The Relationship between Self-Esteem and Perceived Academic Competence

A Survey of Deaf Learners in Special Schools in Uganda

Proscovia Suubi NANTONGO

Master of Philosophy in Special Needs Education

Department of Special Needs Education,
Faculty of Education
University of Oslo
Norway

Spring 2008
Abstract

The research problem focused on Deaf learners’ self esteem and perceived academic competences, the relationship between self esteem and perceived academic competence of Deaf learners in special schools triggered by the fact that Deaf learners in special schools in Uganda have had relatively low academic competences. The Cultural Nature of Human Development theory formed the basis of the present study was among the minority community (Deaf people) and therefore, issues of culture, practices and routines may have been a basis for the learners’ self esteem and perceived academic competences.

A quantitative study survey 162 Deaf learners, 82 girls and 80 boys from primary six and primary seven out of 175 expected, in four Schools for the Deaf using a questionnaire. Statistical analyses were performed using SPSS 14.0 for windows to test the internal consistency of the two standardized tools (Rosenberg 1965 Global self esteem, Gresham & Elliott 1990 academic competence), t-test and F-test (ONE-WAY ANOVA) and Spearman rho correlation coefficient were used to investigate the research question given in chapter one.

The findings revealed that Deaf learners’ self esteem was relatively high with statistically insignificant differences across various demographic characteristics of Deaf learners. Perceived academic competence of Deaf learners remained largely average with a significant number with relatively high perceived academic competence compared to the least number of Deaf learners with low perceived academic competence. Perceived academic competence varied significantly across some of the demographic variables. The relationship between self esteem and perceived academic competence of Deaf learners was statistically significant with a relatively strong correlation. Across the demographic characteristics, the relationship remained relatively moderate.
Based on the findings, the present study recommends the need to investigate other possible factors that may be responsible for low academic competence of Deaf learners in special schools. These may include among others teaching and learning strategies, academic assessment and curriculum design. Policy makers and teachers of the Deaf should take advantage of the high self esteem and perceived academic competence of Deaf learners modify their teaching methods, influence the national curriculum and the examination content to inclusively respond to Deaf learners’ cultural differences.

Standardized instruments should be modified in response to cultural differences and experiences of the Deaf respondents. A combination of methods to supplement the quantitative data may give deeper understand into the Deaf respondent views and may limit misinterpretation of the research tool.
Dedication

To my mom Margaret for the love and support accorded to me through the trying moments of my life.

To my best friend Barbara Ferguson for my hopes are been renewed day after day.

To the Deaf Community which has embraced me, shared and taught me all that I know of a so richly endowed culture of the Deaf.
Acknowledgement

This study has been funded by the Norwegian government under Quota scheme, without her support it would have been difficult to successful complete this course. The developing world, do appreciate your financial and professional support.

The department of Special Needs Education has been so vital in disseminating information and coordinating the activities - Thank you Denese!

My deepest gratitude goes to Associate Professor Siri Wormnæs, for supervising my study with great insight and professionalism. Special recognition goes to Assistant Professor Stenair Theie, for leading me through the initial stages of this study. I am highly indebted to Professor Peer Møller Sørensen, who statistically guided my study. I am grateful to my local supervisor Ali Ayub Baguwemu, Kyambogo University for the profession advice accorded to me during my field work. Senior Miriam Skjørtten and Senior Einar Sletmo, I appreciate your friendly support throughout my study.

Dear classmates (2006-2008), congratulation for the successful completion of the course. I am indebted by your wisdom, love and support you have individually express that has aided my happy start in Norway, and a successful completion of my studies. I also acknowledge the work of our predecessors that has richly provided me with information.

I am grateful to Kyambogo University, for giving this opportunity and creating favourable terms under staff development program. Special appreciation goes to the school for the Deaf for allowing me to interrupt their routines during data collection. I thank you so much for your cooperation and a warm welcome.

As ever before, my family and friends, Daniel Aarem, Hon. Alex Ndeezi, Edvard Grimstad, who have continued to close their hands in prayer and rejoiced in my progress. For your invaluable love, I say ‘Imana ishimwe’- ‘Tusen takk’
List of Tables

Table 1: Deaf learners’ self esteem scores
Table 2: Deaf girls and boys’ self esteem
Table 3: Self esteem of Deaf learners with different degrees of hearing loss
Table 4: Self esteem of Deaf learners with different age at onset of deafness
Table 5: Self esteem of Deaf learners with different family hearing status
Table 6: Self esteem of Deaf learners with different experiences with deafness
Table 7: Deaf learners grouped as per perceived academic competence scores
Table 8: Deaf girls and Deaf boys as per perceived academic competence scores
Table 9: Deaf learners grouped as per their perceived academic competence scores and their degree of hearing loss
Table 10: Deaf learners grouped as per their perceived academic competence scores and their age at onset of deafness
Table 11: Deaf learners grouped as per their perceived academic competence scores and their family hearing status
Table 12: Deaf learners grouped as per their perceived academic competence scores and their experience with deafness
Table 13: The correlation between Self esteem and Perceived academic competence of Deaf learners
Table 14: The correlation between Self esteem and Perceived academic competence of Deaf girls and Deaf boys
Table 15: The correlation between Self esteem and Perceived academic competence of hard of hearing and profoundly deaf learners
Table 16: The correlation between Self esteem and Perceived academic competence of learners born deaf and learners with later deafness
Table 17: The correlation between Self esteem and Perceived academic competence of Deaf learners with different family hearing status
Table 18: The correlation between Self esteem and Perceived academic competence of Deaf learners with different experience with deafness
List of Appendices

Appendix 1: Questionnaire for the Deaf learners………………………………….114

Appendix 2: Reliability analysis test for Rosenberg (1965) Global self esteem
tool and Gresham & Elliott (1990) Academic competence tool………120

Appendix 3: Spearman Rho Correlation co-efficient of the relationship
between self esteem and perceived academic competence .............122

Appendix 4: Letter of Introduction from University of Oslo, Norway…………123

Appendix 5: Letter of Introduction from the Investigator to the Ministry of
Education………………………………………………………………………124

Appendix 6: Letter of Appreciation to the Schools in the present study from the
Investigator……………………………………………………………………...125

Appendix 7: Letter of Recognition to the Foundation of Rosenberg (1965)
from the investigator …………………………………………………………126

Appendix 8: Table 18: The relationship between self esteem and perceived
academic competence of Deaf learners with different experiences
with deafness………………………………………………………………………130
## Statistics concepts as used in this study

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPSS:</strong></td>
<td>Statistical Package for the Social Science</td>
</tr>
<tr>
<td><strong>Significant test:</strong></td>
<td>Determines whether or not a difference exists between variables</td>
</tr>
<tr>
<td><strong>t-tests:</strong></td>
<td>Statistic test used to determine whether two variables are significantly different at a probability level</td>
</tr>
<tr>
<td><strong>Analysis of variance (F-tests):</strong></td>
<td>Also referred to as One–way Analysis of Variance (ANOVA). Is used to determine whether there is a significant differences between more that two or more means at a selected probability level.</td>
</tr>
<tr>
<td><strong>Statistically significant correlation:</strong></td>
<td>Determined a positive, negative or no relationship between variables with no proof of causation</td>
</tr>
</tbody>
</table>
# Table of contents

ABSTRACT .......................................................................................................................................III

LIST OF TABLES .................................................................................................................................... IX

LIST OF APPENDICES ......................................................................................................................XI

STATISTICS CONCEPTS AS USED IN THIS STUDY ........................................................................ XIII

TABLE OF CONTENTS .........................................................................................................................XV

1. BACKGROUND TO THE RESEARCH ..............................................................................................1
  1.1 GENERAL INFORMATION ABOUT UGANDA .............................................................................. 1
  1.2 CLARIFICATION OF TERMS ........................................................................................................ 1
  1.3 THE JOURNEY OF DEAF EDUCATION IN UGANDA .................................................................... 3
    1.3.1 Uganda legal framework on Deaf education in brief ......................................................... 4
  1.4 STATEMENT OF THE PROBLEM .................................................................................................. 6
  1.5 SIGNIFICANCE/ RATIONALE OF THE STUDY ............................................................................ 7
  1.6 OBJECTIVES OF THE RESEARCH STUDY .................................................................................. 8
  1.7 RESEARCH QUESTION ................................................................................................................. 9
    1.7.1 Sub- questions ................................................................................................................ 9
  1.8 SCOPE OF THE STUDY ............................................................................................................... 9
  1.9 LIMITATIONS TO THE RESEARCH STUDY ............................................................................. 10
  1.10 DELIMITATIONS TO THE RESEARCH STUDY ....................................................................... 10

2. RELATED LITERATURE REVIEW ................................................................................................... 11
  2.1 THEORETICAL PERSPECTIVE .................................................................................................... 11
  2.2 CONCEPTUAL DISCUSSION ........................................................................................................ 11
    2.2.1 Deaf learners .................................................................................................................... 11
2.2.2 Self-esteem and Deaf learners ................................................................. 13
2.2.3 Perceived academic competence and Deaf learners.............................. 18

3. RESEARCH METHODOLOGY/ METHODS ................................................. 25

3.1 OPERATIONALIZATION OF TERMS ......................................................... 25

3.1.1 ‘Deaf’, ‘deaf’ and hearing impairment .................................................. 25

3.1.2 Self esteem .............................................................................................. 26

3.1.3 Academic competence or Perceived academic competence ..................... 26

3.2 QUANTITATIVE APPROACH ..................................................................... 27

3.2.1 Survey design ........................................................................................... 27

3.3 STUDY POPULATION AND SAMPLE ....................................................... 27

3.3.1 Population of the school ......................................................................... 27

3.3.2 Schools’ sample ....................................................................................... 28

3.3.3 Learners’ population ................................................................................ 28

3.3.4 Learners’ sample ..................................................................................... 28

3.4 RESEARCH INSTRUMENT .......................................................................... 29

3.4.1 Section A: Demographic information ...................................................... 29

3.4.2 Section B: Standardized Rosenberg (1969) Global self esteem tool .......... 30

3.4.3 Section C: Standardized Gresham and Eliott (1990) academic competence tool .... 30

3.5 DATA COLLECTION ................................................................................... 31

3.6 PILOT STUDY ............................................................................................ 32

3.7 GAINING ACCESS TO DATA COLLECTION .............................................. 33

3.8 DATA ANALYSIS/ PRESENTATION .......................................................... 34

3.9 VALIDITY AND RELIABILITY ..................................................................... 35

3.9.1 Validity .................................................................................................... 35
3.9.2  Reliability....................................................................................................................36

3.10  ETHICS OF THE STUDY.......................................................................................................37

3.11  RESEARCH SUCCESSES ......................................................................................................39

3.12  RESEARCH CHALLENGES ..................................................................................................40

4.  DATA PRESENTATION AND DATA ANALYSIS .............................................................41

4.1  DEMOGRAPHIC INFORMATION ............................................................................................41

4.2  TREATING VARIABLES PRIOR TO ANALYSIS ................................................................43

4.3  SELF ESTEEM ..........................................................................................................................44

  4.3.1  Sub-question 1: What is the self esteem of Deaf learners and how does self esteem vary across the demographic variable? ...............................................................44

4.4  PERCEIVED ACADEMIC COMPETENCE OF DEAF LEARNERS..........................................51

  4.4.1  Sub-question 2: What is the perceived academic competence of Deaf learners and how does perceived academic competence differ across the demographic variable? .....................................................................................................................51

4.5 THE RELATIONSHIP BETWEEN SELF ESTEEM AND PERCEIVED ACADEMIC COMPETENCE OF DEAF LEARNERS .....................................................................................................................55

  4.5.1  Sub-question 3: What is the relationship between self esteem and perceived academic competence of Deaf learners? .................................................................55

  4.5.2  Sub-question 4: Is there a difference in the relationship between self esteem and perceived academic competence with differences in the demographic variable? .............................................................................................................................56

5.  DISCUSSION, CONCLUSION AND SUGGESTIONS ..........................................................63

5.1  THE GENERAL APPLICABILITY OF THE RESEARCH INSTRUMENTS........................................64

5.2  THE SELF ESTEEM OF DEAF LEARNERS AND HOW SELF ESTEEM VARIES ACROSS THE DEMOGRAPHIC VARIABLES ..................................................................................................................66

5.3  THE PERCEIVED ACADEMIC COMPETENCE OF DEAF LEARNERS AND HOW PERCEIVED ACADEMIC COMPETENCE VARIES ACROSS THE DEMOGRAPHIC VARIABLES .........................71
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.4</td>
<td>THE RELATIONSHIP BETWEEN SELF ESTEEM AND PERCEIVED ACADEMIC COMPETENCE</td>
<td>77</td>
</tr>
<tr>
<td>5.5</td>
<td>THE RELATIONSHIP BETWEEN SELF ESTEEM AND PERCEIVED ACADEMIC COMPETENCE ACROSS THE DEMOGRAPHIC VARIABLE</td>
<td>78</td>
</tr>
<tr>
<td>5.6</td>
<td>CONCLUSIONS</td>
<td>80</td>
</tr>
<tr>
<td>5.7</td>
<td>GENERALISATION OF THE FINDINGS OF THE STUDY</td>
<td>83</td>
</tr>
<tr>
<td>5.8</td>
<td>SUGGESTIONS FOR FURTHER STUDIES</td>
<td>83</td>
</tr>
<tr>
<td>5.9</td>
<td>SELF REFLECTIONS</td>
<td>85</td>
</tr>
</tbody>
</table>

REFERENCES................................................................................................................................... 87

APPENDICES.................................................................................................................................... 96
1. Background to the Research

This chapter presents general information about Uganda, the trends in Deaf Education, an overview of the population of study; the rationale of the study; the objectives of the study; clarification of the terms used in the study; statement of the problem; limitations and delimitations of the study. It is hoped that such information might shade light on the self esteem and perceived academic competence of Deaf learners in this study.

1.1 General information about Uganda

Uganda is a developing country with an estimated population of 28.195.754 million persons at a growth rate of 3.37% as of 2006 (World Fact Book 2007). Persons with disabilities are estimated to take 10 percent of the world population giving a figure of 2.8 million persons with disabilities in case of Uganda. Attempts to establish statistical data on disability has been hindered by both social and economical factors (Kiyaga & Moores 2005). Some analysts dispute the figures on grounds of poor methodological tools, political biasness and cultural beliefs.

Uganda is signatory to many all the international declarations and has ratified a number of them including the one on Education for All (UNESCO 1990), where all includes Deaf learners and legal instruments for the rights of Persons with Disabilities (Mandesi 2007).

1.2 Clarification of terms

*Hearing Impairment or deafness* is an umbrella term used to refer to varying degrees of hearing loss ranging from profound deafness to mild deafness. Persons with the
condition may benefit from the use of hearing gadgets or/ and sign language (McCracken 1998, Kyle 1997, Frederick 1994). The term hearing impairment is commonly preferred most professional such as teachers and medical personnel but the majority of our societies use the term ‘deafness’ to refer to all categories indiscriminately.

**Deaf learners** refer to children with hearing impairment attending schools exclusively designated for learners with hearing impairment. These learners are likely to communicate in Sign language for most of their interactions. The term ‘Deaf’ refers to the community of persons with hearing impairment (deafness) as are not defined described by their hearing loss and / or speech loss but more so their cultural values championed by sign language. A large portion of hearing impaired persons resent the pathological view of looking at the condition but rather their identity as a unique and normal community (Eriksson 1993, Kyle 1997, Lewis 1968) referred to as a linguistic minority.

**Sign Language** refers to the language of the Deaf people. In many circles, it is their mother tongue. It is composed of iconic and abstract signs made by hand shapes, facial expressions, and body movements (Uganda Sign Language Dictionary 2006).

**Hearing / majority community** refers to a community of members with insignificant hearing loss. In Uganda, this community is the majority one with members much greater than the Deaf community which is also regarded as a minority community.

**Self esteem** refers the learner’s self feeling about his or her self worth and the ability to accomplish academic tasks. Self worthy and ability can be valued in both positive and negative terms. As a concept, Self-esteem is an internal self feeling or self – perception, self concept by towards one’s (Awad HG 2007, Flynn 2003, Rosenberg 1965)
*Perceived academic competence* refers to one’s self perception of his or her competence to successfully accomplish academic-related tasks. It is the skills, behaviours and attitudes to academic success exhibited by the learners. The may not necessarily reflect the actual academic abilities.

*Relationship* refers to the way the self esteem and perceived academic competence correlate to each in the light of Deaf learners in special schools. The correlation may be positive, negative (strong / weak) or simply insignificant in some cases.

### 1.3 The journey of Deaf education in Uganda

The education of learners with special needs also referred to (by many) as disabled learners, was categorized into specific uni-disability and institutionalised (Kangere 2003). These institutions doubled as educational centres and homes for disabled persons. The first school for children with hearing impairment was initiated by a parent of two hearing impaired children supported by the church missionary in the late 1960s as a result of these children failing to cope up with the challenges in the regular school (Lule 1998). The involvement of the church may have been spiritually inspired (Leviticus, 19:4, Proverbs 31:8). The first formal school for the Deaf was officiated by H.E Iddi Amin Dada, the then president of the republic of Uganda on 17th July, 1974.

Through history, the education of Deaf learners in Uganda has been characterized by prejudice, negative social attitudes and sympathy. This section of our population commonly referred to as ‘deaf and dumb’ were regarded as ‘uneducable’. The traditional beliefs about the aetiology of deafness led to isolation and furthered discrimination in most social activities (Mbulamwana 2007, Kiyaga & Moores 2005, 1 A foundation stone lies at one of the schools in this study.)
Lule 1998). These lived experiences are not peculiar from those experienced by Deaf people in many parts of the world as Eriksson (1993, pp.12 -13) states, ‘(…) the deaf were thought to be specially chosen by the gods (…) the silence nature peculiar behaviour of deaf people lent them an air of mysticism’

Aristotle and Galen squarely related the brain, speech, and hearing as emanating from the same source hence a defect in one obviously resulted into damages in the other faculties.

Deaf education in Uganda commenced by building teachers’ capacities in special skills such as speech and lip reading, reading and writing (Lule 1998, Kiyaga & Moores 2003). Deaf learners remained separated from the ordinary learners (hearing) operating a somehow ‘laisser -faire’ curriculum, putting more emphasis on vocational skills rather than academic subjects. Eriksson (1993, p12) narrates,

Though the global movement is sceptical about segregation of learners with disabilities into special schools and its pervasive effects on their academic and social development (Kristensen et al. 2006), in Uganda special schools are gaining more popularity among Deaf children. Special schools are seen as sanctuaries of Deaf culture identity and a demonstration of human right for Deaf people enshrined in both international and national legal documents such as Convention on the Rights of Persons with Disabilities 2007 (United Nations 2006) and the Disability Act 2006 (Parliament of Uganda 2006).

1.3.1 Uganda legal framework on Deaf education in brief

Uganda’s legal frame on Deaf education is guided by international legal instruments and has been instrumental in ensuring that the Persons with Disabilities acquire the necessary knowledge and skills for independent living (Ndeezi 2004). The most recently signed was The Convention on the Rights of Persons with Disabilities (United Nation, 2007), which declares that,
'(...) State Parties recognize the right of Persons with Disabilities to education... without discrimination and on the basis of equal opportunity, State Parties shall ensure (...) Persons with Disabilities are not excluded from the general education system on the basis of disability, and that the children with disabilities are not excluded from free and compulsory primary education or secondary education on the basis of disability” (p.14, article 24).

The above legal provision, signed by Uganda in 2007, but yet to be ratified\(^2\), at the time of writing this report, is intended to reinforce the already existing national laws and policies towards a fair and just nation (Mandesi 2007) on issues of human rights and especially quality education for Persons with Disabilities. Most learners with hearing impairment continue to flock special schools possibly due to several challenges facing inclusive education in the Sub-Sahara region (Arbeiter & Hartley 2002). Policy implementation in Uganda has led to building of more schools, recruiting teachers and sign language interpreters in some schools.

Universal Primary Education policy (Ministry of Education and Sports 2004) has significantly led to increasing numbers of Deaf learners accessing primary education in both inclusive settings and special schools. Deaf learners are prepared to pursue a nationally designed curriculum for all and face the same academic assessment (national examination). This is a positive move towards inclusive education and the realization of fundamental human rights enshrined in several declarations (UN Convention on the Rights of Persons with Disabilities 2007, UNESCO 1990, UN Standard Rules on the Equalization of Opportunities Persons with disabilities 1993).

