attitudes from either group. Both the lecturers and students were always willing to help, and when they could not it was not because of an attitude problem, but rather because they lacked the time. This participant's positive experiences could be due to the fact that he could talk for himself and the lecturers and students could talk to him with ease, which was not the case with the deaf participants.

5.3.8 Experiences

This theme refers to issues that emerged from the interviews but which could not be included in the other themes mentioned above. The theme contains issues related to the participants' general judgement and perception of the nature of the experiences of deaf/hard of hearing students in tertiary institutions of learning.

Three participants said they had difficulties finding appropriate universities to attend. These participants said they had to change universities because they had been admitted to universities which offered courses they felt were not suited to their abilities and prior education. Eddy

explained to me how he got to the university where he was studying at the time of conducting the study:

> Because during my secondary I had taken computer science I considered which university to choose, and I chose University 2. In 2009 I studied at University 2 but I saw that things were not going well and I said, "What can I do? What can I do?" Because I did not learn more about mathematics. I thought things were very hard. So I considered what to do. I had to try my level best to see that I transfer my course from University 2 to another university. Things were not moving well. I saw that University 3 was appropriate for me so I decided to leave University 2 and go to University 3.

In the process of changing universities, the students found themselves losing time and having to restart their studies all over again. Those participants who had changed universities did so because they usually found the courses in their first universities to be unsuited to what they had studied in high school.

Participants mentioned that they had both good and bad experiences in university. Among the positive experiences they mentioned were that they had some friends who helped them, and that their prior experiences in secondary school helped them to survive in the university environment: most of the participants went to mainstream secondary schools. In fact, only one participant said he went to a special secondary school. In secondary school, deaf/hard of hearing students honed their lip-reading skills, developed the habit of reading and working hard, and made some friends, all of which served them well as university students.

On the whole, however, participants' experiences seemed to be more negative than positive. Naomi simply said, "I have a lot of problems; I have a lot of problems." Participants said they had a hard life in university. Others said they had financial difficulties because the government scholarship money was insufficient and sometimes got to them late. The worst aspect of their experiences, however, was the communication barrier between them and their hearing colleagues. The fact that there was a language barrier between them and the other members of the university community made it difficult for the two groups to understand each other.

As was the case with visually impaired participants, deaf/hard of hearing participants also told me that the longer they stayed with other people in the university, the more they were understood and appreciated and the more people's attitudes improved. Tony put it this way:

> You see, when we were in the first year many students despised me. They would say, "What is this guy doing in a university? I don't understand!" it was quite an issue! I even despaired! But other students encouraged me and said, "You were able to complete secondary school and get a certificate! Be patient, maybe God will help you." I remember at the end of the first semester I had very good marks, while many hearing students had failed and had many supplementary exams! Then people started to say among themselves, "really, what happened to Tony? He has very good marks and he got no supplementary exams!" They were really amazed. From that time they started to approach me and become friends with me. In fact there are things I understand which they do not understand!

Participants were therefore optimistic that their experiences would improve qualitatively as time went on and as more deaf/hard of hearing students got admitted into Rwandan tertiary institutions of learning.

In this section, I have presented data from interviews with deaf/hard of hearing participants. In the next section the interview data from lecturers will be presented.

5.4 Data from Lecturers

Interviews were conducted with three lecturers from University 1 as they were the only ones who agreed to be interviewed during the study. As was mentioned earlier, lecturers from University 2 and University 3 said they were not aware that they had deaf/hard of hearing students in their classes and that therefore they could give me no relevant information. The data presented in this section therefore represents the views of just three lecturers from University 1; the information presented here will therefore be more focused on visually impaired students than deaf/hard of hearing students since the lecturers were more familiar with these students. Nevertheless, some of what was said by the lecturers could apply to deaf/hard of hearing students as well.

As was the case during the presentation of data from visually impaired and deaf/hard of hearing participants, the data from lecturers was also grouped into several themes as follows:

- Inclusion
- Academic issues
- Future prospects
- Institutional efforts
- Attitude

5.4.1 Inclusion

This theme contains data about the lecturers' perceptions concerning the acceptance of students with visual impairment in University 1 and how well these students fitted into the community. The lecturer participants' perceived barriers to the inclusion of students with visual impairment in the university are also discussed under this theme.

The three lecturers felt that including students with visual impairment and other disabilities in universities was possible provided the necessary measures were taken to make this inclusion work. According to Brenda,

> There's nothing difficult in including them (students with visual impairment) in the university as long as … lecturers modify their way of teaching so that, for example, if they have a diagram they know how to explain the diagram to them so that they can also understand.

However, visually impaired students had not been completely accepted by members of the university community, including the teaching staff and students. Brenda said regarding this point, "They've not been accepted (by their fellow students) and even I think that even the teaching community probably has not accepted them well."

According to John, most Rwandans had not quite grasped the meaning of inclusion and still held their old beliefs about disability:

> People in Rwanda are used to seeing disabled people as helpless and needing help, not as scholars. Inclusive education is still quite a novel thing and many people are still finding it difficult to accept these visually impaired students and to see them as equal to others with the same potential and ability.

Lecturer participants gave a number of reasons why they felt the inclusion of students with visual impairment had not been very successful so far. Brenda felt that although the sighted students had not quite accepted their colleagues with visual impairment, the visually impaired students had not on their part made enough efforts to be included into the university community. According to her, the visually impaired students tended to keep to themselves rather than trying to mix with the other students. "From what they tell me, I get the idea that students with visual impairment just interact with themselves," she said, "it's like they've not mixed with the other students very well." She felt therefore that both groups of students bore some responsibility for the slow progress in implementing inclusion.

Adam thought that some students with visual impairment seemed to be shy and afraid to interact with their sighted colleagues. "It could be something to do with their special school background," he said. "And most of them have been together in primary and secondary school, so they seem satisfied by being together and keeping to themselves."

5.4.2 Academic Issues

Issues related to how students with visual impairment studied and learnt, the challenges they encountered in their academic work, and how they performed academically are discussed under this theme.

All three lecturers agreed that students with visual impairment had the same academic abilities and potential as other students. They also agreed that in order for these students to learn effectively and realise their full potential they needed more support than students who had no disabilities.

In the lecturer participants' judgement, students with visual impairment did not all have the same academic abilities. Neither did they achieve the same levels of academic performance. There were those who performed well and there were those who performed poorly, as one would expect in any group of students. "In my course," said John, "I have students with visual impairment who perform quite well. But there are others whose performance is really bad."

Lecturer participants were also in agreement that visually impaired students did not perform as well as they potentially could. Many challenges were mentioned which resulted in this state of affairs. These included the students' unfamiliarity with English as the new medium of instruction; lack of reference materials such as books in accessible formats; the library's lack of reading materials in braille and other formats accessible to students with visual impairment; large classes in some courses which made it difficult for lecturers to pay much attention to individual students; insufficient equipment; inappropriate teaching methods used by lecturers; and lack of interest in the education of students with visual impairment by some lecturers. All these challenges were mentioned as preventing students with visual impairment from reaching their optimal academic levels. The lack of reference materials had another effect on the students as well: they could not improve their writing skills and in some cases their spelling was quite poor. Brenda summarised some of these issues in the following words:

> …because what gives them so much problems is the English language and this English language is taught in the foundation department where all of them are taught together, and you see for a person with visual impairment who does not have a book to read or who does not see the spellings as the lecturer is writing on the chalkboard or talking about those words they may end up forming their own letters or spellings or words. So maybe in some cases when they do not perform their exams well I do believe – that's my own guess – that maybe the lecturer could not read or understand the words they wrote. Maybe they gave wrong spellings of some words. So if the lecturers cannot read them the student cannot earn a mark… it is a new language, and they're being introduced to things that they've never met before, and if they cannot read then they'll not know how to write those words. They'll just write through the pronunciation of the teacher. And in some cases … teachers are not angels, they have mother-tongue interference. So if they have mother-tongue interference and they pronounce a word in a wrong way then the student with visual impairment will get that word through that pronunciation and the student can write wrong spellings and then earn no mark.

A factor which contributed to students with visual impairment performing badly in their studies and which the three lecturers agreed on was the fact that most of the lecturers had no knowledge about special educational needs and how to deal with them. That partially accounted for the lecturers' inability to adapt their methods to meet the learning needs of students with different abilities. Two of the lecturer participants were competent in special needs education, but they said most of their colleagues were not.

The lecturer participants also pointed out that some of the reasons for the poor academic performance of students with visual impairment could be found within these students themselves. One lecturer participant surmised that some of them had spent so much time out of school and that this was perhaps affecting their studies. In addition, they had had a poor academic foundation in their secondary schools because even there they encountered problems in their education. They were admitted to university through "affirmative action", as one lecturer put it. They were admitted with lower grades than other students because of the realisation that the challenges they faced made it very difficult for them to achieve the required qualifications for admission to university. This fact combined with all the others mentioned above made it difficult for visually impaired students to study well.

John also said that after observing the students with visual impairment, he had come to the conclusion that some of them did not seem interested in studying:

> I think some students are able, others are just lazy, they don't want to work, so most of the time they're out there, going out, moving out, doing so many things outside. So for me I've been observing them, the reason why maybe they're not able to perform well is that some lack interest. It's like they're being pushed to learn.

The lecturer participants suggested that in order to improve the academic performance of students with visual impairment, it was necessary to give lecturers some basic training in special needs education. This would enable them to know how to teach these students in a more meaningful way. It was also important that the student population should be sensitised about the needs of their colleagues with visual impairment so that they could understand them better and appreciate them as their fellow students. The lecturer participants also felt that it was important to provide the visually impaired students with enough materials and equipment that they could use in their studies.

5.4.3 Future Prospects

Lecturer participants' thoughts about the future of their students with visual impairment provide the content for this theme. As was the case with the two preceding groups of participants, discussions about the future tended to revolve around the question of employment and the

prospects of visually impaired and deaf/hard of hearing students in finding jobs after completing their studies.

Two distinct issues emerged regarding the future prospects of students with visual impairment and their chances of getting employment. The first issue related to the lecturer participants' views about these students' abilities to perform competently as potential employees. The second related to the students' actual chances of being employed.

The three lecturers were agreed that visually impaired students had the potential to do their jobs well. John observed:

> From what I've observed, I think they can teach quite well. Some of them are quite adept at using computers and their other equipment, so I see no reason why they can't go out there and be good teachers. In fact I think it would be quite nice for people in this country to see blind teachers in their schools.

The lecturer participants also agreed that for people with visual impairment to do their work effectively, they needed extra support and equipment. Brenda was worried that the visually impaired students may not be able to find the necessary equipment to enable them work effectively. As she put it,

> Getting the equipment they may need in the work place is a challenge which they might face when they leave the institution; the writing equipment is a problem because when they go out they will have nothing to write with. Even those who are aspiring to be teachers have been wondering what they will use after leaving the university. Because if University 1 is not going to provide them with writing equipment to go and use wherever they'll go and work then it will be a big challenge. Being given a job and you cannot write notes. It will be very, very difficult for them. So apart from the equipment that is in the resource room, they don't have something which they can work with apart from the Braillino[1], which is also borrowed from the institute.

As far as the chances of the students with visual impairment to find jobs were concerned, lecturer participants were less confident in their answers. They noted that not many Rwandans were even aware that a blind person can be employed and do their job as well as anybody else. Deeply

[1]A note-taker with a braille display.

entrenched negative attitudes towards people with disabilities meant that it was not easy for a visually impaired person to expect to find a job. A lot of advocacy work would need to be done to raise awareness about the abilities of visually impaired students. Adam felt that the students with visual impairment and organisations of persons with disabilities should also play an active role in fighting for their right to employment:

> I teach them and educate them to the best of my ability. But once they come out it's a different programme. They have to struggle like everybody else. They have to work with their associations to make their rights felt by the other decision makers. Otherwise if it doesn't happen their future is bleak.

The lecturers interviewed also felt that with the passage of time awareness about disability issues was increasing. As such, the future was bound to be brighter than the present. I asked Brenda where she saw her visually impaired students in seven years' time, and she replied,

> In seven years from now I think there will be some light in the community or in the job market and maybe by then some of them will have been accepted and offered jobs or working. I think that's a long way, and I think the attitude is changing and as we continue talking about special needs and persons with disabilities, since it's moving very fast in our country I think by then there will be a lot of acceptance and the attitude will have changed from the other sighted world.

In conclusion, it can be said that lecturer participants expressed a variety of feelings about the future prospects of students with visual impairment, feelings that ranged from concern and doubt on one hand to cautious optimism and hope on the other.

5.4.4 Institutional Efforts

As happened in the two previous sections, this theme deals with issues related to what the university had done to improve the conditions of students with visual impairment. In this case, institutional efforts include what the lecturer participants felt the institution had done for them as lecturers and what it had done for the students with visual impairment, although the two aspects feed into each other since what the institution did for lecturers inevitably had an impact on the students with visual impairment and vice versa. The challenges encountered by University 1 in its efforts to provide quality education to the visually impaired students are also presented under this theme.

Some of the things that University 1 had done have already been alluded to. Its admission of visually impaired students on different terms than those of other students has been mentioned. "The most important thing," said Adam, "is the policy of admitting them on affirmative action, which is the most important social reform in developing inclusion and any other programme for the disabled." The fact that University 1 continued to admit more visually impaired students each year was also seen as a positive move by the lecturers, although they expressed concern that the number of students was increasing faster than the equipment they needed. John explained,

> The first blind students came in 2008 and more students have been coming each year, which I think is a good thing because these people had been unable to go to university for so long. However, I think that we are admitting more students without necessarily increasing our capacity to meet their needs. For example, the resource room is still the same, and the equipment is no longer enough for all the students.

Lecturers also mentioned University 1's provision of a resource room and putting three members of staff to work in it as a positive move. The resource room contained various types of equipment and devices needed by students with visual impairment, including computers, braille embossers and voice recording equipment.

According to the lecturers, the resource room and its staff served several functions: visually impaired students (and other students with severe disabilities) did most of their work there since the room had specialised equipment for them to use; staff in the resource room transcribed study materials such as notes into braille for students with visual impairment; any work done in braille by students was transcribed into print for lecturers to be able to read; and finally the resource room staff liaised between the students with visual impairment on the one hand and the administrative staff and sometimes with academic staff as well.

Although the issue of lecturers' lack of knowledge about special needs education recurred frequently in discussions with all the lecturers interviewed, John mentioned that University 1 at one time arranged a talk about this subject for all the academic staff:

> All the lecturers were invited and there were talks about how to meet the educational needs of the visually impaired students. But if I remember correctly not many lecturers came. I think there were only about 20 or so of us present that day. So many lecturers did not really benefit from this event, which I think is quite a pity.

Another aspect of training was mentioned by Adam. According to him, University 1 was running an in-service training programme for teachers in special needs education, and in recognition of the vital role played by the resource room personnel University 1 was paying for their training. To use his words,

> I should also say that in this institution we have put in place a training programme for teachers in the field. And in that training … the three people in the resource room are being trained free of charge; the university is paying for them. Others are paying through the nose to attend the training.

There were therefore many positive things that University 1 had done and was doing to facilitate the inclusion and learning of its students with visual impairment. Nevertheless, there were also a number of challenges mentioned by the participants which needed to be overcome in order for these students to be fully included in the university.

