Educating Teachers of the Deaf:

Experiences and perspectives from teachers on facilitating academic and social participation in Uganda

BY

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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>ABEK</td>
<td>Alternative Basic Education for Karamoja</td>
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<tr>
<td>ACP-EU</td>
<td>African Pacific Caribbean- European Union</td>
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<tr>
<td>ADL</td>
<td>Activity of Daily Living</td>
</tr>
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<td>BEUPA</td>
<td>Basic Education for the Urban Poor Areas</td>
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<tr>
<td>CBR</td>
<td>Community Based Rehabilitation</td>
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<tr>
<td>CDS</td>
<td>Child-Directed Speech</td>
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<td>CHANCE</td>
<td>Child-Centred Alternation, Non-Formal Community Based Education</td>
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<tr>
<td>CHAT</td>
<td>Cultural Historical Activity Theory</td>
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<tr>
<td>COPE</td>
<td>Complementary Opportunities for Primary Education</td>
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<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
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<td>DFID</td>
<td>Department of International Development of the United Kingdom</td>
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<tr>
<td>ECD</td>
<td>Early Childhood Education and Development</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>EMIS</td>
<td>Education Management and Information Systems</td>
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<tr>
<td>ENT</td>
<td>Ear Nose and Throat</td>
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<td>ESIP</td>
<td>Education Strategic and Investment Plan</td>
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<td>FGD</td>
<td>Focus Group Discussion</td>
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<td>IDMC</td>
<td>Internally Displaced Monitoring Centre</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MoE&amp;S</td>
<td>Ministry of Education and Sports</td>
</tr>
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<td>MoFP&amp;ED</td>
<td>Ministry of Finance, Planning and Economic Development</td>
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<td>NCDC</td>
<td>National Curriculum Development Centre</td>
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<td>NCHE</td>
<td>National Council for Higher Education</td>
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<td>NEMA</td>
<td>National Environment Management Authority</td>
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<td>NSD</td>
<td>National Committee for Research Ethics in Social Science and Humanities</td>
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<td>NTC</td>
<td>National Teachers College</td>
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<td>NUFU</td>
<td>Norwegian Programme for Development, Research and Education</td>
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<tr>
<td>SNE/EARS</td>
<td>Special Needs Education/ Education Assessment and Resource Services</td>
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<td>SNECO</td>
<td>Special Needs Education Coordinators</td>
</tr>
<tr>
<td>TDMS</td>
<td>Teacher Development Management Systems</td>
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<tr>
<td>UNCST</td>
<td>Uganda National Council for Science and Technology</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>UNEB</td>
<td>Uganda National Examinations Board</td>
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<td>UNESCO</td>
<td>United Nations Education Scientific and Cultural Organizations</td>
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<tr>
<td>UNISE</td>
<td>Uganda National Institute of Special Education</td>
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<tr>
<td>UPE</td>
<td>Universal Primary Education</td>
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<tr>
<td>USDC</td>
<td>Uganda Society for Disabled Children</td>
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<tr>
<td>USE</td>
<td>Universal Secondary Education</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Abstract

Deaf education has evolved at a rapid rate world over. Reasons for the evolution are several and include reforms in and expanded roles in primary education, special needs education and teacher education, research, technological and legislative provisions. To catch up with these reforms and developments teacher education has to take on new initiatives that should be partly informed by research on experiences in the schools.

Based on a sample of eleven teachers from two schools of the deaf, this dissertation investigates the experiences and perspectives of teachers of the deaf. The understanding is that these experiences and perspectives should inform teacher education preparation programmes that incorporate deaf education. There are positive and challenging experiences that focus on how academic and social participation of deaf learners should be facilitated.

Using qualitative case study design, data from individual interviews, focus group discussions and observations are analysed and used to describe the experiences and perspectives of teachers of the deaf. The analysis and interpretation of findings generated themes that are discussed guided by the activity system theory. The assumption is that activity system theory is a useful tool for extracting meaningful information from the massive and complex situation to conceptualise how real world phenomena are entrenched within the situation being examined.

The findings bring out three main implications. The first implication is that although the teacher education programme is being conducted in line with the curriculum guideline, it may not be assumed that the training automatically translates to best practices in facilitating academic and social participation. Many factors including teachers’ experiences - exposure with the learners, theoretical content covered and practical training components should be considered as there is continuously changing and complex environment under which academic and social participation is facilitated. The second implication is that approaches to teacher education and time allocation for some content areas needs to be reviewed taking into consideration the knowledge bases and skills required. There is need for multi-sectoral planning particularly in the mode of assessment and because some courses require more time and resources than others. The third implication is that considering the fast rate of growth and a rapidly changing political, social and technological environment in deaf education, further research is needed to inform teacher education on how to develop programmes that respond
and correspond to the policy and practice needs in the current inclusive education dispensation.
## Table of Contents

**Educating Teachers of the Deaf:** .......................................................... 1  
*Experiences and perspectives from teachers on facilitating academic and social participation in Uganda* .......................................................... 1  
Acknowledgement .................................................................................. 2  
List of Acronyms .................................................................................. 3  
Abstract .............................................................................................. 5  
Table of Contents .................................................................................. 7

1. **Chapter One: Introduction to the Study** ........................................ 11  
   1.1 Introduction .................................................................................. 11  
   1.2 Background to the study .............................................................. 11  
   1.3 Research assumptions .................................................................. 14  
   1.4 Significance of the study ............................................................... 15  
   1.5 Organisation and structure of the dissertation ......................... 16  
   1.6 Preliminary clarification of some key concepts ...................... 17  

2. **Chapter Two: Contextualizing deafness, deaf education and teacher education for the deaf in Uganda** ........................................... 22  
   2.1 Introduction .................................................................................. 22  
   2.2 Implications of deafness ............................................................... 22  
      2.2.1 Implication of deafness on the individual ......................... 23  
      2.2.2 Implication of deafness on the family ......................... 28  
   2.3 Policy provisions and challenges in support of special needs, inclusive education and teacher training in Uganda ......................................................... 29  
      2.3.1 Policy Challenges in Uganda ............................................... 33  
   2.4 Development and trend in education provision in support of deaf learners in Uganda .......................................................... 34  
      2.4.1 Provision for deaf education within the general education system ............ 34  
      2.4.2 Provision of education of the deaf in Uganda .................. 36  
      2.4.3 Teacher training for teachers of the deaf in Uganda .......... 40  
   2.5 Challenges in deaf education provision and training in Uganda .......... 44  
      2.5.1 Negative Attitudes .............................................................. 44  
      2.5.2 Few qualified teachers ........................................................ 45  
      2.5.3 Few receptive schools and crowded classrooms ............... 46  
      2.5.4 Lack of teaching and learning materials ......................... 49  
      2.5.5 Communication and language challenges .................. 49  
   2.6 Interventions and strategies to enhance deaf education in Uganda ............. 50  
   2.7 Summary .................................................................................. 54
3. Chapter Three: Teacher Education for Teachers of the Deaf – A review of related literature ................................................................. 55
  3.1 Introduction .................................................................................................................. 55
  3.2 Teacher preparation in support of deaf education ..................................................... 55
  3.3 Teacher education knowledge and skills necessary for facilitating academic and social participation .......................................................... 57
    3.3.1 Teacher education knowledge and skills necessary for academic participation 59
    3.3.2 Teacher education knowledge and skills necessary for social participation ..... 60
  3.4 Teacher beliefs and self-efficacy ............................................................................... 62
  3.5 Summary .................................................................................................................... 64

4. Chapter Four: Theoretical Framework ....................................................................... 65
  4.1 Introduction ............................................................................................................... 65
  4.2 Generations and Principles of Activity System Theory ............................................ 65
  4.3 The Activity System Analysis as used in understanding Deaf Education and Teacher Education .......................................................... 69
  4.4 Tension within and between the activity systems ..................................................... 72
  4.5 Justification for using the activity system theory .................................................... 74
  4.6 Summary .................................................................................................................... 75

5. Chapter Five: Research Methodology ....................................................................... 76
  5.1 Introduction ............................................................................................................... 76
  5.2 Philosophical assumptions and positioning of the study ........................................... 76
  5.3 The Study Design ...................................................................................................... 77
    5.3.1 Case Study .......................................................................................................... 79
  5.4 Population and Sample .............................................................................................. 79
    5.4.1 Accessible Population ........................................................................................ 80
    5.4.2 The Sample and Sampling Procedure .............................................................. 80
      5.4.2.1 Sampling Procedure and criteria .............................................................. 80
      5.4.2.2 The Sample ............................................................................................... 81
  Demographic Characteristics of Respondents .............................................................. 83
  Table 5.4.2 Demographic Characteristics of Respondents ........................................... 83
  5.5 Data Collection methods and procedures ................................................................. 84
    5.5.1 Accessing the Site ............................................................................................... 85
    5.5.2 Pilot Study .......................................................................................................... 86
      5.5.2.1 Procedure for data collection during the pilot study ................................ 87
        Document analysis prior to the pilot study ............................................................ 87
        Individual interview during pilot study ............................................................... 88
        Observation during pilot study ............................................................................. 88
      5.5.2.2 Lessons Learnt from the pilot study .............................................................. 89
5.5.3 Procedure for Data Collection during the main study ........................................ 90
5.5.3.1 Individual interviews ...................................................................................... 91
5.5.3.2 Focus Group Discussions ............................................................................... 93
5.5.3.3 Observations ................................................................................................... 95
5.6 Data Analysis ............................................................................................................. 97
5.6.1 Analysis of interviews (individual and focus group discussions) ...................... 97
5.6.2 Analysis of Observations ................................................................................. 100
5.7 Addressing Validity and Reliability ........................................................................ 102
5.8 Ethical consideration ............................................................................................... 104
5.9 Summary .................................................................................................................. 107
6. Chapter Six: Presentation of findings ........................................................................ 108
   6.1 Introduction ............................................................................................................. 108
   6.2 Experiences and perspectives relating to teaching methods and approaches ........ 108
       Positive Experiences .......................................................................................... 109
       Challenging Experiences .................................................................................. 113
   6.3 Experiences and perspectives relating to communication and language .......... 116
       Positive experiences related to communication and language ......................... 117
       Challenges related to communication and language .......................................... 118
   6.4 Experiences and perspectives relating to collaboration with parents and other
       stakeholders ......................................................................................................... 120
       Positive Experiences .......................................................................................... 120
       Challenges related to support and collaboration with stakeholders ................. 121
   6.5 Aspects in teacher education that teachers of the deaf considered relevant and those
       needing more attention ....................................................................................... 123
       Teacher education content considered beneficial during their teacher education and
       training ................................................................................................................. 124
       Content that needed more emphasis during teacher education and training ......... 126
   6.6 Policy and Guidelines that impact on education ..................................................... 129
       Supportive policies and guidelines .................................................................... 130
       Policy challenges ............................................................................................... 131
   6.7 Factors that facilitate or hamper teachers capacity to facilitate academic and social
       participation ......................................................................................................... 140
   6.7.1 Attitude towards deaf learners and teaching ..................................................... 140
       Statements attributed to positive attitudes .......................................................... 141
       Statements attributed to negative attitudes ......................................................... 142
   6.7.2 Child-to-Child Interaction ............................................................................... 147
   6.7.3 Guidance and counselling .............................................................................. 149
   6.8 Summary ................................................................................................................ 150
## 7. Chapter Seven: Discussion, Conclusion and implications of Findings

### 7.1 Introduction

### 7.2 Teacher Preparation for facilitating academic and social participation: An Activity Systems Analysis

### 7.3 Opportunities and challenging experiences associated to methods and approaches for teaching deaf learners

*Opportunities and tensions associated to large classes*

### 7.4 Opportunities and challenges associated to communication and language

### 7.5 Opportunities and challenges associated to policy provisions

### 7.6 Content considered beneficial and content that needed more attention during teacher education

### 7.7 Attitudes towards learners with deafness and teaching

### 7.8 Indicators of child-to-child interaction

### 7.9 What teacher education can learn from teachers’ experiences and perspectives

### 7.10 Conclusion

### 7.11 Implications of the findings

#### 7.11.1 Implications for teacher education

#### 7.11.2 Implications for schools having deaf learners

#### 7.11.3 Implication for further research

### References

### Appendices

- **Appendix 1** Uganda – General Context: *Maps and some demographic information*
- **Appendix 2**
- **Appendix 3** Instruments for Data Collection
  - **Appendix 3 (a)**
  - **Appendix 3(b)**
- **Appendix 4** Letters of Authority
  - **Appendix 4(a)** Norwegian Research council
  - **Appendix 4(b)** Ugandan National Council of Science and Technology
  - **Appendix 4(c)** Office of the President, Uganda
  - **Appendix 4(d)** Ministry of Education and Sports, Uganda
- **Appendix 5**
  - **Appendix 5(a)** Sample Letter to the Resident District Commissioner
  - **Appendix 5(b)** Sample Letter from researcher to schools having Deaf Learners
  - **Appendix 5(c)** Sample consent from (Ethics Protocol)
- **Appendix 6** Statistics of primary school pupils with special needs (2008 – 2009)
1. Chapter One: Introduction to the Study

1.1 Introduction

The theme for this study is teacher preparation for deaf education. The purpose of this study is to explore how the experiences and perspectives of teachers of the deaf can inform teacher education in preparing teachers able to facilitate academic and social participation of deaf learners. The study is conducted within the general framework of special needs teacher education. The overall goal of this study is to contribute information that can be used to improve teacher preparation for teachers of the deaf in Uganda.