It should be noted that the great numbers recorded at the primary school level are not reflected at the secondary school intakes as a result of high learners’ drop-out rate from both regular schools and special schools for different reasons such as poor

\(^2\) Mandesi (2007) reported that “(...) there is no genuine reason to believe that they (State parties) won’t ratify it (The Convention)...the fear is due to ignorance” p.6
academic competence, lack of school dues and low motivation. UNICEF (2005) recognized the challenges faced by learners starting that,

‘(…) getting children to schools is only the beginning, however. Ensuring that they attend school regularly and complete their studies with skills that will allow them to achieve future success is the ultimate objectives’ (cited in The State of the World’s Children, 2006, p.8)

Not withstanding the challenges faced by all learners in Sub-Saharan Africa, Deaf learners face double setbacks. Given the appalling academic state among Deaf students, a need to carry out a research is inevitable if education is to create a just, fair and desirable development for all, as Cummins (2006) posits that,

‘(…) if the policy is not evidence-based, then this fact should be acknowledged... and research should be initiated to provide an empirical basis for policies that profoundly affect the life chances of so many children’ (p.13)

1.4 Statement of the problem

The disparity in Deaf learners’ academic performance and social participation as compared to hearing learners at all levels of education has long been a topic of conjecture (www.deaftoday.com/news/archieves). Even with favourable conditions in our education today and government efforts to provide basis requirements towards improved education for all, the Deaf learners’ academic endeavours are being frustrated by poor academic outcome (Murangira 2007).

Although the Deaf community cherish special schools as the best practice against inclusion there has been limited or no evidence of desirable academic outcome by the learners attending such schools. This appalling situation poses a puzzle among the technocrats as to whether the hearing impairment per se explains the inability of Deaf learners to perform or could be the issues of cultural differences. Numes and Moreno demystified the impairment causal- effect arguing that; ‘(…) deafness should be considered more a risk factor in learning…” (in Kelly and Gaustad 2007).
Whereas policy makers and some educationists may condemn segregation as the sole cause of poor academic and low self esteem among the Deaf learners, as argued by Attiye Suleiman Salim (2006) stating that inclusion is, ‘(...) a process of learning in a normal school without any barriers (...)’ special schools have the negative impact of segregating disabled children’. Several studies among the Deaf community (Marschark 2008), relate to education loopholes as a menace to the past, present and future academic endeavours. There has been limited desired evidence of successful academic performance among Deaf learners neither in special schools nor mainstream classes in Uganda.

1.5 Significance/ rationale of the study

Much as a wide spectrum of studies have been directed to inclusive education, in the new initiative, children confined to the ‘unpopular’ setting (special schools) deserve some attention. Pickersgill (1998, p.94) recommended that, ‘(...) It is inevitable that research and development go hand in hand”. Such research initiatives may shed light on the causes of high drop outs among Deaf learners from the academic institutions and their low education achievements.

Most Deaf people regard themselves as a linguistic minority and not individuals with a hearing defect. Mindful of the role played by self identity or self worthy (self esteem) on human development (Gregory, et al. 1998, Noguera 2002), the extent to which Deaf learners’ academic endeavours warrants a research. The disparities in academic outcome of Deaf learners and hearing learners cannot be ignored by researchers.

The author’s humble opportunity to interact with Deaf persons in diversity as sign language interpreter and a sign language interpreter trainer for more than a decade now, has encountered education imbalances as manifested very often into lobbying
and advocacy work of the Uganda National Association of the Deaf (Murangira 2007). It is inevitable therefore, that such allegations are backed by researched data.

Uganda has been zealous in issues of disability including special education as stated in the Parliamentary Act, 1994 (cited in Ndeezi 2004). It is inevitable therefore, that the impact of our policies is backed by research work that includes all learners without excluding the Deaf (Wilson 2001).

1.6 Objectives of the research study

This survey study was carried out to examine the relation between self-esteem and academic competence among Deaf learners in special schools by identifying significant variables. Result of this study may prompt a discussion accordingly with the stakeholders including learners, parents, teachers and policy makers.

This study provides the opportunity to the investigator to gain knowledge and skills on how to conduct further research among the Deaf community. Suitable methods to use, how to formulate or/and modify research instruments, how to strengthen validity and reliability of the study are some of the issues of professional development.

The study may expose some virgin areas of interest that may trigger further research in relation to the field by providing relevant literature on the subject. Further researchers may wish to explore even deeper the cited areas of this study to compare results and to provide further literature that is apparently limited.
1.7 Research question

What is the self esteem and perceived academic competence of Deaf learners and, Is there a relationship between self esteem and perceived academic competence of Deaf learners?

In order to answer the research question, a couple of sub-questions were development to address Deaf learners as an entity and as a group with different characteristics.

1.7.1 Sub-questions

- What is the self esteem of Deaf learners and how does self esteem vary across the demographic variable?

- What is the perceived academic competence of Deaf learners and how does perceived academic competence vary across the demographic variable?

- What is the relationship between self esteem and perceived academic competence of Deaf learners?

- Is there a difference in relationship between self esteem and perceived academic competence with differences in the demographic variable?

1.8 Scope of the study

This study was limited to Deaf learners in special schools of Uganda. There are four fully fledged special schools for the Deaf in Uganda. That is to say, there have all the classes of the primary school cycle (P1-P7). The schools are located in both rural and urban or semi-urban areas of Uganda.
1.9 Limitations to the research study

The research study covered only those schools that are gazetted as special schools for the Deaf. And among them, only those with primary six and seven classes participated in this study. There were only four schools in Uganda that met the criteria. Individual participation was limited to only primary six and primary seven learners that were present and voluntarily consented to participate.

The research question is limited to establishing self esteem and perceived academic competence of Deaf learners and the relationship between self esteem and perceived academic competence of Deaf learners using two research instruments standardized to measure the above concepts (Gresham & Elliott 1990, Rosenberg 1965).

1.10 Delimitations to the research study

The previous encounters with the Deaf community in the course of the author’s work history made it easy to interact with the respondents in Uganda Sign Language, responding to linguistic challenges as they arose during the data collection process. The school administrators (gatekeepers to the research area) posed no challenges to the study and expressed interest in the process by according ample time to the exercise with no restrictions.
2. Related literature review

This chapter provides a conceptual perspective and a theoretical foundation as a basis for this study. The literature substantially supported the need for the study as navigated by previous researchers. Both grey and academic literature including e-Journals, text books, mass media, political instruments and previous studies were referred to in investigating self esteem, perceived academic competence and the relationship between self esteem and perceived academic competence of Deaf learners in special schools.

2.1 Theoretical perspective

The present study is rooted in the works of Rogoff (2003) analysing human development as related to culture. She criticized the intellectual supremacy of some societies over and above others without them acknowledging the cultural differences embedded in different culture. In her conclusive remarks ‘Culture matters!’ she inspired the present study which relates to the culturally Deaf community faced with numerous cross-cultural challenges. Deaf people’ self identity as a socio-linguistic society other than pathologically defined individuals, has been associated with their social and academic development. The present study investigated the level of self esteem and perceived academic competence of culturally defined Deaf learners.

2.2 Conceptual discussion

2.2.1 Deaf learners

In this study, the rationale to use the term Deaf learners and not learners with hearing impairment was an issue of culture. The pathological view presents deafness as a medical condition, a form of defect whose possible aetiology and eradication remains scientifically inconclusive. On contrary, Social proponents distinguish the terms
‘deaf’ to mean a hearing impairment as medically defined and ‘Deaf’ for a society of hearing impaired persons (Eriksson 1993). In this case deafness possesses double definition in different cultures.

Knight (1998, p. 216-217) stated, ‘(…) each society has expectations, beliefs and values of its own which constitute a concept of normality for that particular society’. In this case, Deaf people are regarded as a richly normal socio-linguistic society (Widdel 2000, Vernon & Andrews 1990) characterized by a common language, beliefs, attitudes, customs, behaviours and social habits (Lane (1996). Deaf people use Sign language as their natural language which involves the use of hands, facial expressions and body movements (Uganda Sign Language Dictionary 2006, Jokinen 2005) to acquire knowledge, skills and share heritage and experiences each one another to convey their feelings, ideas and aspirations.3

Until recently, the use and acceptance of Uganda Sign Language has been highly regarded as inferior communication mode by the majority hearing society in social and academic arenas (Lule 1996). But over years, Deaf people and their allies have preserved it as a cultural symbol and a means of effective communication (Eriksson 1993, Kyle & Wool 1985, Lewis 1968). Rogoff (2003, p. 63) argued that, ‘(…) artificial separation treats biology and culture as independent entities rather than viewing humans as biologically cultural’. In her view, cultural identity shapes the learners’ perceptions and goals for the future. The learners’ culture determines the content, tools and the context of the learning environment.

Skutnabb-Kangas, Kontra, & Phillipson (2005) related the cultural acceptance by majority as an influencing factor in the minority community’s development. Previous studies reveal unjust social treatment of Deaf individuals by the hearing majority

3 “...If it’s no joke being deaf...life has brought much enjoyment and laughter has never been far away. Its attributions have often driven me to follow pursuits and develop interests which give pleasures that other might have been missed” (Jack, 1993, p. v)
leading to psycho-socio setbacks. The persistent denial of the cultural nature of the Deaf community in acquiring knowledge and skills resulted into regrettable experiences among the Deaf learners. Eriksson (1993, p.14) reports, ‘(...) the running sores of anguish and resentment, the gaping, unstauchable wounds of wrongs done decades before; a bottomless fury; an identical litany of slapped hands, tied wrists, punishments, scoldings, tedium, humiliation’

Numes and Moreno (in Kelly & Gaustad 2007) considered deafness as a risk factor to academic competence. The unfavourable conditions may have adverse effects on the Deaf learners’ self-esteem and may compromise their competences to realizing their full potentials in several spheres of life including academics (Matsamura 2004, Mugenyi 2003). Several researchers have argued that learner’s self esteem influences his or her academic competences among other factors (McInerney et al. 2006, Sommer & Baumeister 2002, Befring 2001, Rye 2001).

Suarez (2000, p.2) reported that deaf people constitute a population of much greater variation than people with normal hearing’. Generalizing deaf people could therefore misrepresent their needs and their individually unique experiences. In the present study, Deaf learners’ variations were described into five groups namely; gender, degree of hearing loss, age at onset of the deafness / impairment, the learner’s personal experience with deafness and the family hearing status (Kiyaga & Moores 2003) to determined their relationship with self esteem and perceived academic competence.

2.2.2 Self-esteem and Deaf learners

The concept of Self-esteem was developed by a psychologist known as William James in 1890 and several scholars such as Rosenberg (1965), Flynn (2003), and Jambor & Elloitt (2005) have vested tremendous research interest in this concept. Self-esteem is an internal self feeling or self – perception by an individual towards himself or herself. Individuals have been described as having either high self esteem or low self esteem. One characteristic of low self-esteem is the lack of confidence

Jambor and Elliott (2005, p. 63) posited that self esteem is a significant factor in determining human cognition, motivation, emotion and behaviour development. In their findings they stressed that limited social and economical power lends individuals to minority positions. It was assumed that minority groups such as those defined by race (tribe), gender, sex orientation and disability register low self-esteem. The present study investigated self esteem of Deaf learners with difference experiences with deafness on assumption that such experiences may explain the level of their self esteem.

**Deaf learners’ gender and self-esteem**

Gender has been debated in several education forums. The differences imbedded in males and females may not only be explained by the physical differences but rather in a combination of factors. Bibi (2003), an African female activist narrated;

‘…when I wake up…there is a background of recognition, certain forms of discourses, cultural traditions, specific histories, both personal and collective connections and disconnections, capacities and limitations that confront me and the work through me’

Several researchers concur with her on gender perceived rejection witnessed in different societies that may in turn explain the low self esteem among females (Sommer & Baumaister 2002). In Uganda, girls were seen as mainly potential wives and child bearers (Kangere 2003) undermining their potentials in other male-dominated careers. Kiyaga & Moores (2003) stressed that deaf women face a triple discrimination first as deaf, as women and as poor. As a result of social discrimination, deaf girls are exposed to relatively greater exploitation, violence, and abuse. Mirembe and Davies (2001) noted that deaf girls’ experiences often define their self identity and undermines their self esteem as their self perceptions confined to the inferior positions determined by the social construct.
In most African societies, the position of women is predefined by the culture. Such positions do shape the girl’s academic expectations, choice of carrier and self identity (Bibi 2003, Wilson-Tangoe 2003). This study investigated Deaf learners’ self esteem in regards to gender difference.

**Deaf learners’ degree of hearing loss and self-esteem**

In this study degree of hearing loss was sub-divided into profoundly deaf and hard of hearing. Profoundly deaf learners referred to learners with a hearing loss strongly significant to bar audio perception. Hard of hearing learners referred to learners whose limited hearing could still aid some audio perception with or without the use of hearing aids (Frederick 1994).

Previous findings have been inconsistent on the level of self esteem among hard of hearing and profoundly deaf learner. Some findings contend that hard of hearing learners reveal high level of self esteem due to their ability to assimilate into the hearing majority society significant acceptability (Hintermair 2007). Low self esteem level among profoundly deaf learners have been attributed to the assumed inability to cope up with a culturally hearing world. Flynn (2003, p.1) justified such an observation stating that, ‘(…) individuals who espouse high Self- esteem are considered to be functioning smoothly in Society whereas those with low Self- esteem are thought to be struggling’.

This cultural struggle among profoundly deaf learners may lead to social withdraw and low confidence and anxiety (Jambor & Elliot 2005, Beck 1998, Brooks & Ellis 1982) among profoundly deaf learners.

The present study investigated differences between profoundly deaf learners’ self esteem and hard of hearing learners’ self esteem on the assumption that profoundly deaf learners may be more socially disadvantaged than the hard of hearing learners.

**Deaf learners’ age of onset of deafness and self-esteem**
This term age of onset described the time when one acquired a hearing loss. In this study, age of onset was sub-divided into deafness before birth (pre-lingual deafness) and deafness after birth also referred to as post-lingual deafness (Garguilo 2006, Frederick 1994). The categories of deafness based on age of onset can be endless depending on pathological or social platforms. Marschark (2003) reported on the psychological effects of early deafness due to poor communication skills as a result of poor language acquisition. Research findings have related low self esteem to limited language skills leading to social isolation.

Jumbor and Elliot’s (2005) study findings revealed behavioural imbalances among Deaf learners attributed to social isolation and failure to express themselves due to lack of language (spoken). Deaf people regard sign language as their mother tongue, however, this language of signs have not received a fair reception among the largely hearing community (Jokinen 2003, Eriksson 1998). The present study investigated the difference in self esteem between learners born deaf (prelingual) and learners who acquired deafness after birth (post lingual) on assumption that possessing a language of the superior majority may enhance higher levels of self esteem.

**Family hearing status and self-esteem**

In this study, family hearing status referred to the Deaf learner’s family and whether there was a family member with hearing impairment or not. Jokinen (2005) reported that 95% of deaf persons are born into hearing families. Some Deaf persons may be regarded as bilingual and bicultural (Skutnabb-Kangas, Kontra, & Phillipon 2005) due to their assimilations into two cultures (hearing and Deaf culture).

Lehtomaki (2000) underscored the vital role of a family in the socialization of the child in the early stages of development. Early social attachments create a sense of security and social reliance for the child. He noted that the majority of Deaf learners feel alienated and socially stigmatized by their families on grounds of deafness. They are isolated from social activities due to lack of communication.
Lane, Hoffmeister, and Bahan (1996) described the birth of a deaf child into a hearing family as shockingly frustrating, provoking anger and embarrassment for the parents who are confronted with a stereotyping hearing community. On contrary, some studies among the Deaf parents several studies revealed a great desires for Deaf parents to have Deaf babies instead of hearing ones. Lane, Hoffmeister and Bahan, (1996, pp. 24-25) justified the desire stating that, ‘(...) if you belong to a hearing culture you may find such preference hard to understand; yet all cultures have preference about children. Deaf families with many Deaf members are commonly proud of their genealogy’.

Deaf parents do not focus at the impairment as the hearing parents would. Rather they own reincarnated self image in a baby that is to transfer Deaf culture. The family’s level acceptance of a deaf child, the sense of belonging attached to the family is likely to impact a sense of self esteem / self worthy of the Deaf learner. The present study investigated the possible differences in self esteem of Deaf learners with deaf family members and those without deaf family member.

**Experience with deafness and self-esteem**

In this study, Deaf learners’ experience with deafness was sub-divided into disaster, normal and challenging basing on other researchers’ encounter with Deaf people interacting with the two cultures (Jokinen 2005). Cultural values differ from society to society and it is these values, beliefs and norms that all its members should abide with and defend at all times. A member may be termed ‘uncultured’ or ‘deviate’ if he or she acts indifferently from what is culturally regards normal⁴ (Becker 1991)

Kyle (1991, p.14) described the majority society’s determination to ensure normalcy among the deaf judged that, ‘(...) this may seem particularly harsh terminology, but largely misguided attempts to normalize Deaf people have caused untold hardships’

⁴ (‘...) Deviant is not doing what the majority does or alternatively doing what the majority does not do” (Mwesigye, 2007)
Nantongo (2002) study report findings revealed that most ethncal groupings in Uganda celebrated deafness with rituals, derogatorily nicknames such as ‘kasiru’ in Luganda with the same meaning value as stupid. In Kiswahili deaf people are referred to as ‘bubu’ equivalent of no intellectual speech. ‘ibiragi’ meaning speechless and dumb in Kinyarwanda (spoken by Ugandans of Rwandese origin) defines deaf people. In all the examples given the impairment is associated with intelligence literally defining deaf people as intellectual bankrupt. Kiyaga and Moores (2003) stressed that such cultural stereotyping of deaf people was likely to have a significant impact on their self-esteem by either conceding to the intellectually lacking beings or resented the assessment and become socially deviant.

Mason (1990, p.1) lamented that,

‘(...) Once oppression has been internalized, little force is needed to keep us submissive. We harbour inside ourselves the pain and the memories, the fears and the confusions, the negative self-images and the low expectations, turning them into weapons with which to re-injury ourselves, every day of our lives’.

Deaf people may see themselves in the same mirror as their oppressors use to judge them and admit to their inferior positions jeopardizing their self esteem. The study investigated the difference in self esteem of Deaf learners with different experiences with deafness on assumption that favourable experiences may result into high levels of self esteem.

### 2.2.3 Perceived academic competence and Deaf learners

The concept of academic competence is defined by The Psychological Corporation (2001) as ‘(...) a multidimensional construct composed of skills, attitudes, and behaviors of a learner that contribute to academic success in the classroom. Such skills may include academic skills, critical thinking and academic enablers.

According to Kinard (2001) perceived academic competence refers to the learner’s self perception of his or her academic competences and that perceived academic competence is considered an important determinant of the learner’s actual academic competence.
Some research findings have revealed discrepancies between actual academic competencies and the perceived academic competence of learners. Some findings argue that at times learners do overestimate or underestimate their academic competences. Guay, Boggiano and Vallerand (2001) found that perceived academic competence was influenced by intrinsic and extrinsic motivation. Such motivation included educational rewards as in a job or social status, punishment to reinforce good academic outcomes and motivation that emanates from one’s desire to acquire the knowledge and skills. The findings noted that at times learners may be ill motivated leading to low perceived academic competences.

Murangira (2007) chairperson of the Uganda National Association of the Deaf, challenged the education technocrats to address the pathetic performance of Deaf learners. He emphasized that poor academic performance of Deaf learners was not entirely their inabilities to perform but a failure in the implementation sector to respond to Deaf cultural issues demoralizing Deaf learners. In some cases, Deaf learners’ poor academic performance has been generalized as to reflect their mental retardation (Van Derntth 2005). Many professionals ruled out the academic competence of the deaf learners as the famous philosopher, Aristotle (cited by Eriksson1993, p.14) experienced during his interactions with the deaf and conclusion that, ‘(…) the deaf lacked reason, making educating them an impossible task’

Rogoff (2003) questioned intellectual supremacy of some cultures over others ‘whose culture matters!’ Deaf learners’ cultural perception of their social status may explain the level of their perceived academic competence. Cooney and Robertson (1994) like Kinard (2001) and Trent et al (1994) contended that learners’ perceptions of their abilities to perform influenced their actual competence. This study investigated Deaf learners’ perceived academic competence in light of their low academic performance.

**Gender and perceived academic competence**

Gender has been a cross-cutting issue in lobbying and advocacy work for many civil society organizations in Uganda. The National Women Organizations of Uganda
(NAWOU 2007) commended the government of Uganda for creating the opportunity for the girl-child education through Universal Primary Education and Universal Secondary Education. However, the Women Organization observed that many girls still do not go to school and others drop out due to segregating cultural beliefs that deny girls their right to education.