Some of the challenges mentioned included the increasing numbers of students with visual impairment, which meant that the available materials and human resources were no longer sufficient to meet their needs. The other challenge was lack of awareness on the part of staff and sighted students about visual impairment and how to meet the needs of visually impaired students. These issues needed addressing, the lecturer participants felt, for the university to become more inclusive.

Another issue that was seen as a challenge by the lecturer participants (and this applied to deaf/hard of hearing students as well) was the lack of a national framework to guide the inclusion of students with disabilities in tertiary institutions of learning. Thus, each institution worked alone. These "stand-alone" initiatives, as Adam referred to them, made the whole undertaking quite unsustainable as such initiatives could collapse or change direction at any time. Adam expressed this in the following words:

> There are laws in place, there are ministerial decrees... all these things should be put into action. Once they are not then we can't say we're doing anything. Whatever initiative is taken individually by individuals or individual institutions will be stand-alone projects which can easily disappear. But once they're instituted within a national framework then they will always be there and they will develop and be sustained.

Although the general legal framework is there, an implementation plan is not, such that different institutions do as they deem fit. This is what Adam referred to as 'stand-alone' initiatives.

In conclusion, the lecturer participants mentioned many positive things that University 1 had done to facilitate the inclusion of its students with visual impairment. Various impediments to these initiatives were also mentioned which explain why the process of including students with visual impairment into the university community has not yet completely succeeded.

5.4.5 Attitude

In this subsection, I will discuss attitudes as they emerged from the interviews with lecturers. Specifically, I will look at the attitudes of the University 1 community towards students with visual impairment and the attitudes of the students with visual impairment towards themselves as perceived by the lecturers.

Lecturer participants felt that there were instances of both positive and negative attitudes towards students with visual impairment in University 1. Positive attitudes were inferred by the lecturer participants from such activities as helping students with visual impairment and taking an interest in their work while the reverse was interpreted as indicating negative attitudes.

Lecturer participants said that there were lecturers who had very positive attitudes towards their students with visual impairment. These lecturers would go to the resource room when they were unsure of certain issues and request for clarification from the resource room staff. In the student community there were those who were always willing to help students with visual impairment. They read print material for them, helped them with their computers or invited them to join discussion groups. All these, the lecturer participants felt, were indicators of positive attitudes.

But the general view of the participants was that attitudes towards visually impaired students were generally negative, reflecting the general attitude of society towards disability. In John's opinion, the reason why there were so many things that were not being done for students with visual impairment was the negative attitude of society towards disability:

> I think if special needs education was prioritised then these students would be much better off. But special needs education does not have the priority it should have, and I think this is because of the negative attitudes people have concerning the disabled.

As was mentioned earlier, participants indicated that students with visual impairment had not yet been fully accepted as full and equal members of the University 1 community. This lack of acceptance was also due in part to the negative attitudes held by society towards people with disability, according to the lecturers interviewed.

Lecturer participants also talked about the attitude of students with visual impairment towards themselves. Participants felt that some of the visually impaired students had developed a 'dependence mentality' that led them to rely on others to do things for them. As Adam said,

> But some of them feel disabled and when you feel disabled you feel special in a way; you feel you must be supported and you don't necessarily lay appropriate strategies to ask for your right, what you're entitled to like any other person. You feel somebody else should do it for you. I see this kind of attitude among them and this is a limitation also.

In addition, and perhaps due to the dependence mentality mentioned above, visually impaired students were perceived by the lecturer participants as lacking in confidence. This lack of confidence impacted negatively on their ability to interact with the rest of the community, which served to further increase their isolation.

Lecturer participants mentioned several factors which influenced the attitudes of the sighted members of the University 1 community in relation to visually impaired students. These were generally the same as were mentioned by the other groups of participants and included, among others, cultural beliefs about disability, one's awareness of disability issues and training in special needs education, and exposure to people with disabilities.

5.5 Summary

In this chapter, the views of the participants as expressed through interviews have been presented. Data from three sets of interviews have been presented: data from interviews with students with visual impairment, data from interviews with deaf/hard of hearing students, and data from interviews with lecturers.

The process of analysing interview data revealed some key themes which were then used to organise and present the data. Five common themes featured in all the three sets of interview data, namely:

- Inclusion
- Academic performance
- Future prospects
- Institutional efforts
- Attitude.

There are two themes that were found in interview data from students with visual impairment and deaf/hard of hearing students but which did not feature in the interview data from lecturers, and these were the themes ‘experiences’ and ‘impact of visual impairment on experiences’ for visually impaired students and ‘impact of hearing impairment on experiences’ for deaf/hard of hearing students. There was one theme that featured prominently in interview data from deaf/hard of hearing students but which did not feature in the other two groups of participants, and that was the theme ‘communication’.

In the next chapter, both the quantitative data presented in the previous chapter and the qualitative data presented in this chapter will be analysed and discussed.

Chapter 6

Synoptic Discussion

6.1 Introduction

This study, as has already been mentioned elsewhere in this work, was conducted using a mixed methods research approach: that is to say both quantitative and qualitative data were collected. Quantitative data were collected using two sets of questionnaires, one for lecturers and another for students without disabilities. Qualitative data were obtained by means of interviews conducted with deaf/hard of hearing and visually impaired students as well as lecturers in the three universities which participated in the study. The findings of the quantitative research component were presented in Chapter Four while the data from the qualitative component were presented in Chapter Five.

This chapter endeavours to weave the various strands of data from the diverse groups of participants as presented in the two preceding chapters into one coherent discourse. The literature review and conceptual framework presented in Chapter Two will provide the basis for the discussion.

The key themes that emerged from the study were discussed in Chapter Five. These themes will provide the framework for the preliminary discussion. The final sections of this chapter will revisit the research questions and objectives for this study outlined in sections 1.4 and 1.5 respectively before concluding the chapter by outlining some recommendations suggested by the findings of the study.

6.2 Thematic Discussion

The data in Chapter Four was not presented thematically but rather on the basis of the questions as they appeared in the questionnaires the participants completed. A total of eight themes were identified and presented in Chapter Five. The data and findings of this study will be discussed under these eight themes according to where they most appropriately fit.

The eight themes that will be discussed here are as follows:

- Impact of visual and hearing impairment on the experiences of university students
- Communication
- Inclusion
- Institutional efforts
- Academic issues
- Future prospects
- Attitude
- Experiences.

The themes are not presented in the same order in which they appear in Chapter Five. Instead, an attempt is made here to arrange them into a logical narrative sequence that allows one theme to flow into and contribute to the discussion of the following theme. As this study focuses on the experiences of deaf/hard of hearing and visually impaired students in inclusive universities, the theme 'experiences' is discussed last so as to allow for a general discussion of these experiences.

6.2.1 Impact of Visual and Hearing Impairment on Experiences

Most of the literature that has concerned itself with the impact of visual impairment has mainly focused either on children and adolescents or on elderly people with visual impairment. The way in which visual impairment affects young people, such as the ones who were the main interest of this study, have not been specifically targeted as research topics in most of the research studies dealing with visual impairment.

Existing literature suggests that visual impairment affects different individuals in different ways depending on such factors as the type of visual impairment the person has, age of onset of the visual impairment, the individual's educational level, as well as community and family support and attitude towards the impairment (Rogow, 1999). Some of the areas that may be affected by a visual impairment include physical and motor development, language and concept development (Landsberg, 2011; Rogow, 1999), and psychosocial development (Landsberg, 2011; Keeffe, 2005; Rogow, 1999). Visual impairment is negatively associated with psychological well-being

because it is believed that it reduces one's ability to perform daily activities (Pinquart and Pfeiffer, 2011), thus increasing an individual's sense of dependence and decreasing his/her self-esteem.

In this study, visual impairment was found to affect university students in two major areas: reduced independence and the resulting limitations in opportunities available for the concerned students, and inadequate levels and quality of interaction between visually impaired students and other members of the university community. The students with visual impairment focused mostly on how these affected their academic performance, which was not surprising given that they were university students. The survey data however showed that some lecturers also thought that some visually impaired students had an inferiority complex while students without visual disabilities thought that visually impaired students experienced mobility and orientation problems, especially at the start of their university education. These two issues were not mentioned by the students with visual impairment. Most of the effects typically associated with visual impairment in the literature, including delays in acquiring and developing language and communication skills, and physical and motor development problems, did not feature among the findings of this study. Of all the factors mentioned by Rogow (1999) and listed above as having an influence on the way having a visual impairment may affect an individual, educational level is the one factor that the students with visual impairment had in common. It is therefore reasonable to surmise that it had a role to play in mitigating some of the more serious effects of visual impairment on the visually impaired participants.

During this study, an attempt was made to find out whether the participants with low vision felt that having low vision made a difference between their experiences and those of the blind students. This is because differences between blind people and people with low vision have been widely discussed in the literature on visual impairment (see, for example, Landsberg (2011); Rogow (1999); Sacks (1996) and Scholl (1986)). For example, individuals with low vision may use some materials such as print which cannot be used by blind people (Davis, 2003; Miller, 1996).

The findings of this study suggest that there was little practical difference between the experiences of the blind students and those with low vision. This does not mean that these differences do not exist. Suubi's (2012) study of students with low vision seemed to show that if students with low vision were treated in the same way as blind students without making special efforts to meet their specific needs, they tended to lose their low vision status. Furthermore, this issue was only discussed with the participants with low vision and it is not clear whether the other participants in the study would have felt differently. But it was felt that the students with low vision were the best placed to make any judgement on how low vision affected them. After all, as Vickerman and Blundell (2010) argued, people affected by a disability are the best placed to explain how that disability affects them.

As was the case with visual impairment, hearing loss was found to have effects on the participants. And as was the case with vision loss, there was a difference between how deaf/hard of hearing people viewed the way hearing loss affected them and the way hearing people perceived hearing loss to affect deaf/hard of hearing people. The majority of the deaf/hard of hearing participants felt that hearing loss affected them only insofar as it hindered communication between them and the rest of society. The issue of communication is discussed in detail in the next subsection. Some deaf/hard of hearing participants mentioned feeling inferior to hearing people though this feeling decreased with time. Low self-esteem was also reported by hearing students as a problem facing deaf/hard of hearing students.

There is a relationship between the self-concept of deaf/hard of hearing persons and their identity. Bicultural Deaf people and those deaf people who associate themselves with other deaf people are said to have the most positive self-image (Andrews et al, 2004; Cornell and Lyness, 2004). Deaf/hard of hearing participants in this study formed a very small group in each university and had little chance to interact with other deaf/hard of hearing people. Most of them had little or no special school experience. It is therefore likely that they had most of their interactions with hearing people and did not get a chance to develop the positive benefits of associating with other deaf people.

It is difficult to say for certain whether the assertion by hearing participants that deaf/hard of hearing students had low self-esteem was based on experience or a product of societal beliefs concerning deafness. Nikolaraizi and Makri (2004) have argued that hearing people tend to think of deaf/hard of hearing people in a negative way. It is possible that the perception that deaf/hard of hearing people have low self-esteem may be related to this fact.

This study had one participant who was hard of hearing and who did not use sign language. An effort was made to find out whether his outlook was any different from that of deaf participants. Some research has suggested that differences exist between the perspectives of hard of hearing individuals and those of deaf people. For example, research conducted by Fellinger et al (2007) concluded that hard of hearing people who did not sign had worse social relationships than both the signing deaf and hearing people. Israelite et al (2002) found in their study that hard of hearing students tried to limit the effects of their discrimination by emphasising the similarities between themselves and the hearing students and by criticising Deaf adherents of Deaf Culture. The hard of hearing participant in this study felt that his being hard of hearing gave him a significant advantage over his deaf colleagues, be it in the social or academic sphere. But he was also planning to learn sign language once he completed his studies, for he would then have more free time to devote to this activity. In this sense, he felt an affinity with the other deaf students. As such, the hard of hearing participant in this study differed from the hard of hearing participants in the two studies cited above. This finding is closer to that of a study by Magongwa (2008) in which hard of hearing people were found to relate more to Deaf Culture than to the Hearing world.

Although both the deaf/hard of hearing and visually impaired participants agreed that their impairment affected them in some ways, they emphasised that most of these effects were not due to the disability itself but attributed them to socially constructed barriers. According to them, these barriers aggravated the effects of their disability and created difficulties where there should have been none.

This finding is consistent with discourses of disability usually associated with the social model of disability. The social model, as Avramidis et al (2000) point out, emphasises the role of the

environment within which an individual is placed in determining the effects of a disability on the person. Thus, disability is construed as resulting from socio-cultural factors (Flewitt and Nind, 2007) such as negative attitudes towards disability and not from the individual himself/herself. Clark et al (1999) have further argued that learners with special educational needs in schools do not face problems primarily due to intrinsic factors within them but because of extrinsic barriers that can be located within the school itself. It is therefore important to change these socially constructed obstacles (Davis, 2003) in order to limit the effects of the disability on an individual. If the environment is adapted to suit a particular individual's needs, the disability is no longer an issue (Andrews et al, 2004). As will be recalled from Chapter Two, this is also the philosophical basis of inclusive education: the system (or environment) needs to be sensitive to the needs of learners.

In conclusion, both hearing and vision loss were found to have some effects on this study's participants. However, most of these effects were not the consequence of the disability per se but rather resulted from factors that were external to the deaf/hard of hearing and visually impaired participants. Examining and addressing these factors can help in reducing the impact of a disability on an individual.

6.2.2 Communication

Communication featured prominently as a challenge facing deaf/hard of hearing students in the current study. It recurred frequently in both survey and interview data. Indeed, deaf/hard of hearing participants felt that if their communication problems were resolved, all the other hurdles they encountered in their studies would end. According to Wallhagen, Strawbridge, Shema, Kurata and Kaplan (2001) the aspect of life that deafness affects most acutely is communication. Fellinger et al (2005) observed that deaf/hard of hearing people faced daily problems in relation to communication.

There was a significant barrier between deaf/hard of hearing students on the one hand and lecturers and hearing students on the other resulting from the inability of the two parties to communicate. This meant that deaf/hard of hearing students did not participate actively in either the social or academic activities that took place in their universities. All but two of the deaf/hard

of hearing participants in this study used sign language to communicate with each other and with a small number of close friends who had learnt sign language. As these friends were very few, and none of the universities which participated in this study had more than three deaf students, it is understandable that the deaf participants expressed feelings of loneliness and isolation.

This finding is consistent with existing literature and other research findings. Research concerning the inclusion of deaf/hard of hearing students in mainstream schools shows that deaf/hard of hearing students sometimes experience loneliness, rejection and social isolation (Angelides and Aravi, 2006; Oliva, 2004). Describing her loneliness as a deaf person in mainstream education, Oliva (2004:75) wrote,

> … I see myself walking to school alone … I see myself walking into my homeroom, feeling self-conscious. I see myself gathering up my books quickly whenever the bell rang, going directly to my next class, sitting down and getting my homework out, waiting for class to start. I never talked to anyone. I felt really uncomfortable. And it seems like this was just life as I knew it, as if this were normal for me.