1.2 Background to the study

Deaf education has evolved at a fairly rapid rate due to educational, scientific and legal changes in many countries (Marschark, Lang, & Albertini, 2002). In Uganda, deaf education has gained prominence and met various constraints. Clearly visible among the achievements is the state commitments, supportive legislations and increase in enrolment. It is apparent that in the implementation of legislations and policy provisions, particularly the one providing for education, the quality of teachers cannot be ignored.

To ensure that the provisions are effected, many initiatives, innovations and reforms have been implemented to improve quality in teacher education. Reforms have been done in relation to the curriculum, management, supervision and evaluation, assessment and the language of instruction. The introduction of Universal Primary Education (UPE)\(^1\), Universal Secondary Education (USE)\(^2\) and Universal Post-Primary Education and Training (UPPET)\(^3\) is part of these numerous reforms. The Special Needs Education Education Assessment and Resource Services (SNE\textbackslash EARS) was an incentive innovation for the identification, diagnosis, placement, referral and support in disability and special needs education targeting children of 18 years and below. These reforms are in line with the Dakar Framework for Action (Education for All - EFA\(^4\)), the Salamanca Statement for Action on Special Needs Education

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\(^1\) Universal Primary Education (UPE)
The aim of UPE in Uganda is to expanding access, enhancing equality and equity in primary education.

\(^2\) Universal Secondary Education (USE)
The goal of USE is to bring more students into secondary school system and to increase the quality of secondary education – acquisition of knowledge that should prepare students for the job world.

\(^3\) Universal Post Primary Education and Training (UPPET)
The aim of UPPET is to expand access to equitable and quality education relevant to Uganda’s national development goals

\(^4\) Education for All (EFA)
One of the goals of EFA is for children to have access to primary education by 2015
and the Millennium Development Goals (MDG)\(^5\). Although part of the overarching results of these reforms is the increased enrolment of deaf learners in special school, units and mainstream primary school classes, there is evidence of diminishing numbers of learners as they progress in their education. This situation should worry practitioners, managers and policy makers alike.

The diminishing numbers of deaf learners after primary education result from dropout for various reasons. One reason maybe that teachers are not able to facilitate the academic and social participation. The other reason could be that the school environment may not be friendly hence de-motivating learners from attending school. It may also be that there is no clear data documenting the presence of deaf learners at the higher levels of education. The lack of data on deafness beyond secondary education, for example, has implication for planning and service provision (teacher supply, learning materials, equipment, space, financial resources and other allocation). It also demonstrate disparity in wastage, dropout, push out and/or lack of completion at each cycle of education or that little attention is given to documentation as deaf learners prepare for higher education. This inconsistency and diminishing numbers in higher education should be a matter of concern to deaf education and teacher education particularly on how deaf learners are prepared to cope with facilitating academic and social participation in the early years. Of particular concern is how basic education prepares and motivates deaf learners for higher education, and how teachers apply the knowledge and skills acquired through teacher education to support learners to competently complete each cycle of education and to compete with other learners.

Teacher education has the obligation to provide quality programmes, approaches and materials that prepare student teachers to enhance the participation of all learners. When the teaching of children with deafness takes a universal approach, the general and individual pass-way to learning will help children with deafness to learn, develop and participate. The approach to teacher education should correspond to the initiatives, trends and innovations within teacher education. For, no education can be better than the quality of its teachers (Muyenda-Mutebi, 1996) and universality of education can never be achieved if some groups of learners (e.g. the deaf) do not access quality education (Akope, 2009). The quality of teachers is determined partly by the level of professional preparation teacher trainees undergo. It implies in parts that teachers have to be provided with a variety of opportunities from which they can attain their professional educational goals (Patricia and Elliott, 2002). According to

\(^5\)The overarching goal of MDG is to eliminate extreme poverty by 2015. Extreme poverty is defined by the proportion of people whose income is less than £1 per day.
Patricia and Elliott, teachers must learn more than the mechanics of instruction, something beyond classroom management techniques. Their learning should include theoretical understanding, conceptual analysis and openness to novel ways of seeing and thinking about teaching, schooling and society (Beyer, 2001).

Beyer’s argument focuses on improving teaching in public schools which is in line with the current trend in special needs education towards inclusive education. Inclusive education is about creating a welcoming and an enabling environment for all learners. The obligation of teacher educators should be ‘dedicated to helping prospective teachers to develop the understanding, perspective and skills’ (Beyer, 2001) that will inclusively enhance all pupils’ academic and social participation.

The focus of this study is the experiences and perspectives of graduate teachers on the Research problem and questions

The development plan and national policy on education in Uganda is to provide quality, equitable and accessible basic education and training. A measure to enhance this set objective is the recruitment, training and retention of teachers who are committed, motivated and professionally skilled and ethically ready to provide quality teaching for every student (Ward, Penny, & Read, 2006). Ward et al identify political will, decentralization, funding and change of mind-set as having impressively contributed to the gains in the education system in Uganda. The impressive quantitative gains, however have not kept pace with ensuring quality learning outcomes. The efficiency of the system continues to face the challenges of dropout and repetitions. For example, “limited information is available on how successful pupils are educated due to paucity of the data” (Kasirye, 2009). Even the available data is often generalized with little specific reference on the categories of the special needs in children.

Experiences and perspectives of teachers of the deaf are seldom or not sought for. Soliciting the experiences and perspectives of teachers of the deaf, would inform teacher education to explore how the capacity of teachers of the deaf could be enhanced. The main research question for this study is therefore:

**How can the experiences and perspectives of teachers of the deaf inform teacher education preparation programmes?**

The above question is operationalized through the following sub-questions:

1. What possibilities and challenges do teachers of the deaf encounter related to teaching methods and approaches, and how can these experiences inform teacher preparation programmes?
2. What are the language and communication opportunities and challenging experiences that teachers of the deaf relate to their training, and how can these experiences inform teacher preparation programmes?

3. What positive and challenging experiences related to support and collaboration with stakeholders do teachers of the deaf encounter?

4. What contents in the teacher education programme do teachers of the deaf consider beneficial and which contents do the teachers consider as needing more emphasis during teacher education?

5. What policy provisions do teachers of deaf consider as guiding or challenging their practice?

6. What other factors do teachers of the deaf identify as promoting or hampering the capacity to facilitate academic and social participation?

1.3 Research assumptions

The main point of departure is the description, analysis and understanding of teachers’ actions as a situated activity using the activity system (Engeström, 1987). This perspective argues that there is a continuous level of interaction between and within the different parts of the elements in the activity system at school which influence how academic and social participation of deaf learners is facilitated. In order to investigate the interactions that exist among the different elements at schools, it is necessary to shed more light on factors that enhance the facilitation of academic and social participation of deaf learners.

In this respect, the research questions pay attention to two micro-level factors. At the school level, the existing structures that guide the teaching and way teachers of the deaf facilitate academic and social participation is explored. At teacher education level, focus is put on the content that is considered relevant and those that needed more attention to enhance teachers’ capacity to facilitate academic and social participation of deaf learners. Focus is also put on factors that facilitate or hamper the process of facilitating academic and social participation of deaf learners.

The immediate unit of analysis is the experiences and perspectives of teachers of the deaf whereas the phenomena being investigated pertain to the activities at school, collaboration with other stakeholders and policy provisions that support the process of academic and social participation of learners with deafness. The major assumption is that success in the academic and social participation of deaf learners is made possible by the methods, communication, support teachers get, collaboration with stakeholders and the policy provisions in place that
promote or hamper their capacity at school after their teacher education. The above assumptions give serious consequences for the design, method and analytical strategies to be adopted when planning for educating deaf learners and the teacher education programme.

In the first place, focus is put on the internal dimensions of the school as an environment. This is not to assume that the school is solely responsible for influencing the process of learning but that it is the departure point of interaction between the teacher and deaf learners. Secondly, rather than focusing solely on the school, attention is drawn to the interplay between what takes place within the school and within the teacher education that influences how academic and social participation is facilitated. Thirdly, given the complexity associated to soliciting the experiences and perspectives of teachers of the deaf, an in-depth qualitative analysis of the phenomena is required. The idea is to solicit information which can contribute to better conceptual understanding of what takes place within classrooms where there are deaf learners in order to inform teacher education.

1.4 Significance of the study

Uganda is one of the first countries in Sub-Saharan Africa to make a policy that recognizes deaf education and the use of sign language as one of the official language of communication (GoU, 1995). Uganda’s teacher education model has also attracted recognition and admiration in the region. However, there are critical concerns in the education system that keeps arising. Deaf education is not spared in this criticism and the experiences and perspectives of the teachers of the deaf should not be ignored. Teachers’ experiences and perspectives could be sought to help provide knowledge-based scientific evidence that should inform the teacher education policy and practice. There is substantial research from the western world on deaf education but very little from Uganda. However, information from western literature is gathered from situations which may not correspond to Ugandan situations and practices. This study seeks to contribute towards understanding the experiences and perspectives teachers of the deaf have in their endeavour to facilitate academic and social participation from a Ugandan perspective in order to inform teacher education.

Experiences and perspectives generated from this study could help to shed more light on how academic and social participation of deaf learners is being facilitated in Ugandan classroom. This study makes a contribution to a field that is not well researched in Uganda and yet one of the areas that has direct impact on the achievement of the Millennium
Development Goal, and Education for All with the aim of contributing to national development. The voices captured in this study should generate ideas that could inform teacher educators, policy makers, planners and programme designers of education for the deaf.

Practicing teachers of the deaf are gatekeepers of innovations and initiatives at the classroom level. Documenting accounts of their experiences and perspectives on the attempts being undertaken to facilitate academic and social participation should provoke other teachers of the deaf to rethink their practices. The results of this study should be useful to the Ministry of Education and Sports (MoE&S), educational institutions and organizations in the event that they decide to plan interventions to increase support for and implementation of the education for the deaf.

Education for the deaf is being practiced all over the world and teachers are in the forefront of facilitating academic and social participation. The experiences and perspectives of the teachers of the deaf reported in this study will be applicable beyond the context of Uganda and East Africa. By considering the knowledge and skills teachers have and need, other concerned educational planners and implementers can strategically rethink their education of the deaf programmes.

1.5 Organisation and structure of the dissertation

This dissertation comprises of seven chapters. Chapter one provides the background and motivation for the study, the main research question, research sub-questions, the significance of this study and preliminary clarification of some concepts. Chapter two provides a synopsis of the implications of deafness on the individual, social development, communication, cognitive development and on the family as a means of putting the education of the deaf and teacher education for the deaf into context. It also provides an account of policy provisions that support teacher education, special needs education and training, its challenges and development trends in the provision and training in education, special needs education and deaf education in Uganda. Finally chapter two highlights some challenges and interventions in the education of the deaf and teacher education for the deaf in Uganda.