Kiyaga & Moores (2003) concurred with the above observation with a focus on deaf girls who are faced with multiple social discrimination causing disparities between Deaf boys and Deaf girls’ education. In response to academic disparities between boys and girls, both international and national legislations have been enacted. The United Nations Millennium Development Goal (2000), Target number 3 seeks to eliminate disparities in primary and secondary education by giving the same opportunities to girls and boys (Kokkala 2006). Kinard (2001) posited that efforts to improve academic competence should focus on learners’ perception of their ability to academically compete.

The present study investigated whether there are such disparities between Deaf boys and Deaf girls in regard to their perceived academic competence given their social and academic positions.

**Degree of hearing loss and perceived academic competence**

Available literature provides many definitions of degree of hearing loss with either a medical (pathological) classification or a social (cultural) classification (McCracken 1998, Kyle 1997, Frederick 1994). In this study however, degree of hearing loss was described into two groups: profoundly deaf and hard of hearing. Garguilo (2006) observed that the type (profoundly or hard of hearing) and the degree (severe or mild) are likely to affect the education of the learner with hearing impairment significantly.

Study findings revealed that hard of hearing learners were more likely to excel in academics than those who are profoundly deaf due to their ability to benefit from the residual hearing left behind by the impairment. The residual hearing would be adequate enough to facilitate the acquisition of a language (spoken or written). In
Uganda a few Deaf learners who have fairly managed to climb the academic ladder, as known to the author, are hard of hearing or postlingual deafened in support of Garguilo (2003) findings.

On contrary, Most (2004) study findings revealed lower performance in academic activities by hard of hearing learners especially those who wore no hearing aids as their perceptions were fragmented leading to misinterpretation of messages received. With such evidence of high academic competences among hard of hearing learners, the present study investigated the differences between profoundly deaf learners and hard of hearing learners as regards to their perceived academic competence in special schools in Uganda.

**Age of onset of deafness and perceived academic competence**

Garguilo (2006) described age of onset as the time when the person acquires a hearing deficit. In this study, age at onset of deafness was divided into two: born deaf and deafened after birth and the Deaf learners identified the suitable group their associated with. It has been reported that in many developing countries, Deaf learners are referred to special schools due to failure to respond to oral communication coupled with low academic performance in classroom activities without adequate assessment and subsequent intervention (Wilson 2005) for the teachers or other professionals.

Previous studies underscored the effect of age of onset of deafness on social, cognitive and academic achievements linked to human language development (Garguilo 2006, Marschark 2003). Both findings contended that early deafness deny the child from developing language for the acquisition of knowledge and skills. Limited experiences due to limited exposure would hinder a Deaf learner from acquiring the necessary knowledge and skills for academic competence. Born deaf learners are likely to suffer from the language deficit than the learners with later deafness and already had language (spoken and written) proficiency before deafness. Cummins (2006) reported that Deaf children who have limited access sign language
in their early childhood, failed to develop strong first language conceptual foundation. He underscored the importance of proficiency in the first language to the learning of a second language for the Deaf children. In this case, depending on the learners’ first language, early exposure to the mother tongue would facilitate English proficiency among Deaf learners.

Recognisant of the significant role of language in education as underscore by those findings, this study investigated the differences in perceived academic competence of born deaf learners and those with later deafness after birth.

**Family hearing status and perceived academic competence**

The influence of a family to the child’s learning competence was reflected in the works of Vygotsky (1978) ‘Zone of Proximal Development’. He posited that the child’s cognitive development depended on the level of interaction that child was exposed to in the social and cultural environment in which the child grew. However, Kiyaga & Moore 2003, p 20) noted that, ‘(...) problems of communication between deaf and hearing parents impede or prevent acquisition of the family language, thus closing off enculturation and the benefit of incidental learning enjoyed by hearing siblings’. Most children with hearing impairment are born in hearing families were a spoken language prevails. Lack of incidental learning limits the academic competence of Deaf learners (Marschark 2008).

Mattanah (2001) noted that with a limited command in a mother tongue due to limited parent-child interaction and friendship would adversely affect the learning of a second language. Barbara Rogoff (2003, p 68) noted in her studies that, ‘(...) rapid language development relies on both their ability to detect language distinctions and their experience with distinctions used in the language they hear’. Research findings have revealed that most Deaf learners lag behind in language development leading to low perceived academic competence.

Miller (2002) study results pointed out that prelingually deaf children raised in hearing families where the oral communication is emphasized will be relatively better
in phonological awareness, than those Deaf learners raised in a deaf family using sign language. With difference in family hearing status and the possible advantages attached to the difference on family motivation to learn, the present study investigated the differences in perceived academic competence of Deaf learners with deaf family members and those with no deaf family members.

**Experience with deafness and perceived academic competence**

Ssenyonga (1998), Deaf lecturer at Kyambogo University and one of the founder members of Uganda National Association of the Deaf (UNAD) recollected the untold stories of memories of failures and emotional grievances of Deaf persons in their pursue to attain education. He retaliated that the move to normalize the deaf children through oral communication and punishments for using sign language was an impediment to perceived academic competence. Some educators and researchers are stunned by the cognitive impoverishment of the Deaf and justify the situation to the effects of deafness.

Marschark (2003) pointed out that deaf children’ poor language skills leads to poor literacy skills, and as compared to hearing children, deaf children reveal low academic skills. Deaf children possess relatively limited knowledge and skills for reasoning and problem solving essential for academic competence. The language (spoken) as a medium of instruction in most schools, the learning artefacts, and the nature of academic assessment that may not reflect the Deaf culture, are some of the issues cited by several research findings as responsible to low perceived academic competence among Deaf learners (Marschark 2008). The present study investigated the possible differences in Deaf learners’ perceived academic competence with their differences in experiences with deafness.

**Deaf’ self-esteem and learners’ perceived academic competence**

There have been inconsistence findings about the relationship between the learners’ self esteem and their academic competences. Awad (2007) reported that some findings suggested that high self esteem correlated with high academic achievements
of learners. In his own study Awad reported inconsistent findings and suggesting negative correlations between self esteem and academic achievements.

Relating self esteem and perceived academic competence, Awad’s (2007) study among the African American students revealed low academic achievements with both high self esteem and high perceived academic competence. Kinard’s (2001) study among maltreated children, found that children with low self esteem overestimated their academic abilities in order to compensate for their sense of satisfaction. In that case there was a negative relationship between self esteem and perceived academic competence. Alaker’s (1989) study findings led to the conclusion that the relationship between global esteem and other dimensions of self such as perceived academic competence must be examined since their correlations are often inconsistent.

In Uganda, most Deaf learners are believed to be low academic achievers in examination assessments compared to the hearing learners. The correlation between self esteem and perceived academic competence from previous research findings may be supplemented by the present study findings that focused on the learners’ perception of self (self esteem and perceived academic abilities) to determine the relationship between self esteem and perceived academic competence of Deaf learners in special schools.
3. **Research methodology/ methods**

This chapter describes the research process underwent to investigate Deaf learners’ self esteem, perceived academic competence and the relationship between self esteem and perceived academic competence. The research methods, operationalization of concepts, applicability of Rosenberg (1965) Global self esteem and Gresham & Elliot (1990) academic competence tools and ethical considerations are some of the issues addressed in this chapter.

3.1 **Operationalization of terms**

In this study ‘Deaf’, ‘deaf’ and hearing impairment, ‘self esteem’ and ‘perceived academic competence’ have been adapted and translated into concrete measurable terms in relation to the research objectives (operationalization) as follows:

3.1.1 **‘Deaf’, ‘deaf’ and hearing impairment**

In this study, hearing impairment was used to refer to the pathological description of deafness as was the same meaning with the term deaf. It should be noted that the majority of Ugandan children are seldom audiologically / medically assessed to determine the actual levels of their impairments. Further still, the distinction among hearing losses are highly appreciated by professionals. The many people there may be no distinction in the use of the words ‘deaf” and ‘hearing impairment’.

The term ‘Deaf’ (with uppercase- D) refers to an individual with a hearing impairment and belonging to a culturally defined community. The individual is expected to associates freely with other members with the same traditions, values, and customs, creating a cultural bond (Jumbor & Elliot 2005, Kyle 1991, Vernon & Andrews 1990, Moores 1987). Deaf learners in this study are those that attend
special schools for the Deaf and, identify themselves as primarily as Deaf children and use sign language as their first language in daily interactions.

### 3.1.2 Self esteem

As a concept, Self-esteem is an internal individual self feeling or self liking. Reactions toward ‘Self’, may result from external factors such as social attitudes towards the individuals, ability to meet basic needs, social participation and achievements (Awad 2007, Rosenberg 1965). In this study self esteem is described by 10 items Rosenberg (1965) self esteem measuring scale was used to measure Deaf learners’ self esteem. The scale was 6 point-scale anchored with strongly disagree and strongly agree (cited in Flynn, 2003).

### 3.1.3 Academic competence or Perceived academic competence

This study focused on the deaf learners’ perceived academic competence. The concept ‘perceived academic competence’ refers to learners’ self perception of their ability to perform in academic subjects as compared to other learners. This can be reflect by their motivation or / and behaviour towards achieving success in academics.

Because of the relationship between academic competence and perceived academic competence (Kinard 2001, Cooney& Robertson, 1994), this study adapted a nine-item Gresham & Elliott (1990) academic competence measuring scale with a 5 point-score anchored with lowest disagree and highest agree to measure Deaf learners’ perceived academic competence. Further, Deaf learners’ respondents’ scores were categorized into three groups: high perceived academic competence (19-27) average perceived academic competence (10 -18) and low perceived academic competence (1- 9).
3.2 Quantitative approach

In Uganda, there is limited quantitative research carried out in the field of Special Needs Education (Albeiter & Hartley 2002) at the time of carrying out this study. This fact cannot continually to be ignored mindful of the influence of quantitative data on policy formulation and implementation. The present study therefore took a quantitative approach in an attempt to produce numerical data that may be generalized, tested, and statistically presented to create a measurable impact (Bryman 2004, Gall, Gall & Borg 2003) in the education of the Deaf in Uganda.

3.2.1 Survey design

The survey design made it possible to collect relatively large data from many respondents of equally varying opinions on the given variables within a limited time available (Gall, Gall & Borg 2003). The study combined two different standardized sets of questions (ordinal data) built on scales plus the respondents’ demographic information (nominal data). The survey does not show cause-and-effect relationship among the variables probed.

3.3 Study population and sample

3.3.1 Population of the school

Educational centres in the country offering education to learners with hearing impairment in a special setting formed the population of the study. These may include; schools Units for the Deaf, initiated or founded by the government or by the private sector. The study findings may be generalized to above population.
3.3.2 Schools’ sample

Four special schools for the Deaf were sampled for this study on the basis of having a complete primary cycle (primary one –primary seven). The schools that met the above criteria were widely spread; two schools located in Kampala district, one in the southern part (Masaka district) and the forth one in the Eastern part of Uganda. These schools admit learners from any part of Uganda with other factors contact. All the schools provide a sign Language environment to the learners. Since these are the only ‘major’ schools for the Deaf in Uganda, their views may be regarded as a fair representation of other schools/ units for the Deaf which did not participate in the study.

3.3.3 Learners’ population

In this study, the population of the respondents comprised of Deaf learners in the four sampled schools in Uganda and all learners had equal chances to participate in this study. The outcome of this study may be generalised to the learners’ population.

3.3.4 Learners’ sample

The respondents in this study were purposefully identified as all Deaf learners in primary six and primary seven (Census Survey). The rational for choosing the two classes was on the assumption that these learners are intellectually mature to comprehend the questionnaire within the given time and resources with limited assistance. The total number of respondents and their demographic characteristics depended entirely on Deaf learners available in a particular school/ class at the time of data collection. The second reason for choosing the two classes in this study was based on the academic nature of primary six and primary seven as regarded by the Uganda educational system. The ethical issue of seeking consent could also be negotiated directly from the respondents themselves.
3.4 Research instrument

The standardized questionnaire was sub-divided into three parts (section A, B and C). Section A had 5 Deaf learners’ demographic information, section B was Rosenberg (1969) Global self esteem tool and section C was Gresham and Elliott (1990) academic competence tool (Appendix 1). The questionnaire in written form was also interpreted into Uganda Sign language to the Deaf respondents.

A standardized instrument with predefined scales made it possible for the respondents to react in a relatively limited time but to many variables without being unnecessary lengthy in response (narratives) that could have risk misinterpretation (Bryman 2004). This uniformity made it possible to record data and analyse it with minimal errors and to compare the varying responses and make a fair discussion. Rosenberg (1965) Global Self esteem tool and Gresham and Elliott (1990) Academic competence tool were tested for reliability (Cronbach’s Alpha of the scale) to ensure their consistence to measure Deaf learners’ self esteem and perceived academic competence.

3.4.1 Section A: Demographic information

The general information about the respondents included gender, degree of hearing loss, age at onset of deafness, family hearing status and the respondent’s own experiences with deafness. All the five variables were of a nominal nature (Appendix 1). Deaf people are not homogenous and their variations (Kiyaga & Moores 2003) may reveal variations in their self esteem and perceived academic competence.
3.4.2 Section B: Standardized Rosenberg (1969) Global self esteem tool

A ten-item Rosenberg (1965) Global self esteem (likert scale) tool as cited by Flynn (2003) was adapted to measure Deaf learners’ self esteem in this study. In Rosenberg remarked that every individual by nature has a pervasive need for self-esteem manifested in their continued struggle in improving and maintaining the self (Flynn, 2003). The tool was introduced by a general question that provides choices to the respondent: “To which extent do you disagree or agree with the following statements?” giving a 6 score value ranging from strongly Disagree to Strongly Agree (Appendix 1). The instrument has been widely used by other researchers for its broader construction of issues of self perception with a broadly definition (Farrugia et al. 2004, Tafarodi & Milne 2002), although other researchers have questionnaire the tool’s universality (Fylnn 2003).

Some items in this tool were of a reversal nature and further analysis reversed their scores. All items are treated as having an ordinal value. The outcome of this study may shed some light on how global self esteem definition and the scale relate to Deaf learners in special schools in Uganda.

3.4.3 Section C: Standardized Gresham and Eliott (1990) academic competence tool.

Gresham and Eliott (1990) developed an academic competence Social Measurement Scale on the basis of social skills. The questionnaire had three dimensions: Social skills, problem behaviour and academic competence. For the purpose of this study, only items meant to measure academic competence were extracted. Although this scale was used to solicit information from the teachers about the learners, academic competences, the present study explored the learners’ self perceptions of their academic abilities by adapting the tool to measure the learners’ perceived academic competence. As De Vaus (2002) posited that,
‘(…) in many cases it is wise to ask people why they act or think as they do. This can provide clues about motivations behind actions and assist in interpreting what a particular action or attitude indicate for a person’

In this study, Deaf learners’ academic competences were not assessed. The data collected is the learners’ academic self evaluation in response to the items of the tool. The study termed their views as, the learners’ perceived academic competence. The tool was a nine- item likert scale, with rating system earmarked from the Lowest (1) Next lowest (2) Middle (3) Next Middle (4) and finally Highest (5). All items are treated as having an ordinal value. The performance is favourable as the numbers ascend (Appendix 1)

3.5 Data collection

The questionnaire was introduced by an instruction guide to address important issues such as how the form was to be filled, the degree of confidentiality to be maintained, the available assistance if needed, and the objectives of the study. The respondents were required to consent on the form before proceeding to the main part of the questionnaire (I do accept/ I don’t accept). Only learners who voluntarily chose “I do” proceeded with the questionnaire (Appendix 1)

In each of the four schools, Deaf learners assembled and were briefed by the school administration and the author on the objectives of the research. The entire research instrument was live interpreted into Sign Language item by item, page by page as the respondents answered the questions therein systematically. A Deaf interpreter assistant witnessed the process to provide linguistic assistance if needed. It should be noted here that there is no written Sign Language which would have enabled prior translation of the tool and prior video recordings of the questionnaire into sign language may have been challenged by linguistic dialect characteristic of several schools for the Deaf in Uganda due to geographical and cultural differences.
All 166 questionnaire forms distributed were collected onsite at the end of the process recording full return rate (100%). Four of the questionnaires were regarded invalid because the respondents did not complete the exercise. The report is therefore based on 162 questionnaires, giving the answering rate of 98%.

3.6 Pilot study

The initial investigation (pilot study) was done to provide strengths and challenges of using the instrument (Gall, Gall & Borg, 2003) to investigate the Deaf learners’ self esteem and perceived academic competence. Anticipated challenges included the cultural-linguistic nature of the respondents, their experiences and general education in interpreting the items. Initially, two Deaf adults were exposed to the questionnaire in written form, followed by both written and live interpreting. The class of Deaf learners were piloted to correspond with the age of the respondents. The learners were grouped according to gender differences (stratified sampling) in response to assumed differences between boys and girls. In each group three coupons were drawn giving a total number of six respondents for the pilot study.

Outcome of the pilot study

A pilot study makes it possible to make several adjustments in the construction of the instrument such as wording/signing and the actual questionnaire format to limit the possibility of non-response rates for purposes of validity and reliability (De Vaus 2003). The pilot study findings cited the need to interpret the instrument into Sign Language during data collection stage. It was noted that the linguistic nature in which the instrument appeared may be misinterpreted by the respondents in this study. Sign language, therefore, was intended to bridge the cultural-linguistic gap between English and Sign Language.
The pilot study also concluded that the instrument be systematically interpreted item per item, page by page as the individual respondent react to each issue at a time to minimize the occurrence of missing data. The pilot exercise confirmed that the sample of the study would comprehend the research tool as exhibited by the minimal missing data during the pilot study.

Suitable timetable was draw, acquired resources were determined and the sample size of the respondents known for planning purposes. The initial time allocated for data collection was adjusted to enable the process of live interpreting and give ample time to respondents to react on each item in case the message was unclear. This helped to narrow the gap between the interpreted message and the source message.

### 3.7 Gaining access to data collection

A letter from the University of Oslo coupled with a letter from the Investigator were sent to the department of Special Needs and Counselling, Ministry of Education and Sports, Uganda, informing the office of the intention to carry out the study (Appendix 4 & 5)

The Investigator made a couple of phone calls in the interest of time, to the school administrators to make appointments for the study. A copy of the introduction letter for the University of Oslo was presented on arrival at the schools before the process.

Class teachers and the respondents were briefed onsite of the study objectives and the Investigator was left in charge of the instrument process that took a couple of hours in each school. Questionnaire forms were collected by the author at the end of the process on the same day to ensure full return.
3.8 Data analysis/ presentation

The present study took a descriptive statistical analysis to quantify Deaf learners’ self esteem and perceived academic competence in Special schools in Uganda. Spearman rho Correlation Coefficient was used to establish the significance and the strength of the relationship between self esteem and perceived academic competence of Deaf learners, a t-test for independent dichotomous groups and F-test (ONE-WAY ANOVA) for trichotomous variables were used to investigate the nature and the differences in self esteem and perceived academic competence of Deaf learners. Both standardized tool used were ordinal scale. Data was coded and analyse objectively to produce scientific data that could be numerically comparable (De Vaus 1991).

Four research sub-questions were analysed to establish self esteem and perceived academic competence of Deaf learners and the relationship between self esteem and perceived academic competence of Deaf learners. Deaf learners were described by 5 groups (demographic variables); gender, degree of hearing loss, age at onset of deafness, family hearing status and learners’ experience with deafness as presented on the general questionnaire item 1-5 (Appendix 1).

A 10- item Rosenberg (1965) Self- esteem tool started from 1-10 presented in section B of the general questionnaire (Appendix 1). The scale contained some items of a reversal nature (2, 3, 6, 8, 9), and were positively reversed when scoring. In analysing self esteem of Deaf learners, item by item approach was used as described in chapter four of this study.

The 9- items Gresham and Elliott (1990) perceived academic competence tool started from 1 – 9 presented in section C of the general questionnaire (Appendix 1). A sum total of perceived academic competence was used to measure Deaf learners’ perceived academic competences as the tool was fairly reliable (Appendix 2b).

To establish the relationship between self esteem and perceived academic competence of Deaf learners, single items of self esteem scale were correlated with
the sum of Academic competence scale. The correlation analysis of data used Spearman rho statistics appropriate for analysing ordinal data (De Vaus 2005). In this study, mean difference was reported statistically significant at 0.05 and statistically significant correlation at 0.01 and 0.05 (2-tailed). Correlation strengths were classified according to Rea and Parker (1997) classifications: weak (.10-.19), Moderate (.20-.39), relatively strong (.40-.59) strong (.60-.79) and very strong (.80-1).