In an account of her own and other deaf/hard of hearing people's experiences in mainstream schools, Oliva (2004) noted that while deaf/hard of hearing students in mainstream schools may derive academic benefits from mainstreaming, their social experiences were so unpleasant that any academic benefits accruing from inclusion became meaningless. As Oliva (2004:75) further wrote,

> When belaboring these social disadvantages, several … participants went so far as to declare that they were of such severity that no deaf or hard of hearing child should be mainstreamed alone. For them, the loneliness and lack of self-esteem resulting from the pervasive feeling of being different and left out were so damaging as to negate any academic benefits.

According to Arnold (1999) deaf people find comfort in talking to other deaf people, especially when their need for interaction is not met by the hearing society in which they live. Moreover, they find communication between them and other deaf people to be more meaningful and deeper. Whyte and Guiffrida (2008) further explained that significant cultural differences in areas such as language and social relationships exist between deaf/hard of hearing university students and their hearing counterparts. These cultural differences could have compounded the

communication barriers between deaf/hard of hearing students and other members of the university community and increased their isolation and loneliness.

It was mentioned in Chapter Two that there were various technological options and devices available to help deaf people access the spoken word. These include real-time captioning, captioning software, and note-taking software. Other alternatives are computer-assisted note-taking (CAN) and communication access real-time translation (CART). These technologies are used to provide whole or summarised verbal transcriptions of proceedings in a variety of environments, such as in a lecture room. Surprisingly, these technologies did not feature anywhere in this study, either in the survey data or in the interview data. One possible explanation for this is that the study participants were probably not aware that such technology exists. Another possible explanation would be that deaf participants preferred using sign language over any other means of communication, hence their emphasis on having sign language interpretation services in their universities. It is also worth pointing out that these assistive technologies for deaf/hard of hearing people are rather expensive and therefore difficult to obtain, especially for developing countries.

None of the three universities which took part in this study had any sign language interpretation services for their deaf/hard of hearing students. This is despite the fact that lack of sign language interpreters was mentioned as a challenge by all groups of participants. One participant mentioned a number of reasons given by the university administration for not employing sign language interpreters: first, a sign language interpreter would be an additional person in the class (in addition to the lecturer); second, employing sign language interpreters was not financially feasible since it would entail the university having to employ a sign language interpreter for each deaf student, or even perhaps a sign language interpreter for each subject for each student; third, no research had been done in Rwanda to show the practicability of using sign language interpreters in schools.

The issue of cost is often cited for not making the necessary accommodations to meet the needs of students with special educational needs (Andrews et al, 2004), including providing deaf students with sign language interpreters. However, when working with deaf/hard of hearing

people, issues related to communication need to be given priority over any other matters (Cornell and Lyness, 2004). There are profoundly deaf people who learn to use spoken languages well, but other deaf people may find it easier to learn and use sign language (Arnold, 1999). This could be explained by the fact that the majority of deaf learners are vision-oriented, unlike hearing and seeing learners, who are both auditory and visual (Moores, 2010). Sign language, as a visual language (Damian, 2011; Marschark, 2006), is suited to the learning needs of deaf/hard of hearing people. Furthermore, sign language is viewed as the natural or first language of deaf people (Hauser et al, 2010). Thus, any attempt to resolve the communication challenges of deaf/hard of hearing students will have to take into account their use of sign language and the necessity for sign language interpretation in environments where deaf and hearing people live and work together. Whereas some deaf/hard of hearing people may not benefit from, or even wish to use sign language interpreters, those who desire to use sign language should be facilitated to do so. The fact that no empirical evidence exists to guide the use of sign language interpretation in Rwanda should not be an excuse to prevent its use. There is a large body of literature about sign language interpretation (see, for example, Marschark et al (2006); Marschark et al (2005); Andrews et al (2004); Honna and Kato (2003) among others) which can be used to inform practice in Rwanda although more research should be done specifically designed to address the particular situation of the country. For instance, such studies could address issues such as variations in regional sign languages used in the country and how they can affect sign language interpretation services.

Sign language interpretation in the classroom is vital as a means of enabling deaf students to access verbal information (Marschark et al, 2005). It is unclear why university authorities should object to the presence of sign language interpreters on the basis of the argument that it would introduce an extra person in the lecture room. Sign language interpretation is one of the support services and accommodations that deaf/hard of hearing students in inclusive settings require (Magongwa, 2008; Whyte and Guiffrida, 2008; Marschark et al, 2005; Andrews et al, 2004) and its significance for deaf people was emphasised in the Convention on the Rights of Persons with Disabilities (United Nations, 2006). Denying deaf people sign language interpretation services amounts to denying them opportunities to participate effectively in the academic and social activities of the university. The Salamanca Statement (UNESCO, 1994) affirms that providing

equal opportunities for all learners is a human rights issue and that deaf learners should be provided with sign language interpretation services. The failure of universities in this study to provide sign language interpreters for their deaf/hard of hearing students could be due to ignorance of the specific needs of these students. As Magongwa (2008) pointed out, there is a tendency among many hearing students and lecturers to assume that everybody in class can hear and speak, and that every deaf person can lip-read. However, there is increasing acceptance of the use of sign language in schools in many countries of Sub-Saharan Africa (Kiyaga and Moores, 2009) and this provides hope that Rwanda may follow the example of other countries in the region and do the same. Indeed, the recent training of some staff members of the National University of Rwanda in Rwandan Sign Language (National University of Rwanda, 2012) suggests that this change may already have started taking place.

Because of the lack of sign language interpreters in the participating universities, deaf students used a number of alternative mechanisms to communicate with others. These included using gestures, writing notes, getting colleagues who knew sign language to translate for them, and so on. Often, deaf students were unable to talk to lecturers or ask and answer questions in class. These coping mechanisms among deaf students were remarkably similar to those Magongwa (2008) reported among deaf/hard of hearing students at the university of the Witwatersrand.

Deaf students in Rwandan universities were studying in an environment designed for hearing students and in which their communication needs were not taken into account. Despite this, they managed to progress from one academic year to another. There is no doubt that improving communication between them and the rest of the university community would enhance the quality and depth of their university experiences and improve their academic performance and social life.

So far in this subsection, I have concentrated on language and communication challenges experienced by deaf/hard of hearing students. This is because these students strongly emphasised the importance of addressing the communication barriers they faced. Students with visual impairment did not discuss communication issues very much, but some of them mentioned experiencing difficulties in visual aspects of communication because of their visual impairment.

Their inability to use eye contact during communication, for example, interfered with effective communication between them and their sighted colleagues. Visual feedback is vital for the establishment and maintenance of social interaction (James and Stojanovik, 2006; Rogow, 1999). In addition, vision enables one to know what is going on around them (Rogow, 1999), which is also important in social interaction. By missing the visual input to communication, visually impaired students faced challenges in their interaction with sighted people.

6.2.3 Inclusion

Inclusion here refers to how well the deaf/hard of hearing and visually impaired students were accepted by the university communities in general, and in particular by the students without disabilities as well as the lecturers. Levels of interaction between deaf/hard of hearing and visually impaired students on the one hand and lecturers and other students on the other and friendships, cooperation and understanding were considered as indicators of levels of inclusion in the participating institutions.

Data from this study suggest that levels of inclusion of the visually impaired and deaf/hard of hearing students in the universities where they studied were not satisfactory. Students with visual impairment felt that they were not fully included while deaf students on the whole felt excluded and 'left out'. Among deaf/hard of hearing participants, only the student who was hard of hearing felt included. There were few instances of friendships between deaf students and hearing students and very little interaction between deaf students and their lecturers.

Levels of satisfaction with their inclusion were much lower among deaf/hard of hearing students than among visually impaired students. These differences were also reflected in the survey data. Responses to several questions that were designed with the purpose of helping to understand survey respondents' attitudes towards inclusion elicited more positive responses from University 1 participants than from University 2 and University 3. For instance, all but one of the student participants from University 1 said they had had some form of interaction with visually impaired students; in contrast, only eight of the 45 participants from University 2 and 28 of the 96 participants from University 3 said they had had such interactions. Similarly, 96.2%, 17.8% and 25% of students surveyed from University 1, University 2 and University 3 respectively said

they had friends among deaf/hard of hearing and visually impaired students. The trend was the same for data from lecturers surveyed, although there were relatively fewer participants from University 2 and University 3 than from University 1. This puts some limits on how much weight can be given to this data. Lecturers interviewed also felt that students with visual impairment had not been fully accepted by the other students and lecturers.

Students with visual impairment as well as deaf/hard of hearing students perceived their fellow students to be more accommodating and understanding than their lecturers. The majority of lecturers surveyed however thought that lecturers did their best to help deaf/hard of hearing and visually impaired students. Whereas it is possible that there were lecturers who were not very inclusive in their practices, there are other possible explanations for this perception: the interaction between deaf/hard of hearing and visually impaired students and their lecturers was predicated on academic matters while relationships between the students without disabilities and those with disabilities was more general and included both social and academic aspects. There was therefore more interaction between the two groups of students than there was between students with disabilities and lecturers. The tendency among students to view their lecturers as 'superior', 'unapproachable' and 'aloof' is bound to limit interaction, and this could also explain why lecturers were perceived to be less inclined to be inclusive.

This study's findings show that several factors seem to hinder the acceptance and inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities. These include attitudes and cultural stereotyping of people with disabilities, prejudice against and lack of understanding of people with disabilities, and the fact that inclusive education is a relatively new undertaking in Rwanda and therefore many people have not yet understood and accepted its principles. In addition to societal attitudes, the attitudes and behaviour of the deaf/hard of hearing and visually impaired students themselves were viewed by lecturers and students without disabilities as being barriers to their inclusion. Students with visual impairment seemed to keep to themselves and shied away from interacting with others. One visually impaired participant did say he was more at ease with other visually impaired students than with the rest of the students. This tendency among visually impaired students was perhaps due to their special school background. Skjørten (2001) noted that after years of isolation in special schools, students often

found it difficult to fit into mainstream society. The advantages of inclusion mentioned by participants in a study by Kristensen et al (2006) were that learners got used to life in a typical environment outside special schools, and to socialising with other people without disabilities, which reduced negative attitudes towards disabled people. Deaf/hard of hearing students have the additional barrier of lack of meaningful communication between them and the rest of the community in which they live because of the language differences between deaf and hearing people. Attitudes and their role in promoting or hindering inclusion will be discussed in a later section while communication and its implications for deaf/hard of hearing students was discussed in the previous subsection.

A number of factors were found to facilitate the inclusion of students with disabilities in Rwandan universities. These factors only applied to University 1 as only participants from this institution mentioned them. Of these, the one that all participants, including the deaf student, agreed on was the fact that the administration of University 1 was committed to the inclusion of students with varying special educational needs. The construction and equipping of a resource room and adaptations to the physical environment were mentioned as instances of this commitment (this issue is discussed in detail in the next subsection). Other factors mentioned included the teaching of a course in special needs education as part of the teacher training programme. This course, it was believed, could have had a positive influence on inclusive practices in University 1. Education plays an important role in informing the public about disability and thereby helping in the formation of positive attitudes towards inclusion in the society (Clark, 2006).

The fact that many students in University 1 are mature and some had even been practising teachers before joining the university was another factor said to positively influence inclusive practices among the general student population. The experiences of these mature students, including the possibility that some of them could have taught students with special educational needs or had been in some other way exposed to them influenced the way they viewed and treated students with disabilities in their midst. According to Avramidis et al (2000), teachers who had no experience with inclusion tended to have the most negative opinions of it; as teachers gained experience by working in inclusive settings their confidence and opinions about

inclusion gradually improved. However, the issue of adult learning and its relationship to disability has not been adequately studied, despite the increasing numbers of people with disabilities seeking tertiary and advanced educational opportunities (Clark, 2006).

As has been implied above, experience with inclusion and working with people with disabilities is believed to positively influence views and attitudes towards inclusion. The levels of inclusion of deaf/hard of hearing and visually impaired students in their universities improved over time as students and lecturers got to know them better and understand their abilities. Furthermore, some of the closest friends of the deaf participants were students who had studied with them in secondary school. This finding is consistent with the argument that inclusive education is associated with combatting discriminatory practices against people with disabilities and is said to be one of the ways to promote inclusive societies (Mărgărițoiu, 2010).

An interesting point to ponder here is the fact that the deaf student from University 1 felt more comfortable interacting with visually impaired students than she felt interacting with the other students. She felt an affinity to them because students with visual impairment were in the same boat with her, as it were. This is despite the fact that she faced the same communication challenges with them (or perhaps greater challenges, if one considers the fact that communication for deaf people is a visual process) as she experienced communicating with the rest of the student population: communication between students with visual impairment and the deaf student was conducted through the medium of the resource room personnel. Inter-disability interaction and relationships is an area that has not received much attention, but it is possible to learn something about inclusion by paying more attention to it. Understanding why and how people with different kinds of disabilities interact with each other can add interesting perspectives to the inclusion debate.

It is clear that there were differences between the inclusion of deaf/hard of hearing and visually impaired students, with the visually impaired students feeling more included. The factors discussed above as promoting inclusion in University 1 may serve as partial explanations for this, in addition to the fact that they did not have to contend with the language and communication hurdles encountered by deaf students. But these explanations are not complete as

the deaf student from University 1 did not feel as satisfied with her inclusion as the visually impaired students. Another plausible explanation could be found within the nature of visual impairment and deafness: deafness is an invisible impairment (Storbeck, 2011; Ahmad, 2003) whereas visual impairment is much more noticeable (Wallhagen et al, 2001). Therefore, Wallhagen et al (2001) opined that people were more disposed to be understanding towards persons with visual impairment than towards deaf/hard of hearing people, who are not easily distinguished as having a disability and therefor special needs.

Another factor which, either on its own or in conjunction with the other issues discussed above, could explain the differences between the opinions of inclusion of students with visual impairment and deaf/hard of hearing students is the fact that there were very few deaf/hard of hearing students in the institutions where they studied. This made them less noticeable than the larger number of students with visual impairment in University 1. Students with visual impairment attended a number of core courses with the rest of the student body and attended a variety of optional courses. This made them quite visible in the university, a fact which could have had a positive influence on the University 1 community in relation to its opinions and practice of inclusion. This would also explain why the deaf student from University 1 was not as included as her colleagues with visual impairment: not only was she the only deaf student in the institution, but she also attended the evening programme that was quite separate from the day programme of the university. She was therefore unable to benefit from the awareness raised by the presence of visually impaired students in the institution. The larger numbers of visually impaired students in University 1 could also explain why more students without disabilities from this university claimed to have friends among visually impaired students while fewer participants from either University 2 or University 3 said they had friends among deaf/hard of hearing students.

In this subsection, several aspects of the inclusion of deaf/hard of hearing and visually impaired students have been discussed, especially their acceptance by the university communities. Factors that militate against their inclusion have been discussed as well as the factors that promote inclusive practices in University 1. An attempt has been made to explain the apparent difference

between University 1 and the other two institutions as far as their inclusion of deaf/hard of hearing and visually impaired students is concerned.

6.2.4 Institutional Efforts

So far in this chapter, I have discussed the various ways in which visual impairment and hearing impairment affected students in their university life. I have also examined the inclusion of deaf/hard of hearing and visually impaired students in these universities. The measures that these universities had taken to meet the special needs of their deaf/hard of hearing and visually impaired students provide the next topic for discussion. Measures that were important for the successful inclusion of visually impaired and deaf/hard of hearing students and which the universities should take as suggested by various participants in this study will also be discussed.