Chapter three reviews related literature to teacher preparation in support of the education of the deaf. Emphasis is put on knowledge and skills necessary for facilitating academic and social participation and the importance of self-efficacy and belief in teaching

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6 Goal 2 “Achieve Universal Primary Education”
Target “Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling”
deaf learners. Activity system is presented in Chapter four as the theoretical framework that guided the dissertation. The Activity system theory is used in this dissertation because of its ability to analyse human interaction in social settings, in this case the school and the university. A school including a classroom or a university as a social setting has various interaction web that can best be understood by engaging an activity system.

Chapter five presents the methodology that guided the study. It starts by highlighting the philosophical assumptions and positioning of the dissertation and describes the design, population, sampling techniques, procedures and instruments used in the study. The chapter ends by explaining data analysis, establishment of validity and reliability and ethical consideration.

In Chapter six, results of the findings in relation to the research sub-questions that identified teachers’ experiences and perspectives are presented. The chapter ends by presenting excerpts from individual interviews, focus group discussion and observations. Chapter Seven discusses the results, bearing in mind Activity Systems as the theoretical framework explaining activities at school and university as the two activity settings. The chapter ends with a conclusion and implications of the study to teacher education, schools having deaf learners and for further research.

1.6 Preliminary clarification of some key concepts

Many terms used in the field of education, special needs education and the education of the deaf has been reason for discussion and confusion, not that they are necessarily controversial but that they keep changing in approach to avoid negative connotation, to accommodate innovations and to be in line with developments within policy and human rights provisions. In addition, the changing concepts and contexts make the field of special needs education and deaf education more politically and operationally charged, correct and acceptable. An attempt has been made to discuss some of them here in context.

To begin with, teacher education refers to the policies and procedures designed to equip teachers with the knowledge, attitudes, behaviours and skills they require to perform their tasks effectively in the school and classroom. Teacher education involves initial teacher training / education implying a pre-service course before entering the classroom as a fully responsible teacher. It also involves induction which refers to the process of providing training and support during the first few years of teaching or the first year in a particular school. Induction is a distinct phase in learning to teach by uncovering qualitative differences in the thinking and performance of teachers at different stages in their career (Ferman-Nemer,
2010). As teachers settle in the classroom, they engage in another aspect of teacher education commonly referred to as teacher development or continuing professional development (CPD). Continuous professional development is a “broad term that covers all forms of teachers’ professional learning, whether formal or informal, within school or out of school, self-directed or externally prescribed” (Conlon, 2004), that teachers undertake as a journey after their period of induction (Noble, 2011). In general terms, continuous professional development could be summed up as an in-service training process provided to practicing teachers.

There is however still a longstanding and on-going debate about the most appropriate term to describe teacher education. The original term teacher training seems to be losing ground to teacher education. The shift from teacher training to teacher education arise due to the fact that the activity of teaching does not only involve training staff to undertake relatively routine tasks, but preparing staff for a professional role as a reflective practitioner. In this dissertation, teacher education is used as a focus on training teachers to equip them with the required attitudes, attributes, knowledge and skills necessary to provide education to children with deafness.

**Education and training** is more understood by its aims and purpose than a distinct definition. For the purpose of this dissertation, education is considered from the perspective of knowledge and skills that are acquired to enable an individual think and deal with the reality of life while training is used to describe the acquisition of skills resulting from instruction.

**Special needs education** is an intervention bearing educational approaches and provisions that address a broader group of learners including those with disabilities. It has, in the recent past, substituted the term ‘special education’ which is associated with disability needs. Special needs education therefore emphasizes that, in addition to disabilities, other learning needs may call for adjustments in the school system, hence recognizing the existence of special needs in the regular classroom. Today, those learning needs (which also include disabilities), are considered to be simply ‘barriers to learning, development and participation’. In this dissertation, special needs education is considered as a provision that goes beyond what ordinary teacher education provides and advocates for the inclusion of educational and social needs of all learners. Inclusion in educational activities is referred to as inclusive education.

**Inclusive education** can be viewed as a positive description of efforts to involve children with special needs and disabilities in genuine and comprehensive ways of learning and in a total participatory life of schools. Inclusive education is a process of increasing
participation and decreasing exclusion from the culture, curricula and communities of local schools (Booth & Ainscow, 2002). It involves addressing learners’ needs within the mainstream school setting using all available resources to create opportunities for learning and preparing learners for life. The emphasis is on equality of access and opportunities to education, adjusting schools and systems, and changing them rather than trying to change the learners.

**Inclusion** in education involves the process of increasing access, meaningful participation and achievement of the students and reducing their exclusion from the cultures, curricular and communities of local schools (Booth & Ainscow, 2002). Crucial for all service providers and consumers is to perceive the fundamental nature of inclusion as a concept that will transform society into a ‘safe haven for all’ as different approaches to inclusion are influenced by regional, state and cultural contexts. Most important for this thesis is the fact that teacher education plays a crucial role in the development of a more *inclusive education for all*. It is viewed from the point that it allows deaf learners to actively participate in academic and social life.

**Participation** is a concept that involves informing, communicating, having and taking part in something. In special needs education, participation is considered as a process and nature of involvement for a child with special needs in the ordinary class or school activities. Sampaio & Kurigant (2009) argues that participation involves taking part in something that is being effectively present and committed. According to Stinson and Antia (1999) participation is a basis for which children develop close relationships with their peers leading to the facilitation of learning. The interpersonal relationship that emerges as a lever in the process of participation leads to inclusion. For the purpose of this study participation is viewed from the perspective of engagement and involvement of deaf learners in academic and social learning and development for inclusion.

**Academic participation** focuses on taking effective part in the working group. In the case of this study, it is how deaf learners work together among themselves and with others to acquire the knowledge and skills necessary for an independent life. Academic participation results from academic inclusion. Academic inclusion has two components viz academic performance and classroom participation. According to Stinson & Antia (1999) academic performance can be established through the classroom academic status and normative academic status while classroom participation refers to the students’ ability to be actively involved in classroom activities and discussions.
Social Participation in this study refers to active involvement in social activities as a contribution to knowledge, skills and values for personal development. The benefit of social participation is inclusion and opportunities to interact with peers (Katz & Mirenda, 2002). For the purpose of this study social participation should transform the life of deaf individuals as a change from the status quo to a pragmatic human being able to communicate wishes and dislikes.

According to Marschark (2007), a complete or precise description of deaf people is difficult as they vary widely. He argues that the lack of precision is contributed by whether their hearing loss is congenital (present at birth) or adventitious (acquired), acute (sudden) or progressive (increasing over time), caused by medical or genetic factors, by whether they are born into deaf or hearing families, and by the quality and type of education they receive. A deaf Person is thus “one whose hearing is disabled to an extent that precludes the understanding of speech through the ear alone, with or without the use of a hearing aid” (D. Moores, 2001). In specific terms, a deaf person as one who manifest severe to profound hearing loss that ranges between 71dB to 91dB and beyond and commonly use sign language as the major means of communication (Ndurumo, 1997). For the purpose of this thesis, all learners who cannot hear/speak and are using sign language as the main means of communication and subscribe to deaf culture are considered deaf.

Knowledge refers to facts, information, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject (Oxford University Press, 2012). According to Sveiby (1997) knowledge is the capacity to act. Knowledge provides an orderliness to our lives which allows us to conceptualize goals, to anticipate and perceive events, and to respond in accordance with the changing needs, purposes and desires (Hunt, 2003). It is through knowledge that we acquire the skill to undertake our daily actions.

Skill is associated with many meanings, numerous synonyms such as ability, competence, aptitude and talent, and varied imprecise translations in other languages (Green, 2011). The Oxford University Press (2012) refers to skills as the ability to do something well especially because of training and practice. Skill is the ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carry out complex activities. Green (2011) summarises skill as a personal quality with three key features namely productive- using skill is productive of value; expandable- skills are enhanced by training and development and social - skills are socially determined. The key concept related to skill is the ability to perform an activity in a manner that is satisfactory based on training and experience.
2. Chapter Two: Contextualizing deafness, deaf education and teacher education for the deaf in Uganda

2.1 Introduction

This chapter provides a synopsis of the implications of deafness on the individual deaf person, on the family and on teaching. It further discusses the contextual development that deaf education has taken in Uganda, by first presenting the policies and legislations that has supported the establishment of deaf education. In discussing the policies, distinction is made on how they have contributed to teaching children with deafness and supporting teacher education for the deaf.

The chapter further discusses development trends in the provision of deaf education and training as part and partial of the overall education system in Uganda. For the purpose of this dissertation, deaf education implies the acquisition of knowledge and skills necessary for deaf learners to become critical thinkers who are able to live and deal with real life situations. Provisions in teacher education and training\(^7\) are chronologically presented to demonstrate how it has supported deaf education. The chapter ends with presenting challenges in education with a focus on deaf education and attempts that have been made to intervene in deaf education in Uganda.

2.2 Implications of deafness

The field of deaf education is better known for its controversies than its successes (Easterbrooks, 2001). The controversies surround the pathological and socio-linguistic models of service provision. Other controversies are concerned with the most appropriate communication that should be used with children with deafness and the method best suited to facilitate academic and social participation of deaf learners. The sad reality is that these controversies have persisted for so long that they have come to be accepted as part of the operational framework in deaf education. To fundamentally understand deaf education, a critical review of the two models (pathological and socio-linguistic models), factors surrounding communication, language and teaching methodology is necessary, as these factors influence the attitudes towards people who are deaf and the nature of education and support learners with deafness ought to get. In discussing deafness and deaf people, what cannot be ignored is the context of disability and language, recognition of deaf culture, deaf identity, the influence of the family and school; the acknowledgement of diversity in the

\(^7\) For clear concept of education and training ref to 1.6
population and the effect of technology (Jones, 2002; Leigh, 2009) on the lives of deaf people.

A debate which continues to reign among professionals, scholars, activists and legislators is whether deafness is a disability or a culture. While one school of thought views deafness as a physical impairment, associated with such disabilities as blindness, cognitive and motor impairments, others argue that deafness is not a disability but a cultural trait of linguistic minority (Brokop & Persall, 2009; Jones, 2002). Arguing for deafness as a physical disability is to look at deafness from a pathological or medical model. The proponents of a medical or pathological model of deafness consider deafness as a neurological or structural anomaly in the ear or the auditory centre of the brain that can be lessened through rehabilitating the organ of the ear and using technology (Jones, 2002). They advocate for the use of hearing aids, cochlea implant and possibly through training deaf people to speak and benefit from lip/speech reading. Those who view deafness as a cultural trait subscribe to a socio-linguistic model. Proponents of the socio-linguistic model recognize deaf people as a community of individuals who can structure their own destiny and ameliorate the oppressive nature of the institutions in which they live (Bennet & LeCompte, 1990). Socio-linguists look at deafness as a culture with its own language – sign language and consider the inability to hear as an integral part of the day-to-day activity (Jones, 2002).

2.2.1 Implication of deafness on the individual

Deafness is an invisible impairment that impacts on an individual in many ways. It impedes the access to oral information and communication, and greatly influences an individual’s social, physical, linguistic, psychological and educational development (K. P. Meadow, 2005; NMIT, 2010). The heterogeneous state of children with deafness (variation in hearing loss, family structure, type of school being attended, general exposure, etc) greatly impact on their linguistic, social and academic participation and development. To understand these implications on the child with deafness, it is prudent to contextually explore the experiences children with deafness undergo in school. The continuous interplay between the characteristics of the individual child and environmental factors (settings and family) helps to understand the development of a child with deafness (Mason & Mason, 2007). To put it into perspective, reference will be made to experiences from research on child development.