3.9 Validity and Reliability

The present study was guided by the need to reflect on the cultural theory as it relates to the deaf learners. The proposed research tools had to relate to the research question set. The present study terms that validity of the study and the tools. Reliability refers to the consistence of the research tool in measuring the intended concepts without or with limited variations of outcome when repeated over time (Gal, Gall & Borg 2003, De Vaus 2003).

3.9.1 Validity

In this study the internal validity considered the research process by remaining consistent with the research problem and research question as reflected in the chapter one (1.7). The choice of the instrument and the respondents were suitable for the present study. From the start of the study, literature provided information on the previous works (Flynn 2003, Tafarodi 2002, Gresham & Elliott 1990, Rosenberg 1965) that had incorporated the use of the same tools in investigating the same concepts as in the present study. Therefore, using these adapting these tools for the present was assumed of validity.

However, to further strengthen the tools validity, the study carried out a pilot study to purge the possible gaps. External validity considered steps taken to ensure a fair
representation of the research population (the choice of the research sample) for the intended wish to generalization the results.

Validity of the tools was ensured from the start of the study since it was evident that both tools had been used before to measure the concepts across cultures, ages and gender and found applicable special case by some researchers. To further strengthen validity, the tools were interpreted into sign language (language of the Deaf) to minimize linguistic loophole. A retest was carried out among the young learners close to the intended respondents’ age to judge their comprehension of the tool. The further amendments strengthened both validity and reliability.

3.9.2 Reliability

In this study, all respondents voluntarily participated with the understanding of the objectives of the study. Willingness to participate may guarantee a fair treatment of the questionnaire by the respondents. To limit the sampling error and achieve statistical significance on this study (De Vaus 2002), a relatively sizeable number of respondents participated to strengthening reliability of the data and to increase chances of generalizing the results to the study population and drawing conclusions.

The standardized instruments used in this study were used by other researchers and produced consistence reputation in measuring the variables in question (Flynn 2003, Gresham & Elliott 1990). However, further input was required such as Sign Language interpreting on item to item approach to minimized missing data to strengthen reliability. The same interpreter was used in all the schools of this study to maintain a fairly high degree of consistency in Sign Language interpreting by giving respondents the same version of the instrument.

The data when collected was entered into the Statistical program (SPSS) and several clean ups were made to ensure no intended data was missing or a mixed up of figures
that may jeopardize reliability (De Vaus 2005). The reliability test for the tools was computed using Cronbach Alpha as discussed in chapter four.

**Threats to reliability and validity in the study**

The use of the standardized tools in this study may have been threatened by the cultural differences of Deaf learners of both geographical and human nature. At the inception of this study, no knowledge of previous studies in the same research area had been carried out. Items of the tool may have a relatively different meaning to Deaf learners than it would be the case to members of a different culture such as American Deaf students as in Sommer and Baumeister (2002) and thus leading to misinterpretation of concepts.

The use of Sign Language to convey the same meaning as in a written hearing-based standardized tool may pose linguistic and cultural challenges to the process of interpreting. These may threaten the reliability of the tool leading to inconsistence responses. Cokely (1992) restated the complexity of sign language interpretation in relaying the message citing out dependable factors such as fatigue and human error of either the interpreter or the recipients of the message. Further still, Flynn (2003) highlighted the link between cultural values and response bias among respondents that may be an oversight in using Rosenberg global self esteem. The tool other than other factors may affect Deaf learners’ responses.

**3.10 Ethics of the study**

In this study, professional responsibility was exercised above the personal interests or achievements as recommended by Cartwright (1999) by seeking permission to carry out the study, ensuring informed consent from the respondents, being loyal to respondents view, acknowledgement of other researchers in the report, pre-testing of the tool among others. The research process devoted ample time and conscience to
meet the ethical demands. The author therefore regrets if there has been an oversight of some sort on ethical grounds.

**Seeking permission/ introduction to undertake the study**

An introduction letter from University of Oslo (UiO), the investigator’s letter of introduction were sent to the Ministry of Education and Sports, Special Needs and Counselling section informing them of the intended study (Appendix 4&5).

Consent from the schools to participate was given by the schools’ administration on the presentation of a copy of the letter from University of Oslo. Deaf learners had the opportunity to consent individually in writing. The questionnaire contained an opening portion which demanded that each respondent consents before proceeding with a self-report anonymous completion of the questionnaire (Appendix 1). No formal letter to the schools for permission since doing so would threaten enormity. The identity of the schools and the respondents were purposefully omitted and replaced by pseudo names such as School 1 or idnr for the respondent’s number during data processing.

**Pre-testing of the tool**

In this study among Deaf learners, pre-testing of the tool was regarded as an ethical matter. A tool may cause psychological torture to the respondents by exerting or unearthing negative perceptions about one’s self. However, during pre-tested the findings gave a positive impression of the respondents. It was not the intention of the investigator to create situations that may move the respondents to unworthy positions as a result of the tools used.

**Acknowledgement of other researchers/ respondents**

Previous works of other researchers have been referenced in this study. A letter of recognition to the Morris Rosenberg Foundation was sent as requested on the
usefulness of the Instrument (Appendix 7). No permission to use the instrument was required though European Monitoring Centre for Drug and Drug addicts (2006). A general letter of appreciation to the schools was sent in recognition of their noble contribution to the success of study (Appendix 6). Personalities and institutions have been acknowledged in this study report for personal and professional contribution accorded to the author during the study.

**Loyal to respondents view**

External interference with the respondents’ views during data collection was avoided as much as possible and/or professional criticised whenever it occurred. During data analysis, the study paid allegiance to the results (situation) as perceived by the respondents by remaining loyal to their views (facts collected). Several consultations to the raw data were done to ensure correct data transfer.

**Strengthening Relationships**

Deaf learners who voluntary excused themselves from the study were followed up to ascertain reasons for their exit and to make them feel that their action to do so was an acceptable behaviour in this study. It was thought important for further research studies that their reasons for quitting the study be known.

**3.11 Research successes**

The schools in the study were known to the investigator making it less strenuous to access the respondents. The respondents easily embraced the study may be due the investigator’s willingness to use sign language directly. The schools’ administrations were very cooperative to exercise and granting all suggestions regarding dates, place and the entire research procedure.
All questionnaire forms were collected and only four out of 166 forms were treated as invalid. An informal interaction with the respondents after the exercise on request by the school administration provided an insight on why some respondents were reluctant and others were very eager to participate. It was important that Deaf learners are socially listened to.

3.12 Research challenges

Interpreting the research instrument into sign language to the respondents was tiresome and linguistically challenging task due to the cultural linguistic differences. The level of Uganda Sign Language development may have limited Deaf learners’ conceptualisation of the standardized research tools.

Some respondents opted out of the study process may be due poor perception of the objective of the study or uncertainty of the ability to complete the task. Informal discussion indicated that some respondents still treated the questionnaire as an academic assessment tool regardless of the investigators attempt to clarify. Some informally reported fear of being examined and later implicated.
4. Data presentation and Data analysis

In this study, data analysis and presentation was aided by SPSS software commonly used for statistical data. As stated in chapter three, Deaf learners and their five demographic backgrounds namely gender, degree of hearing loss, age at onset of deafness, the family hearing status, and the experience with deafness formed the independent variables of the study. The two dependent variables were self esteem (10-item Likert scale) and perceived academic competence (9-items Likert scale).

The analysis was based on the four sub-questions. Sub-question 1. *What is the self esteem among Deaf learners and how does self esteem vary across the demographic variables?* Sub-question 2. *What is the perceived academic competence of Deaf learners and how does perceived academic competence vary across the demographic variables?* A t-test and F-test were carried out to analyse variances. Sub-question 3. *What is the relationship between self esteem and Perceived academic competence of Deaf learners?* Sub-question 4. *Is there a difference in the relationship between self esteem and perceived academic competence with differences in the demographic variable?* Corrections were determined by Spearman rho because the two scales used were of an ordinal nature.

In presenting and analysing data in the present study, $r=0.30$ was described as relatively strong in a research carry out among Deaf learners in special schools. De Vaus (2002) recommended that such a correlation may be regarded relatively strong in social research.

4.1 Demographic information

In this study, 162 respondents participated out of 175 anticipated from the four schools with a response rate of 92%, an excellent response rate according to Mangione (1995) classification. School 1 with 39 respondents (24.1%), school 2 with 46 respondents (28.4%), school 3 with 54 respondents (33.3%) and finally school 4
with 23 respondents (14.2%). Findings revealed nearly equal representation for girls and boys. Percentages stood at 51% girls and 49% boys.

Hearing status was predefined into three groups namely; hard of hearing, profoundly deaf and hearing. Noted in this study is the significant difference in the numbers of respondents across these groups, with the largest being profoundly deaf (86.4%), hard of hearing comprised of 12.6% and the smallest comprised of 1.2% of the hearing respondents. Two respondents described themselves as hearing to the question “How do you identify yourself?” Through scrutiny of the two learners’ further responses to the item “I am … (1. Born deaf; 2. Deafened later after speech)”, both learners said they were born deaf. With this misunderstanding, the dilemma was either to discriminate them from the study or treat them as one of the categories of hearing loss.

The available matching data and further consultations guided the decision to adjust figures to only two groups: hard of hearing and profoundly deaf. However, it was insufficient to conclude on a specific category to which these two respondents belonged given the fact that age at onset of the impairment may not determine the severity of deafness (Moores 1987). Thus, when correlating data on the degree of hearing loss, the two respondents (1.2%) were purposefully eliminated.

In this study age at onset predefined respondents into two groups: born deaf were 95 (58.6%) and deafened after birth were 67 (41.4%). Deaf learners responded to whether they had family members with deafness or no deaf family member. Respondents with deaf family members were 49 (30.2%) and those with no known family member with deafness were 113 (69.8%).

Respondents also reacted to the item regarding their experiences with deafness from three predefined groups. Deaf learners who described their experience with deafness as a disaster counted for 30 (18.5%), 106 (65.4%) responded to a normal experience and 26 (16.0%) described their experience as a challenging.
4.2 Treating variables prior to analysis

Compensating missing data
There were two unanswered items and in order to benefit from the responses on other items, the missing values were compensated for, giving them an average of what they had answered on other items as recommended in such cases (De Vaus 2005).

Testing reliability of the instrument

In analyzing the data, reliability of the two research instruments was determined by Cronbach alpha. In this study the internal consistence of the Rosenberg (1965) ten-item self esteem scale measured to $\alpha = .147$ (Appendix 2a).$^5$ Previously studies recorded higher internal consistence (Award 2007; $\alpha = .84$). In other words, there were massive inconsistencies in response to the items measuring self esteem in the present study. There was no knowledge of any previous studies carried out using this tool to measure self esteem of Deaf learners in special schools in Uganda at the time of writing this study.

In this study, reliability of Gresham and Elliott (1990) academic competence measuring tool was reached at $\alpha = .682$ for a total of 9 items (Appendix 2b). Although Cronbach’s alpha did not hit standard desirable mark of $\alpha = .7$, it was reliably enough for general acceptability. It should be noted that Gresham & Elliott (1990) study academic competence study focused on the teachers’ evaluation of the learners unlike in this study where the concept charged to Deaf learners’ perceive academic competence to reflect their own self evaluation.

---

$^5$ De Vaus (2002) “…we should look for ‘negative’ results and do what we can to report inconvenient results. It is only by doing this, that we can extended our knowledge beyond that which our beliefs and prejudice dictate” (p. 210)
Collapsing categories
Perceived academic competence scores ranged from the lowest (1) to the highest (5) (Chapter 3). In this study, however, the scale was trichotomised into low perceived academic competence ranging from 12 to 27, average perceived academic competence between 28 and 34 and high perceived academic competence ranging from 35 to 45 to allow realistic definition of the categories. In this study, Deaf learners’ self esteem was dichotomised low self esteem ranging from 10-50 (strongly disagree- slightly disagree) and high self esteem from 60-100 (slightly agree-strongly agree).

4.3 Self esteem

In this study, a sum total of self esteem tool could not be used to determine Deaf learners’ self esteem due to inconsistence level of $\alpha$. Therefore, in this study Deaf learners’ self esteem was measured on item-item analysis. The items are: 1. On a whole, I am satisfied with myself, 2. At times I think I am no good at all 3. I feel I do not have much to be proud of 4. I feel that I have a number of good qualities, 5. I am able to do things as well as most other people do, 6. I certainly feel useless at times, 7. I feel that I am a person of worth, at least to the level equal with others, 8. I wish I could have more respect 8 I wish I could have more respect. 9 All in all, I am inclined to feel that I am a failure
10. I take a positive attitude towards my self. The following sub-questions addressed self esteem of Deaf learners.

4.3.1 Sub-question 1: What is the self esteem of Deaf learners and how does self esteem vary across the demographic variable?

Table 1 shows the distribution of Deaf learners according to their scores on each item measuring self -esteem. There are differences in Deaf learners score across the ten self esteem items. The findings revealed item 5 with both highest number of respondents with high self esteem (128) and the lowest respondents with low self
esteem (34). Item 8 received the least number of respondents with high self esteem (46) and the largest number with low self esteem (115). The general, Deaf learners self esteem as measure by item-item analysis, was relatively high.

In this study, five demographic variables describing Deaf learners’ diversity were analysed in relation to self esteem by the following questions.

Table 1: Deaf learners grouped as per their Self esteem scores on each items

<table>
<thead>
<tr>
<th>Degree of agreement</th>
<th>(Six options)</th>
<th>strongly disagree</th>
<th>somewhat disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>somewhat agree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>v1 on a whole, I am satisfied with myself</td>
<td>16 9.9</td>
<td>15 9.3</td>
<td>13 8</td>
<td>33 20.4</td>
<td>27 16.7</td>
<td>58 35.8</td>
<td></td>
</tr>
<tr>
<td>v2 At times I think I am no good at all</td>
<td>45 27.8</td>
<td>21 13</td>
<td>32 19.8</td>
<td>32 19.8</td>
<td>18 11.1</td>
<td>14 8.6</td>
<td></td>
</tr>
<tr>
<td>v3 I feel I do no have much to be proud of</td>
<td>44 27.2</td>
<td>23 14.2</td>
<td>15 9.5</td>
<td>30 18.5</td>
<td>15 9.3</td>
<td>35 21.5</td>
<td></td>
</tr>
<tr>
<td>v4 I feel that I have a number of good qualities</td>
<td>6 3.7</td>
<td>12 7.4</td>
<td>21 13</td>
<td>22 13.6</td>
<td>26 16</td>
<td>75 46.3</td>
<td></td>
</tr>
<tr>
<td>v5 I am able to do things as well as most other people do</td>
<td>13 0.8</td>
<td>8 4.9</td>
<td>13 8</td>
<td>28 17.3</td>
<td>35 21.6</td>
<td>65 40.1</td>
<td></td>
</tr>
<tr>
<td>v6 I certainly feel useless at times</td>
<td>56 34.6</td>
<td>22 13.6</td>
<td>14 8.6</td>
<td>19 11.7</td>
<td>12 7.4</td>
<td>39 24.1</td>
<td></td>
</tr>
<tr>
<td>v7 I feel that I am a person of worth, at least to the level equal with others</td>
<td>17 10.5</td>
<td>7 4.3</td>
<td>15 9.3</td>
<td>24 14.8</td>
<td>33 20.4</td>
<td>66 40.7</td>
<td></td>
</tr>
<tr>
<td>v8 I wish I could have more respect</td>
<td>66 40.7</td>
<td>33 20.4</td>
<td>16 9.9</td>
<td>14 8.6</td>
<td>22 13.6</td>
<td>10 6.2</td>
<td></td>
</tr>
<tr>
<td>v9 All in all, I am inclined to feel that I am a failure</td>
<td>30 18.5</td>
<td>36 22.2</td>
<td>28 17.3</td>
<td>31 19.1</td>
<td>26 16</td>
<td>11 6.8</td>
<td></td>
</tr>
<tr>
<td>v10 I take a positive attitude towards myself</td>
<td>16 9.9</td>
<td>10 6.2</td>
<td>21 13</td>
<td>20 12.3</td>
<td>35 21.6</td>
<td>60 37</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>162 100</td>
<td>162 100</td>
<td>162 100</td>
<td>162 100</td>
<td>162 100</td>
<td>162 100</td>
<td></td>
</tr>
</tbody>
</table>

Is there a difference in self esteem between Deaf boys and Deaf girls?

The table 2 shows mean differences on all the ten items measuring self esteem between Deaf boys and Deaf girls. The results show Deaf boys with the highest score on items v2, v3, v4, v5, v6, v7, v8, v9. Deaf girls had the highest means on item v1 and v10. With these findings, it can be concluded that Deaf boys in this study had a relatively higher self esteem than Deaf girls. A t-test however revealed a statistically
insignificant mean difference between girls and boys.

Table 2: Deaf girl and Deaf boys’ self esteem

<table>
<thead>
<tr>
<th>Selected items of self esteem</th>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>v1  on a whole, I am satisfied with myself</td>
<td>female</td>
<td>82</td>
<td>4.55</td>
<td>1.786</td>
<td>1.749</td>
<td>160</td>
<td>.082</td>
</tr>
<tr>
<td>v1</td>
<td>male</td>
<td>80</td>
<td>4.09</td>
<td>1.561</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2  At times I think I am no good at all</td>
<td>female</td>
<td>82</td>
<td>2.95</td>
<td>1.655</td>
<td>-.335</td>
<td>160</td>
<td>.738</td>
</tr>
<tr>
<td>v2</td>
<td>male</td>
<td>80</td>
<td>3.04</td>
<td>1.626</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3  I feel I do no have much to be proud of</td>
<td>female</td>
<td>82</td>
<td>3.26</td>
<td>1.897</td>
<td>-.520</td>
<td>160</td>
<td>.603</td>
</tr>
<tr>
<td>v3</td>
<td>male</td>
<td>80</td>
<td>3.41</td>
<td>1.927</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4  I feel that I have a number of good qualities</td>
<td>female</td>
<td>82</td>
<td>4.59</td>
<td>1.625</td>
<td>-.953</td>
<td>160</td>
<td>.342</td>
</tr>
<tr>
<td>v4</td>
<td>male</td>
<td>80</td>
<td>4.81</td>
<td>1.397</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5  I am able to do things as well as most other people do</td>
<td>female</td>
<td>82</td>
<td>4.77</td>
<td>1.373</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5</td>
<td>male</td>
<td>80</td>
<td>4.43</td>
<td>1.749</td>
<td>1.392</td>
<td>160</td>
<td>.166</td>
</tr>
<tr>
<td>v6  I certainly feel useless at times</td>
<td>female</td>
<td>82</td>
<td>2.96</td>
<td>1.972</td>
<td></td>
<td></td>
<td>.211</td>
</tr>
<tr>
<td>v6</td>
<td>male</td>
<td>80</td>
<td>3.36</td>
<td>2.070</td>
<td>-1.257</td>
<td>160</td>
<td>.211</td>
</tr>
<tr>
<td>v7  I feel that I am a person of worth, at least to the level equal with others</td>
<td>female</td>
<td>82</td>
<td>4.21</td>
<td>1.712</td>
<td></td>
<td></td>
<td>.780</td>
</tr>
<tr>
<td>v7</td>
<td>male</td>
<td>80</td>
<td>4.61</td>
<td>1.626</td>
<td>.279</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>v8  I wish I could have more respect</td>
<td>female</td>
<td>82</td>
<td>2.28</td>
<td>1.574</td>
<td></td>
<td></td>
<td>.063</td>
</tr>
<tr>
<td>v8</td>
<td>male</td>
<td>80</td>
<td>2.77</td>
<td>1.761</td>
<td>-1.870</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>v9  All in all, I am inclined to feel that I am a failure</td>
<td>female</td>
<td>82</td>
<td>3.06</td>
<td>1.643</td>
<td></td>
<td></td>
<td>.605</td>
</tr>
<tr>
<td>v9</td>
<td>male</td>
<td>80</td>
<td>3.19</td>
<td>1.459</td>
<td>-.518</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>v10 I take a positive attitude towards myself</td>
<td>female</td>
<td>82</td>
<td>4.56</td>
<td>1.564</td>
<td></td>
<td></td>
<td>.125</td>
</tr>
<tr>
<td>v10</td>
<td>male</td>
<td>80</td>
<td>4.49</td>
<td>1.779</td>
<td>-1.544</td>
<td>160</td>
<td></td>
</tr>
</tbody>
</table>

The mean difference is significant at 0.05

Is there a difference in self esteem among learners with different degrees of a hearing loss?