A key component of the inclusive educational setting, according to Mărgăriţoiu (2010:83) is that it is "accessible to all who become members – physically in terms of the buildings and grounds and educationally in terms of curricula, support systems and methods of comunication (sic)". The various ways in which people with visual impairment and deaf/hard of hearing people can be supported in an inclusive setting were discussed in chapter 2. These range from communication and access to information to environmental adjustments.

The universities which participated in the current study were at different levels in their inclusion of deaf/hard of hearing and visually impaired students, with University 1 seeming to have gone the furthest along the inclusive road. However, I agree with the lecturer who said during our interview that admitting students with severe disabilities was the boldest and most important step towards inclusion in Rwandan higher institutes of education, and the three universities which participated in this study as well as the other institutions which did the same ought to be commended for having taken that initial step. As part of the policy to include students with visual impairment in university, and in recognition of the special challenges these students encountered in their secondary and high school education, students with visual impairment were admitted on the basis of affirmative action, i.e. they were admitted with lower pass marks than their sighted counterparts. This was an important decision because Richardson and Roy (2002) and Bruce et al (1991) pointed out that the reason why there were such small numbers of

students with visual impairment in tertiary institutions of learning was their poor academic performance at secondary school level. As the information about admitting visually impaired students to university through affirmative action was provided by a lecturer from University 1, it was not certain whether this policy applied to deaf/hard of hearing students as well. All the deaf/hard of hearing participants in this study said they had been admitted to university because they had performed well in their secondary school examinations.

Apart from admitting students with disabilities, there were two measures which all three universities had taken to meet their needs. One was to prioritise them in getting university accommodation, although this did not benefit students who chose to stay off campus (at least three of the deaf/hard of hearing participants in this study did not stay in university hostels). Students with disabilities in University 1 also paid less rent than their colleagues. In addition, University 1 staff working in the university restaurant and dispensary gave special attention to students with visual impairment, but it was not clear whether this was due to personal initiatives by the concerned staff or whether it was the result of some directive from the university administration. The deaf student from University 1 did not mention receiving any preferential treatment, most probably because she got none.

Each of the three universities had a student representative council and students with disabilities were represented on these councils by a student with a disability. However, both deaf/hard of hearing and visually impaired students felt that these councils did not serve their needs.

Generally speaking, deaf students were dissatisfied with their universities' efforts to meet their special needs. Both survey and interview data showed that universities were aware of their needs but had done little to meet them. For example, one university had asked its deaf students to make a list of their needs, but nothing had come of the list. The students and lecturers surveyed also mentioned a range of measures which their universities could take in order to improve conditions for deaf students. Only the hard of hearing student felt that his university made sufficient efforts to meet his special needs, but it was apparent from what he said that only ad hoc measures were taken to help him when a specific need arose. It is possible that his ability to communicate, albeit with difficulty, with the teaching and administrative staff gave him a false sense of satisfaction

for it was clear, judging from the challenges he faced in university, that he too could have benefitted from accommodations necessary to help deaf students. For example, he had difficulties communicating with other students and lecturers as well as following lectures in class.

The provision of support services for deaf students is essential to their success (Whyte and Guiffrida, 2008). There were many suggestions from both interview and survey data regarding what the universities could do to support deaf/hard of hearing students. As has already been mentioned, sign language interpretation was a key issue. Other suggestions included sensitising lecturers and students about the needs of deaf/hard of hearing students, having personnel who could provide advice to lecturers about issues related to deafness, and establishing a mechanism in place to help lecturers know if they had a deaf/hard of hearing student in their class.

Students from University 1 paid tribute to its efforts to meet their special needs, although that is not to say that they were completely satisfied with them. In addition to the steps taken by all three universities as mentioned above, University 1 had a resource room that was used by students with severe disabilities. It was mostly used by students with visual impairment and was well equipped with assistive devices and computers installed with different kinds of software designed to enable visually impaired users access them. As University 1 continued to admit more and more students with visual impairment each year, the ratio of students to available equipment increased. The available equipment was moreover mostly suitable for blind students. The available equipment for use by students with low vision was inadequate and unsuitable for its intended users. The tendency to treat blind and low vision individuals in the same way in Rwanda was noted by Suubi (2012), and this could be one reason for the paucity of appropriate equipment for students with low vision. Moreover, according to Miller (1996), because children with low vision may adopt very successful strategies of dealing with their visual loss, their needs can easily be overlooked. But as was explained in chapter two, individuals with low vision and blind people sometimes have different needs which require different strategies and ways to meet them.

The resource room in University 1 had three people working in it, including one lecturer who headed it. It had several functions: it served as a place where students with visual impairment and other severe disabilities did their work, including examinations, as it was the only place in University 1 which contained the specialised equipment they needed; transcription of notes, examination papers and manuscripts, and so on into and from braille was done in the resource room; it also served as a liaison office between students with visual impairment and university academic and administrative staff. Omvig (2002) has argued that providing such support services for students with visual impairment tended to reduce their independence. Whereas some visually impaired students seemed to show an overreliance on the resource room personnel in such issues as advocating for their rights, the majority of students did not seem to be more dependent because of the presence of the resource room. There were some students with visual impairment who felt that the resource room hindered their inclusion into University 1. These students argued that if they could, for instance, do their examinations together with other students they would be more accepted and their abilities noticed and recognised. The resource room served to perpetuate the myth of 'specialness' of students with visual impairment. These students did not oppose the presence of the resource room; rather, they wished for more opportunities to work in the same environments with students without disabilities.

Although there was much talk about lack of awareness about the needs of students with visual impairment among both the student population and lecturers, University 1 had made some efforts to rectify this. It had organised a meeting for lecturers to inform them about the needs of students with visual impairment. Not many lecturers attended this meeting however. Moreover, no such efforts had been made to sensitise the student population. University 1 was also paying for the resource room personnel to attend an in-service training course in special needs education for teachers in the field that it had organised and was in progress at the time this study was being done.

In summary, the findings of this study suggest that there were no measures taken by the universities to meet the specific needs of deaf/hard of hearing students. In contrast, a lot had been done to meet the needs of students with visual impairment, particularly in terms of provision of a resource room and necessary equipment. The equipment however needs to be constantly

increased and varied to match the increasing numbers of students with visual impairment and reflect their different needs. There is also the need to raise awareness among lecturers and students about the needs of deaf/hard of hearing students. More efforts need to be put into sensitising lecturers about the academic and social implications of visual impairment.

6.2.5 Academic Issues

Academic performance is a prime concern for any serious university student, and this is no less true for deaf/hard of hearing and visually impaired students. In this subsection, therefore, matters of an academic nature will be discussed. I will discuss the academic performance of deaf/hard of hearing and visually impaired students and various issues which have a bearing on this performance, including the challenges faced by these students in their academic work, the coping strategies they adopted to alleviate the effects of these challenges, and the teaching methods used during the teaching/learning process and how these affected deaf/hard of hearing and visually impaired students.

Deaf/hard of hearing students had mixed feelings about their studies: some found them hard while others thought they were easy. But both deaf/hard of hearing and visually impaired students had confidence in their academic abilities. Despite this confidence, deaf/hard of hearing and visually impaired students said they did not perform as well as they would have liked due to a number of challenges they encountered in their academic work.

Survey data from this research showed that students without disabilities and lecturers had mixed feelings and attitudes about the academic abilities and efforts of deaf/hard of hearing and visually impaired students. 65% of all students surveyed thought deaf/hard of hearing and visually impaired students had the same academic potential as other students while the rest disagreed or were not sure. Almost 78% of the lecturers surveyed, including all the lecturers from University 3, thought that deaf/hard of hearing and visually impaired students had the same academic abilities as other students. Just over 50% of students surveyed did not think that deaf/hard of hearing and visually impaired students experienced greater difficulties in their studies than other students while 17.7% of them thought that deaf/hard of hearing and visually impaired students did not make sufficient efforts to cope with their academic work. Only 49.1% of all lecturers

were aware that deaf/hard of hearing and visually impaired students faced more challenges than other students in their academic work. It is not clear whether those who thought that deaf/hard of hearing and visually impaired students did not have the same academic potential as other students believed them to have higher or lower abilities, but given the prevailing negative attitudes towards disability it is unlikely that they believed deaf/hard of hearing and visually impaired students had higher academic abilities than students without disabilities. According to Nikolaraizi and Makri (2004) hearing people generally hold negative attitudes towards deaf/hard of hearing people. The same can be said of the attitudes of sighted people towards visually impaired people.

Some of the challenges faced by students with visual impairment and deaf/hard of hearing students in their academic work were rather similar though there were variations resulting from the different perspectives of deafness and visual impairment. Challenges faced by deaf/hard of hearing students resulted from communication barriers caused by the fact that the academic environment was based on meeting the needs of hearing students while students with visual impairment faced challenges caused by the fact that although the university had tried to accommodate their needs, the learning environment was largely visually oriented.

Teaching strategies and methods applied by lecturers posed significant problems to deaf/hard of hearing and visually impaired students alike. Deaf/hard of hearing students found the teaching methods employed to be too oral while visually impaired students found them to be too visual. Deaf/hard of hearing students wished their lecturers to use more visual teaching aids such as overhead projectors to help them access classroom information since there was no classroom sign language interpretation. Most of them also relied on lip-reading in class and they usually found this difficult during lectures. Moores (2010) has further suggested that most deaf/hard of hearing people cannot use lip-reading to access complex or advanced academic material. What seemed to aggravate the situation further was the fact that lecturers seemed to shun their responsibility to ensure access to learning for all students by referring deaf/hard of hearing students to their fellow students for assistance. This is despite the fact that 78.2% of all lecturers surveyed agreed that it was the responsibility of the lecturer to make sure that all students, including those who were deaf/hard of hearing or visually impaired, benefitted fully from the

teaching and learning experience. However, the fact that nearly 44% of lecturers surveyed thought most lecturers did not know what to do when they were together with a deaf or blind student coupled with the fact that of the 55 lecturers surveyed only one from University 3 and one from University 2 said they had received some form of induction from their universities on how to teach deaf or blind students suggest that many lecturers did not have the knowledge and skills to teach deaf/hard of hearing students. Indeed this was the challenge most lecturers said they faced in teaching deaf/hard of hearing students.

Students with visual impairment found it difficult to follow lectures when lecturers used the chalkboard or overhead projector. Lecturers in many cases did not say what they wrote on the chalkboard or what was displayed on the overhead projector so that visually impaired students could hear. These students therefore missed some of the information that the other students got.

Both students with visual impairment and deaf/hard of hearing students experienced difficulties in either making or getting lecture notes. Although the resource room in University 1 had a braille embosser which was used to produce braille materials for visually impaired students, some lecturers did not take their notes to be transcribed into braille while others took theirs when it was nearly examination time so that braille readers were unable to make full use of them. The library lacked reading materials in formats that visually impaired students could access, such as braille books, thus making it more difficult for visually impaired students to study independently and make their own notes. Deaf/hard of hearing students found it difficult to make their own notes when lecturers dictated them in class.

In addition to the lack of adequate training in teaching visually impaired and deaf/hard of hearing students, some lecturers also had large classes to contend with, making it hard for them to devote sufficient time to meeting the special needs of these students. The problem of lack of time was exacerbated by the lecturers' need to complete the syllabus within a given semester, such that many of them felt pressed for time. This could be one reason why some lecturers thought that teaching deaf/hard of hearing students was hard, especially considering that these students had no support whatsoever in their studies.

The newly introduced use of English as the medium of instruction in the Rwandan education system posed significant challenges to both deaf/hard of hearing and visually impaired students in university. All the deaf/hard of hearing and most of the visually impaired students had gone through primary and secondary school using French as the medium of instruction and the introduction of English meant having to learn a new language in addition to their other challenges. For deaf/hard of hearing students, this meant learning yet another spoken language without adequate support and then having to study using this language. For visually impaired students, lack of any reference materials other than lecture notes made it hard for them to develop adequate English language skills in areas such as spelling and grammar. These language difficulties may have had a negative effect on the ability of deaf/hard of hearing and visually impaired students to comprehend subject content and perform well in examinations and other forms of assessment.

As has already been mentioned, increasing numbers of students with visual impairment in University 1 meant that there was less equipment to go around and this was becoming an area of concern for both students with visual impairment and lecturers. Some visually impaired students also did not seem to be very skilled in using some of the equipment available, leading to differences in their use. Some students used the equipment extensively, such as in writing lecture notes, while others claimed that the equipment was unsuited for taking notes. Interview and survey data from lecturers further showed that students with visual impairment lacked sufficient background knowledge in some subjects, thus causing them more challenges in their academic work. This challenge could be the result of the difficult conditions under which these students studied in their secondary school or it could have been caused by the fact that some of the visually impaired students had stayed out of school for long periods of time before continuing their studies.

Deaf/hard of hearing students also felt disadvantaged by the assessment strategies used by their lecturers. Quite apart from the fact that they sometimes were unaware of impending tests or did not have enough time to prepare if they learnt too late that an examination or test was imminent, deaf/hard of hearing students were also expected to do oral tests in such subjects as English. Because they could not do these kinds of tests, lecturers awarded them arbitrary scores that the

students felt did not reflect their performance or take their needs and abilities into account. Whether indeed lecturers awarded scores arbitrarily for tests and examinations that had not been done or whether they had some way of calculating the scores they awarded could not be ascertained. However, the perception among deaf/hard of hearing students that they were unfairly assessed can be given some credence. In a study conducted by Vickerman and Blundell (2010) to understand the experiences of students with disabilities in some universities in the United Kingdom, it was found that 11.1% of students with disabilities in the study felt that their assessment did not meet their needs, as compared to 3.6% of students without disabilities who felt the same. Assessment for a deaf student should aim to evaluate understanding and mastery of the subject content and should be conducted using both spoken and signed languages (Moores, 2010).

All these challenges had a negative impact on the academic performance of deaf/hard of hearing and visually impaired students. Some visually impaired students had had to sit for supplementary examinations after failing the regular examinations. Deaf/hard of hearing students were in perpetual fear of having to repeat courses in case they failed. They felt that given how hard they were already working in order to cope with their studies, having to repeat a course or two would be a very difficult task, if not an impossible one.

Visually impaired and deaf/hard of hearing students adopted a number of coping mechanisms to help them manage their academic work and reduce the impact of the challenges mentioned above. Both groups of students relied on their colleagues for assistance. Sighted students helped their counterparts with visual impairment by reading books for them while hearing students lent their notes to deaf/hard of hearing students. But sighted students did not always have time to read for the visually impaired students while copying notes made by others always bore the risk of copying errors made in writing them. This could adversely affect deaf/hard of hearing students' understanding of subject content while such errors could be reproduced in tests and examinations, thus negatively affecting the academic performance of these students. Students with visual impairment also got a lot of academic information by being part of study groups while deaf/hard of hearing students relied on their friends to explain things that they missed during lectures. Deaf/hard of hearing students also put a lot of extra efforts into reading to

compensate for their lack of access to orally transmitted information in class. The price they paid for this was a very limited social life because they spent most of their time revising.