Implication of deafness on social development

Children with deafness growing up among hearing communities where oral communication is the main means of communication will typically experience delayed social
development partly due to delayed language acquisition, failure to be exposed to opportunities for interaction and communication and lack of stimulation (Habber, 2007; Wedell-Monnig & Lumley, 1980). This delay may be compounded by limited attachment that arises between the child with deafness and the parent or caregiver. Attachment in this case is the strong affectionate tie to special people that give us comfort during the time of stress (Mason & Mason, 2007). Attachment develops overtime depending on the reciprocal relationship that exists between the child and the adult caregiver. Young deaf persons have to develop this relationship through touch, eye contact and the different visual inputs dictating events in the environment. Early visual communication, for example, do exist between the child with deafness and the hearing parent (Wedell-Monnig & Lumley, 1980). Wedell-Monnig & Lumley argue that this visual and visionary stimulation, smiles and frowns by the child with deafness frequently confuse hearing parents that the child is hearing and yet it is a common symbolic language in infants. As the child grows these actions persist, worrying parents as it fails to develop language skills. The restriction in development often generates social distance between the parents and the child.

The next and most intriguing challenge is at school. As the child joins and settles at school, challenges associated with social participation increase. Deaf learners tend to have difficulties establishing their independence (Mason & Mason, 2007). This lack of independence occurs in part due to the overprotection and restriction that parents exert on their child with deafness while at home. The restriction parents and caregivers provide may be attributed to the additional time and patience needed to communicate what is expected, required and necessary for the child to engage and accomplished an activity. The way the social interaction between the child with deafness, the teacher and the peers is managed has profound effect on their academic success (Standley, 2005). It is at school that the child with deafness has to expand on their receptive and expressive sign language and eventually the written form of communication to facilitate their social relation with others. The family and the school have the obligation to socially nurture and linguistically support the child with deafness to ensure that the child with deafness copes with the school environment.

**Implication of deafness on communication and language**

Communication is a means through which human relations develop and exists. Deafness implies difficulties in communication which in turn limit he child’s participation. The primary impact of deafness is loss of communication (Smith & Allman, 2010). The communication and language problems often arise from the delay in identification of hearing loss and the lack of intensive language instruction that could be provided to the child and family at an early
The significant language delay experienced by many children with deafness from hearing families is detrimental to their educational success (Standley, 2005). Communication is among the possible hindrance of the quality of life and education (Miller, 1993). This however does not mean that children with deafness fail to communicate. They develop systems to reach out to others and they develop relationships and systems of language. Normal linguistic development emerges out of the typical and almost universal interactions between mothers and their infants (Mason & Mason, 2007). This process continues and to a hearing child a natural reciprocal interplay follows. To a child with deafness this process is impossible. Mason & Mason (2007) argue that children with deafness have to depend greatly on tactile sensation, direct contact and visual input.

Generally, the basic impoverishment of deafness is not the lack of hearing parse but the inability to develop language. This lack of language has adverse implications on the psychological and social relationship between the child and the environment (Meadow, 2005) yet ‘easy communication between deaf and hearing children is important for friendship formation and for successful learning in class’ (Herman & Morgan, 2011). Moreover, there is continuing controversy over the best strategies to promote communication and linguistic competencies in children who are unable to process spoken language as efficiently as their normally hearing counterparts. A number of factors could be considered as there may not be any single best approach. As it is always the case, many children with deafness are born to hearing families with limited or no experience in sign language and/or any other visual communication input to the child with deafness’ language.

As the child with deafness grows and gets exposed to a number of languages – speech, signed language and signed systems (gestures), they get more confused and their life become more complicated. This deficiency in the environment influences the social, educational and intellectual functioning of a child with deafness. It directly affects the ability of the child with deafness to interpret general social clues and controversies influencing how they participate academically and socially. As the gap in this social relationship widens, deaf learners lose interest in many cases making them to isolate themselves or feel isolated.

Very often children with deafness start school without adequate communication and language skills that make them isolated, particularly among the majority of hearing learners. This challenge may arise even within their minority group where other children with deafness have not learnt sign language or may have only learnt minimal sign language skills (Keating & Mirus, 2003). As children with deafness settle at school, they encounter a ‘minimum of two languages or a variety of languages used for communication, instruction and
This language state of affair may not only limit the academic pursuit but also the incidental learning of the child with deafness. Incidental learning is the process where information is learned by virtue of passive exposure to events witnessed or overheard (Calderon & Greenberg, 2003; Mason & Mason, 2007). This lack of incidental learning may limit the opportunity of the child with deafness to learn about social norms and how to respond to others. Other influences are how their response affects others and how others’ response affects them. The complexity in language delay may often be due to the disruption in the language acquisition process, inadequate linguistic input, incomplete linguistic systems or exposure to non-linguistic inputs (Standley, 2005).

Sign language may be preferred by the family; however, the child with deafness may randomly, inconsistently and irregularly get exposed to sign language. If this child is from a hearing family, growing up in this bilingual/bicultural environment makes the child with deafness more confused. Growing up in a family where one or both parents are deaf eases the sign language acquisition. In families of hearing parents, a comprehensive family-focused early intervention\(^8\) that involves not only the child with deafness but the parents and caregivers\(^9\) should be strategically and aggressively implemented.

To Standley (2005) a complete linguistic system at an earliest possible opportunity to deaf learners should be provided by teachers of the deaf and interpreters. Special attention to language should be made if children with deafness are to be fully literate in either English or sign language. It is the language limitation and not the child with deafness’s intellect that contribute to the lack of academic participation (M. Marschark, 2007). Marschark notes that children with deafness of hearing parents, as compared to hearing children, enter school already with a language disadvantage regardless of whether they use spoken language or sign language or whether or not they have had the benefit of early intervention services or cochlea implant. What professionals and parents should be concerned with is to ensure that the child with deafness is supported to develop early language and communication skills (Mukuria & Eleweke, 2010). They advise that professionals should provide unbiased information to parents to enable them make the best choice of communication method that their child with deafness should learn and adopt.

\(^8\) The concept of early intervention is being used here to refer to the support that would be given to the child with deafness immediately the hearing loss is identified no matter the age.

\(^9\) A caregiver in this case is that other person who spends most of the time with the child. In Uganda it might be the sibling, grandparent, a relative or a house helper employed in the family.
Implication of deafness on cognitive development

Cognitive development implies ‘changes in a person’s intellectual abilities, including attention, memory, academic and everyday knowledge, problem solving, imagination, creativity, and language’ (Mason & Mason, 2007). Cognitive development of a child with deafness is to a great extent influenced by the contextual experiences that children with deafness get exposed to from infancy to adolescence. Cognitive development is closely related to communication and language proficiency. According to Standley (2005) a deaf student needs to ‘develop communicative competence and literacy in their first language prior to acquiring literacy in their second language’. Lack of this signacy may cause deaf learners to lag behind. Teacher factor could also account for a ‘considerable variability of deaf students’ achievement across all levels of learning’ (Garberoglio, Gobble, & Cawthon, 2012).

Cognitive development has adverse effect on the child with deafness’ academic achievement particularly by the fact that deaf learners are reported to lag behind their hearing peers across the board (S. Powers, 2003). In specific terms other scholars reported studies that focus on problems deaf learners encounter in reading (Conrad, 1979) and mathematics (Kluwin & Moores, 1989). The reported under achievement in reading and mathematics should be a concern as reading and mathematics have a relationship to academic achievement and development. Reading, for example, is one avenue through which children with deafness can have access to academic and social content, and engage in meaningful communication with peers and other members of the literate community. Standley (2005) contends that deaf students should have comprehensive access to academic content through a complete linguistic system.

Recognising that deaf learners come from culturally and structurally diverse families, their cognitive abilities should be identified as early as possible to help in planning for early intervention. The quality and extent of the intervention will depend on the cognitive ability and other development milestones of the child. The engagement of deaf learners and the quality and quantity of their academic participation provide more opportunities for cognitive development, satisfaction with the entire experience and increased rates of student retention (A.W. Astin, 1984; A. W Astin, 1999). For a student to be deeply involved in the learning process, she or he must invest energy in academic relationships and social activities. The amount of energy a student invests in these types of activities will depend on the student's interest, goals and other commitments.
2.2.2 Implication of deafness on the family

Deafness does not only affect the person but is equally a concern to the parent, professionals and other people who work with him/her (Eron, 2011; Knight P & Swanwich, 1999). The realization of deafness in a child is stressful and shocking to a family who has had little or no contact with deaf persons and knows little about deafness (Feher-Prout, 1996). The situation varies greatly from families where there is a deaf adult to families of hearing parents. Most deaf families tend to receive the child with joy and pleasure, as they will be able to share the language and culture (Knight P & Swanwich, 1999). In general terms, families of newly diagnosed children with deafness experience a changed world as a result of the diagnosis which is more than just the absence of hearing (Mason & Mason, 2007). At this stage grieving parents tend to seek information and cure from all sources. In doing so, parents of children with deafness get swamped with ideas including how to get amplification devices with the assumption that it may help their child to hear and speak. Others need information relate to sign language, school placements and legal issues, all of which demand comprehension for the affected parents to make appropriate and critical decisions about the child with deafness's future (K. Meadow, 1980). In doing so, many parents and families in most cases develop a feeling of isolation and not getting enough support, care, education and training (Feher-Prout, 1996; WorldVision, 2008).

These reactions may affect the role parents play in contributing to the child with deafness’ education, communication, academic and social participation. Parents tend to look around to find ‘other parents of children who are deaf in order to validate and manage their feelings towards their child’s deafness’ (Feher-Prout, 1996). The effect may vary from person to person and family to family depending on when the hearing impairment occurred, when it was identified and how immediate an intervention is provided. It is at this point in time that families need professionals who understand and appreciate their situation and who are able to initiate and implement a family-focused intervention. How the family responds to the hearing loss greatly impacts on the intellectual and social functioning of the child with deafness. The impact in turn influences the level of maturity and inter-dependence the child with deafness develops.

In reality, two factors (stress – grief and denial and coping - acceptance and adjustment) are commonly advanced to explain the response family members demonstrate towards the child with deafness. Considering that 90% of severe to profound children with deafness need specific support and education, it is crucial that they receive appropriate interventions. In Uganda the Community Based Rehabilitation (CBR) is a family-focused intervention that involves teachers, social workers, medical staff, deaf associations and interpreters collaborating to bring up a child with deafness.

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10In Uganda the Community Based Rehabilitation (CBR) is a family-focused intervention that involves teachers, social workers, medical staff, deaf associations and interpreters collaborating to bring up a child with deafness.
deafness are normally born to hearing families (D. F. Moores, 1987; Salend, 2001), families have to go through stages of grief—shock, anger, denial and helplessness before accepting to cope with the deafness. Families having children with deafness, realizing its irreversibility, reach a point when they have to decide on how to ‘cope with the emotions associated with the grief, understand information on deafness and its implications, and make critical decisions regarding communication methods and educational interventions’ (Feher-Prout, 1996). This is often a similar experience in a family where one of the parents is deaf. For the hearing family, the reaction is typically, and understandably, negative, emotional and very strong.

The pattern of response is associated to the family relationships and support services. Positive responses are associated to positive family relationship and negative reactions with negative family relationships (Feher-Prout, 1996). A basic understanding of what deafness is, its cause, the social and psychological effect and possible exposure to a network of parents and service providers may prove useful in determining the duration of time families take to adopt a coping strategy. However, some hearing parents, often not understanding their children with deafness, give the school full responsibility of personal development and education of the child. They tend to prefer to place the child in a boarding school and have limited contact with the child only during holidays. The tendency to have the child fully placed at school mostly by hearing parents may be in parts due to their attitudes or communication and language problems.

The perception of the family about the hearing loss itself, of its implications for the child and family and of the resources available to the family is another critical factor affecting family adaptation (Feher-Prout, 1996). Addressing such factors therefore requires looking at issues that concern the child, family and the nature of support that is availed. The influence that the home will have in the education of the child with deafness must form the backbone for moulding the child educationally, socially and intellectually.

2.3 Policy provisions and challenges in support of special needs, inclusive education and teacher training in Uganda

Education is a fundamental human right as well as a catalyst for economic growth and human development (WorldBank, 1993). In Uganda, education provisions are governed by policies as outlined in the Constitution, directives, principles, statues and Acts of Parliament. The government of Uganda has since her independence, put in place enabling policies and legislations to support education guided by recommendations from different commissions,
committees and bodies that were instituted to review the education system. Remarkable among them was the Castle’s Education Commission of 1963 that examined the content and structure of education and recommended adaptation to suit a free Uganda. It should be appreciated that the recommendations were general with little or possibly no specific reference made about deaf education at the time.