Table 3 shows mean differences between hard of hearing learners and profoundly deaf learners. Hard of hearing respondents scored the highest self esteem on seven items compared to profoundly deaf learners who scored the highest on only three items. With these findings, it can be concluded that hard of hearing learners had the highest self esteem than profoundly deaf learners in this study. A t-test revealed that the mean differences in self esteem between hard of hearing learners and profoundly deaf learners were statistically significant on only one item v8 (.006), but with a negative difference.
Table 3: Self esteem of Deaf learners with different degree of hearing loss

<table>
<thead>
<tr>
<th>Selected items of self esteem</th>
<th>Hearing status</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V1 on a whole, I am satisfied with myself</strong></td>
<td>1 hard of hearing</td>
<td>20</td>
<td>4.80</td>
<td>1.542</td>
<td>1.312</td>
<td>158</td>
<td>.191</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>140</td>
<td>4.27</td>
<td>1.704</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V2 At times I think I am no good at all</strong></td>
<td>1 hard of hearing</td>
<td>20</td>
<td>2.80</td>
<td>1.735</td>
<td>-1.580</td>
<td>158</td>
<td>.191</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>140</td>
<td>4.03</td>
<td>1.638</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V3 I feel I do no have much to be proud of</strong></td>
<td>1 hard of hearing</td>
<td>20</td>
<td>2.65</td>
<td>1.725</td>
<td>-1.748</td>
<td>158</td>
<td>.082</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>140</td>
<td>3.44</td>
<td>1.920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V4 I feel that I have a number of good qualities</strong></td>
<td>1 hard of hearing</td>
<td>20</td>
<td>5.15</td>
<td>1.089</td>
<td>1.354</td>
<td>158</td>
<td>.178</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>140</td>
<td>4.66</td>
<td>1.548</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V5 I am able to do things as well as most other people do</strong></td>
<td>1 hard of hearing</td>
<td>20</td>
<td>4.80</td>
<td>1.704</td>
<td>.570</td>
<td>158</td>
<td>.570</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>140</td>
<td>4.59</td>
<td>1.555</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V6 I certainly feel useless at times</strong></td>
<td>1 hard of hearing</td>
<td>140</td>
<td>3.25</td>
<td>1.773</td>
<td>-2.50</td>
<td>158</td>
<td>.083</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>20</td>
<td>3.13</td>
<td>2.063</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V7 I feel that I am a person of worth, at least to the level equal with others</strong></td>
<td>1 hard of hearing</td>
<td>140</td>
<td>5.00</td>
<td>1.654</td>
<td>1.288</td>
<td>158</td>
<td>.200</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>20</td>
<td>4.49</td>
<td>1.647</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V8 I wish I could have more respect</strong></td>
<td>1 hard of hearing</td>
<td>140</td>
<td>1.55</td>
<td>.999</td>
<td>-2.809</td>
<td>158</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>20</td>
<td>2.66</td>
<td>1.726</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V9 All in all, I am inclined to feel that I am a failure</strong></td>
<td>1 hard of hearing</td>
<td>140</td>
<td>3.15</td>
<td>1.496</td>
<td>.905</td>
<td>158</td>
<td>.392</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>20</td>
<td>3.11</td>
<td>1.574</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>V10 I take a positive attitude towards myself</strong></td>
<td>1 hard of hearing</td>
<td>140</td>
<td>4.35</td>
<td>1.755</td>
<td>-2.31</td>
<td>158</td>
<td>.817</td>
</tr>
<tr>
<td></td>
<td>2 profoundly deaf</td>
<td>20</td>
<td>4.44</td>
<td>1.668</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean difference is significant at 0.05

Is there a difference in self esteem among learners with different age at onset of the impairment?

In this study, respondents were grouped into born deaf (prelingual) and Deaf learners deafened at a later age (postlingual). Table 4 shows both groups of Deaf learners scored highest with equal numbers. Learners born deaf scored that highest on five items v3, v5, v7, v8 and v9 whereas and learners with later deafness scored highest on variable v1, v2, v4, v6 and v10. A t-test revealed statistically insignificance mean differences between postlingual learners and prelingual learners on all items. With those findings, it can be concluded that in this study, both learners born deaf and those who acquired deaf later after birth had equal self esteem.
Table 4: Self esteem of Deaf learners with different age at onset of deaf

<table>
<thead>
<tr>
<th>Selected items of self esteem</th>
<th>Age at onset</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1 on a whole, I am satisfied with myself</td>
<td>1 born deaf</td>
<td>95</td>
<td>4.29</td>
<td>1.707</td>
<td>-2.25</td>
<td>160</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>4.36</td>
<td>1.676</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2 At times I think I am no good at all</td>
<td>1 born deaf</td>
<td>95</td>
<td>2.96</td>
<td>1.694</td>
<td>-3.32</td>
<td>160</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>3.04</td>
<td>1.561</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3 I feel I do no have much to be proud of</td>
<td>1 born deaf</td>
<td>95</td>
<td>3.38</td>
<td>1.963</td>
<td>-1.95</td>
<td>160</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>3.27</td>
<td>1.839</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4 I feel that I have a number of good qualities</td>
<td>1 born deaf</td>
<td>95</td>
<td>6.66</td>
<td>1.589</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>4.75</td>
<td>1.418</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5 I am able to do things as well as most other people do</td>
<td>1 born deaf</td>
<td>95</td>
<td>6.61</td>
<td>1.652</td>
<td>1.13</td>
<td>160</td>
<td>.263</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>4.58</td>
<td>1.468</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v6 I certainly feel useless at times</td>
<td>1 born deaf</td>
<td>95</td>
<td>3.13</td>
<td>2.017</td>
<td>-1.57</td>
<td>160</td>
<td>.119</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>3.21</td>
<td>2.049</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v7 I feel that I am a person of worth, at least to the level equal with others</td>
<td>1 born deaf</td>
<td>95</td>
<td>4.53</td>
<td>1.630</td>
<td>1.075</td>
<td>160</td>
<td>.284</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>4.24</td>
<td>1.742</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v8 I wish I could have more respect</td>
<td>1 born deaf</td>
<td>95</td>
<td>2.61</td>
<td>1.767</td>
<td>-1.07</td>
<td>159</td>
<td>.283</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>2.40</td>
<td>1.558</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v9 All in all, I am inclined to feel that I am a failure</td>
<td>1 born deaf</td>
<td>95</td>
<td>3.20</td>
<td>1.635</td>
<td>-1.74</td>
<td>160</td>
<td>.083</td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>3.01</td>
<td>1.430</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v10 I take a positive attitude towards myself</td>
<td>1 born deaf</td>
<td>95</td>
<td>4.41</td>
<td>1.807</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 deafened</td>
<td>67</td>
<td>4.69</td>
<td>1.448</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean difference is significant at 0.05

Is there a difference in self esteem of learners with difference in family hearing status?

In this study, respondents were asked if they had any deaf family member. Table 5 shows mean differences between learners with deaf family members and those with no deaf family members. Deaf learners with no deaf family members scored highest self esteem on items v1, v4, v5, v6, v7 and v9 compared to Deaf learners with deaf family member who scored the highest on only three items. From the findings, it can be concluded that Deaf learners with no deaf family members exhibited relative higher self esteem than learners with deaf family members. The t-test results revealed statistically significant mean difference on item v7 (p = .026) and nearly statistically significant mean difference on item v4 (p = .052).
Table 5: Self esteem of Deaf learners with different family hearing status

<table>
<thead>
<tr>
<th>Selected items of self esteem</th>
<th>Family hearing status</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1 on a whole, I am satisfied with myself</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>4.08</td>
<td>1.778</td>
<td>-1.189</td>
<td>16</td>
<td>.236</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>4.42</td>
<td>1.646</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V2 At times I think I am no good at all</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>3.04</td>
<td>1.581</td>
<td>240</td>
<td>16</td>
<td>.811</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>2.97</td>
<td>1.666</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3 I feel I do no have much to be proud of</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>3.35</td>
<td>1.899</td>
<td>.060</td>
<td>16</td>
<td>.953</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>3.33</td>
<td>1.920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V4 I feel that I have a number of good qualities</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>4.35</td>
<td>1.715</td>
<td>-1.955</td>
<td>16</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>4.85</td>
<td>1.403</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5 I am able to do things as well as most other people do</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>4.43</td>
<td>1.568</td>
<td>-906</td>
<td>16</td>
<td>.366</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>4.67</td>
<td>1.578</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V6 I certainly feel useless at times</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>2.84</td>
<td>1.908</td>
<td>-1.344</td>
<td>16</td>
<td>.181</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>3.30</td>
<td>2.065</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V7 I feel that I am a person of worth, at least to the level equal with others</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>4.08</td>
<td>1.858</td>
<td>-2.253</td>
<td>16</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>4.72</td>
<td>1.550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V8 I wish I could have more respect</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>2.69</td>
<td>1.735</td>
<td>.859</td>
<td>15</td>
<td>.392</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>2.45</td>
<td>1.659</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V9 All in all, I am inclined to feel that I am a failure</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>2.92</td>
<td>1.566</td>
<td>-1.109</td>
<td>16</td>
<td>.269</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>3.21</td>
<td>1.544</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V10 I take a positive attitude towards myself</td>
<td>1 yes deaf relatives</td>
<td>49</td>
<td>4.29</td>
<td>1.555</td>
<td>-.607</td>
<td>16</td>
<td>.545</td>
</tr>
<tr>
<td></td>
<td>2 no deaf relatives</td>
<td>11</td>
<td>4.46</td>
<td>1.732</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean difference is significant at 0.05

Is there a difference in self esteem among learners with different experiences of deafness?

In this study, respondents were asked to describe their experiences with deafness. Table 6 shows mean differences in the scores of the three groups of Deaf learners. Deaf learners who self-described their experiences with deafness as disastrous, scored the highest on only two items (v4 and v9). Both Deaf learners with self description of normalcy with deafness and challenging with deafness had equal numbers of high scores. With these findings, it can be concluded that Deaf learners self described as experiencing a disastrous life with deafness had the least self esteem in this study whereas as Deaf learners self described as experiencing challenges and those experiencing a normal life with deafness exhibited equal self esteem. The F-test
results revealed nearly statistically significant mean differences among the three groups of respondents on three items ($v_2=.061$, $v_3=.051$, $v_9=.058$).

Table 6: Self esteem of Deaf learners with different experience with deafness

<table>
<thead>
<tr>
<th>Selected items of self esteem</th>
<th>Experience with deafness</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_1$ on a whole, I am satisfied with myself</td>
<td>1 disaster</td>
<td>30</td>
<td>4.37</td>
<td>1.608</td>
<td>.431</td>
<td>2,159</td>
<td>.651</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>4.38</td>
<td>1.676</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>4.04</td>
<td>1.865</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$v_2$ At times I think I am no good at all</td>
<td>1 disaster</td>
<td>30</td>
<td>3.03</td>
<td>1.586</td>
<td>2,848</td>
<td>2</td>
<td>.061</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>3.15</td>
<td>1.672</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>3.11</td>
<td>1.408</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$v_3$ I feel I do not have much to be proud of</td>
<td>1 disaster</td>
<td>30</td>
<td>3.27</td>
<td>1.929</td>
<td>3,014</td>
<td>2</td>
<td>.051</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>3.55</td>
<td>1.873</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>2.31</td>
<td>1.408</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_4$ I feel that I have a number of good qualities</td>
<td>1 disaster</td>
<td>30</td>
<td>4.87</td>
<td>1.383</td>
<td>.757</td>
<td>2,159</td>
<td>.471</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>4.73</td>
<td>1.471</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>4.38</td>
<td>1.835</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_5$ I am able to do things as well as most other people do</td>
<td>1 disaster</td>
<td>30</td>
<td>4.30</td>
<td>1.803</td>
<td>.768</td>
<td>2,159</td>
<td>.465</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>4.70</td>
<td>1.525</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>4.54</td>
<td>1.503</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$v_6$ I certainly feel useless at times</td>
<td>1 disaster</td>
<td>30</td>
<td>2.93</td>
<td>2.083</td>
<td>1,003</td>
<td>2</td>
<td>.369</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>3.10</td>
<td>1.990</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>3.65</td>
<td>2.097</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_7$ I feel that I am a person of worth, at least to the level equal with others</td>
<td>1 disaster</td>
<td>30</td>
<td>4.57</td>
<td>1.654</td>
<td>.803</td>
<td>2,159</td>
<td>.450</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>4.42</td>
<td>1.723</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>4.88</td>
<td>1.583</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$v_8$ I wish I could have more respect</td>
<td>1 disaster</td>
<td>30</td>
<td>2.31</td>
<td>1.365</td>
<td>.278</td>
<td>2</td>
<td>.758</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>2.57</td>
<td>1.724</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>2.58</td>
<td>1.858</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$v_9$ All in all, I am inclined to feel that I am a failure</td>
<td>1 disaster</td>
<td>30</td>
<td>3.30</td>
<td>1.765</td>
<td>2,906</td>
<td>2</td>
<td>.058</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>3.24</td>
<td>1.477</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>2.46</td>
<td>1.476</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_{10}$ I take a positive attitude towards myself</td>
<td>1 disaster</td>
<td>30</td>
<td>4.30</td>
<td>2.054</td>
<td>1,575</td>
<td>2,159</td>
<td>.210</td>
</tr>
<tr>
<td></td>
<td>2 normal</td>
<td>106</td>
<td>4.56</td>
<td>1.512</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 challenge</td>
<td>26</td>
<td>3.92</td>
<td>1.809</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean difference is significant at 0.05
4.4 Perceived academic competence of Deaf learners

4.4.1 Sub-question 2: What is the perceived academic competence of Deaf learners and how does perceived academic competence differ across the demographic variable?

In this study analysis of on academic competence scores were regrouped into three: low perceived academic competence ranging from 12-27, average perceived academic competence from 28-35 and high perceived academic competence from 36-45.

Table 7: Deaf learners grouped as per perceived academic competence scores

<table>
<thead>
<tr>
<th>Groups of score</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low PAC</td>
<td>38</td>
<td>23.5</td>
<td>23.5</td>
<td>23.5</td>
</tr>
<tr>
<td>Average PAC</td>
<td>81</td>
<td>50.0</td>
<td>50.0</td>
<td>73.5</td>
</tr>
<tr>
<td>High PAC</td>
<td>43</td>
<td>26.5</td>
<td>26.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence.

Table 7 shows the distribution of respondents in the three groups. The biggest group (81 respondents) scored average perceived academic competence and a fairly bigger (43) scored high perceived academic competence while 38 respondents fell into low perceived academic competence group.

In this study, five demographic variables describing Deaf learners’ diversity guided the study in formulating demographic-related questions for further analysis in relation to perceived academic competence of Deaf learners.

Is there a difference in perceived academic competence between Deaf boys and Deaf girls?

Table 8 shows the boys scoring highest on perceived academic competence. There were equal numbers of Deaf girls and Deaf boys in the average perceived academic competence score (50%). But Deaf boys score highest perceived academic competence than Deaf girls (27% :25.6%). There were more Deaf girls in the low
perceived academic competence than Deaf boys. The findings therefore revealed Deaf boys with high perceived academic competence than Deaf girls in general. The t-test showed mean differences between girls and boys in regard to perceived academic competence statistically insignificant.

Table 8: Deaf girls and Deaf boys grouped as per perceived academic competence scores

<table>
<thead>
<tr>
<th>Gender</th>
<th>v26 scaled to three</th>
<th>Total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 low PAC</td>
<td>2 average PAC</td>
</tr>
<tr>
<td>1 Female</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1 Female</td>
<td>20</td>
<td>24.4</td>
</tr>
<tr>
<td>2 Male</td>
<td>18</td>
<td>22.5</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence.  
CHI² = 0.116  DF = 2,  p= 0.944

Is there a difference in perceived academic competence of learners among different degrees of hearing loss?

Table 9: Deaf learners grouped as per perceived academic competence scores and degree of hearing loss

<table>
<thead>
<tr>
<th>Hearing status</th>
<th>v26 scaled to three</th>
<th>Total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 low PAC</td>
<td>2 average PAC</td>
</tr>
<tr>
<td>1 Hard of hearing</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1 Hard of hearing</td>
<td>4</td>
<td>20.0</td>
</tr>
<tr>
<td>2 Profoundly deaf</td>
<td>32</td>
<td>22.9</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence.  
CHI²= 0.862  DF = 2,  p= 0.650

Table 9 shows profoundly deaf learners with the highest perceived academic competence than the hard of hearing learners. There are more of hard of hearing learners in the average group than the profoundly deaf respondents (60% : 49.3%). Results also revealed the highest number of profoundly deaf in the low perceived academic competence group than the hard of hearing learners (22.9%: 20%). However, the t-test showed statistically no significant mean differences between the profoundly deaf and hard of hearing learners (p= 0.650).

Is there a difference in perceived academic competence among learners’ age at onset of the impairment?

Table 10 shows learners born deaf with the highest perceived academic competence than the learners who acquired deafness later after born and possibly with some
speech. Learners who described their deafness as later acquired were more in the low perceived academic competence group and registered the least numbers of respondents in both average and the high perceived academic competence. In general later deafness had the lowest perceived academic competence than learners born deaf. Although these differences occurred, a t-test showed statistically insignificant mean differences in perceived academic competence of both groups of learners (p=0.129).

Table 10: Deaf learners grouped as per perceived academic competence scores and their age at onset of deafness

<table>
<thead>
<tr>
<th>Learners born deaf/ deafened later may with speech</th>
<th>v26 scaled to three</th>
<th>Total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 low PAC N %</td>
<td>2 average PAC N %</td>
</tr>
<tr>
<td>1 Born deaf (prelingual)</td>
<td>17 17.9</td>
<td>50 52.6</td>
</tr>
<tr>
<td>2 Deafened (postlingual)</td>
<td>21 31.3</td>
<td>31 46.3</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>81</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence. CHI²= 4.091 DF = 2, p = 0.129

Is there a difference in perceived academic competence among learners with different family hearing status?

Table 11: Deaf learners grouped as per perceived academic competence scores and their family hearing status

<table>
<thead>
<tr>
<th>Family hearing status</th>
<th>v26 scaled to three</th>
<th>Total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 low PAC N %</td>
<td>2 average PAC N %</td>
</tr>
<tr>
<td>1 Yes deaf family member</td>
<td>14 28.6</td>
<td>28 57.1</td>
</tr>
<tr>
<td>2 No deaf family member</td>
<td>24 21.2</td>
<td>53 46.9</td>
</tr>
<tr>
<td>Total respondents</td>
<td>38</td>
<td>81</td>
</tr>
</tbody>
</table>

Note: PAC= perceived academic competence  CHI²= 5.477 DF = 0.0651

Learners were asked if there had deaf family members. Table 11 shows more learners with no deaf family members in the highest perceived academic competence group (31.9%) than Deaf learners with deaf family members (14.3%). There were more learners with deaf family members in the average perceived academic competence
group (57.1) than Deaf learners with no deaf family members. In the low perceived academic competence, learners with deaf family members accounted for more numbers than learners with no deaf family members. A t-test showed nearly statistically significant differences (p= 0.065) in perceived academic competence between those with deaf family members and those without deaf family members. In general Deaf learners with no deaf family members revealed the highest perceived academic competence than learners with deaf family members but differences were statistically insignificant.

Is there a difference in perceived academic competence of Deaf learners with different experiences of the Impairment?

Table 12: Deaf learners grouped as per perceived academic competence scores and their experiences with deafness

<table>
<thead>
<tr>
<th>How do you describe your experience with deafness</th>
<th>v26 scaled to three</th>
<th>Total respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 low P AC</td>
<td>2 average P AC</td>
</tr>
<tr>
<td></td>
<td>N  %</td>
<td>N  %</td>
</tr>
<tr>
<td>1 Disastrous experience</td>
<td>8  26.7</td>
<td>14  46.7</td>
</tr>
<tr>
<td>2 Normal experience</td>
<td>20  18.9</td>
<td>61  57.5</td>
</tr>
<tr>
<td>3 Challenging experience</td>
<td>10  38.5</td>
<td>6  23.1</td>
</tr>
</tbody>
</table>

38 79 43 162

NOTE: PAC=Perceived academic competence. CHI²= 10.363  DF = 4,  p= 0.035

As shown in table 12, learners’ experiences are grouped into three: disastrous, normal and challenging experiences. Deaf learners who self described their experiences as normal accounted for the lowest numbers of respondents with low perceived academic competence (18.9%) and the highest percentage number with the average academic competence (57.1%), but with the least respondents with high perceived academic competence. Learners who self described their experiences as challenging scored the highest perceived academic competence than those with normal and disastrous experiences. Further analysis of variance (F-test) showed a statistical significance (p= 0.035) in mean differences in perceived academic competence among the respondents.
4.5 The relationship between self esteem and perceived academic competence of Deaf learners

The correlation between self esteem and perceived academic competence was only possible on five levels after the Spearman’s correlation coefficient test ruled out the rest of the correlations for lack of significance (Appendix 2). Therefore, only item 4, 5, 7 and 10 on the self esteem tool were correlated with perceived academic competence and analysed in this study. Although some items may have had statistically significant correlations with Deaf learners’ different demographic variables, in the interest of consistence only four items were analysed for their relationship between self esteem and perceived academic competence of Deaf learners.