After citing several research findings about the academic achievements of students with visual impairment in higher institutions of education, Richardson and Roy (2002) observed that it was remarkable that these students were able to succeed, given the barriers they encountered in their studies. Some of the barriers mentioned by Richardson and Roy (2002:44) include difficulties in accessing the library; difficulties in negotiating the physical university environment; difficulties in obtaining notes, textbooks and hand-outs in formats they preferred; difficulties in finding staff members willing to help them; and spending more time than other students in doing their academic work. Judging from the findings of the current study, many of these barriers would sound quite familiar to visually impaired students in Rwandan universities.

Fuller et al (2004) carried out research in a university in the United Kingdom to find out the experiences of students with disabilities in relation to learning and assessment. These researchers found that disabled students had mixed experiences of learning and assessment and that they did not form one uniform population but had unique individual differences. Deaf/hard of hearing and visually impaired students in the current study also showed wide variations in their approach to the academic issues and challenges confronting them. Based on their study, Fuller et al (2004:315-316) made four recommendations that are also pertinent to the present study. These included the following: first, they stressed the need for variety and flexibility in approaches to teaching and learning; second, it is important to ensure both quality and equality in access to learning for all learners; third, access to information is important for both students with disabilities and lecturers in such matters as available services or the number of disabled students registered for a particular course; fourth, the actions and attitudes of lecturers are important for the successful inclusion of students with disabilities in higher educational institutions.

This subsection has focused on the current study's findings vis-à-vis academic issues in relation to deaf/hard of hearing and visually impaired students in Rwandan universities. I have outlined how these students perceived their academic performance and how others thought about it. Challenges and barriers encountered by these students in their academic endeavours have been

presented, as well as the methods they employed to try and overcome them. In the following subsection, the findings about the future prospects of deaf/hard of hearing and visually impaired students will be presented.

6.2.6 Future Prospects

This subsection considers the future of deaf/hard of hearing and visually impaired students in Rwandan universities after graduating. These students' fears, prospects, expectations and hopes for the future are discussed in the light of this study's findings. The way in which the experiences of deaf/hard of hearing and visually impaired students influenced their future prospects and plans will also be discussed. As all the deaf/hard of hearing and visually impaired students who participated in this study expected to be employed after completing their university education, discussions of the future naturally gravitated towards issues related to employment.

Some of the visually impaired students were confident about getting and maintaining a job, while others were worried about being able to find employment. University 1 being primarily a teacher training institute, all the students with visual impairment expected to be employed as teachers although some expressed a desire to engage in private enterprises or work in fields other than teaching. There were other visually impaired students who, given an opportunity, wished to continue with postgraduate studies. Deaf/hard of hearing students were on the whole confident that they would find employment on completion of their studies. However, only 15.5% of students surveyed thought deaf/hard of hearing and visually impaired students were likely to find employment after graduating and difficulties in finding employment were mentioned by students surveyed in relation to visually impaired students. The views of lecturers surveyed were more ambivalent: 43.6% of them thought deaf/hard of hearing and visually impaired students would be able to find employment on completing their studies, 21.8% thought it was unlikely and the rest, more than a third of them, were not sure.

Most of the deaf/hard of hearing students expressed a desire to work with deaf people in order to avoid the communication challenges inherent in working with hearing people. They were also influenced by a desire to help other deaf people because they felt that there was a lot of work to be done to raise the standard of life of deaf Rwandans. Those deaf/hard of hearing students who

did not express a desire to work directly with deaf people preferred jobs of a practical nature and which did not involve too much speaking. This was especially the case with the student who was hard of hearing. The wish of deaf/hard of hearing university students to work in areas such as deaf education that would enable them to help other deaf people was also identified by Magongwa (2008). A similar desire was expressed by a much smaller number of visually impaired students. Unlike the deaf/hard of hearing students, however, visually impaired students who had this wish did not propose to work directly with other people with visual impairment: they wanted to work in fields such as journalism, which would enable them to influence public attitudes about disability.

The confidence of deaf/hard of hearing and visually impaired students in their future and their prospects of finding employment on completing their studies was tempered by some concerns. Deaf/hard of hearing students were uneasy about the procedures involved in getting a job, especially the issue of interviewing job applicants, which they felt was unfair to deaf people. They were also concerned that negative attitudes towards and ignorance of capabilities of deaf/hard of hearing people could make it more difficult for them to get jobs.

Students with visual impairment were also concerned about the effects of negative attitudes on their prospects of finding employment. There were some visually impaired students who feared that they would not be able to teach in mainstream schools and hoped to work in special schools for the visually impaired. These students associated teaching in a mainstream school with using the chalkboard. They also believed that marking the test and examination papers of sighted students was beyond the ability of a visually impaired teacher. These fears should be viewed in the light of the fact that visually impaired people have only recently joined university and examples of successful visually impaired professionals such as teachers are rare. In addition to academic instruction therefore, some visually impaired students may need career guidance to help them understand their full potential and career prospects.

A concern raised by lecturers was that lack of support and equipment could hinder visually impaired students from getting and keeping jobs. They further stressed the need for sensitisation

of the public regarding the potential and employability of people with disabilities, a sensitisation in which disabled people themselves should play an active role.

The concerns and fears of deaf/hard of hearing and visually impaired students discussed above are not unfounded. Research done in the United States of America shows that people with disabilities are more disadvantaged socio-economically than people without disabilities, with people having sensory disabilities such as visual and hearing impairment facing the most serious challenges in securing employment (Barton, 2009). Furthermore, difficult learning conditions in school and university can limit the ability of disabled people to acquire relevant work skills (Janus, 2009), which can result in their inability to find and maintain employment. As one participant told Vickerman and Blundell (2010:28) in their study of the experiences of students with disabilities in universities in the United Kingdom, "…we still need to be given the confidence and skills to prepare for job applications as our confidence levels are often lower due to previous negative experiences." Even after getting employed, people with disabilities face marginalisation and discrimination in the workplace (Janus, 2009), which can make them uncertain and worried about the future.

In this subsection, the future prospects of deaf/hard of hearing and visually impaired students have been discussed, especially their chances of getting employment after completing their undergraduate studies. The next subsection examines the theme of attitudes.

6.2.7 Attitude

Attitudes towards disability and how they affected the lived experiences of deaf/hard of hearing and visually impaired students featured prominently in this study. The influence of attitudes on all the other themes discussed so far has been mentioned. In this subsection attitudes will be discussed in a more general manner. The discussion will be approached from two angles: first, societal attitudes towards deaf/hard of hearing and visually impaired people will be examined; second, the attitudes of deaf/hard of hearing and visually impaired students towards themselves will be discussed.

Deaf/hard of hearing and visually impaired students interpreted actions such as lack of understanding, unwillingness to help them, making negative remarks about them, ignoring them and manifestations of patronising tendencies towards them as portrayals of negative attitudes while the opposite actions were seen as demonstrations of positive attitudes. Although there were instances of positive attitudes shown by both lecturers and students without disabilities towards visually impaired and deaf/hard of hearing students, the overall picture that emerges concerning attitudes towards deaf/hard of hearing and visually impaired students is more negative than positive. This was not only evidenced by interview data, it was also corroborated by the survey findings. This study's survey data showed that deaf/hard of hearing and visually impaired students were 'not readily accepted' by their fellow students. Almost a third of students surveyed said they did not treat deaf/hard of hearing and visually impaired students in the same way they treated other students, although it was impossible to tell what the nature of the difference was. Furthermore, only 50.5% of students surveyed said students without disabilities were willing to help deaf/hard of hearing and visually impaired students, with a further 25% saying they were not. Although it is possible to interpret these findings in several ways, it is difficult not to infer negative attitudes towards disability from them. But it is also possible that some students without disabilities declined to help deaf/hard of hearing and visually impaired students simply because they did not know how to help them.

Trammell (2009) observed that the stigmatisation of students with disabilities is the greatest obstacle to their success in higher institutions of learning. This author further argues that as adults, university students have a clearer understanding of social conditions than children, and this makes disability-related issues more complex and challenging for them as they attempt to deal with them. In Rwanda, attitudes towards disability are generally negative and people with disabilities are stigmatised and socially excluded (Thomas, 2005). Those with severe disabilities such as blindness and deafness, according to this author, receive the brunt of this stigmatisation. Kiyaga and Moores (2009) also noted the negative attitudes Rwandans have towards deaf/hard of hearing people. Rwanda is not unique in showing negative attitudes towards people with disabilities: Milsom (2006) suggests that research shows that in general people have negative attitudes towards disabled people; Kiyaga and Moores (2009) mention that attitudes towards deaf

people in sub-Saharan Africa are generally negative, while Lewis (2009) noted the existence of negative attitudes towards disabled people in Ethiopia.

Attitudes towards deaf/hard of hearing and visually impaired students were influenced by cultural beliefs about and stereotyping of disability, exposure to and knowledge about disability, and, in the case of students without disability, maturity. The stereotypical disabled person in Rwanda is a helpless individual who is expected to be assisted by others or beg for alms. This would explain why students without disabilities applauded when a visually impaired student answered questions correctly in class, an action which visually impaired students found patronising and offensive. It was clear from this study that attitudes towards disability improved with exposure to persons with disabilities. Experience of and contact with people with disabilities is an important factor in changing attitudes towards disability (Skjørten, 2001). An illustration of this fact can be found in Rwanda where, according to Thomas (2005) attitudes towards disabled people improved after the Tutsi genocide of 1994 which left many Rwandans disabled, thus making disability more prevalent and evident in Rwandan society. This positive shift in attitude however benefitted amputees more than any other disability group (Thomas, 2005). As more and more people with disabilities become prominent in Rwandan society, therefore, it is possible to hope that attitudes towards them will improve.

Writing about visually impaired people, Hollins (1989) remarked that attitudes towards visual impairment and other disabled people affect them in three ways: first, attitudes negatively affect communication and interaction between them and sighted people. Secondly, attitudes impede the chances of visually impaired people finding employment suited to their abilities and interests. Thirdly, constant encounters with people who are always expressing feelings of pity can affect a visually impaired person's sense of self-worth, making him/her become hostile and defensive, refuse help, become more dependent on family, friends and institutions, and so on. However, according to Hollins (1989) many blind people attribute such attitudes to ignorance rather than deliberate lack of concern. The same can also be said of the impact of negative attitudes on deaf/hard of hearing people: negative attitudes towards deaf/hard of hearing people have a damaging impact on their feelings of self-worth and, if they internalise these attitudes, their personalities can be permanently damaged (Nikolaraizi and Makri, 2004).

Negative experiences and attitudes made both the deaf/hard of hearing and visually impaired students to sometimes have negative feelings about themselves. At such times they would become more conscious of their disability and the perceived limitations it imposed on them. But both groups of students were generally positive about themselves and their abilities. People with visual impairment do not all have the same attitude towards it. Some are comfortable with it and others have negative attitudes towards it (Rosenblum, 2000). A positive attitude towards one's disability contributes to the development of positive attitudes towards one's self. The negative feelings experienced by deaf/hard of hearing and visually impaired students tended to be more pronounced in new students and decreased as students got used to the university environment.

In Chapter Two, the positive benefits for Deaf people associating with Deaf culture were mentioned. There seemed to be little awareness among the deaf/hard of hearing participants in this study of the concept of Deaf culture. Throughout the interviews with deaf/hard of hearing participants, there was only one reference to Deaf culture. As a way of demonstrating this finding, I have used 'deaf' rather than 'Deaf' in this and the previous chapter to refer to deaf/hard of hearing students. However, this does not mean that deaf people in Rwanda do not have a culture or a strong Deaf identity. Nevertheless, its remarkable absence from this study's data suggests a need for research in this area. Cornell and Lyness (2004) demonstrated that bicultural Deaf people had higher self-concept than either deaf people who associated with hearing culture only or Deaf people who identified with Deaf culture only. It was not possible to establish whether the apparent lack of a strong link to Deaf culture affected the participants in this study. Deaf students did not however identify themselves with hearing culture. On the contrary, they were well aware of the disadvantages they faced in the hearing world. Only the hard of hearing student gave the impression of having an affiliation to hearing culture. But even he implicitly dissociated himself from it: when referring to hearing people, he used a Kinyarwanda word which could be loosely translated to mean 'normal[1]', thus implying that he was 'disabled'. This is an effect of the internalisation of negative societal attitudes to disability by people with disabilities. Milsom (2006) explained that people with disabilities often internalise negative

[1]The word used was 'abazima', which literally means 'healthy' or 'whole' people.

societal attitudes and that these attitudes affect their self-worth. In Rwanda and other parts of Africa, dehumanising words often denoting objects are used to refer to people with disabilities (Karangwa et al, 2010). Disabled people therefore end up feeling different and 'abnormal'.

In this subsection, attitudes towards disability and their effects on deaf/hard of hearing and visually impaired students have been discussed. The attitudes of deaf/hard of hearing and visually impaired students towards themselves have also been examined in the light of this study's findings. The next subsection looks at the experiences of deaf/hard of hearing and visually impaired students.

6.2.8 Experiences

The whole of the discussion so far in this chapter has been about the experiences of deaf/hard of hearing and visually impaired students in different areas of university life. In this subsection experiences of a more general nature and which have not been adequately examined so far will be discussed.

Both deaf/hard of hearing and visually impaired students had positive and negative experiences in their university life. However, the perception among deaf students was that their experiences were more negative than positive, primarily because of the communication barriers as discussed earlier. Only the hard of hearing student adjudged his experiences to be generally positive.

Students with visual impairment mentioned that they had gained new skills in university. In particular they mentioned learning to use computers and improving their braille skills as two achievements which increased their independence, although their expertise in these areas differed from one student to another. Finding lecturers with visual impairment in University 1 helped to boost the confidence of students with visual impairment as it showed them what they themselves could achieve. The positive experiences of deaf/hard of hearing students derived mainly from their success in their studies. This gave them immense pride and boosted their confidence in themselves.

Both the deaf/hard of hearing and visually impaired students felt that their experiences before joining university helped them in their academic and social life as university students. All of the visually impaired students and all but one of the deaf/hard of hearing students attended inclusive secondary schools and they felt that the experience gained there helped them as university students. The deaf/hard of hearing students felt that it was this experience which enabled them to succeed academically despite the lack of any institutional support to aid them. The visually impaired students felt that the social benefits they gained from being in an inclusive setting helped them to manage social interactions between them and sighted students.

Students with visual impairment referred to experiencing varying degrees of discrimination and being made to feel 'different'. The discrimination experienced was however subtle and covert and there was little evidence of any overt discrimination. It is also possible that the discrimination perceived by these students was not necessarily intentional but the result of ignorance. For instance, some visually impaired students mentioned difficulties in social relationships and establishing meaningful friendships with members of the opposite sex. Interactions between visually impaired male students and sighted female students (this issue was only broached by some male visually impaired students) were viewed with much curiosity by the rest of the student population: female students who appeared to have romantic relationships with visually impaired male students faced many intrusive questions from their fellow students about the nature of these relationships. Other girls, according to some visually impaired participants, thought that having romantic relationships with visually impaired students was "scandalous", as Samuel put it. Thomas (2005) noted that it was more difficult for people with severe disabilities such as deafness and visual impairment, particularly women, to get married in Rwanda due to the prevailing negative attitudes towards disability. However, she also noted that disabled men who had the financial means found it easier to marry and raise families. So while it was understandable for visually impaired participants to feel that some sighted girls avoided having relationships with visually impaired students because of their conceit, the degree to which male visually impaired students objectively distinguished between the rejection of their amorous advances on the basis of their disability and a girl's legitimate right to decide whom to have a relationship with was much less clear from this study.