Policy provisions that support disability, special needs education, deaf education and inclusive education in Uganda can be traced back to the 1950s. This was when Sir Andrew Cohen, the then British Governor of the Uganda Protectorate, who had a blind relative, impressed it on Parliament to legislate the education of the blind (Okech, 1993). This Act of Parliament - Uganda Foundation for the Blind (UFB) Ordinance of 1952 provided for the education and welfare of the blind and remained a classical document that opened avenues for the establishment of schools and units for children with disabilities and special needs throughout the country (Matovu, 1994). Since then many education policies and legislations have been in place with little mention of disability, special needs education and deaf education. Today there is no specific policy on deaf education and training. Unless otherwise stated, most of the policies cited are general and intuitively cover provisions for deaf education and training. For the purpose of this dissertation, deaf education refers to the process of instilling in deaf learners the knowledge, skills, values and attitudes for independent living and dealing with the reality. Training is used in this study to refer to the specific knowledge and skills that teachers of the deaf acquire as a result of instruction to enable them facilitate academic and social participation of deaf learners for independent living.

The latest policy provision emanate from the Kajubi Education Commission (MoE&S, 1989) the results of which culminated into the Government White Paper on Education. The Government White Paper on Education (MoE&S, 1992) is among the latest education policy document from which developments, provisions and other education reforms emanate. The Government White Paper is the basis for Universal Primary Education (UPE), Universal Secondary Education (USE) and Universal Post-primary Education and Training (UPPET) which aim at overcoming barriers to learning, participation and development. It recognizes and spelt out government commitment to provide compulsory primary education for all learners irrespective of gender, ethnic origin, social group and place of birth (MoE&S, 1992). Marginalized groups such as women, girls, people with disabilities and learning difficulties, and other children living under difficult circumstances due to poverty, violence, wars, lack of basic education and linguistic issues are given particular consideration (Okot, Eron, & Kutosi, 2004).
For these policies to be effective, they had to be supported by laws, legislations, implementation plans, guidelines and resources. The commitment in the Government White Paper on Education is clearly captured in a series of policy and legal documents. These policies and legislations may be categorized into two. The first group of policies and legislations are specific for persons with disabilities. These policies include: the National Council for Disability Act (GoU, 2003) which aims at promoting the rights of persons with disability as set in the international conventions and legal instruments, the constitution and other laws and for other connected matters. Others include the Persons with Disabilities Act (GoU, 2006b) which provides a comprehensive legal protection for persons with disabilities in accordance with Art 32 and 35 of the constitution, and which made provision for the elimination of all forms of discrimination. The National Policy on Disability in Uganda (GoU, 2006a) provides for a human rights-based framework for responding to the needs of persons with disabilities.

The second category is policies and laws with a provision about disability. This category of policies include the Constitution of the Republic of Uganda (GoU, 1995) particularly objectives xvi (recognition of the rights of persons with disabilities) and xxiv – iii (development of sign language for the deaf). Article 21 warns against discrimination, Art 35 (i) provides for their respect and human dignity while (ii) demands parliament to enact appropriate laws and the electoral rights provided for in Art 59. The Children Act (GoU, 1997a) sec 10 - provides for early assessment, treatment and rehabilitation and sec 11 - demands local governments to keep a register of children with disabilities and to provide them with opportunities for development to their full potential. The right to active participation of persons with disabilities is well documented in the Local Government Act (GoU, 1997b) art 11 (d). It demands the composition of the council to have ‘two councillors with disabilities, one of whom shall be a female, representing persons with disabilities (PWD)’. These representatives are to oversee and advance the needs of children and adults with disabilities and special educational needs. The Movement Act (GoU, 1997c) backs up this right and allows for the representation of Persons with Disabilities at all levels of political and decision making organs including the local government structures. At lower levels Persons with Disabilities are represented by councillors for Persons with Disabilities and at the national level, there are 5 Members of Parliament who represent their interest. Persons with Disabilities are also represented on the District Service Commission and District Tender Board (GoU, 1997b). These representations have given Persons with Disabilities including
deaf persons the opportunity and power to actively participate and influence decisions at all levels resulting in the enactment of a number of disability friendly legislation.

Other statutory documents include the Rules of Procedure for the Parliament of Uganda (GoU, 1996), the Uganda Communication Act (GoU, 1997d), the Land Act (GoU, 1998a), Equal Opportunity Commissions Act (GoU, 2007), The Traffic and Road Safety Act (GoU, 1998b) and the Uganda People’s Defence Forces Act (GoU, 2005).

Similarly, the Universal Primary Education (UPE) Policy (MoE&S, 1997) ensured that the education of children with disabilities including children with deafness was implemented. The strategic priorities of the Ministry of Education and Sports contained in the Education Strategic Investment Plan (ESIP, 1999-2003) considered access and equality in education, improvement in quality, delivery of education services and capacity development as a key component to achieving full participation of all children and young people. To ensure that human resource are trained and services are provided for at all level, the Universities and Other Tertiary Institutions Act (GoU, 2001) provided for ‘two persons with disabilities elected by members of staff who are persons with disabilities and another by national organization of PWD’ to propose, advance, monitor progress and ensure that policies, laws programmes, activities, practices, traditions and cultures are in conformity with the needs of PWDs. A policy for the educationally disadvantaged children was also put in place and provided among other things for basic education for children who are experiencing barriers to learning and includes the Complementary Opportunities for Primary Education (COPE)\(^{11}\), Alternative Basic education for Karamoja (ABEK)\(^{12}\) and Basic Education for the Urban Poor Areas (BEUPA)\(^{13}\) programmes (MoE&S., 2004).

The latest policy provision to be put in place is the Policy on Special Needs and Inclusive Education (MoE&S, 2011) which aims at addressing concerns of access, quality and equity in education for learners with disabilities, special needs among who are children with deafness. The policy on Special Needs and Inclusive Education (MoE&S, 2011) aims at streamlining special needs and inclusive education services: teacher training, recruitment, curriculum adaptation, learner identification, assessment, intervention and collaboration among partners. It recognizes sign language as a curriculum language of instruction for deaf

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\(^{11}\) COPE – was a programme initiated by UNICEF Uganda to increase access of disadvantaged children who are not able to attend formal schooling most of whom are girls

\(^{12}\) BEUPA- is a provision of non-formal basic education for disadvantaged children and youth in the poor urban areas of Uganda. Learners attend flexible training programmes for literacy, numeracy with integrated production and life skills.

\(^{13}\) ABEK- is an education initiative designed to benefit children in the Karamoja region who are not able to access formal primary education due to the semi-nomadic lifestyle of their parents and the community at large.
learners and proposes functional assessment as the preferred intervention strategy for learners with special needs in education alongside continuous and competence based assessment.

The successful implementation of these well outlined policies necessitates state commitment and appropriation of the needed funds by government. It calls for the commitment of the technical and professional team, the willingness, awareness and engagement of the different stakeholders.

2.3.1 Policy Challenges in Uganda

Although the existing policies are supposed to facilitate the education and training of persons with disabilities and their teachers, many challenges prevail. Evidence shows that some committees that should implement these policies cannot be fully constituted due to lack of qualified persons with disabilities. For example, the Rukungiri District Service Commission which is supposed to oversee recruitment and deployment of staff to provide the necessary services, could not be fully constituted due to lack of a suitably qualified person with disability to fill the slot (Ahimbisibwe, 2012). This case situation which could be experienced in many districts\(^{14}\), may affect the employment, deployment and retention of the professionals who should teach, interpret and provide other needed services for children and adults with disabilities, special educational needs and indeed deafness.

Studies conducted in Uganda indicate that there is lack of sufficient numbers of trained teachers which could affect policy implementation and the inclusion of all children with special needs and of course deafness (Kristensen, Omagor-Loican, Onen, & Okot, 2006). The decentralized government system in Uganda means that Local Government Authorities are mandated to recruit personnel based on the district’s needs. Yet in some districts the attitude and perception of the authorities are not in support of special needs education and do not prioritise special needs education and disability as crucial for national development. The presence of these attitudes and perceptions and without any representative of persons with disabilities to advance for the need of children with special needs, their teachers and other personnel, the recruitment of trained teachers of the deaf, their deployment and other forms of service provision could be affected. The attitudes and perceptions may also affect the support teachers should get, the level of their morale and the quality of interventions teachers would give to children with disabilities, special needs education including those with deafness.

\(^{14}\) Uganda has a total of 112 districts, most of which are curved out of previously well-established districts with minimal infrastructural and organisational development.
Moreover evidence indicates that there is low direct government expenditure on primary education which falls below the needs of the sector affecting policy implementation (Omagor-Loican, Atim, Okot, Kiryahika, & Eron, 2002). The allocation of these minimal resources to the sector may not be rational and proportional to benefit deaf learners, leaving high private costs on parents in relation to providing scholastic materials, uniforms, lunch, transport and additional fees to supplement teachers’ welfare especially in boarding facilities that accommodate most deaf learners.

Omagor-Loican, et al (2002) adds that there are negative attitudes and limited awareness of the content in the policy documents by the majority of the people and children themselves. The publication of these policies in English and in few local languages and the limited advocacy and dissemination level also affect its implementation. Uganda, having a broad-based population pyramid, exerts pressure on the limited resources available for the basic services like education which may leave children with deafness to be among those grossly affected. Teachers of the deaf who are faced with the expanded role of teaching, training, sensitising and advocating for the rights of children with deafness may also be affected the underfunding in the education sector. This may in turn impact on how teacher education implements its obligation to prepare graduates with requisite knowledge and skills to achieve this expanded role.

2.4 Development and trend in education provision in support of deaf learners in Uganda

This section gives account of deaf education provisions in Uganda. It starts by presenting general education showing the place of deaf education within the overall education system. It further discusses teacher education for the deaf, challenges and intervention strategies being adopted.

2.4.1 Provision for deaf education within the general education system

Uganda like many African countries had its indigenous forms of education with informal school which prepared its young people for artistic skills for life. Teachers of indigenous education were elders and artisans found within the community. When formal education was introduced by missionaries in 1877, modelled along the British structure, classification according to grades and academic hierarchy started to be visibly recognised.
The provisions for deaf education in Uganda followed the formal system of education\(^\text{15}\). Within the formal education provision, there are opportunities for professional and skill training in other tertiary institutions at various stages after primary, ordinary level or advanced level of education lasting at least two years\(^\text{16}\).

Candidates for training as teachers of the deaf are practicing teachers who have had the initial teacher education which is an example of the formal education provision. Initial teacher education is provided in the Primary Teachers Colleges (PTCs)\(^\text{17}\) and attracts qualified candidates from the ordinary level of education. Having no prior training in teacher education, these candidates are introduced to theoretical and practical knowledge and skills necessary to become a professional and certified teacher. The PTC curriculum\(^\text{18}\) consist of subject matter domain: mathematics education, science education, social studies and cultural education subjects; professional studies: foundation of education, special needs education and instructional materials and practicum – school practice and child study (Aguti, 2003). Quality assurance\(^\text{19}\) in both government and private teachers’ colleges is a designate responsibility of Kyambogo University. The Ministry of Education and Sports provide policy guidelines, funds and is the overall supervisor.

A few written accounts of the education of deaf people within the formal education system exist. Many factors may account for this lack of documentary evidence. It might probably be due to the fact that deaf learners sailed through unnoticed as there was no structured system for examining deaf learners. Deaf learners in special primary schools prior to 1997\(^\text{20}\) had no special provision when sitting national examinations – the Primary Leaving Examinations (PLE). The lack of documentary evidence might also have been due to a wide array of people who were involved in the provision of services for deaf people with their specific interest, conflicting ideologies, myths and definitions. What is particularly striking is that the available reports are accounts of hearing practitioners with a particular stance. There is limited systematic investigation that pulls together and critically evaluates the evidence that exists in relation to formal education of children with deafness in Uganda. The fact that deaf

\[^{15}\text{Formal education in Uganda has five main levels: pre-primary level (3 years), primary level (7 years), lower secondary – ordinary level (4 years), upper secondary – advanced level (2 years) and university education (3-5 years depending on the programme.}\]

\[^{16}\text{For more information of how it is structured see Appendix 2}\]

\[^{17}\text{For summary of Primary Teacher Education curriculum see Appendix 7}\]

\[^{18}\text{For summary of PTC curriculum see Appendix 7}\]

\[^{19}\text{Theoretical and practical examinations (school practice) and award}\]

\[^{20}\text{From 1997, the Uganda National Examinations Board (UNEB) started to give special provisions to candidates with special needs in education which included extra time and a support staff to help them during examinations.}\]
education history has been characterized by private providers may be another reason for lack of documentation.