4.5.1 Sub-question 3: What is the relationship between self esteem and perceived academic competence of Deaf learners?

Table 13 below reveals Item 4 on the self esteem scale “I feel that I have a number of good qualities” produced statistically significant moderate correlation between self esteem and perceived academic competence of Deaf learners (r=.229, p=.003). Item 5 on the self esteem scale “I am able to do things as well as most other people do” showed a statistically significance moderately correlation between self esteem and perceived academic competence (r=.209, p=.007). Item 7 on self esteem scale “I feel that I am a person of worthy, at least on the level equal to others” produced statistically significant moderate correlation between self esteem and perceived academic competence of Deaf learners (r=.296, p=.000) and item 10 on the Self esteem scale “I take a positive attitude towards myself” presented statistically significant moderate correlations between self esteem and perceived academic competence of Deaf learners (r=.352, p=.000).

It should be note that only 4 items of self esteem tools were analysed out of the total of ten items because the 6 items did not produce statistically significant correlations between self esteem and perceived academic competence in this study (Appendix 3).
Table 13: The correlation between self esteem and perceived academic competence of Deaf learners

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>Five variables from the ten-item self esteem scale</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V4  I feel that I have a number of good qualities</td>
<td>.229**</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Sig.(2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V5  I am able to do things as well as most other people do</td>
<td>.209**</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>Sig.(2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V7  I feel that I am a person of worth, at least to the level equal with others</td>
<td>.296**</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Sig.(2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V10 I take a positive attitude towards myself</td>
<td>.352**</td>
</tr>
<tr>
<td></td>
<td>Correlation Coefficient</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Sig.(2-tailed)</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence. ** Correlation is significant at the 0.01 level (2-tailed).

4.5.2 Sub-question 4: Is there a difference in the relationship between self esteem and perceived academic competence with differences in the demographic variable?

In sub-question 4, the study established the relationship between self esteem scale and perceived academic competence with the different demographic characteristics of Deaf learners. The following questions were used to guide the study in establishing the correlations between self esteem and perceived academic competence on each of the 5 demographic variables. In these correlations, self esteem was measured by four items as explained in previous presentation (4.5)

Is there a relationship between self esteem and perceived academic competence for boy and girls?

Table 14 below reveals Deaf girls with a statistically significant moderate relationship between self esteem and perceived academic on items v4 and v5(r= .248, p=.024; r=.292, p=.008). Deaf boys did not reveal a statistically significant correlation between self esteem (v4 and v5) and perceived academic competence.

The findings show both Deaf boys and Deaf girls had a statistically significant moderate correlation between self esteem and perceived academic competence on
item v7 (r=.308, p=0.05; r=.263, p=0.19). Deaf girls’ self esteem (v10) and perceived academic competence related statistically relatively strong (r=.435, p=.000) than the Deaf boys with a statistically moderate correlation (r=.263, p=.018).

With the findings in table 14, it may be concluded that Deaf girls’ self esteem and perceived academic competence statistically correlated the strongest than for the Deaf boys.

Table 14: The correlation between self esteem and perceived academic competence with boys and girls

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Self esteem items / Spearman’s rho</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>82</td>
<td>V4 I feel that I have a number of good qualities</td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>Male</td>
<td>80</td>
<td>V5 I am able to do things as well as most other people do</td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>Female</td>
<td>82</td>
<td>V7 I feel that I am a person of worth, at least to the level equal with others</td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>Male</td>
<td>80</td>
<td>v10 I take a positive attitude towards myself</td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence.  
** Correlation is significant at the 0.01 level (2-tailed).  
* Correlation is significant at the 0.05 level (2-tailed).
Is there a relationship between self esteem and perceived academic competence of learners with different hearing loss?

Table 15: The relationship between self esteem and perceived academic competence of hard of hearing and profoundly deaf learners

<table>
<thead>
<tr>
<th>Hearing status</th>
<th>N</th>
<th>Self esteem items / Spearman’s rho</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>V4 I feel that I have a number of good qualities</td>
<td></td>
</tr>
<tr>
<td>Hard of hearing</td>
<td>20</td>
<td>Correlation Coefficient</td>
<td>.370</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.109</td>
</tr>
<tr>
<td>Profoundly deaf</td>
<td>140</td>
<td>Correlation Coefficient</td>
<td>.199*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V5 I am able to do things as well as most other people do</td>
<td></td>
</tr>
<tr>
<td>Hard of hearing</td>
<td>20</td>
<td>Correlation Coefficient</td>
<td>.285</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.223</td>
</tr>
<tr>
<td>Profoundly deaf</td>
<td>140</td>
<td>Correlation Coefficient</td>
<td>.190*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.025</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V7 I feel that I am a person of worth, at least to the level equal with others</td>
<td></td>
</tr>
<tr>
<td>Hard of hearing</td>
<td>20</td>
<td>Correlation Coefficient</td>
<td>.561**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.010</td>
</tr>
<tr>
<td>Profoundly deaf</td>
<td>140</td>
<td>Correlation Coefficient</td>
<td>.251**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>v10 I take a positive attitude towards myself</td>
<td></td>
</tr>
<tr>
<td>Hard of hearing</td>
<td>20</td>
<td>Correlation Coefficient</td>
<td>.253</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.282</td>
</tr>
<tr>
<td>Profoundly deaf</td>
<td>140</td>
<td>Correlation Coefficient</td>
<td>.343**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.000</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 15 shows no statistically significant correlation between self esteem (v4, v5, v10) and perceived academic competence of hard of hearing learners in this study. Findings further show correlation between self esteem (v7) and perceived academic competence of hard of hearing learners statistically significant relatively strong (r=.561, p=.010) and a statistically significant moderate correlation between self esteem and perceived academic competence for profoundly deaf learners (r=.251, p=.003).
Self esteem (v4, v5) and perceived academic competence of profoundly deaf learners revealed a statistically significant weak correlation on both items ($r=.199$, $p=.018$ $r=.190$, $p=.025$).

With the findings in table 15, it may be concluded that profoundly deaf learners’ self esteem and perceived academic competence statistically correlated the strongest as compared to hard of hearing learners.

**Is there a relationship between self esteem and perceived academic competence of learners with different age at onset of the impairment?**

Table 16: The relationship between self esteem and perceived academic competence of learners born deaf and learners with later deafness

<table>
<thead>
<tr>
<th>Age at one set</th>
<th>N</th>
<th>Self esteem items / Spearman’s rho</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><em>V4</em> I feel that I have a number of good qualities</td>
<td></td>
</tr>
<tr>
<td>Born deaf</td>
<td>95</td>
<td>Correlation Coefficient</td>
<td>.381**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>Deafened later</td>
<td>67</td>
<td>Correlation Coefficient</td>
<td>.023</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.854</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>V5</em> I am able to do things as well as most other people do</td>
<td></td>
</tr>
<tr>
<td>Born deaf</td>
<td>95</td>
<td>Correlation Coefficient</td>
<td>.174</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.091</td>
</tr>
<tr>
<td>Deafened later</td>
<td>67</td>
<td>Correlation Coefficient</td>
<td>.271*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.027</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>V7</em> I feel that I am a person of worth, at least to the level equal with others</td>
<td></td>
</tr>
<tr>
<td>Born deaf</td>
<td>95</td>
<td>Correlation Coefficient</td>
<td>.321**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.002</td>
</tr>
<tr>
<td>Deafened later</td>
<td>67</td>
<td>Correlation Coefficient</td>
<td>.294*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>v10</em> I take a positive attitude towards myself</td>
<td></td>
</tr>
<tr>
<td>Born deaf</td>
<td>95</td>
<td>Correlation Coefficient</td>
<td>.349**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td>Deafened later</td>
<td>67</td>
<td>Correlation Coefficient</td>
<td>.362**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.003</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 16 shows no statistically significant correlation between self esteem (v4) and perceived academic competence of learners who acquired deafness later after birth on
but a statistically significant moderate correlations for learners born deaf ($r= .381$, $p=.000$). Self esteem (v5) and perceived academic competence of learners born deaf revealed a no statistically significant correlation ($r= .174$, $p= .091$) whereas learners who acquired deafness later revealed a statistically significant moderate correlation between self esteem and perceived academic competence ($r= .271$, $p= .027$).

Self esteem (v7, v10) and perceived academic competence of both learners born deaf and learners who acquired deafness later findings revealed a statistically significant moderate correlation ($r= .271$, $p= .027$).

In this study, it may be concluded that self esteem and perceived academic competence of both born deaf and the learners who acquired deafness after birth statistically significantly correlated moderately.

**Is there a relationship between self esteem and perceived academic competence of learners with different family hearing status?**

The table 17 shows there was no statistically significant correlation between self esteem and perceived academic competence of learners with deaf family members in this study.

Learners with no deaf family members’ self esteem (v 4, v5 and v10) and perceived academic competence statistically significant with a moderate correlation ($r= .235$, $p= .012$; $r= .241$, $p= .010$; $r= .371$, $p= .001$) respectively.

Self esteem (v10) and perceived academic competence correlated statistical significant relatively strong ($r=.446$, $p=.000$) for Deaf learners with no deaf family members. In this study, it may be concluded that self esteem and perceived academic competence of Deaf learners with no deaf family member (s) statistically significant correlated with a moderate and relatively strong relationship, but not for those learners with deaf family members.
Table 17: The correlation between self esteem and perceived academic competence of Deaf learners with different hearing status

<table>
<thead>
<tr>
<th>Family hearing status</th>
<th>N</th>
<th>Self esteem items / Spearman's rho</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>V4 I feel that I have a number of good qualities</td>
<td></td>
</tr>
<tr>
<td>Deaf family member</td>
<td>48</td>
<td>Correlation Coefficient</td>
<td>.186</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.200</td>
</tr>
<tr>
<td>No deaf family member</td>
<td>113</td>
<td>Correlation Coefficient</td>
<td>.235*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V5 I am able to do things as well as most other people do</td>
<td></td>
</tr>
<tr>
<td>Deaf family member</td>
<td>48</td>
<td>Correlation Coefficient</td>
<td>.117</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.429</td>
</tr>
<tr>
<td>No deaf family member</td>
<td>113</td>
<td>Correlation Coefficient</td>
<td>.241**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V7 I feel that I am a person of worth, at least to the level equal with others</td>
<td></td>
</tr>
<tr>
<td>Deaf family member</td>
<td>48</td>
<td>Correlation Coefficient</td>
<td>.277</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.057</td>
</tr>
<tr>
<td>No deaf family member</td>
<td>113</td>
<td>Correlation Coefficient</td>
<td>.317**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V10 I take a positive attitude towards myself</td>
<td></td>
</tr>
<tr>
<td>Deaf family member</td>
<td>48</td>
<td>Correlation Coefficient</td>
<td>.086</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.560</td>
</tr>
<tr>
<td>No deaf family member</td>
<td>113</td>
<td>Correlation Coefficient</td>
<td>.446**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.000</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Is there a relationship between self esteem and perceived academic competence of learners with different experiences with the impairment?

Table 18 (Appendix 8) shows self esteem (v4) and perceived academic competence of Deaf learners self described as experiencing as disastrously correlated statistically significant with a relatively strong relationship (r= .401, p= .028) and not statistical significant for both Deaf learners who self described their experiences with deafness as normal or challenging. Findings also revealed that Self esteem (v5) and perceived academic competence of Self esteem (v5) and perceived academic competence of Deaf learners self described as experiencing challenges with deafness correlated
statistically significant with a strong relationship \( (r = .712, p = .000) \) and not statistical significant for both Deaf learners who self described their experiences with deafness as normal or disastrous.

Self esteem \((v7)\) and perceived academic competence of Deaf learners self described as experiencing normal with deafness correlated statistically significant with a moderate relationship \( (r = .274, p = .005) \) and Deaf learners self described as experiencing challenges with deafness correlated statistically significant with a relatively strong relationship \( (r = .467, p = .016) \) but not statistical significant for Deaf learners who self described their experiences with deafness as disastrous.

The findings revealed self esteem \((v10)\) and perceived academic competence of Deaf learners self described as experiencing disastrous statistically significantly correlated, but statistically significantly correlated with a moderate relationship for Deaf learners self described as experiencing a normalcy with deafness \( (r = .321, p = .083) \) and statistically significant relatively strong relationship \( (r = .274, p = .005) \) and Deaf learners self described as experiencing challenges with deafness correlated statistically significant with a relatively strong relationship \( (r = .527, p = .006) \) for Deaf learners who self described their experiences with deafness as challenging.

From the findings it can be concluded that the relationship between self esteem and perceived academic of Deaf learning experiencing challenges with deafness correlated statistically more stronger than for both Deaf learners self described as experiencing disaster or normalcy with deafness in this study.
5. Discussion, Conclusion and Suggestions

The discussion was based on the findings of the study carried out among Deaf learners in four schools for the Deaf in Uganda. These findings were discussed under the following categories: The general applicability of the standardized instruments, the self esteem of Deaf learners and how self esteem varies across demographic variables, the perceived academic competence of Deaf learners and how perceived academic competence varies across demographic variables and the relationship between self esteem and perceived academic competence of Deaf learners and how the relationship varies across demographic variables.

In this study Data analysis and discussion was guided by other documented research findings and views. Statistical interpretation of data was based on Rea and Parker (1997) classification of measurement of strength of relationships as presented in chapter 3.8 of this study. It should be noted that the classification used in this study differ from other classifications used in social sciences such as Miller and Salkind (2002) and as remarked by De Vaus (2002)\(^6\).

In this study there was uneven number of participants from the four schools. In some cases the difference in numbers were so relatively big (highest school had 54 respondents and the least school had 23 respondents) that it may have had an impact on the final results on the assumption that different schools may influence the learners’ responses due to different experiences.

\(^6\) ‘(…) in social science, particularly those involving attitudes are normally weaker…there could be many other factors at hand…we shall always accept that most relationships are weak than to over interpret results’ (p.262). (…) in social science a correlation of 0.30 is relatively strong’ (p.259).
5.1 The general applicability of the research Instruments

It was not possible to find documented studies that had applied the same research instruments (standardized) used in this study to measure self esteem and perceived academic competence of Deaf learners in special schools in Uganda. The present study had a number of successes and challenges in using the identified research tools. The findings revealed a high response rate by Deaf learners with an insignificant non response rate may be due to Sign Language interpreting that may have aided linguistic comprehension and the item to item answering approach. The tools were constructed in such a way to limit verbalism which made it easy for answering by merely ticking from the options given. This can be advantageous to children who may also be limit by written language.

The findings also revealed inconsistencies in the Deaf learners’ responses on the research tools especially one measuring self esteem. Wylie (1974) recognized that measuring self attributes is a challenging task. The question of validity and reliability is greatly determined by the respondents who may be greatly influenced by other forces such as the social desires. For both tools, the learners themselves expressed their judgements on the items raised and there was no measure put in place to cross-examine their responses other than strengthen validity or reliability as anticipated in chapter three.

External reliability of the tools may have been threatened by Sign Language interpreting. In Cokely (1992) dissertation on sign language interpreting process, findings showed a couple of challenges encountered by Sign Language Interpreters and the consumers (Deaf / hearing). In my study some of the challenges may have included limited linguistic awareness causing inconsistencies.

The research instruments in this study were scored in the range of 1 to 6 (self esteem tool) and 1-5 (perceived academic competence tool). The inconsistencies in responses may be due to the ambiguity in the scaling system. In Jumbor & Elliott (2005) study,
a range of 1–4 was used, and it may explain their high $\alpha_{0.8}$ compared to the present $\alpha_{0.17}$. Wylie (1974) reported on the threat to external reliability such as guessing due to the inability to read and misunderstandings. For the Deaf learners in this study, a wide range in the options may have resulted into guessing responses.

In Gresham and Elliott’s (1990) academic competence tool was administered to teachers to report on the students’ academic competencies. In the present study, the tool was adapted to measure perceived academic competence of Deaf learners and subjected to the views of the learners themselves. The differences in the concepts and respondents in the two studies may have influenced the level reliability.

In Rosenberg (1965) Global self esteem tool has been used widely and recommended for measuring self esteem. Martin-Albon, Navarro & Grijalvo (2007) obtained reliability $\alpha_{0.85}$ and $\alpha_{0.88}$ when applied in case of University respondents. Jumbor & Elliott (2005) study carried out on self esteem among Deaf learners obtained reliability with $\alpha_{0.8}$. These findings are contrary to the results of the present study. There were a number of methodological differences between previous studies and the present study.

The numerous inconsistencies in response to the abstract nature of the tool measuring self esteem (clarity of meaning) given the age and the nature of respondents. As an observation Marschark (2008) addressed the issue of regarding Deaf children as simply children with deafness. These children are endowed with varying experiences as a result of their impairment and different cultures. Because of such differences, some statements may have carried different meanings and values.

In both Jumbor & Elliott’s (2005) and Martin-Albon, Navarro and Grijalvo (2007) studies, the Global self esteem tool was used to solicit views learners at higher levels of learning than in the present study. The issue of cultural differences may also arise between the views of a Ugandan Deaf primary school learner and that of Deaf American or a Spanish hearing student. Such differences may affect the learners’
perception of the instrument. Flynn (2003) supported the argument by questioning the universality of Global self esteem tool given the numerous human diversities.

5.2 The self esteem of Deaf learners and how self esteem varies across the demographic variables

The difference in self esteem between Deaf boys and Deaf girls
In this study, boys and girls accounted for 80 to 82 respectively. Uganda education policy demands that both boys and girls are given equal opportunity to free universal primary education. The State financial response to lessen the burden of parents to pay school fees to the Deaf children and therefore choosing between educating a girl or a boy, may contribute to increase higher numbers of girls in primary schools.

The educational statistics in Uganda show girls’ enrolment and persistence to complete their education is generally lower than for the boys especially at upper primary and secondary school level. Some researchers partly attribute girls’ low enrolment and high drop out rate to low self esteem among girls. Kiyaga & Moores (2003) attributed school drop out and limited education enrolment of Deaf girls to triple social discrimination. Findings in this study further support the view that Deaf girls exhibited low self esteem than the Deaf boys did. Nevertheless, the differences were statistically insignificant and could not be used to conclude on whether Deaf boys had a high self esteem than Deaf girls.

Current policies in Uganda have highlighted education policies for equal opportunities for boys and girls through affirmative action and discouraging of female dehumanizing cultural practices, and established. This positive social and political response the girls’ social and educational well-being may have contributed to Deaf girls’ self esteem nearly as high as Deaf boys’ self esteem.
The difference in self esteem of Deaf learners with different degrees of hearing loss

In this study, the term Deaf learners included both hard of hearing and profoundly deaf children grouped according to their self descriptions. The results were in agreement with what Jambor & Elliot (2005) also found out that hard of hearing learners possessed a relatively higher self esteem than profoundly deaf learners. The findings revealed that differences in self esteem between hard of hearing learners and profoundly deaf learners were significant on one item of self esteem.

Flynn (2003) described the level of self esteem as correlated to the individual’s possibility to smoothly function in the society. The high self esteem among hard of hearing learners in this study may indicate their possibility to socially interact in a hearing society due to their residual hearing ability facilitating communication and their ability to move to the Deaf world when need arises. The ability to understand and be understood by both the hearing world and the Deaf world advantages hard of hearing learners creating a sense of self worthy than the case for a deaf learners who may fair well within the Deaf world alone but may attract negative reception in the hearing world. This ability in itself is a point of self worthy and satisfaction among hard of hearing learners and accords with the findings from Hintermair’s (2007) study that reported high self esteem among hard of hearing people.

However, the findings revealed that the differences between hard of hearing learners and profound deaf learners as regards to self esteem were limited to one item in support of previous researchers have found statistically insignificant differences in self esteem between profoundly deaf learners and hard of hearing learners (Jambor & Elliott 2005, Beck 1998, Brooks & Ellis 1982). In the case of Uganda, hearing assessment and intervention programs such hearing aids, speech training are seldom. Profoundly deaf and hard of hearing learners equally challenged with information accessibility and social acceptability (Flynn 2003). Therefore, being able to hear fragmented messages may offer statistically insignificant advantages to a hard of
hearing learner over a profoundly deaf learner.