A unique experience of some deaf students was that they had to change universities before they found one that they were satisfied with. These students felt that the universities where they were initially admitted did not offer courses suited to their abilities and prior academic experience. Although these students mentioned that they felt that the courses they turned down were not suited to their abilities as deaf students, it seemed that deafness alone could not account for their decisions. For instance, whereas one deaf student decided to move from University 2 to University 3, another student transferred from a university which was not involved in this study to University 2. This suggests that the personal characteristics of deaf students interacted with their status as deaf people and their perception of how deafness affected them to determine which university to go to and which course to study. Apart from the time wasted, the process of changing universities did not seem to have affected deaf students in any other way.

In this section, the themes that emerged from this study have been discussed. In this discussion, quantitative data presented in Chapter Four and qualitative data presented in Chapter Five have been merged to provide a better understanding of the issues under investigation. The next section examines the degree to which the research questions of this study were answered.

6.3 Revisiting the Research Questions

This study aimed to explore the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities in a context where they are included among a large body of other students without disabilities and the overwhelming majority of the academic and administrative staff are not disabled. Based on this overarching objective, six research questions were identified for this study (see section 1.4) and six research objectives were formulated on the basis of these questions (see section 1.5). The relationship between the research questions was demonstrated in figure 1.1. This section examines the extent to which this study answered its stated questions and met the objectives it set out to achieve. In summary, the study was guided by the following questions:

1. What are the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities in terms of educational access and social inclusion in the university environment?
2. What are the similarities and differences between the experiences of deaf/hard of hearing students and students with visual impairment?
3. What are the underlying causes of these experiences?
4. In what ways do these experiences, either negative or positive, influence the academic performance of these students?
5. How do these experiences influence these students' perspectives, expectations and hopes for the future?
6. How do the attitudes of students and lecturers in universities with deaf/hard of hearing and visually impaired students concerning inclusion influence the interaction between these students and lecturers on the one hand and the deaf/hard of hearing and visually impaired students on the other?

In the first research question, this study sought to describe and shed light on the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities, especially those that related to their academic and social life. These experiences were described in detail in chapter five while the preceding section of this chapter focused on trying to analyse and understand them. It can therefore be said that the first research question has been adequately attended to. I will now turn to the remaining research questions and discuss the answers provided by this study.

6.3.1 Comparing the Experiences of Deaf/Hard of Hearing and Visually Impaired Students

There is insufficient research and literature that compares the experiences of deaf/hard of hearing and visually impaired people. By conducting the current study, I wished to contribute to the small body of literature regarding this issue. Moreover, as the effects of deafness and visual impairment can be said to be diametrically opposed to each other, their comparison can help in enhancing our understanding and practice of inclusive education. Hence, one objective of this study was to compare the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. This was the crux of the second research question. In order to achieve this,

discussions of issues related to deafness and visual impairment were juxtaposed throughout this work. Thus, attempting to engage in a general comparison of the experiences of deaf/hard of hearing and visually impaired students here will be merely repeating what has already been said. In the following few paragraphs, some salient factors relevant to a comparative understanding of the experiences of deaf/hard of hearing and visually impaired students will be discussed.

Deafness and visual impairment affect an individual's functioning (Wallhagen et al, 2001) and they both impose about the same kind of limitations on the performance of everyday tasks (Hollins, 1989). Both deaf/hard of hearing and visually impaired students can be considered to be students with special educational needs (Abosi and Koay, 2008). As such, their effective participation in the teaching and learning process requires making certain accommodations and adjustments in the learning environment. The extent to which the needs of deaf/hard of hearing and visually impaired students are met through such adjustments and accommodations is an important factor in shaping their experiences in an inclusive environment.

The fact that deaf/hard of hearing and visually impaired students have specific needs that should be met through relevant educational adjustments and accommodations is the common variable that makes their experiences more similar than different; both groups of students experienced varying challenges based on inadequate adjustments to the academic and social environments within their universities. It is this shared experience that made the deaf student in University 1 feel more at ease interacting with visually impaired students than with the rest of the student population. The differences between the experiences of deaf/hard of hearing and visually impaired students can be attributed to the differences between hearing loss and vision loss and the different ways in which these two situations affect individuals. These differences made the perspectives of deaf/hard of hearing students different from those of visually impaired students. The experiences of deaf/hard of hearing students in this study were shaped largely by their inability to communicate effectively with the majority of the population in their universities while the experiences of students with visual impairment revolved around the challenge of functioning in a visually oriented environment.

The language and communication barriers experienced by deaf/hard of hearing students and which were not experienced to the same extent by visually impaired students may also account for the differences in the experiences of these two groups of students. Communication and language barriers encountered by deaf/hard of hearing students could have made it much more difficult for them to advocate for improvements in their conditions in the universities where they study. Their much smaller numbers in these universities and the fact that deaf students cannot be easily identified if they do not choose to reveal that they are deaf may make it easier for institutions to act as if they had no deaf students. This could explain why the experiences of deaf students in this study were on the whole more negative than those of visually impaired students and why the hard of hearing student thought that his experiences were positive.

The smaller numbers of deaf students further meant that they could not offer each other the social support that could have helped to mitigate the negative effects of the lack of meaningful communication between them and the hearing university population. Furthermore, they were either studying different courses or in different academic years, which made it even more difficult for them to support each other. According to Whyte and Guiffrida (2008) deaf students in hearing universities find it difficult to establish meaningful relationships with the rest of the university community when no sign language interpretation services are available, as was the case in Rwandan universities with deaf/hard of hearing students. The deaf/hard of hearing participants in this study had very limited social interactions with the rest of the university community and larger numbers of deaf students could have made their social experiences more positive as they would have been able to support each other.

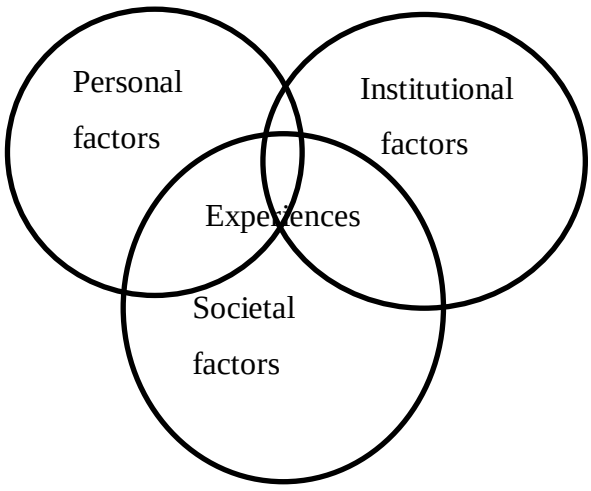
6.3.2 Causes of the Experiences of Deaf/Hard of Hearing and Visually Impaired Students

This study's third question concerned itself with attempting to identify the underlying causes of the experiences of deaf/hard of hearing and visually impaired students in Rwandan universities. This question was therefore considered when both the survey and interview instruments were constructed. The data thus provided a lot of useful information that helped to answer this question. Deaf/hard of hearing and visually impaired students had both positive and negative experiences. Understanding the root causes of these experiences can help in strengthening the

positive ones and reducing the negative ones and thus make the inclusion of deaf/hard of hearing and visually impaired students more meaningful.

There were a number of factors which were found to either positively or negatively influence the experiences of deaf/hard of hearing and visually impaired university students. These factors can be categorised into three groups: personal, institutional, and societal factors. These factors, individually and in interaction with each other, determined the nature of the experiences of deaf/hard of hearing and visually impaired students and influenced the level of their inclusion in the universities where they studied. This study focused on university-related factors only. However, a myriad of other factors will certainly also have an impact on the students' experiences as well. These could include such factors as family situation, religious affiliations and beliefs, home and community environment, and many others. As these factors were outside the purview of this study, it was not possible to establish how they interacted with the factors discussed below to influence participants' experiences. Figure 6.1 illustrates the relationship between the three groups of factors mentioned above and the experiences of visually impaired and deaf/hard of hearing students.

Figure 6.1: Relationship between the groups of factors influencing the experiences of deaf/hard of hearing and visually impaired students



Personal factors are those that were unique to deaf/hard of hearing and visually impaired students either as individuals or as deaf/hard of hearing or visually impaired people. These included such factors as the pre-university experiences of these students, their personal skills and aptitudes, their ability to integrate into the university community and socialise with other members of the university community, their personality, and the way in which deafness or visual impairment affected each student. These factors determined the students' ability to cope with their academic work, cope with the teaching methods used in class, make friends and lead a meaningful social life, and get help from lecturers and other students. As was explained earlier, the influence of deafness and visual impairment on the experiences of students was mainly due to the fact that the special needs of deaf/hard of hearing and visually impaired students were not adequately met.

Institutional factors included those aspects which were dependent upon or determined by the institutions where deaf/hard of hearing and visually impaired students studied. They included, among other things, the availability or the lack of resources and personnel to help deaf/hard of hearing and visually impaired students; the presence or absence of institutional mechanisms to help lecturers cater for the needs of deaf/hard of hearing and visually impaired students; level of adjustments made to the physical, social and teaching environments to meet the needs of deaf/hard of hearing and visually impaired students; and the levels of awareness among the lecturers and general student population about the needs of deaf/hard of hearing and visually impaired students. These factors affected the social and academic experiences of deaf/hard of hearing and visually impaired students and influenced their inclusion in their universities. The differences shown by this study between the experiences of visually impaired and deaf/hard of hearing students can be attributed largely to institutional factors: as was mentioned earlier, several measures were in place to meet the needs of visually impaired students whereas there was little evidence of institutional measures taken to cater for the needs of deaf/hard of hearing students.

The most important societal factor influencing the experiences of deaf/hard of hearing and visually impaired students was found to be attitudes towards disability. The generally negative attitudes towards disability affected the way deaf/hard of hearing and visually impaired students were treated by lecturers and other students. Attitudes towards disability influenced attitudes

towards and practice of inclusion. Attitudes were influenced by familiarity with and exposure to people with disabilities and the resulting knowledge about their abilities and needs. Thus, there was a qualitative improvement in the experiences of deaf/hard of hearing and visually impaired students the longer they stayed in their universities because the university population became increasingly aware of the abilities and needs of these students.

As figure 6.1 shows, the experiences of deaf/hard of hearing and visually impaired students were not just the result of personal, institutional and societal factors acting independently: their experiences were also caused by an interaction between these factors. For instance, deafness and visual impairment (personal factors) affected the students because of the inadequate adjustments to the social and academic environment in which they functioned (institutional factors). The making of these adjustments was influenced by knowledge and attitudes towards deafness and visual impairment (societal factors). However, as was pointed out at the beginning of this subsection, the factors discussed here are not the only ones which contributed to the aggregate experiences of deaf/hard of hearing and visually impaired students; these experiences are the result of many factors, of which the ones presented here are just a small part.

Identifying the underlying causes of the experiences of deaf/hard of hearing and visually impaired students was an important objective of this study because it was felt that measures to improve these experiences could then be taken based on empirical evidence. Hodson, Baddeley, Laycock and Williams (2005) demonstrated that identifying and tackling factors that hindered the inclusion of students with special educational needs improved their experiences in inclusive schools. Hodson et al (2005) carried out research in four secondary schools in the United Kingdom to identify factors that impeded the inclusion of Year 7 learners in these schools. Based on the issues identified, the schools designed intervention strategies to improve the inclusion of their students with special educational needs. These strategies led to improvements in the experiences of these students in these schools.

6.3.3 Influence of Experiences on Academic Performance

There is a shortage of empirical evidence regarding the experiences of deaf/hard of hearing students in higher education institutions, especially evidence with an African perspective (Magongwa, 2008). The situation for visually impaired students is much the same. It therefore follows that the effects of these experiences on the academic performance of deaf/hard of hearing and visually impaired students have not been sufficiently investigated and understood. By focusing on the experiences of deaf/hard of hearing and visually impaired students in higher institutions of education in Rwanda, it was hoped that this study would contribute infilling this gap in knowledge. It was found that deaf/hard of hearing and visually impaired students had both positive and negative experiences as university students. The fourth research question for this study sought to determine whether these experiences had any influence on the academic performance of deaf/hard of hearing and visually impaired students.

The deaf/hard of hearing and visually impaired students who participated in this study generally expressed confidence in their academic abilities. Their academic performance was boosted by a number of factors that contributed to their positive experiences as university students. The factor mentioned most frequently by both deaf/hard of hearing and visually impaired students was the support they got from their fellow students. Positive social and academic interactions between deaf/hard of hearing and visually impaired students and their counterparts without disabilities enabled deaf/hard of hearing and visually impaired students to get support in their academic work, which contributed to their improved academic performance. There was also evidence of deaf/hard of hearing and visually impaired students getting emotional support and encouragement from their fellow students, which encouraged them to persist in their studies. In addition, those participants who said they received support from lecturers spoke favourably about the impact of such support while others talked of the discouraging effects of negative interactions with lecturers. De Schauwer et al (2008) emphasised the importance that students with special educational needs, just like other students, attach to being valued by their teachers.

The two groups of students also agreed that their pre-university experiences contributed to their good academic performance. Deaf/hard of hearing students emphasised the importance of their experiences as students in mainstream schools in preparing them to cope with the conditions they

encountered in university. Visually impaired students noted that their experiences as students in a mainstream secondary school were instrumental in helping them to socialise and get academic support from other students.

The existence of a relatively well-equipped resource room and personnel to help students with special educational needs in University 1 also qualitatively improved the experiences of visually impaired students and helped them in their academic work. The importance of a resource room (or its equivalent, such as a disability office or disability unit) in helping students with special educational needs in inclusive schools has also been emphasised by authors such as Orsini-Jones (2009) and Andrews et al (2004).

Whereas these factors had a positive impact on the experiences of deaf/hard of hearing and visually impaired students and thus improved their academic performance, other factors were found to contribute to these students having negative experiences that in turn had adverse effects on their academic performance. Some of these experiences were directly linked to academic issues, such as the use of inappropriate teaching methods, difficulties in obtaining notes and, in the case of deaf students, lack of institutional measures to support them academically. Societal attitudes towards disability had a more general and sometimes insidious influence on the experiences of deaf/hard of hearing and visually impaired students and thus unfavourably affected their academic performance. For example, attitudes towards disability affected the way deaf/hard of hearing and visually impaired students interacted with lecturers and other students and the manner in which they were able to get these people to support them appropriately in their academic work. The potential that negative societal attitudes have to unfavourably affect people with disabilities educationally has been emphasised by Milsom (2006). In those cases where attitudes were positive, there were positive interactions and deaf/hard of hearing and visually impaired students were able to get peers and lecturers who gave them the academic support they needed. This in turn led to improved academic performance.