2.4.2 Provision of education of the deaf in Uganda

When considering the developments and trends in the provision of deaf education in Uganda attention must first of all be focused on the traditional attitudes, myths and customs of the Ugandan diverse nationalities. Traditionally, illness and handicap were thought of as being caused by witches, ancestral spirits or malevolent gods who were offended and become angry (Matovu, 1994). Deafness, for example, was equated with stupidity and dumbness. The focus was on philanthropy and natural aid to keep deaf people going. According to Matovu (1994) this moral philosophy, which is the oldest, resulted in general social rejection and ostracism that generated a feeling of self-hatred, dependency and hopelessness.

Although some communities in Uganda sympathised with and recognized deaf people, their overprotection limited the opportunities of children with deafness to education and independence. Children with deafness were in most cases trained and used as a source of manual labour as well as income through begging on streets and in villages (Matovu, 1994). These negative orientations ultimately generated social distance and relationship problems between deaf persons, their family and the community. Most children with deafness were deprived of conducive, child-friendly environment in their earliest years to learn, participate and develop. They experienced emotional and social deprivation, neglect and rejection that limited their participation and interaction with peers and escalated their exclusion from community activities (Eron, 2011). This misendeavour was a prime cause for deaf persons constituting part of the most illiterate and poorest of the poor in Uganda.

The absence of easily accessible early primary and secondary preventive and intervention services prior to 1992 contributed to an increase in the incidences of deafness. There was limited pre-natal, neo-natal, peri-natal and post-natal parenting support. There was also lack of health education; lack of support for prospective mothers, difficulty related to delivery and lack of protection from preventable childhood infectious diseases. Traditional harmful practices, malnutrition, accidents, civil strife, drought, famine and poverty greatly impacted the prevalence of infant and adult deafness in Uganda. The absence of accurate data on deafness, other disabilities and special needs in education affected planning and service

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21 In 1992, a decentralized Special Needs Education/Educational assessment and Resource Services (SNE/EARS) programme was introduced in Uganda and contributed greatly in identification, assessment, referral and placement of children with disabilities and other special educational needs. It also carried out a country-wide in-service training of teachers in collaboration with Uganda National Institute of Special Education (UNISE)
provision. Generally speaking, it could be argued that the poor quality of sources of information about deaf education in Uganda originated from lack of coordination, awareness, negative attitudes and political will. The question was whether the chronically handicapped should be helped at all, when there were so many able-bodied children lacking important facilities of health, education, jobs and others (Matovu, 1994). A more related question was as to why the oral histories of provisions and instructions given to children with deafness could not be documented.

It could further be argued that the nature of education provision for deaf learners reflected the social, cultural, political and economic trend in the history of Uganda. It followed though in many ways, the same sequence like in many industrialised and developing countries. The available information about education and other services for deaf persons reports on how an ENT surgeon, Dr. Peter Ronalds and senior civil servants in Uganda organized themselves to form an association that provided services for the large number of deaf clients flocking the clinic at Mulago – Uganda’s referral hospital (Matovu, 1994). The association– the Uganda Society for the Deaf (USD) launched in 1958 marked the beginning of the provision of education for the deaf (Eron, 2011; Matovu, 1994; Okot, 1992). Through the efforts of the Uganda Society for the Deaf, schools for the deaf were established in Buganda at Mengo, Kampala in 1964 and in Teso at Ngora in 1969. Interested teachers were mobilized to start the education of children with deafness and these teachers22 were trained mainly abroad23 to be able to work with children with deafness already placed in schools.

Deaf education expanded when in 1961 the Nuffield Trust sent a delegation to assess the magnitude of the handicap of hearing (Matovu, 1994). The delegation recommendations for Uganda were among other things that:

i. The Ear Nose and Throat (ENT) department at Mulago hospital carry out a pilot survey to determine the incidence of hearing impairment in children,

ii. The achievement of the Uganda Society for the Deaf should be beefed up by giving it more funds to intensify its activities, and that,

iii. Suitably experienced teachers should be groomed and sent to the UK for further training.

22 Some of the first teachers include
   - Mrs. Julia Lule, a mother of two children with deafness
   - Mr. Ivan M. K. Matovu who become the first head of special education department at ITEK
   - Mr. Sandorino Nyang who was a head teacher at Ngora School for the Deaf

23 Some of the trainings were conducted in the United Kingdom, Australia, Malawi and Norway. Those trained formed the core team of teacher educators at ITEK, UNISE and later Kyambogo University. Others took up management roles at the Ministry of Education and Sports and the decentralised programmes at the districts.
This last recommendation strengthened the initiatives towards teacher education for the deaf in Uganda. The result of the recommendation culminated in expanding training for teacher educators and the establishment of many provisions for children with deafness in special schools, units and mainstream schools.

A comprehensive study was later carried out by UNESCO in 1987 (Karugu, 1988) that recommended the establishment of teacher education for special needs education teachers at the Institute of Teacher Education Kyambogo (ITEK). The report outlined how the training should progress, the management and administration structure at the national level and the immediate equipment needed. The inaugural national mass training of special needs education teachers at ITEK was started in 1988 in four main areas: mental retardation, physical handicapped, deaf and blind (Karugu, 1988). The Institute of Teacher Education Kyambogo (ITEK) was identified as the most suitable venue for training teachers in special needs education because of its mandate by the Act of Parliament to become a centre for education of teacher training and coordination of teacher education in the country (Adupa & Mulindwa, 1998). The UNESCO report (Karugu, 1988) also recommended setting aside two scholarships each year by the Government of Uganda for further training in the area of special education and to approach NGOs to award scholarships for training teachers in special needs education. The report outlined how special needs education training should be organized from certificate to graduate level. Potential teacher educators were identified and sponsored for training aboard to establish and strengthen the special needs education and inclusive education training, research and outreach programmes for Uganda. Deaf education was strengthened after the Kajubi Report on Education for National Integration and Development (MoE&S, 1989), the recommendations of which culminated into the Government White Paper on Education24.

Today there are many schools scattered all over the country providing education to deaf learners (Appendix 10) and many more deaf learners are placed or are studying in inclusive classrooms. Available statistical data reports an increasing, promising and progressive enrolment of deaf learners in the primary (see appendix 6), secondary and tertiary schools. There is however conflicting data on the population of deaf people in the country. While the official number indicates 160,316 deaf people, the Uganda National Association of the Deaf (UNAD)25 reports that there are 840,000 deaf people countrywide (WFD, 2008) out

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25 UNAD is an umbrella organization of deaf people formed to look after the interest of deaf people communicating in sign language and advocate for service provision for them.
of whom 55,942 children are in school (MoE&S, 2008). The inconsistency in the reporting of the population of deaf people and that of children in schools notwithstanding, what is clear is that there is increasing number of learners with deafness in schools.

As in most developing countries, the largest proportions of these learners are in urban schools with overcrowded, ill equipped and insufficiently staffed classes. Special schools exist mainly in cities and are accessed by the elites and/or other city dwellers, while the majority of the population live in rural areas\textsuperscript{26} with children going to mainstream schools which are not adequately resourced to accommodate children with disabilities (Arbeiter & Hartley, 2002). The children who access school come with varying special needs albeit deafness that are most often unrecognized making them receive limited individualized education support. These children often suffer from psychological, academic and social difficulties affecting their participation which designate them to leave school early in life\textsuperscript{27}. Moreover, most deaf learners do not participate in pre-school programmes where social interaction could have been developed.

In the last two decades, however, there has been a gradual shift in the perception among a large segment of Ugandan population. The perception about deafness and deaf education shifted from medical to social challenge that calls for a comprehensive developmental intervention strategy. A significant understanding and an increased awareness on the part of professionals, parents, deaf associations and legislators about deafness, deaf people, deaf education and needed interventions arose. The strategies for intervention considered treatment, rehabilitation, human rights and participation in a way which is locally appropriate and sustainable. Organizations of and for the deaf and disability in general, community workers (community based rehabilitation) and educators now consider deafness more or less a social issue, advocating for their education, empowerment and involvement. The trend in rehabilitation, for example, has moved away from institutional management to the provision of services that places greater reliance on family and community based rehabilitation (WorldVision, 2008).

The upscale number of deaf learners at the primary level of education could be attributed to the role played by the Special Needs Education/Educational Assessment and Resource Services (SNE/EARS)\textsuperscript{28} and subsequently the move towards inclusive education.

\textsuperscript{26} As of 2010, 86.7\% of Ugandan population live in rural areas (World Bank Report 2012)
\textsuperscript{27} Appendix 6 shows that in 2009, 40,023 pupils with special needs were enrolled in P.1, but only 13,302 were in P.7. A similar trend was reported in 2008.
\textsuperscript{28} SNE/EARS was a cooperation programme between the Government of Uganda and Denmark implemented through DANIDA from 1991 to 2002 focusing on prevention of disabilities, early identification and intervention.
The implementation of SNE/EARS programme was boosted by the launch of the Universal Primary Education (UPE) in 1997. UPE progressively reinforced SNE/EARS efforts to enlist children with deafness in education. However, there are still many learners with special educational needs including learners with disabilities who are unable to attend formal schooling (Kristensen et al., 2006). Many parents, teachers, other learners and policy makers continue to demonstrate negative attitudes. These attitudes in one way or another affect the commitment of these stakeholders, service provision and policy implementation and deter expansion of deaf education at different levels. Moreover, under SNE/EARS little was done to provide for post-primary education and training, a level considered necessary for preparing a literate and innovative mind for self-reliance.

2.4.3 **Teacher training for teachers of the deaf in Uganda**

Training of teachers of the deaf which starts at diploma level draws its candidates from among practicing certified teachers with interest or already teaching deaf learners. The in-service training programme is offered through a conventional\(^{29}\) and distance\(^{30}\) modes of delivery.

The national mass training of teachers of special needs including teachers for deaf learners which started in 1988 was coordinated by the department\(^{31}\) of Special Education established at ITEK. A two-year Diploma in Special Education\(^{32}\), a Bachelor of Education in Special Needs Education\(^{33}\), a Post Graduate Diploma in Community Based Rehabilitation and a Certificate in Mobility and Rehabilitation were developed by the Uganda National Institute of Special Education (UNISE)\(^{34}\) and their awards administered by ITEK and Makerere University (Adupa & Mulindwa, 1998)\(^{35}\). The in-service diploma in special needs education training programme, builds on the candidates experience attained through the initial primary teacher education. These programmes focus on acquiring knowledge, skills and experience necessary to teach children with disabilities including deaf learners and those experiencing other barriers to learning and development. Learners categorised as having barriers to learning

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\(^{29}\) The conventional mode is a residential full-time undertaking lasting two years

\(^{30}\) Distance education mode is a part-time undertaking conducted during the Primary School holidays in selected PTCs and last for three years.

\(^{31}\) The department become a fully-fledged institution – Uganda national Institute of Special Education (UNISE)

\(^{32}\) The Diploma content addresses approaches and methods for an inclusive class. School practice in classes where there are children with deafness is mandatory

\(^{33}\) Bachelors candidates get into the depth of theoretical and practical skills needed for teaching deaf learners

\(^{34}\) UNISE was mandated by the Act of Parliament in 1998 as a national training centre for special needs education teachers and other personnel in disability and rehabilitation.