It is no surprising therefore, that both profoundly deaf and hard of hearing learners maintain nearly the same high self esteem. Flynn (2003) related the degree of self esteem to the feeling of belongingness to a community. In this study, the similarities in self esteem may be explained by belongingness to the Deaf community for both profoundly deaf and hard of hearing learners who may feel united by Sign Language and express a need to stand against the social hurdles of a hearing society.

The difference in self esteem of Deaf learners with different ages at onset of deafness

In this study age at onset was limited to two groups: learners born deaf (prelingual) and learners who acquired deafness later (postlingual). The findings revealed both postlingual learners and prelingual Deaf learners had nearly equal levels of self esteem and there were no significant differences in self esteem between prelingual deaf and postlingual leaf learners were not significant.

High self esteem among postlingual deaf learners may be associated with their speech abilities and sign language abilities as a master key to both the hearing society and the Deaf society. Depending on the age at which the learner acquired the deafness, the proficiency in spoken language and prior acquired knowledge and skills from the hearing society (usually seen as superior) may have contributed to relatively high self esteem among postlingual deaf learners in this study. In some cases, postlingual deaf learners double as interpreters between teachers and fellow Deaf learners because of their bilingual nature which may further contribute to higher self esteem among prelingual deaf learners.

However, the findings presented statistically insignificant differences between prelingual and the postlingual deaf learners in regard to self esteem. In Uganda, Deaf learners in special schools mainly use and socialize in sign language. The social value attached to sign language may explain the nearly the same self esteem between both prelingual and postlingual deaf learners as echoed by Vernon & Andrews (1990). It
should be noted that the study did not establish the actual speech ability of the prelingual deaf learners.

**The difference in self esteem of Deaf learners with difference in family hearing status**

The findings revealed learners who reported on having deaf family members were 49 as compared to 113 learners who reported having no known deaf family member. The revelation of majority of Deaf learners born in hearing families (70%) was echoed by Jokinen (2005) the current president of the World Federation for the Deaf, who reported an estimate of 95% of deaf children born into hearing families globally.

The causes of deafness in Uganda may be attributed to inaccessible assessment and prevention measures against curable diseases that strike pregnant mothers and children unlike as noted by Kiyaga & Moores’s (2003). However, the present study did not investigate the cause of deafness among the Deaf learners.

The findings revealed that Deaf learners with no deaf family member had a relative higher self esteem than those with deaf family members with significant differences. Low self esteem among learners with deaf family members contradict the arguments advanced by other researchers such as Lane, Hoffmeister & Bahan (1996) on the pride generated by a Deaf family for having a deaf child. Well as that may be undisputed, the present findings did not relate presence of a deaf family member to Deaf learner’s high self esteem.

In Uganda although there has been tremendous improvement in social attitudes towards deafness may be as a result of advocacy and lobbying by the State and private sector (UNAD/ Concern (2007), we may not report on a total positive change. Low self esteem among Deaf learners with deaf family members may be associated with multiple social prejudices experienced by the family. The Deaf child may be vulnerable to the same prejudices of the likelihood to give birth to another deaf child and may lead lower self esteem among Deaf learners with deaf family members. In
case of no deaf family member, the causes of deafness may be attributed to natural calamities such as diseases, and deaf child may be seen as a victim.

The findings revealed statistically significant differences occurred on only two items. Therefore, the insignificance differences on other items of self esteem for both learners with deaf family members and those with no deaf family member may be explained by the amount of more time deaf learners spend in special schools and their attachment to these schools. It has been argued before that schools and clubs for the Deaf may provide a sense of belonging to Deaf learners serving as a refuge from the ‘hearing’ homes. In this study however, the extent to which the schools under study provide a sense of belonging to the Deaf learners and the regular interaction between the deaf family member and the Deaf learner were not investigated.

**The difference in self esteem of Deaf learners with different experiences of deafness**

The data revealed that Deaf learners who self described their experiences with deafness as normal totalled to 106 compared to least numbers of Deaf learners in both disastrous (30) and challenging experience group (26). Majority of Deaf learners describing their experiences as normal is in line with what other researchers have expressed on the Deaf community’s self regard (Lane, Hoffmeister & Bahan 1996, Eriksson, 1993) of treating the impairment as a normal condition. It may also explain why most persons with hearing impairment prefer to be identified as Deaf people.

In this study, Deaf learners who self described their experiences with deafness as disastrous exhibited low self esteem compared to the Deaf learners who described their experiences as challenging or normal. The findings revealed high self esteem among Deaf learners who self described their experience with deafness as normal and those self described as experiencing challenges with deafness. The results reflect on what Kyle (1991) recommended as understanding the positive features of a Deaf society. Deaf learners in special schools and being able to share the norms and the
values of a Deaf community with fellow Deaf learners, may have reflected on what Hintermair (2007) found out that group identity related to high self esteem.

It may be argued that Deaf learners who described their experiences as challenging or disastrous may have been simply speaking out the hardships they have to tread in hope to reverse this situation. Regardless of the different self descriptions, Deaf learners’ self esteem did not differ statistically significant. However, the differences in self esteem across demographic variables although not statistically significant reveal the external determinants of Deaf learners’ self esteem in relation to the Deaf learners’ demographic characteristics in the present study.

5.3 The perceived academic competence of Deaf learners and how perceived academic competence varies across the demographic variables

In this study, Deaf learners were divided into three groups according to their perceived academic competence scores as described in Chapter four. Learners in the low perceived academic competence accounted for 23.5% (38), average perceived academic competence accounted for 50% (81) and learners in the high perceived academic competence group accounted for 26% (43).

From the above findings, the majority of Deaf learners scored average perceived academic competence, followed by a relatively fair number of Deaf learners scoring high perceived academic competence. These perceived academic competence findings are contrary to other researchers’ conclusions a relative strong correlation between perceived academic competence and actual academic competencies (Kinard 2001, Coonery & Robertson 1994). It is also in contrary to the reports on the actual academic performance of Deaf learners in Uganda. Murangira (2007) chairperson Uganda National Association of the Deaf (UNAD) lamented the poor academic results of Deaf children.
In this study, Deaf learners expressed their own judgement of their competencies without necessarily referring to past academic evaluations. The self reporting may have revealed the desire for the Deaf learners to have a positive academic self regard. The positive self academic perceptions expressed by the large number of Deaf learners with average perceived academic competence and not the high perceived academic competence  may have been controlled by the Deaf learners’ actual academic performances or/ and  what Guay, Boggiano & Vallerand (2001) referred to as intrinsic motivation –‘performing an active for itself to experience pleasure and satisfaction inherit in the activity and extrinsic motivating-engaging in an activity for external reasons such as receiving rewards or avoiding punishments’.

Although this study did not investigate factors associated with poor academic performance, the findings showed that Deaf learners had a relatively high perceived academic competence. The question raised from the findings is on the differences between perceived academic competence of Deaf learners and their poor academic competence. Are Deaf learners perceived academic competences motivated by intrinsic factors or extrinsic factors? Does the academic assessment measures what it intends to measure in reference to Deaf learners? Marschark (2008) noted that Deaf learners’ learning strategies may differ from the strategies employed by hearing learners in the process of acquiring knowledge and skills. These strategies may not only be determined by their cultural nature (use of sign language) but more so their experiences as a result of the hearing impairment. Differences in the learning process however, may disadvantage the Deaf learners when academically examined on the same platform as the hearing learners.

The issue of educational artefacts in adapting to the cultural nature of Deaf learners should not be taken lightly. Artefacts may include but not limited, language and learning materials. Although language issues have been debated and education policy formulated, many learners, particularly the Deaf learners are still instructed and examined in other forms of communications. Language is a culture tool (Rogoff 2003) for effective human communication. The effectiveness of the medium of
instruction determines effectiveness of the learning process. Wormnæs (2006, p. 4) in recognising the diversity of learners stating that,

‘(...) some learners need more concretisation than others...a person who is deaf needs teachers or interpreters who have mastered Sign Language’

Noguera (2003) in his research among the African- American schools, revealed the nature of single race school and learners’ academic performance, observing that,

‘(...)it is also true that large numbers of students languish in schools that do not provide them with intellectual stimulation and fail to promote their academic skills and healthy social development’

The nature of Uganda schools for the Deaf learners and their ability to respond to the learners perceived academic competence, the availability of skilled teachers with Deaf cultural consciousness, the content of examination, learners’ motivation to learn may be some of the challenges that need to be redressed in the education system by not only the technocrats, but the also stake holders.

In the report by the Uganda Education Commission (1989), learners’ voices were phrased,

“What the public is calling for is the redesign of the education system which fulfils the needs and aspiration...and which functions as powerful instrument...a system geared towards providing adequate knowledge and skills for participation in productive activities, promoting democratic values...” (p. 4)

The findings in this study reemphasize the need to respond the recommendation of the Uganda Education Commission in reference to realizing the Deaf learners’ perceived academic competence into successful academic performance. There is a need for the society to become normal to the learners’ diversities (Skjørten 2001) to recognize the loopholes in the current Uganda education system formulate and modify education curriculum where possible.
The difference in perceived academic competence between boys and girls

The findings revealed Deaf boys had relatively high perceived academic competence than Deaf girls. However, the differences were statistically insignificant. High perceived academic competence among Deaf boys coincided with what several studies have reported on Deaf boys’ high academic competence. The difference between Deaf boys and Deaf girls may be explained by causes of gender disparities (NAWOU NEWS 2007, Kiyaga & Moores 2003). Deaf girls in this study may have perceived themselves as socially destined for less academic careers such as hand crafts and tailoring than academic career. The may reflect low perceived academic competence of Deaf girls than for Deaf boys in a male dominated society.

Statistically insignificant differences in perceived academic competence between Deaf boys and Deaf girls, however, may be as a result to political efforts by the government and the civil society on education for the girl-child as a tool to the emancipation of women. The minister of State for of higher education’s speech on students’ academic performance results (UNEB 2007), he called upon all stakeholders to address challenges in education of girls (Lirri 2008).

The difference in perceived academic competence of Deaf learners with different degree of hearing loss

This study revealed differences in perceived academic competence between profoundly deaf learners and hard of hearing learners. However, these differences were insignificant. The high perceived academic competence among profoundly deaf learners did not correlated with previous finding by Garguilo (2006) which showed that hard of hearing learners had relatively higher academic achievements than profoundly deaf learners. On the other hand, Most (2004) found profoundly deaf learners with a fairly higher academic achievements than the hard of hearing learners. Although present study did not investigate academic competence per se, the results show nearly the same desires in self-reporting academic competences for both profoundly deaf and hard of hearing learners raising a question as to why in Uganda
hard of hearing learners and profoundly deaf learners’ academic achievements differ significantly but not their perceived academic competence.

**The difference in perceived academic competence of Deaf learners with different ages at onset of the deafness**

In the present study, learners born deaf had a relatively higher perceived academic competence than learners who acquired deafness after birth. The differences however, were statistically insignificant. The study however did not investigate age the learners acquired deafness (whether after acquiring spoken language skills and / having attained some education in the schools for the hearing learners). Some studies have reported on better academic performances among learners with later deafness than those born deaf. The argument has been linked to language (spoken and written) acquisition and the advantages in the acquired experiences and knowledge prior to the impairment (Marshark 2003, 2008).

In this study however, the differences in perceived academic competence were statistically insignificant and may be explained by limited spoken language proficiency among learners born deaf and those who acquired deafness later after birth.

**The difference in perceived academic competence of Deaf learners with different family hearing status**

The findings in this study showed learners with no deaf family member (s) had relatively higher perceived academic competence than learners with deaf family member (s). The differences were found to be statistically significant (p= .065). The findings from a study carried out by Phillips (1987) revealed that parents’ perceived academic competence and appraisal of their children’ abilities to perform significantly influenced the children perceived academic competencies.

Relatively high perceived academic competence of Deaf learners with no deaf family member may be explained by their hearing families’ perception of their abilities to perform. The positive perception may be due to the families’ own academic
perception of themselves drawing from their successful academic experiences. On the other hand, Deaf learners with deaf family member(s) scoring relatively low perceived competence may be a result of low family members’ perception of the deaf learners’ ability to perform drawing from past experiences. These findings contradicts the notion that Deaf families significantly contribute to Deaf learners high perceived academic competencies by exposing learners to sign early language development for effective communication, acquisition of knowledge and skills. Rogoff (2003) emphasized the need to communicate in a language that promotes interaction. It should be noted however, that the study did not refer to parents/guardians or siblings specifically when asked about family members and may be the reason why the differences were not strongly significant.

The differences in perceived academic competence of Deaf learners with different experience with deafness

The findings in this study revealed that Deaf learners who self described their experiences as challenging exhibited higher perceived academic competence than deaf learners who described their experiences as normal and those that described it as disastrous. The differences among the three groups were statistically significant (p=.035). Although it may seem logic for learners experiencing a normalcy with deafness to report high perceived academic competence, the findings show these Deaf learners with the least perceived academic competence. These findings reflect on what Jack (1993) described as enjoyment and laughter of being deaf. Deaf learners describe deafness as a normal experience not judged by academic activities that have already depicted them as failures and could further undermine their dignity. From Deaf learners’ experiences, the motivation for academic success may be very low. The data showed a small number of respondents described their experiences with deafness as challenging (26). It may also be true that some of these very respondents belonged to the hard of hearing group. If the reasoning may be true, then the high
perceived academic competence among Deaf learners experiencing challenges with deafness may be attributed to their motivation to academically compete effectively with hearing learners but are only limited by the hearing impairment.

5.4 The relationship between self esteem and perceived academic competence of Deaf learners

Some researchers have revealed notably weak relationships between self esteem and academic achievement. In Uganda, Deaf learners are seen to perform academically poorly compared to their hearing counterparts. The findings revealed Deaf learners’ self esteem and perceived academic competence remained relatively high in the present study.

The correlation between perceived academic competence and self esteem yielded only four significant results out of ten initially planned correlations (Appendix 3). This statistical revelation is in line with Alaker’s (1989) observation that it was high time for researchers to examine the relationship between global self esteem with other perceptions of self.

The correlations between perceived academic competence and the four items measuring self esteem were moderately statistically significant for the four. These were: v4 I feel that I have a number of good qualities with perceived academic competence ($r = .229$, $p = .003$), v5 I am able to do things as well as most other people do with perceived academic competence ($r = .209$, $p = .007$), v7 I feel that I am a person of worth, at least to the level equal with others with perceived academic competence ($r = .296$, $p = .000$) and v10 I take a positive attitude towards myself ($r = .352$, $p = .000$). The significant relationship between the four items of self esteem and perceived academic competence varied from item to item revealing inconsistence strength of correlations. That inconsistence in scores had been observed by previous researchers as well (Awad 2007).
However, the present study revealed that Deaf learners’ positive self esteem (four items) related to their positive perceived academic competence and the results supported what Awad (2007) found among the African American students regardless of their poor academic achievements.

The positive relationship between self esteem and perceived academic competence of Deaf learners may be explained by the understanding that both concepts refer to self perception. Deaf learners’ self worthy (self esteem) may have been interpreted into academic self worthy. Deaf learners in this study seemed to focus on their self perceptions other than their actual state of their academic performances. Alasker (1989) findings among maltreated children revealed a tendency for children under harsh conditions to overestimate their abilities as it is the case with Deaf learners’ poor academic performances which may be interpreted as unfair treatment by highly driven hearing education system.

The present study revealed self esteem and perceived academic competence correlated moderately as shown in table 13 on the four correlations but did no correlate with six other items of self esteem (Appendix 3). The degree of correlation in the present study may raise questions, as De Vaus (2002) noted, of other factors in social science that may explain relationships. Trent et al (1994) noted the relationship between learners’ perceived academic competence and their academic achievements. Guay, Boggiano & Vallerand (2001) findings underscored the effects of intrinsic and extrinsic motivation on perceived academic competence. With such understanding, Deaf learners’ self esteem or perceived academic competence may relatively be influenced by different factors.

5.5 The relationship between self esteem and perceived academic competence of Deaf learners across the demographic variable
The difference in the relationship between self esteem and perceived academic competence of Deaf boys and Deaf girls

The findings revealed that self esteem and perceived academic competence of Deaf girls was statistically significantly correlated on all the four items but statistical significant correlation was limited to only two items for the Deaf boys. There by presenting Deaf girls with a relatively higher correlation between Self esteem and perceived academic competence than for the Deaf boys. These findings may be due to the social stigma that girls are not academically competent. So with the increased self esteem among Deaf girls the likelihood of their increased perceived academic competences.

The difference in the relationship between self esteem and perceived academic competence of Deaf learners with different degree of hearing loss

The present study revealed inconsistence relationships between self esteem and perceived academic competences for both hard of hearing learners and profoundly for profoundly deaf learners. Profoundly deaf learners’ self esteem and perceived academic competence correlated more than for the hard of hearing. The inconsistencies in the relationship for different item correlations may be signal the possibility of different cultural interpretation of the global self esteem scale. In a study carried out by Flynn (2003) among different ethnical respondents different cultural values reflected on the respondents’ reaction to the items. The possible differences between Deaf learners’ cultural value and the hearing cultural values may have caused some parallel views on the study instrument.

The difference in the relationship between self esteem and perceived academic competence of Deaf learners with different age at onset

The study showed significant relationships between self esteem and perceived academic competence of both learners who were born deaf and learners who deafened later after birth. It can be assumed that there is a stronger relationship between born deaf learners’ self esteem and their perceived academic competence
than for learners with later deafness. These findings were support by Awad (2007) findings that revealed high perceived academic competence, high self esteem but low academic achievements among the African American students. Among the Deaf learners who are born deaf, the two concepts may be linked to their cultural identity.

**The difference in the relationship between self esteem and perceived academic competence of Deaf learners with different family hearing status**

The findings showed Deaf learners with no known deaf family members had moderate relationship between self esteem and perceived academic competence than Deaf learners with deaf family members. This correlation may be explained by wish to compare him/ her self with the hearing siblings/ hearing family members and to succeed as equally as they did. In this case, high self esteem correlated with high perceived academic competence for learners with no deaf family member, as was with low self esteem and low perceived academic competence for learners with deaf family members.

**The difference in the relationship between self esteem and perceived academic competence of Deaf learners with different experience with deafness**

From the findings, there were inconsistence relationships between self esteem and perceived academic competence among Deaf learners who described their experiences as disastrous, normal and challenging with deafness. Learners self described as experiencing challenges with deafness consistently presented stronger relationships between self esteem and perceived academic competences on most

5.6 Conclusions

The chapter presents a summary of the study findings that addressed self esteem and perceived academic competence and the relationship between self esteem and perceived academic competence of Deaf learners in special schools in Uganda. The conclusion is drawn from the findings as presented and discussed in previous chapters. The results are based on the data generated by only five items of the ten-
item Rosenberg (1965) Global self esteem tool and nine-item Gresham and Elliott (1990) academic competence tool. The validity and reliability of the tools in the present study have been addressed in the discussion.

The term Deaf learners in this study referred to learners with hearing impairment attending special schools for the Deaf. In the present study, conventional groups describing of Deaf learners’ demographic characteristics may have been unsatisfactory as there are other ways some researchers may choose to categorize them, such as categories that highlighting the learners’ hearing and speech functional abilities (World Health Organisation 2001). Therefore, the findings relate to the conventional description of the Deaf learners as presented in this study.

**Deaf learners’ self esteem**

In this study, Deaf learners revealed relatively high self esteem as measured by the five items out of the ten- items in Rosenberg (1965) Global self esteem tool. Across demographic variables self esteem differed insignificantly tallying with other researchers’ findings (Rhodelwart 1984, Sabery 2007). Possible explanations for high self esteem among Deaf learners in this study may have been attributed to Special schools, where Deaf learners spend much time socializing with fellow Deaf learners, creating a sense of collectiveness and self identity. In this study therefore, the high level of self esteem among Deaf learners could not explained the low academic achievements prevailing in Uganda special schools for the Deaf. The conclusion is in line with Alves-Martins et al (2002) findings of weak relationship between self esteem and academic achievements of learners.

**Perceived academic competence of Deaf learners**

In the present study most Deaf learners had average perceived academic competence and a fair percentage had high perceived academic competence. Across demographic characteristics among the Deaf learners, their percentage academic competencies did not significantly differ with gender, degree of hearing status and age at on set of
deafness, but did reveal significant differences with Deaf learners’ family hearing status and Deaf learners’ experiences with deafness. It may be concluded therefore, that Deaf learners’ perceived academic competence was relatively higher than expected given their low academic competence. Further more, Deaf learners’ perceived academic competence could be influenced by their family hearing status and their experience with deafness.