Deaf/hard of hearing students experienced serious communication barriers between them and the rest of the university population. As a result, they faced difficulties in having full access to teaching and learning activities. It is not surprising therefore that these students felt that the

provision of sign language interpretation services by their universities would bring an end to all the challenges they faced as university students.

In general, one can say that positive experiences of deaf/hard of hearing and visually impaired students improved their academic performance while negative experiences resulted in poorer levels of academic performance. The experiences of deaf/hard of hearing and visually impaired students and the factors which led to these experiences were many and it was not possible to establish the extent to which each of them contributed to reduced or increased levels of academic performance. More research focusing on specific aspects of these experiences and their impact on deaf/ hard of hearing and visually impaired students is needed in order to provide a deeper understanding of these experiences.

6.3.4 Influence of Experiences on Future Expectations

Having explored the impact of the experiences of deaf/hard of hearing and visually impaired students on their academic performance, I wanted to establish whether these experiences also had an impact on these students' future prospects, expectations and hopes. Therefore, this study's fifth research question focused on establishing the influence of the university experiences of deaf/hard of hearing and visually impaired students on their perspectives and prospects for the future.

One way in which the university experiences of deaf/hard of hearing and visually impaired students influenced their future plans was through the professional training they received as university students. Most of the visually impaired students therefore expected to become teachers on completing their studies because that is what they were being trained to become. The new skills gained in university and their success in their academic pursuits helped to bolster the confidence of deaf/hard of hearing and visually impaired students in their ability to succeed in their post-university lives.

On the whole, however, the future plans, hopes, prospects and perspectives of this study's participants were found to be heavily influenced by their cumulative experiences as deaf/hard of hearing and visually impaired people. Thus, it was not possible to determine the exact manner in

which their university experiences on their own influenced the thoughts of these students about their future. Generally speaking, participants' future prospects and plans were influenced by several factors, including:

- Their being deaf/hard of hearing or visually impaired and the challenges they expected to encounter because of this;
- Consideration of societal attitudes to disability and the impact such attitudes could have on their employment prospects;
- Their interpretation of the conditions of deaf/hard of hearing and visually impaired people in general in the country and the resulting desire to help them; and
- Their different academic pursuits and the employment avenues open to them based on these pursuits.

Some of the factors mentioned above were not necessarily or wholly the direct result of the students' university experiences. However, one can argue that their university experiences and the resulting widening of their horizons made deaf/hard of hearing and visually impaired students more aware of the challenges of deaf/hard of hearing and visually impaired people in society and thus served to heighten their awareness of how these challenges could influence their future.

A factor which did not seem to influence the future prospects of deaf/hard of hearing and visually impaired students but which had the potential to do so was the fact that they encountered many challenges in their studies, challenges which negatively affected their academic work. These challenges were not referred to in relation to the future plans and expectations of deaf/hard of hearing and visually impaired students. However, according to Janus (2009) the difficulties disabled students encounter in school and university can hinder their acquisition of appropriate work skills. Poor academic preparation, for example, can make it more difficult for anybody, whether disabled or not, to acquire relevant work skills. This can result in disabled people facing difficulties in getting and keeping jobs.

6.3.5 Attitudes to Inclusion and Their Influence on Interaction

Attitudes of teachers to inclusion are associated with the success or failure of inclusive education (Short and Martin, 2005). Teachers who hold the medical view of disability tend to be less inclusive in their practices than those teachers who subscribe to the social model of disability (Carrington and Elkins, 2002; Avramidis et al, 2000). The attitudes of students without disabilities towards disability influence the way they behave and interact with students with disabilities (Suubi, 2012) and thus have a bearing on the successful implementation of inclusive practices in educational institutions. Consequently, the sixth and final question for this study concerned itself with identifying the attitudes of lecturers and students without disabilities towards including deaf/hard of hearing and visually impaired students in university, and how these attitudes influenced the interaction between deaf/hard of hearing and visually impaired students and their fellow students and lecturers.

The attitudes of students without disabilities from University 1 towards inclusion differed significantly from those of students from University 2 and University 3. The attitudes of lecturers were varied across the three institutions. Table 6.1 summarises the responses of both students and lecturers in the three participating universities to the statement that deaf/hard of hearing and visually impaired students should be taught together with other deaf/hard of hearing or visually impaired students (as opposed to educating them with students without disabilities in inclusive settings). In the table, 'strongly agree' and 'agree' responses have been combined under the columns labelled 'agree'; the same has been done for the 'strongly disagree' and 'disagree' responses (see tables 4.14 and 4.35 for the full responses of students and lecturers respectively to this question).

Levels of interaction between deaf/hard of hearing and visually impaired students on the one hand and lecturers and students without disabilities on the other differed markedly between the three institutions. Table 6.2 shows the percentage of participants who said they had interacted in some way with deaf/hard of hearing and visually impaired students in their institutions (see tables 4.9 and 4.32 for the complete details of responses of students and lecturers respectively to this question).

Table 6.1: Responses of lecturers and students to the statement that deaf/hard of hearing and visually impaired students should be taught together with other deaf/hard of hearing or visually impaired students

Participants/ Institution	Lecturers			Students		
	Agree	Disagree	Undecided	Agree	Disagree	Undecided
University 1	51.4%	42.9%	5.7%	16.5%	83.5%	0%
University 2	36.4%	18.2%	45.5%	46.7%	35.6%	17.8%
University 3	44.4%	44.4%	11.1%	51.6%	34.7%	13.7%

Table 6.2: Percentage of lecturers and students who had interacted with deaf/hard of hearing and visually impaired students

Participants/ Institution	Lecturers			Students		
	Yes	No	Not sure	Yes	No	Not sure
University 1	85.7%	14.3%	0%	98.7%	1.3%	0%
University 2	9.1%	81.8%	9.1%	17.8%	66.7%	15.6%
University 3	44.4%	55.6%	0%	29.2%	59.4%	11.5%

As table 6.1 shows, there were lecturers and students who believed that deaf/hard of hearing and visually impaired students should be educated in special schools while others believed that they should be included in mainstream environments. Table 6.2 shows that there was some form of interaction between deaf/hard of hearing and visually impaired students and their lecturers and fellow students without disabilities. The exact forms that this interaction took could not be determined from survey data but the issues relating to interaction as they emerged from interview data have already been discussed in this chapter.

From the available data, it was not possible to make a direct link between the attitudes of lecturers and students without disabilities to inclusion and the nature of interaction that took place between them and visually impaired and deaf/hard of hearing students. What was clear was that interaction between deaf/hard of hearing and visually impaired students and their lecturers and students without disabilities was influenced by general societal attitudes towards disability and doubtless these attitudes also influenced the attitudes of the survey participants towards inclusion. This is in line with Milsom's (2006) assertion that attitudes towards disability are related to attitudes towards inclusion.

In this section, this study's research questions have been discussed. Each of the six research questions and the extent to which it was answered has been discussed. By finding answers to these research questions, the study was able to meet its stated objectives as outlined in section 1.5 of this work.

In the next section, various recommendations based on this study's findings and which could help to improve the inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities will be presented.

6.4 Recommendations

Based on this study's findings, I would like to make several recommendations whose implementation can contribute to an improvement in the experiences and inclusion of deaf/hard of hearing and visually impaired students in Rwandan universities. Most of these recommendations are derived from suggestions made by both interview and survey research participants about ways in which the experiences and inclusion of deaf/hard of hearing and visually impaired students could be improved. Others are based on this study's findings, which showed that there were some issues that appeared to need addressing in order to make Rwandan universities more inclusive. Since this study was concerned with the inclusion of deaf/hard of hearing and visually impaired students in universities, I will confine myself to those recommendations whose implementation is within the power and ability of higher institutions of learning.

As was explained in section 1.3, the Government of Rwanda has formulated and promulgated a number of laws and policies designed to promote the welfare of people with disabilities, including their education. But often there is a mismatch between policy and practice (Karangwa et al, 2010; Oliver and Barnes, 2010). The recommendations made here will therefore focus on improving practice in universities in order to make them more inclusive in accommodating the needs of students with various needs and abilities.

As mentioned above, there are sufficient policies and legislation in place to support the provision of adequate services for students with special educational needs, including those with disabilities,

within the entire Rwandan education system, including higher education. A good example of such policies is the Ministry of Education's (2007a) National Equality and Diversity Policy for Higher Education referred to in section 1.3. In spite of the existence of such laws and policies, none of the participants in this study mentioned them or their role in promoting the education and inclusion of deaf/hard of hearing and visually impaired students. It was also apparent that many deaf/hard of hearing and visually impaired students lacked the ability and will to advocate for themselves. Therefore, the first recommendation I would like to make is that students with special educational needs in general, and deaf/hard of hearing and visually impaired students in particular, be educated about available laws and policies related to their rights so that they can use them to advocate for improvements in services provided to them. Vickerman and Blundell (2010) have argued that disabled students need to be empowered to advocate for themselves.

The question arising from this recommendation is related to who would take responsibility for educating deaf/hard of hearing and visually impaired students about the policies available and how they can assist them in advocating for themselves. Universities, as educational institutions, could well feel that this is outside their mandate. However, if we agree with Fuller et al (2004) that higher education should lead to the empowerment of students with disabilities, then we should also agree that institutions of higher education with such students should play a role in their empowerment. One way in which they could do this would be to implement this recommendation. Universities could find it helpful to collaborate with other interested agencies in implementing this recommendation. In particular, they could work with disabled people's organisations to develop appropriate strategies for such actions. Skjørten (2001) emphasised the need for cross-sector collaboration in developing and implementing successful inclusive practices in educational institutions.

The second recommendation I would like to make is that students with special educational needs should be consulted in matters that directly affect their inclusion in institutions of higher education. Vickerman and Blundell (2010) stressed the need to consult with disabled students when making decisions on matters that affect them. In the absence of such consultations, inappropriate decisions can be made by even the most well-meaning authorities. For example,

the absence of suitable low vision aids for students with low vision in University 1 could have been the result of a lack of such consultation.

This study's third recommendation relates to the provision of career guidance and counselling services for students with special educational needs in higher institutions of education in Rwanda. This study found widespread concern among participants about the ability of deaf/hard of hearing and visually impaired students to find and maintain appropriate employment on completing their studies. Furthermore, some students with visual impairment did not seem to be aware of how a visually impaired person could cope with teaching in a mainstream school. They therefore thought that the only option available for them was to teach in special schools for visually impaired learners. The provision of career guidance and counselling services to deaf/hard of hearing and visually impaired students would help them to prepare for the job market and inform them about the employment possibilities available. In addition, Omvig (2002) argued that the reason why so many visually impaired people were either unemployed or underemployed was because they were not aware of their full potential, resulting in their not searching for jobs or getting worse jobs than their qualifications entitled them to. Punch and Hyde (2005) observed that some hard of hearing students avoid certain career options such as nursing because of the fear that their being deaf could prevent them from fulfilling the requirements of such careers. These authors point out however that hard of hearing students should make such decisions based on accurate information about the particular requirements of their chosen careers. These are some of the issues that could be addressed by an effective career guidance and counselling service for deaf/hard of hearing and visually impaired students. Preparing deaf/hard of hearing and visually impaired students for employment through career guidance and counselling is all the more important since there are very few examples of deaf/hard of hearing and visually impaired people in professional occupations who could serve as role models for these students.

Many lecturers surveyed mentioned that the absence of personnel charged with providing services to deaf/hard of hearing students was a big challenge in their universities. In addition, the lack of adequate resources for deaf/hard of hearing and visually impaired students was also identified as posing challenges to these students and their lecturers. Hence, a recommendation

emanating from these findings is that universities with deaf/hard of hearing and visually impaired students (and other students with special educational needs) should have adequately trained personnel and resources to cater for their needs and help lecturers and administrative personnel provide them with better services. This could be done through the establishment in such universities of a resource room (or disability office/unit) equipped with sufficient and appropriate resources and staffed by adequately trained personnel.

Many universities have personnel and offices in place to cater for the needs of students with special educational needs. Fuller et al (2004:307) mention a "Disability Coordinator" in one university in the United Kingdom where they conducted research. This coordinator was charged with "continual development of policies and practices regarding students with disabilities, as well as continuing to support individuals" (Fuller et al, 2004:307). In Australia, disability support offices "provide services and hire interpreters and tutors as needed (for deaf/hard of hearing students)" (Hyde et al, 2009:85). The University of the Witwatersrand in South Africa has a Disability Unit that provides support services to all students with disabilities at the university (Disability Unit, n.d.). According to the Disability Unit (n.d.:7), "While service provision to students remains our primary focus, disability training, awareness and advocacy among Wits[1] staff, students and the general community are also our concern." Some of the services offered by the Disability unit include having several computer rooms with computers equipped with various types of accessible hardware and software, an information technology expert to train and help students with disabilities in using computers, and examination rooms where students with disabilities can do their examinations (Disability Unit, n.d.).

All students with visual impairment who participated in this study mentioned how useful the resource room had been for them, thus demonstrating its importance. The establishment of an office mandated to deal with issues related to the needs of students with disabilities (or strengthening them where they exist) would greatly contribute to their inclusion in universities in Rwanda. One activity such a resource room would engage in would be to train students with

[1] Shortened name for the University of the Witwatersrand.

special educational needs in the use of assistive technology. The effective use of assistive technology is positively associated with obtaining and maintaining employment for visually impaired youth (McDonnall and Crudden, 2009).

Visually impaired students and their lecturers mentioned the absence of reference materials such as books in accessible formats for visually impaired students. The possible damage this caused to the academic development of these students was also mentioned. It is therefore recommended that library services be made accessible to visually impaired students. This would involve, among other things, the library having relevant books in formats such as braille that visually impaired students could access. The library and the resource room could collaborate in getting relevant reading materials required by visually impaired students.

The communication barriers experienced by deaf/hard of hearing students in the absence of sign language interpretation services in their universities meant that they could neither follow nor participate actively in lectures, and neither were they able to have a meaningful social life. Moores (2010) argued that sign language should be a fundamental aspect in the education of deaf learners. The only way in which this can be done in an inclusive setting is through the provision of sign language interpreters in classrooms with deaf/hard of hearing learners. Thus, a recommendation of this study is that universities with deaf/hard of hearing students provide them with sign language interpreters in order to improve their inclusion and provide them with more meaningful social and academic experiences. In the absence of sign language interpreters, deaf participants in this study relied heavily on lip-reading during lectures and social interaction. However, Hauser et al (2010:488) noted that deaf adults and children understood less than 50% of what was said if they relied on lip-reading alone. This fact combined with others such as the use of inappropriate teaching/learning methods means that deaf/hard of hearing students most probably got very little of what was taught during lectures. Providing them with sign language interpreters would go a long way in improving deaf/hard of hearing students' access to educational activities and thereby give them the possibility of improving their academic performance. There may be some deaf/hard of hearing students who may not benefit from this service, either because they do not know sign language or because they choose not to use it. But

the consensus among this study's participants was that deaf/hard of hearing students needed sign language interpreters in their universities.