\(^{35}\) ITEK registered and awarded Diplomas and Makerere University awarded the Degree to graduates trained at UNISE before Kyambogo University was granted the autonomy to award its own degrees.
and development include among others young parents, street children, and children from disadvantaged areas, those living with or affected by HIV/AIDS and other health problems, those from nomadic tribes, orphans, child soldiers and children who are traumatized (Omagor-Loican et al., 2002). The training of teachers was in line with the Government White Paper\textsuperscript{36} (MoE&S, 1992), the objectives of which were clearly outlined in the UNISE Act which has been taken over by Kyambogo University\textsuperscript{37}

Since their first graduation in 1990, 716 in-service teachers have been trained through the full-time Bachelors and Diploma courses, and between 2000 and 2003, 1,451 were enrolled on the distance courses (Kristensen et al., 2006). In addition, between 2000 and 2008 a total of 1922 Diploma and 196 Bachelor teachers have been trained (see Table 2.4 below). The number trained, however, is just a small proportion of the estimated total of 130,000 teachers employed in primary schools, in administration, other government departments and organizations of and for persons with disabilities.

\textsuperscript{36} The policy included support to special needs education by providing funding and teacher training
\textsuperscript{37} Universities and Other Tertiary Institutions (Amendment) Act 2003

Part of the objectives for which Kyambogo University was established in relation to special needs education include:

(m) to aim at ensuring an increased number of learners with special educational needs and ensure that the learners receive equitable and quality education, through providing professional manpower to secure effective support of training needs.

(n) to provide training to teachers and other personnel working in the field of special needs education and rehabilitation, and to cater for all kinds of persons with disabilities and special learning needs.

(p) to undertake research in disabilities and other related fields for better understanding and development of persons with disabilities and special learning needs.
Table 1  
Diploma and Bachelors of Special Needs Education Graduation Statistics

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>2000 DSNE</td>
<td>30</td>
<td>44.10%</td>
<td>38</td>
<td>55.90%</td>
<td>68</td>
</tr>
<tr>
<td>B. Ed</td>
<td>11</td>
<td>55%</td>
<td>9</td>
<td>45%</td>
<td>20</td>
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<tr>
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<td>57.80%</td>
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<td>B. Ed</td>
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<td>11</td>
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<tr>
<td>2002 DSNE</td>
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<td>59.70%</td>
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<td>40.30%</td>
<td>72</td>
</tr>
<tr>
<td>B. Ed</td>
<td>8</td>
<td>61.50%</td>
<td>7</td>
<td>38.50%</td>
<td>13</td>
</tr>
<tr>
<td>2003 DSNE</td>
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<td>52.60%</td>
<td>27</td>
<td>47.40%</td>
<td>57</td>
</tr>
<tr>
<td>B. Ed</td>
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<td>70.60%</td>
<td>5</td>
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<tr>
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<td>22</td>
<td>28.60%</td>
<td>77</td>
</tr>
<tr>
<td>B. Ed</td>
<td>13</td>
<td>54.20%</td>
<td>11</td>
<td>45.80%</td>
<td>24</td>
</tr>
<tr>
<td>2005 DSNE</td>
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<td>54.70%</td>
<td>24</td>
<td>45.30%</td>
<td>53</td>
</tr>
<tr>
<td>B. Ed</td>
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<td>52.60%</td>
<td>9</td>
<td>47.40%</td>
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</tr>
<tr>
<td>2006 DSNE</td>
<td>508</td>
<td>53.40%</td>
<td>443</td>
<td>46.60%</td>
<td>951*</td>
</tr>
<tr>
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<td>52.20%</td>
<td>11</td>
<td>47.80%</td>
<td>23</td>
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<tr>
<td>2007 DSNE</td>
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<td>50.90%</td>
<td>281*</td>
</tr>
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<td>47.60%</td>
<td>11</td>
<td>52.40%</td>
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</tr>
<tr>
<td>2008 DSNE</td>
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<td>44.60%</td>
<td>170</td>
<td>55.40%</td>
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<td>20</td>
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</tr>
<tr>
<td>Total DSNE</td>
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<td>84</td>
<td>43.30%</td>
<td>194</td>
</tr>
</tbody>
</table>

Source: Graduation Statistics and Examination Records ITEK / Kyambogo University Academic Registrar’s Department, 38, 39, 40, 41

*The population includes Conventional (full-time) and Distance learning (part-time) graduates. Prior to that, the Diploma programme was offered only through specialized conventional mode. The graduates study an inclusive programme with a strong component of sign language and methods of teaching children with deafness.

38 Although the curriculum was designed and taught at UNISE, the awards were those of Makerere University (1998-2002) and Kyambogo University (from 2003 to date) when Kyambogo became a fully-fledged state University legally accredited to offer Certificates, Diplomas and Degrees.

39 The first four intakes/graduations were after every two years when Special Needs Education was still a department at the Institute of Teacher Education Kyambogo (ITEK). Subsequent intakes under the Uganda National Institute of Special Education (UNISE) were done annually to date.

40 Specialization in Physical Disability, as it was called then, was phased out after only one intake. Reason advanced was that they do not have major academic/curriculum problem. It is now content under Learning Difficulties referred to as Motor Difficulties with a broad spectrum of special educational needs.

41 The Diploma curriculum was reviewed to make it inclusive whereby candidates study all content in the curriculum without any specialization so as to go and serve in an inclusive class. This also followed government directive to introduce universal primary education (UPE) that allowed all learners accepted in schools nearest to their home. There was an influx of children with disabilities and other special leaning needs that necessitated the review and training through the Conventional and Distance modes of delivery.
The diploma content\textsuperscript{42} addresses the approaches and methods needed to facilitate academic and social participation of learners with special needs in an inclusive classroom. School practice is carried out in classes where there are children with disabilities and special educational needs. Teachers of the deaf are placed in schools where there are children with deafness. At the bachelor\textsuperscript{43} level, candidates get into the depth of the theoretical knowledge and practical skills needed to teach among other pupils the deaf learners.

Although there is very little documentary evidence on how teacher education for deaf education in Uganda is developed, anecdotal evidence shows that teacher education programme for the deaf has undergone many transformations in conformity to what is happening internationally and nationally. One of such developments is the move towards inclusive education aimed at ensuring that all Ugandan children equitably access quality education which had to correspond with quality training of teachers (Eron, 2008). For this reason, the curriculum for the diploma in special needs education programme had to be reviewed to meet the need for inclusive education\textsuperscript{44} enabling teachers to study all content areas needed for special needs education. Although it was solving the challenge brought about by the move towards inclusive education, anecdotal information from schools and organisations for persons with disabilities indicted that teachers were being passed out with limited skills in all areas of special needs. This implies that teachers of the deaf at the Diploma level are to some extent considered to be deficient in their knowledge and skills for facilitating academic and social participation of deaf learners. Placement during school practice in schools for the deaf is a strategy that helped these teachers to develop the skills for providing academic and social support needed by for deaf learners. The bachelor of education (B.Ed) programme was launched in 1998 with specialisations in hearing impairment, visual impairment and learning difficulties. The purpose of the B.Ed programme was to meet the increasing demand for highly knowledgeable and skilled teachers of the deaf with the ability to provide the needed training and service for the increasing number of deaf learners in schools. Specialisation in hearing impairment provided a comprehensive training for teachers of the deaf to serve in the primary school classroom, teacher education colleges and in management positions.

Although the launch of the bachelors programme showed a positive and promising development, it seems not to have solved the lack of teachers of the deaf in schools. Many reasons could be advanced for this inadequacy some of which are personal to the teachers

\textsuperscript{42} For summary of content and time allocation see appendix 9
\textsuperscript{43} For summary of content and time allocation see Appendix 8
\textsuperscript{44} Appendix 9 presents a summary of the revised diploma programme
while others are institutional. Evidence shows that most of the bachelor’s graduates prefer to take up roles in the inspectorate, administration and in organisations of the deaf and/or persons with disabilities.

### 2.5 Challenges in deaf education provision and training in Uganda

The teacher education provision and training in Uganda has generally been affected by political, economic, social and developmental challenges the country has undergone since independence. These challenges have unfavourably impacted on general educational provision, special needs education and deaf education. Prominent among the challenges are minimal resource allocation\(^{45}\) for the increasing and complex population that benefits from education. Other challenges include and are not limited to negative attitude, few qualified teachers, few receptive schools and unfavourable classroom environments. In addition, limited teaching/learning materials and equipment and communication and language difficulties are some of the challenges that deaf education is grappling with.

#### 2.5.1 Negative Attitudes

Education in Uganda is one of the investment areas expected to contribute to accumulation of human capital essential for higher income and sustainable growth (MoFP&ED, 2004). Such investments necessitate adequate moral, technical and financial support. However, government recognises the limited funding that it allocates to the sector incidentally associated with cultural attitudes (MoFP&ED, 2004). The cultural attitudes cited by government emanate from policy makers, technocrats, parents and the pupils themselves.

While positive attitudes are important for the successful implementation of special needs education very often there are hard-to-interpret attitudes towards special needs and inclusive education (Nakitende, 2011). Cultural beliefs and societal attitudes towards persons with disabilities make children with deafness to be continually marginalized and developments in deaf education very slow. Traditional negative attitudes are particularly associated with addressing the requirements of the girl child and children with special needs (MoFP&ED, 2004). With regard to deaf learners, attitudes towards them, their exclusion and eventual dropout is often triggered by the language barrier experienced among them and the larger inclusive school community. Negative attitudes influences the concepts and beliefs

\(^{45}\) Although Education has been given the second biggest allocation in the 2013/14 budget at 1.8 trillion, its demands are far beyond the allocation.
regarding best approaches in providing special needs and inclusive education (MoE&S, 2011).

Even with the introduction of Universal Primary Education (UPE) studies show that there are still many learners with special educational needs including learners with disabilities who are unable to attend formal schooling (Kristensen et al., 2006). For those who enrol in school, some drop out without completing that cycle of education. There was a 2.25% increased enrolment of children with special needs in primary one in the 2006 and 2007 and a dropout rate of 38.7% at primary six (UBOS, 2008). The alarming percentage dropout is attributed to the attitudes that teachers, learners with special needs and their peers have and the parents’ preference to have their children promoted on merit as opposed to the policy of automatic promotion (MoFP&ED, 2004).

2.5.2 Few qualified teachers

As the Uganda education system battles with the many reforms arising from the recommendations of the 1992 Government White Paper on Education, one challenge that stands out is the shortage of qualified teachers. There are studies that indicate lack of qualified teachers in schools partly explaining the decline in learning achievements of learners and affecting the implementation of universal primary education (Kasirye, 2009). The Education Statistical Abstract of 2006 acknowledges qualified teacher shortfall indicating that at least 25% of all primary school teachers were not trained (MoE&S, 2007). Most of the untrained teachers are in hard-to-reach areas that fail to attract qualified teachers (Kasirye, 2009). A similar situation applies to special needs education including deaf education where cannot realize the minimum number of teachers with specialized skills to meet standard teacher to pupil ratio of 1:6 (MoE&S, 2011).

While a noticeable achievement is reported in the rapid increase in primary education enrolment as a result of universal primary education with the net enrolment reaching 93.2% in 2008/09 up from 84% in 2005/06 (Fentiman, Kamuli, & Afoyocan, 2011), evidence indicates lack of teachers of the deaf in schools. One of the challenges highlighted in relation to Universal Primary Education for children with special needs in Uganda is the inadequacy and non-existence of teachers with expertise in deaf education and proficiency in sign language (Ndeezi, 2000).

46 Other causes include poor quality, distance from school, lack of appropriate facilities in school and harassment by teachers (MoFP&ED, 2004)
There has been poor retention of teachers with the requisite knowledge and skills that could facilitate the academic and social participation of learners. Challenges in the decentralized teacher recruitment system, the emphasis put on examination as a measure of quality and the fact that some district prefers recruiting personnel considered native to the district (Pillay & Kasirye, 2006) creates a possibility for deaf education to suffer understaffing. There are no opportunities to replace the un-qualified teachers in deaf education available in the schools due to the staff sealing given to each district basing overall teacher-pupil ratio.