**The relationship between perceived academic competence and self esteem of Deaf learners**

In this study, the relationship between self esteem and perceived academic competence of Deaf learners was positive and may be described as moderate. The relatively high self esteem did not result into equally high perceived academic competence. It may therefore, be concluded that other possible factors or a combination of factors may significant influence the level of Deaf learners’ perceived academic competence and their self esteem. Such possible factors are supported by the significance differences in the relationship between self esteem and perceived academic competence across demographic characteristics of Deaf learners. Such factors may include, gender, family perceptions of the learner, the learner’s experiences and the language of instruction.

The present study revealed significant findings on Deaf learners’ self perception of their academic abilities contrary to their actual academic competences as reflected by the examination assessment results. This contradiction may call for a more in-depth study of Deaf learners’ learning strategies as echoed by Marshark (2008), the validity of the examinations in assessing the Deaf learners’ academic competences and other factors that may explain poor academic performance learners should be explored. Kafui (2005) findings revealed that poor performance of primary school pupils were attributed to teachers’ commitment to teach, teachers’ knowledge and skills, parental involvement and perceptions and the learners’ motivation.
Present findings revealed that classification Deaf learners on the basis of their degrees of hearing loss may not lead to academic success since the differences in hearing losses did not reveal significant differences in self esteem or perceived academic competences. In any case, education is a right to every child (Kilkelly 2002) but more so quality education. Researchers and professional should invest efforts to ensure that Deaf learners are fairly treated in the academic arena. Dewey (1990) underscored the importance of a fair curriculum to the learners. It is high time that the educationists in Uganda question the inclusiveness of the education curriculum and the examination assessment. For the Deaf learners in Special schools in Uganda, full inclusion in education by 2015 as set by the Millennium Goal (United Nations 2000) may not be realized even at its basics with the prevailing school drops among the Deaf learners due to disabling education systems.

5.7 Generalisation of the findings of the study

This study revealed a number of issues related to self esteem and perceived academic competence of Deaf learners. The methodology chapter explained how representative the sample of the population was, a high response rate (98%) and the involvement of all the known special schools in Uganda. For these reasons, the findings can be generalized. The present study, highlighted the limitations of the Global self esteem to measure self esteem among Deaf learners may be due to cultural differences. Because the self esteem tool may have been misunderstood, it was not reliable. Self esteem among the Deaf learners was therefore measured by only five items of Rosenberg (1965) self esteem. For this reason, the findings may be questionable whether the five items really captured Deaf learners’ self esteem.

5.8 Suggestions for further studies

The present study focused attention on the Deaf learners’ perception of their academic abilities to perform. Further studies may be interested in comparing
perceived academic competences and the actual academic competencies of the learners. The comparison of the two concepts may provide information on their relationships and responsible factors influencing their relationship among Deaf learners.

In the present study, the use of standardized tools among Deaf learners faced the challenge of reliability. Further studies may wish to look into possibilities of modifying the standardized tools especially the Rosenberg (1965) Global self esteem tool in relation to cultural differences and experiences of the respondents as underscored by Farrugia et al. (2004) to strengthen validity and reliability. Wylie (1989, p.12) recognized that,

‘(…) there is a somewhat greater recognition today of the need for appropriate instrument development, and there is a more widespread attempt to increase and evaluate the validity of self concept indices by more sophisticated applications of item analyses, factor analyses, multimethod matrices, and various techniques for evaluating and minimizing the many possible irrelevant responses or score determiners that can decrease construct validity’

Further till, in using standardized tools among respondents with low exposure to such methods, it may necessitate a combination of research methods such as interviews or focus group discussions, to prompt more concrete responses.

Further studies should invest more effort and time in finding out (as close as possible) the factors that can possibly explain the low academic performance of Deaf learners in Special schools. Among other researchers, Wormnæs (2006) suggested more concretized strategies such as skilled teachers and sign language interpreters for effective learning of the Deaf children, Kafui (2005) study findings revealed teacher factor, school factors, and parental factor as having a significant impact on the learners self academic competence, Marschark (2008/ 2007) was concerned with the Deaf learners’ different learning strategies in organizing knowledge and experiences as compared to the hearing children. Further studies may invest interest in Deaf
learners learning strategies, the teaching materials designed for learning and the how the national education curriculum relates to the Deaf learners.

Cummings (2006) emphasized first language proficiency among Deaf learners as having an influence to the learning of a second language. Being a deaf child may not guarantee a child of sign language proficiency. With that understanding, sign language should be taught as a lesson and research into Uganda sign language should be able to enhance sign language development.

5.9 Self reflections

Initially, I expected that the widely used standardized tool measuring Global self esteem would undoubtedly apply in my study. But it turned out that the responses were largely inconsistent. I was able to explore my research basing on other researchers. At the end of this study, I am fairly able to manage research crisis, work independently to formulate and adapt, analyze and to professionally criticize standardized tools especially among the Deaf people. I have gained knowledge and skills on how to carry out research analysis using a quantitative approach and a statistical program (SPSS). In this research, the research problem was based on the fact that the Deaf learners in special schools in Uganda have low academic competence and on the assumption that Deaf learners’ low self esteem and low academic competence may be related to their low academic competence as proposed by other researchers. However, with the results revealing both high self esteem and relatively high perceived academic competence, I am convinced that there is a dire need for the question: What then explains the low academic competence of Deaf learners in special schools in Uganda. As Marschark (2008) critically observed, ‘deaf children are not children who cannot hear’. Deaf learners’ culture needs may not only be summarized as providing a favourable sign language environment. My reflection from the findings is that there is still many I need to know about Deaf learners’ acquisition of knowledge and skills.
References


Cartwright, B 1999, Encounter with Reality: 1,001 Interpreter Scenarios, RID Press, SilverSpring, USA. www.rid.org


Frederick, NM 1994, Introduction to Audiology, 5th edn. Prentice Hall, New Jersey


Kyle, J 1997, ‘The Deaf Community’, In Being Deaf, The Open University, Unit 2, pp. 5-54,

Lane, H, Hoffmeister, R & Bahan, B 1996, A Journey into the Deaf-World, Damsg sign Press, San Diego, California


Lule, J 1998, Memories and Visions, Uganda National Associations of the Deaf, Danish Deaf Association,


Mangione, T 1995, Mail Survey. Improving the Quality, California, Sage Publications


Marschark, M 2008, ‘Deaf children are not children who cannot hear’ A lecture presented on 27th March, 2008 at the Faculty of Education, University of Oslo, Norway


Nantongo, PS 2002, ‘Sign Language Interpreting. The invaluable need in the education of the Deaf’ Bachelor of Education Degree thesis, Makerere University, Unpublished, Kampala, Uganda


http://www.harcourtassessment.com/NR/rdonlyres/33A4CAFF

http://aare.edu.au


http://www.un.org/millenium/declaration


Appendices

Appendix 1: Research Questionnaire for Deaf learners in Special schools

INTRODUCTION TO THE RESEARCH QUESTION

You have been identified as one of the resourceful respondents to this study that is intended to collect data as part of my academic program in Special Needs Education, University of Oslo, Norway. Significant measures are put in place to ensure possible confidentiality and enormity of all participants in the study. Although I wish for full participation of all learners, you are not compelled to do so against your will. You should feel free to declaim your participation unconditionally by ticking the appropriate box.

Do you willingly accept to participate in this study?

I do accent

☐

I do not accent

☐

INSTRUCTION TO THE QUESTIONNAIRE

Dear respondent, you are requested to answer all the questions in the three sections of the questionnaire. Read the instructions carefully in each section and individually respond accordingly by marking x or tick. A Sign Language Interpreter is available when required.

SECTION A

I am a …
Female

Male

How do you identify yourself?

Hard of hearing

Deaf

Hearing

I am …

Born deaf

Deafened later after birth

Do you have any relative / member of your family that is deaf or hard of hearing?

Yes

No
Personally, how do you describe your experience with the impairment/ deafness?

A disaster

Normal

A challenge

NB: Please continue with the second section

SECTION B

Choose your answer from the given choices by putting a tick or X on only one of them in the appropriate box. The options are described by a general question as follows:

To what extent do you disagree or agree with the following statements?

1. Strongly Disagree
2. Somewhat Disagree
3. Slightly Disagree
4. Slightly Agree
5. Somewhat Agree
6. Strongly Agree

1. On a whole, I am satisfied with myself.
   
   | 1 | 2 | 3 | 4 | 5 | 6 |

2. At times I think I am no good at all
   
   | 1 | 2 | 3 | 4 | 5 | 6 |

3. I feel I do no have much to be proud of.
   
   | 1 | 2 | 3 | 4 | 5 | 6 |
4. I feel that I have a number of good qualities

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

5. I am able to do things as well as most other people do.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

6. I certainly feel useless at times

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

7. I felt that I am a person worthy, at least on the level equal to others

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

8. I wish I could have more respect

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

9. All in all, I am inclined to feel that I am a failure

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

10. I take a positive attitude towards myself

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

NB: Please continue with the third and last section

SECTION C

Choose your answer from the given choices by putting a **tick** or **X** on only one of them in the appropriate box. There are five options as described:

1. Lowest
2. Next Lowest
3. Middle
4. Next Highest
5. Highest
1. Compared with other children in my class, my overall academic performance is…
   
   1  2  3  4  5  6

2. In English, I perform………………….compared to other students in my class.
   
   1  2  3  4  5  6

3. In mathematics, I perform………………. Compared to other students in my class
   
   1  2  3  4  5  6

4. In terms of examinations expectation, my skills in mathematics are…………..
   
   1  2  3  4  5  6

5. My overall motivation to succeed academically is…………
   
   1  2  3  4  5  6

6. My parent(s) / guardian encouragement to succeed academically is…………
   
   1  2  3  4  5  6

7. Compared to other students in my class my intellectual functioning is…………
   
   1  2  3  4  5  6

8. Compared to other students in my class my overall behaviour in class activities is…………
   
   1  2  3  4  5  6

9. In terms of examinations expectations, my skills in English are…………………
   
   1  2  3  4  5  6

NB: You have completed the questionnaire. Thank you for your participation.
Appendix 2 a: Reliability statistics for Deaf learners’ self esteem

### Case Processing Summary

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases Valid</td>
<td>161</td>
<td>99.4%</td>
</tr>
<tr>
<td>Excluded(a)</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

a Listwise deletion based on all variables in the procedure.

### Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.147</td>
<td>10</td>
</tr>
</tbody>
</table>

### Item-Total Statistics

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>On a whole, I am satisfied with myself</td>
<td>33.44</td>
<td>31.748</td>
<td>-.080</td>
<td>.208</td>
</tr>
<tr>
<td>feel that I have a number of good qualities</td>
<td>33.08</td>
<td>31.812</td>
<td>-.060</td>
<td>.191</td>
</tr>
<tr>
<td>I am able to do things as well as most other people do</td>
<td>33.15</td>
<td>29.778</td>
<td>.053</td>
<td>.131</td>
</tr>
<tr>
<td>I feel that I am a person of worth, at least to the level equal with others</td>
<td>33.22</td>
<td>29.125</td>
<td>.070</td>
<td>.121</td>
</tr>
<tr>
<td>I take a positive attitude towards myself</td>
<td>33.37</td>
<td>28.398</td>
<td>.105</td>
<td>.099</td>
</tr>
<tr>
<td>At times I think I no good at all (reversed)</td>
<td>34.76</td>
<td>26.619</td>
<td>.226</td>
<td>.024</td>
</tr>
<tr>
<td>I feel I do not have much to be proud of (reversed)</td>
<td>34.42</td>
<td>30.258</td>
<td>-.038</td>
<td>.192</td>
</tr>
<tr>
<td>I certainly feel useless at times (reversed)</td>
<td>34.60</td>
<td>27.167</td>
<td>.087</td>
<td>.105</td>
</tr>
<tr>
<td>I wish I could have more respect (reversed)</td>
<td>35.25</td>
<td>29.475</td>
<td>.043</td>
<td>.136</td>
</tr>
<tr>
<td>All in all, I am inclined to feel that I am a failure (reversed)</td>
<td>34.63</td>
<td>29.071</td>
<td>.097</td>
<td>.106</td>
</tr>
</tbody>
</table>
Appendix 2 b: Reliability statistics for Deaf learners’ Perceived academic competence

Case Processing Summary

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases</strong></td>
<td>160</td>
<td>98.8</td>
</tr>
<tr>
<td><strong>Excluded(a)</strong></td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>162</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*a* Listwise deletion based on all variables in the procedure.

Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.682</td>
<td>9</td>
</tr>
</tbody>
</table>

Item-Total Statistics

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compared to other children in my class, my overall academic performance</td>
<td>28.08</td>
<td>22,384</td>
<td>.430</td>
<td>.639</td>
</tr>
<tr>
<td>2. In English subject, I perform...compared to other students in my class</td>
<td>28.09</td>
<td>24,413</td>
<td>.280</td>
<td>.671</td>
</tr>
<tr>
<td>3. I mathematics i perform...compared to other students in my class</td>
<td>28.21</td>
<td>24,282</td>
<td>.292</td>
<td>.668</td>
</tr>
<tr>
<td>4. In terms of examination expectations, my skills in Mathematics are</td>
<td>27.98</td>
<td>22,905</td>
<td>.406</td>
<td>.645</td>
</tr>
<tr>
<td>5. My overall motivation to succeed academically is</td>
<td>27.77</td>
<td>22,770</td>
<td>.426</td>
<td>.641</td>
</tr>
<tr>
<td>6. My parents encouragement to succeed academically is</td>
<td>27.86</td>
<td>22,552</td>
<td>.352</td>
<td>.658</td>
</tr>
<tr>
<td>7. Compared to other students in my class my intellectual functioning is</td>
<td>27.89</td>
<td>23,031</td>
<td>.438</td>
<td>.639</td>
</tr>
<tr>
<td>8. Compared to other students in my class my overall behaviour is</td>
<td>27.89</td>
<td>24,674</td>
<td>.302</td>
<td>.666</td>
</tr>
<tr>
<td>9. In terms of examinations expectations, my skills in English are</td>
<td>27.89</td>
<td>24,377</td>
<td>.278</td>
<td>.671</td>
</tr>
</tbody>
</table>
Appendix 3: Spearman rho correlation coefficient test

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>Ten Items Rosenberg (1965) Self esteem tool</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. On a whole, I am satisfied with myself</td>
<td>0.090</td>
</tr>
<tr>
<td></td>
<td>4. I feel that I have a number of good qualities</td>
<td>0.229(**)</td>
</tr>
<tr>
<td></td>
<td>5. I am able to do things as well as most other people do</td>
<td>0.209(**)</td>
</tr>
<tr>
<td></td>
<td>7. I feel that I am a person of worth, at least to the level equal with others</td>
<td>0.296(**)</td>
</tr>
<tr>
<td></td>
<td>10. I take a positive attitude towards myself</td>
<td>0.352(**)</td>
</tr>
<tr>
<td></td>
<td>2. At times I think I no good at all (reversed)</td>
<td>-0.049</td>
</tr>
<tr>
<td></td>
<td>3. I feel I do not have much to be proud of (reversed)</td>
<td>-0.108</td>
</tr>
<tr>
<td></td>
<td>6. I certainly feel useless at times (reversed)</td>
<td>-0.113</td>
</tr>
<tr>
<td></td>
<td>8. I wish I could have more respect (reversed)</td>
<td>-0.090</td>
</tr>
<tr>
<td></td>
<td>9. All in all, I am inclined to feel that I am a failure (reversed)</td>
<td>-0.020</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

PAC = Total sum of Perceived academic competence
TO WHOM IT MAY CONCERN:

This is to certify that NANTONGO, Proscovia, date of birth 04.10.1972, is a full-time student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Master of Philosophy in Special Needs Education (M. Phil. SNE).

This is a continuous two-year programme run on the "sandwich" principle, which involves periods of study and field work/research in both Norway and the home country. The student has concluded the initial 11-month period in Norway and will be returning to the home country in July 2007 to continue full-time studies/research until 1 January 2008 when s/he returns to Norway for the final part of the degree. The period of study will be completed at the end of May 2008.

The main responsibility for supervising the research, developmental work and thesis remains with the Department of Special Needs Education, University of Oslo, Norway. However, we would kindly request that the relevant authorities give the student the access required to the schools and educational establishments necessary in order to undertake field work and research. We would also be most grateful for any assistance that is afforded to the student which enables her/him to carry out this work, particularly the use of facilities such as access to telephone, fax, e-mail, computer services and libraries at the various educational establishments.

Yours sincerely

[Signature]

Ass. Professor Steinar Theie
Academic Head of International Master’s Programme
Department of Special Needs Education
Appendix 5: Letter of Introduction to the Ministry of Education and Sports,
Department of Special Needs Education Foundation

Proscovia NANTONGO
Kyambogo University
P.O. Box 1, Kyambogo
Email: prossyssubinantongo@hotmail.com
Tel no. 256 31 232528
Mobile: 256 77 2 468574 or 77 373769

10 September, 2007

To the Commission,
Special Needs Education and Counselling,

Dear Sir/ Madam,

Introducing Proscovia Nantongo
I am on a two year masters program, Special Needs Education at the University of
Oslo, Norway and it is required that students carry out study preferably in their home
countries. My research topic is “Deaf learners’ Self- Esteem and Perceived
academic Competence in Special schools in Uganda”
I would like to inform your office that I have identified the schools in which I would
like to carry out my research problem. Possible arrangements are underway to this
effect with the administrators of these Schools.
Due to research ethical considerations, however, I am not able to list the names of the
schools to participate in this study on ethical grounds.

Yours faithful,

[Signature]
Appendix 6: General Letter of Appreciation to Schools

Proscovia NANTONGO
Kyambogo University
P.O. Box 1, Kyambogo
Email: prossyssubinantongo@hotmail.com
Tel no. 256 31 232528
Mobile: 256 77 2 468574 or 77 373769

April, 2008

To the School Administrator,

Dear Sir/ Madam/ Sister,

Appreciation for Participating in the Research Process
I carried out a study in your school between September and October, 2007 as a partial fulfillment of my Masters degree in Special Needs Education, in the department of Special Needs Education, Faculty of Education, University of Oslo, Norway (2006-2008).
My research topic was “Deaf learners’ Self- Esteem and Perceived academic competence in Special schools in Uganda”. Through you I would like to thank the entire Administration, the teaching staff and the dear Deaf learners who open heartedly responded to my call. I hope the findings of the research will go a long way to contribute to the fulfillment of your educational goals.

Thank you very much,

Yours faithful,
Appendix 7: Letter of Recognition to The Morris Rosenberg Foundation

Proscovia NANTONGO
Faculty of Education
Department of Special Needs Education
University of Oslo, Norway.
Email: prossyssubinantongo@hotmail.com

March, 2008

The Morris Rosenberg Foundation
C7o Department of Sociology
University of Maryland
2112 Art/ Soc Builiding
College Park, MD 20742- 1315

Dear Foundation,

Re: Acknowledgement for using Rosenberg (1969) self esteem measuring scale

I am on a two year masters program, Special Needs Education at the University of Oslo, Norway. It is my last semester of the last academic year (2006-2008), and I carried out a study using the research instrument advanced by Morris Rosenberg (1965), as a partial fulfilment of my master degree on the topic “Deaf learners’ self esteem and perceived academic competence in Special schools in Uganda.”

The purpose of this communication is to let you know that I am humbled by the invaluable contribution the tool contributed to the entire study, and take full responsibility of the limitations of encountered during the study.

Letter of Appreciation from the investigator to the Schools

[Signature]
Table 18: The relationship between self esteem and perceived academic competence of Deaf learners with different experiences with deafness

<table>
<thead>
<tr>
<th>Experience with impairment</th>
<th>N</th>
<th>Self esteem items / Spearman’s rho</th>
<th>PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaster</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V4 I feel that I have a number of good qualities</td>
<td>.401**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.028</td>
</tr>
<tr>
<td>Normal</td>
<td>106</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V5 I am able to do things as well as most other people do</td>
<td>.305</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.101</td>
</tr>
<tr>
<td>Challenge</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V7 I feel that I am a person of worth, at least to the level equal with others</td>
<td>.130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.305</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V10 I take a positive attitude towards myself</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.(2-tailed)</td>
<td>.712**</td>
</tr>
</tbody>
</table>

NOTE: PAC=Perceived academic competence.