The final recommendation emanating from this study's findings is that Rwandan universities with deaf/hard of hearing and visually impaired students should organise some form of training and sensitisation for all lecturers and the general student population about disability issues, including those related to deafness and visual impairment. The issue of lecturers' lack of knowledge about the needs and abilities of deaf/hard of hearing and visually impaired students was frequently mentioned in both interview and survey data as a hindrance to lecturers' ability to meet the needs of these students. Ignorance about deafness and visual impairment was also evident in the general student population. This lack of knowledge about deaf/hard of hearing and visually impaired people was a factor that contributed immensely to deaf/hard of hearing and visually impaired students' negative experiences in university. Experience with and knowledge about people with disabilities is important for the successful implementation of inclusion (Milsom, 2006; Skjørten, 2001; Avramidis et al, 2000). Raising the levels of awareness about deafness and visual impairment would therefore contribute in making Rwandan universities more inclusive of all learners. Awareness raising activities should, among other things, target areas such as attitudes towards disability for lecturers and students at large as well as how to meet the educational needs of deaf/hard of hearing and visually impaired students for lecturers. In addition, deaf/hard of hearing and visually impaired students should be involved in carrying out such training and sensitisation programmes.

In this section, several recommendations that could help to make Rwandan universities more inclusive and thus lead to deaf/hard of hearing and visually impaired students having more positive experiences in their university lives have been made. It should be pointed out that these recommendations have not been listed in order of importance or preference. Each of them has an important role to play in the development of inclusive universities. Indeed, given the complex interaction between the factors influencing the inclusion and experiences of deaf/hard of hearing and visually impaired students in university, none of these recommendations on its own could help to resolve the issues outlined in this study. These recommendations should be viewed in a

context where deaf/hard of hearing and visually impaired students face a variety of challenges whose solution should be approached from different but convergent angles.

Another point worth reiterating is that the recommendations made here are those whose implementation would be within the purview of universities. However, issues such as those related to employment and societal attitudes towards disability need to be tackled by a variety of actors. A cross-sector approach would be the most productive way of dealing with such issues. Universities could therefore find it helpful to work with other stakeholders for a holistic improvement in the inclusion of their students with special educational needs, including those who are deaf or visually impaired.

6.5 Conclusion

In this chapter, the findings of this study have been discussed. The experiences of deaf/hard of hearing and visually impaired students in Rwandan universities have been analysed in order to understand the nature of their inclusion in these universities. The relationship between this study's research questions and its findings has been discussed. Finally, some pertinent recommendations for the improvement of the experiences of deaf/hard of hearing and visually impaired students have been made.

Deaf/hard of hearing and visually impaired students are enrolling in Rwandan public universities in ever increasing numbers. For instance, at the time of conducting this research in 2010 there were only seven deaf/hard of hearing students in Rwandan public institutions of higher education. Now the National University of Rwanda (NUR) alone has five deaf/hard of hearing students (National University of Rwanda, 2012). If these students are to reap the maximum benefits that are supposed to accrue from attending higher institutions of learning, some serious thinking will need to be done concerning the nature of their academic and social inclusion in these institutions and how this inclusion impacts on their experiences. These experiences ultimately influence not only the academic achievements of deaf/hard of hearing and visually impaired students but their future and career prospects as well.

This study set out to examine the inclusion of deaf/hard of hearing and visually impaired university students by exploring the nature of their experiences. The basic purpose of the study was to contribute in some small way to the improvement of these experiences. It should also be kept in mind that making educational practices more inclusive is not only beneficial for students with special educational needs; all students benefit from educational approaches that are more inclusive and therefore cognizant of the abilities and needs of all. If this study has succeeded in showing the gap between what is and what could be as far as the inclusion of deaf/hard of hearing and visually impaired university students is concerned, then it has achieved its goal.

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APPENDICES

Appendix A: Research Instruments

Appendix A1: Interview Guide for Deaf/Hard of Hearing and Visually Impaired Students

1. Can you please tell me your name, the courses you are studying, and the academic year you are in?
2. How did you come to join this university?
3. Can you please tell me about your experiences as a deaf/blind student in a university where the vast majority of students have no disability?
4. What is your opinion concerning your inclusion in this university?
5. What is the nature of your interaction with your fellow students?
6. What is the nature of your interaction with your lecturers?
7. In what ways does your disability influence your interaction with both your lecturers and fellow students?
8. Can you tell me about how your disability impacts on your academic performance as a university student?
9. What do you think are the opinions of your lecturers and fellow students without disabilities concerning your academic abilities and performance?
10. How would you judge your own academic abilities and performance?
11. What would you say are the challenges that you encounter in your life here in the university as a deaf/blind student?
12. In general, do you think that the university is making reasonable efforts to accommodate the special needs resulting from your disability?
13. What changes would you like the university to make in order to improve your life here?
14. What are your plans for the future once you get your degree?
15. Is there anything else you would like to add to what you have already told me?

Appendix A2: Interview Guide for Lecturers

1. Can you please tell me your name and your area of specialisation?
2. How long have you been a lecturer, and when did you start teaching students with disabilities, especially those who are deaf/blind?
3. What is your opinion concerning the inclusion of students with disabilities in university?
4. What has the university done to support you as a lecturer in a university which has deaf/blind students so that you can better meet their individual needs?
5. What has the university done to ensure that the deaf/blind students here can succeed in their academic endeavours?
6. In your view, what more can or should be done to improve the learning environment of the deaf/blind students in this university?
7. What is your opinion regarding the academic abilities of the deaf/blind students in this university?
8. How would you describe/characterise the academic performance of the deaf/blind students in general and in your subject area in particular?
9. What would you say are the challenges that the deaf/blind students encounter in this university?
10. Can you tell me about the nature of your interaction with your students in general, and with the deaf/blind students in particular? In what ways does their disability influence your interaction with the deaf/blind students, and how would you compare the nature of your interaction with them and your interaction with the non-disabled students?
11. What do you think are the future prospects of the deaf/blind students once they leave this university?
12. Is there anything else you would like to add to what you have already told me?

Appendix A3: Questionnaire for Lecturers

Section 1: Personal Information

1. Institution where you work: | KIE | KIST | SFB | (Please tick)

2. Course(s) taught: ……..……
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3. Age: ……

4. Sex: | Female | Male | (Please tick)

5. University teaching experience (in years) …….

Section 2:

For each of the following items, tick in the column for 'Yes', No', or 'Not sure' depending on your answer.

		Yes	No	Not sure
6.	Are you familiar with the concept of 'inclusive education'?			
7.	Have you in your teaching career ever taught students with severe special educational needs?			
8.	Are you aware that this institution has deaf or blind students?			
9.	Has this institution at any time arranged for any form of induction or orientation for you regarding how to meet the special needs of deaf or blind students, including teaching them?			
10.	Have you taken time to inform yourself about the needs of deaf or blind students?			
11.	Have you had any interaction with a deaf or blind student of this university?			
12.	Has a deaf or blind student of this university ever approached you personally for assistance in academic matters?			
13.	Is there someone in this university who is responsible for the wellbeing of the deaf or blind students?			

Section 3:

Please give a numeric value to the following statements based on the table below:

1	2	3	4	5
Strongly disagree	Disagree	Undecided	Agree	Strongly agree

14.	I think it is best for deaf or blind students to be taught together with other deaf or blind students.	
15.	Deaf or blind students have the same academic potential as other students without disabilities.	
16.	Deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	
17.	It is unlikely that deaf or blind students will be able to find employment once they graduate.	
18.	This university has done enough to ensure that the deaf or blind students can realise their full potential.	
19.	Lecturers in this university do their best to help the deaf or blind students.	
20.	It is the responsibility of the lecturer to make sure that deaf or blind students, as people with severe barriers to learning, benefit fully from the teaching and learning process.	
21.	Most lecturers do not know what to do when faced with a deaf or blind student in their classroom or office.	
22.	When compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	

Section 4:

Please provide as much information as you feel necessary. If need be, attach an extra sheet of paper to the questionnaire and indicate which items you have answered on it.

23. What do you think are the challenges facing deaf or blind students in this university?

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24. What are the challenges facing lecturers who teach deaf or blind students in this university?

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25. What do you think this university should do to help its deaf or blind students learn better?

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Thank you very much.

Appendix A4: Questionnaire for Non-Disabled Students

Section 1: Personal Information

1. Institution: (Please tick) | KIE | KIST | SFB |
2. Combination/Courses: (Please write in full) ……
   ……
3. Age: ……
4. Sex: (Please tick) | Female | Male |

Section 2:

For each of the following items, tick in the column for 'Yes', No', or 'Not sure' depending on your answer.

		Yes	No	Not sure
5.	Are you familiar with the concept of 'inclusive education'?			
6.	Are you aware that this institution has deaf or blind students?			
7.	Are there any courses which you attend together with deaf or blind students?			
8.	Have the university authorities made any efforts to help the student community understand the needs of the deaf or blind students?			
9.	Have you taken time to inform yourself about the needs of deaf or blind students?			
10.	Have you had any interaction with a deaf or blind student of this university?			
11.	Has a deaf or blind student of this university ever approached you personally for assistance of any kind?			
12.	Is any of the deaf or blind students in this university your friend?			
13.	Do you treat the deaf or blind students here in the same way you treat the rest of the students?			
14.	Do you think the lecturers here make enough efforts to help the deaf or blind students learn?			

Section 3:

Give a numeric value to the following statements based on the table below:

1	2	3	4	5
Strongly disagree	Disagree	Undecided	Agree	Strongly agree

15.	I think it is best for deaf or blind students to be taught together with other deaf or blind students.	
16.	Deaf or blind students have the same academic potential as other students without disabilities.	
17.	Deaf or blind students in this university find it more difficult than non-disabled students to cope with their academic work.	
18.	It is unlikely that deaf or blind students will be able to find employment once they graduate.	
19.	This university has done enough to ensure that the deaf or blind students can realise their full potential.	
20.	Lecturers in this university do their best to help the deaf or blind students.	
21.	Non-disabled students here are on the whole willing to help their deaf or blind counterparts in this university.	
22.	Most students do not know what to do when they are together with a deaf or blind student.	
23.	When compared with other students, deaf or blind students do not make sufficient efforts to cope with their academic work.	
24.	Deaf or blind students do not make enough efforts to be integrated into the university community.	

Section 4:

Please provide as much information as you feel necessary. If need be, attach an extra sheet of paper to the questionnaire and indicate which items you have answered on it.

25. What do you think are the challenges facing deaf or blind students in this university?

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26. What are the challenges facing non-disabled students in their interaction with deaf or blind students in this university?

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27. What do you think this university should do to help its deaf or blind students learn better?

……

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……

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……

……

Thank you very much.

Appendix B: Consent Forms

Appendix B1: Informed Consent Form

I, the undersigned, voluntarily agree to participate in the study titled "A Comparative Study of the Inclusion of Students with Visual and Hearing Impairment in Rwandan Universities". I understand that I can withdraw from participating in the study at any time should I wish without any adverse consequences. I further understand that my participation does not expose me to any risk and that my identity and privacy will not be compromised.

Participant's Name: .....

Participant's Signature: ..... Date: .....

Researcher's Name: Patrick Suubi.

Researcher's Signature: ..... Date: .....

Appendix B2: Audio Recording Consent Form

I, the undersigned, voluntarily agree to be recorded on cassette tape while being interviewed. I understand that my identity and privacy will not be revealed by the researcher; that the information I provide will be kept confidential, and that it will be used only for the purposes of the study titled "A Comparative Study of the Inclusion of Students with Visual and Hearing Impairment in Rwandan Universities". In addition, I understand that the audio recording will be destroyed as soon as the resulting transcription has been verified by me.

Participant's Name: .....

Participant's Signature: ..... Date: .....

Researcher's Name: Patrick Suubi.

Researcher's Signature: ..... Date: .....

Appendix B3: Video Recording Consent Form

I, the undersigned, voluntarily agree to be recorded on video while being interviewed. I understand that this is necessary because of my use of sign language, which is a visual language. I also understand that my identity and privacy will not be revealed by the researcher; that the information I provide will be kept confidential, and that it will be used only for the purposes of the study titled "A Comparative Study of the Inclusion of Students with Visual and Hearing Impairment in Rwandan Universities". In addition, I understand that the video recording will be destroyed as soon as the resulting transcription has been verified by me.

Participant's Name: .....

Participant's Signature: ..... Date: .....

Researcher's Name: Patrick Suubi.

Researcher's Signature: ..... Date: .....

Appendix B4: Participant Information Sheet

Dear Participant,

I am a PhD student at the University of the Witwatersrand in Johannesburg, South Africa. As part of the process of completing my studies, I am carrying out a research titled "A Comparative Study of the Inclusion of Students with Visual and Hearing Impairment in Rwandan Universities". This study, which aims to explore the experiences of deaf students as well as students with visual impairment in Rwandan universities, will take place over a period of approximately three months. The study will contribute towards making Rwandan universities more inclusive. Data will be collected through the use of interviews and questionnaires.

As a person who is likely to have information relevant to this study, I would like you to participate in it. Your participation will be entirely voluntary, and you will be free to withdraw from the study at any time should you so desire. Should you decide not to participate in the study, this will have no negative consequences for you. Any information you provide will be kept strictly confidential and will be used only for the purposes of this study. The interviews should not take more than an hour to conduct, while the questionnaires will only take about 20 minutes to complete.

Thank you very much.

Yours Sincerely,

Patrick Suubi.

Contact details: included in original document.

Appendix C: Other Documents

Appendix C1: Ethics Clearance Letter

Wits School of Education

27 St Andrews Road, Parktown, Johannesburg, 2193 • Private Bag 3, Wits 2050, South Africa
Tel: +27 11 717-3007 • Fax: +27 11 717-3009 • E-mail: enquiries@educ.wits.ac.za • Website: www.wits.ac.za

STUDENT NUMBER: 429159
Protocol number: 2010ECE39C

17 June 2010

Mr. Patric Suubi
Kigali Institute of Education
P O Box 5039
KIGALI

Dear Mr. Suubi

Application for Ethics Clearance: Doctor of Philosophy

I have a pleasure in advising you that the Ethics Committee in Education of the Faculty of Humanities, acting on behalf of the Senate has agreed to approve your application for ethics clearance submitted for your proposal entitled:

A comparative study of the inclusion of students with visual and hearing impairment in Rwandan universities

The Protocol Number above should be submitted to the Graduate Studies in Education Committee upon submission of your final research report.

Yours sincerely

MMabeta

Matsie Mabeta
Wits School of Education

Cc Supervisor: Dr. C Storbeck (via email)

Appendix C2: Letter to Universities Requesting Permission to Conduct the Study

Patrick Suubi
Kigali Institute of Education
P. O. Box 5039
Kigali.

09/02/2010.

The Rector
(Name of University)[1]
Kigali.

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN SFB

Dear Sir,

I am a lecturer at Kigali Institute of Education currently on study leave as a PhD student at the University of the Witwatersrand in South Africa. My thesis will focus on the inclusion of students with hearing and visual impairment in Rwandan universities. SFB is one of the institutions where I would like to carry out my research starting from September 2010.
As the Research Ethics Committee of the University of the Witwatersrand requires a letter of approval from an institution where research is intended to be carried out, I am writing this letter to request for permission to carry out the above-mentioned study in SFB. This letter will form part of the documentation presented to the Research Ethics Committee.

Yours Faithfully

Patrick Suubi

[1]The same letter was sent to the three institutions which participated in this study.