Many teachers are reported to abscond from teaching and to leave schools due to lack of recognition of their status as well as poor working conditions (Acedo, 2011). Their departure results into shortage of qualified teachers and an increase in the number of unqualified teachers working in Ugandan schools (Odaet, 1988). From anecdotal information attrition among teachers of the deaf arise from taking up administrative roles in the schools, and at district levels while others prefer to work in non-governmental organisations who offer better remuneration. Teaching children with deafness is obviously more intensive than teaching non-children with deafness. Deaf learners may require more one-to-one involvement with the teachers than the ordinary learner. Teacher attrition contributes to overpopulation in the class and poor attention to individual needs of the learners.

2.5.3 Few receptive schools and crowded classrooms

Deaf pupils have strength, needs and knowledge that should be activated, motivated and supported for them to acquire the new knowledge and concepts they interface. A welcoming school, receptive classroom facilitated by qualified, innovative and motivated teacher are some of the requisites that deaf learners need to actively participate in academic and social learning. The school and the classroom environment is one of the prerequisites for the quality of instruction that teacher would provide. It is at school where children with deafness spend most of their youthful time, make friends and improve on their language for academic and social participation.

Some of the school related factors that inhibits the school and classroom to be receptive include few receptive schools, physical barriers, labelling of children, attitudinal barriers, violence, bulling and abuse (WHO, 2011). The special needs and inclusive education policy recognizes the lack of adherence to accessibility standards and failure in the implementation of the 2009 Infrastructure Accessibility Standards Tool (MoE&S, 2011). From an economics of education perspective, Kasirye argues that pupils having a place to sit
in significantly influence learning achievement (Kasirye, 2009). In deaf education, a flexible sitting arrangement could greatly ease communication and social participation.

The government of Uganda recognises that quality education is affected by large classes in lower primary, poor teacher and head teacher attendance in school, large numbers of under, and overage enrollees (MoE&S., 2005). Studies about teacher-pupils ratio recognise that although the current official average pupil-to-teacher ratio in ordinary school stand at 51:1, the reality is that many classrooms in most schools across the country have over 70 pupils in one classroom (Nakabugo, Opolot-Okurut, Ssebbunga, Maani, & Others, 2006). Some of the causes of the overcrowding in classes is attributed to the over enrolment is the universal primary education. Universal primary education enabled many children with special needs in education to be enrolled in schools. Special needs in learners bring with them barriers to learning, participation and development which challenge teachers to device different approaches to meet the individual special needs. When these needs are not met, learners may fail to attain the competences expected of them in order to move to the next class. Repeating a class contribute to increased population in such classes. Large classes may result into lack of opportunities for adequate seats and space for free movement in class which may affect learners’ involvement in and teachers’ ability to facilitate academic and social participation.

The notion of a large class size is a matter of contention and its impact is inconclusive even in international literature. However, an agreed position is that the persistence of large class size has implication for quality teaching, teacher performance and learner participation. In reality, teacher and other socioeconomic factors surrounding education can be attributed to dropout (Nakabugo et al., 2006).

Large classes may in turn lead to inadequate school facilities and a non-receptive school environment. For example, lack of basic necessities like classrooms, benches, latrines and water are quality determinants that affect the education children will get (Kasirye, 2009). Inadequate school hygiene and lack of appropriate facilities impact negatively on attendance and instigate dropout particularly for girls (MoFP&ED, 2004).

In Uganda records from schools for the deaf indicate large classes. Tables 2.5.3.1 and 2.5.2 below provide examples of enrolment in some school that have children with deafness.
**Table 2**  
**Enrolment of Children with deafness in a Special School**

<table>
<thead>
<tr>
<th>Class</th>
<th>Boys</th>
<th>Girls</th>
<th>Total in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>13</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>P2</td>
<td>9</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>P3</td>
<td>7</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>P4</td>
<td>11</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>P5</td>
<td>18</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>P6</td>
<td>13</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>P7</td>
<td>17</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>187</td>
</tr>
</tbody>
</table>

*Source: Uganda School for the Deaf enrolment as of 16.11.2011*

Enrolments in table 2 above represent the population of children with deafness in a special school / class. As can be seen, the smallest class has 19 deaf learners while the largest class has 33 learners. It is evident that the beginning class and upper classes where individual attention is most needed has the highest numbers. The possibility of overcrowding in class may affect the sharing and utilisation of the limited available resources and the necessary individualised education support that teachers of the deaf are expected to provide.

**Table 3**  
**Enrolment of Children with deafness in an Inclusive School**

<table>
<thead>
<tr>
<th>Class</th>
<th>Ordinary Children</th>
<th>Deaf Children</th>
<th>Total in class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Total</td>
</tr>
<tr>
<td>P1</td>
<td>33</td>
<td>21</td>
<td>54</td>
</tr>
<tr>
<td>P2</td>
<td>30</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td>P3</td>
<td>45</td>
<td>36</td>
<td>81</td>
</tr>
<tr>
<td>P4</td>
<td>35</td>
<td>58</td>
<td>93</td>
</tr>
<tr>
<td>P5</td>
<td>24</td>
<td>42</td>
<td>66</td>
</tr>
<tr>
<td>P6</td>
<td>39</td>
<td>38</td>
<td>77</td>
</tr>
<tr>
<td>P7</td>
<td>34</td>
<td>23</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>244</td>
<td>484</td>
</tr>
</tbody>
</table>

*Source: Ikwera Negri School for the Disabled enrolment as at 16.11.2011*

Table 3 show the enrolment in an inclusive school having deaf learners. Much as some classes have as low as 02 deaf learners, their presence in a class of 59 may immense them among the hearing learners impacting on the attention that the teacher is expected to provide for their academic and social participation. The teacher will most likely have limited time to provide the expected individualised education support in such a relatively large and probably complex class having learners with deafness and hearing learners who have to use two languages (sign language and speech) concurrently.
2.5.4 Lack of teaching and learning materials

The shortage and sometimes lack of teaching and learning materials and/or resources in schools is recognised by government, appreciating that there is high pupil : text book ratio (MoE&S, 2004). In addition schools are still faced with challenges of meeting curriculum needs of children with special needs due to resource constrains, scarcity and in some cases complete lack of materials which are not only very expensive but have to be imported (MoE&S, 2011). The lack of teaching and learning resources have many implications including the inability of teachers to facilitate and learners to actively engage in academic and social participation. Adequate and available supply of teaching and learning materials enables teachers to respond positively to learners needs (Firestone & Pennell, 1993). Lack of learning materials impact negatively on attendance and facilitate drop out of learners (MoFP&ED, 2004).

For deaf education, the presence and use of these materials motivate and enable teachers of the deaf to facilitate their work and for children with deafness to benefit academically. Learning materials are a necessary resource for facilitating their academic and social participation. The teaching and learning materials should consider the linguistic, social, emotional and cultural needs, opportunities for peer interaction and communication (Nowell & Innes, 1997).

2.5.5 Communication and language challenges

Most Ugandan schools are situated in a multi-cultural and multi-lingual environment and situation. Most mother tongue or home language differs from the official language and the language of instruction in education at school. Language has been a big challenge in education, nationally and no agreement has been reached to adopt a national language (Nakabugo, Byamugisha, & Justus, 2008). The principle of using relevant local languages from primary one to primary four and English from primary five to seven (MoE&S, 1992) has been accepted and adopted in the education system. Most schools are instructed using the area language particularly in the lower primary schools and English in upper primary classes. The idea is to enable learners acquire literacy in the mother tongue. In most urban schools though, the medium of instruction at all levels of education remain predominantly English.

The presence of a child with deafness in the school presents an additional requirement of using sign language. Teachers are expected to learn and use the alternative communication - an additional language to facilitate the child with deafness's academic and social participation. Sign language is recognised as the curriculum language of instruction for
learners who are deaf (MoE&S, 2011) and (GoU, 1995). This legal recognition does not automatically translate to implementation. There is evidence that some teachers lack the mastery of sign language (Adoyo, 2002) which is a necessary precursor to the academic and social participation of children with deafness. It is common practice for teachers of the deaf to use sign supported language. Although a sign supported language is better than having no knowledge in sign language, its continued use could leave children with deafness to lag behind in academic and social participation.

In Uganda, the acquisition of sign language may be delayed in the early years as many children with deafness are born to hearing parents and their identification is done quite late (Lule & Willan, 2010). The pattern of sign language acquisition may also be delayed depending on when the deafness occurs – from birth, at school or in adulthood (K. Meadow, 1980). The critical issue in deaf education is to find the most appropriate classroom communication mode that provides access to curriculum content (Adoyo, 2002).

In some instances, it may require the engagement of sign language interpreters. With the help of qualified sign language interpreters, deaf students are able to undertake further training and qualification up to universities and institutions of higher learning (UNAD, 2012). However, the government of Uganda does not employ any sign language interpreters in schools to help the learners where teachers lack the mastery of sign language.

2.6 Interventions and strategies to enhance deaf education in Uganda

Teachers are part of the central crew to the implementation strategies aimed at reducing barriers to learning, participation and development. The performance of teachers partly depends on the knowledge and skills they acquire through the professional education and trainings. Teachers of the deaf require training in specific skills to meet the academic and social needs of their deaf learners. Some of the specific skills that require concentration, time and focus are methods, communication, norms and values.

Generally, there have been many attempts to improve the quality of teacher education for the past 25 years. The government of Uganda has attempted to have teachers trained using a dual mode (pre-service\textsuperscript{47} and in-service\textsuperscript{48}) for primary schools and conventional\textsuperscript{49} and

\textsuperscript{47} Pre-service refers to initial teacher education given to new teachers from secondary school before entering the classroom to practice teaching.

\textsuperscript{48} In-service refers to a professional teacher development programme given to practicing teachers on specific subject areas for example special needs education. It may lead to an award or just a skill development seminar/workshop.

\textsuperscript{49} For meaning of Conventional mode see footnote 29
distance education\textsuperscript{50} for special needs education. These attempts follow recognition by government and development partners (donors) who appreciate teacher quality as a necessary driving force for improving student achievement and retention. Teacher quality promotes national economic transformation and competitiveness in the global market (MoE&S., 2004).

A lot of emphasis has been put on improving access, equity and quality primary and teacher education through the Teacher Development and Management System – TDMS (MoFP&ED, 2004). TDMS is an integrated delivery system for primary education reform focusing on improved pupil learning in Ugandan schools. With structures countrywide, TDMS train and support teachers and their management at school level with modern methods of teaching, train un-trained teachers and equip head teachers with modern management skills. The professional development course (Certificate in Teacher Education Proficiency - CTEP) was instituted to re-orient tutors in the Primary Teachers’ Colleges on various new developments affecting education around the globe and make it inclusive. Many studies were carried out as a strategy towards improving the quality of education and making it relevant to the individual and national needs (MoE&S, 1989; MoE&S., 2005 ; UNEB, 2003). Reforms were also carried out to address the training needs of teachers for secondary education (MoE&S, 2011). It was evident that during the implementation of these reforms, little consideration was given to special needs education, inclusive education and deaf education. There was still more reported poor quality of education provided to deaf learners, other learners with disabilities and special educational needs than others. The dropout rate of learners with special educational needs was as high as 20.5% in P.1\textsuperscript{51} (MoE&S., 2005).

The Special Needs Education/Educational Assessment and Resource Services (SNE/EARS)\textsuperscript{52} programme was therefore specifically designed in 1992 as an alternative approach providing for the needs of learners with disabilities and those having barriers to learning, development and participation. Among the SNE/EARS objectives was the improvement of the quality of education for all learners with special educational needs including children with disabilities; and assisting in the development and pilot testing of training courses on special needs and inclusive education - training of trainers (Reynolds & Fletcher-Jonzen, 2007). The training of trainers was launched as a comprehensive country-

\textsuperscript{50} For meaning of Distance Education mode see footnote 30

\textsuperscript{51} P.1 is a grade/class system in the primary education sector in Uganda implying the standard/level where the child is e.g P.1 meaning Primary One and P.7 implying Primary Seven (the last grade of the primary school system after which a child progresses to the secondary level)

\textsuperscript{52} SNE/EARS was a decentralized countrywide programme placed within the inspectorate to provide early identification, referral, placement, guidance and to coordinate all special needs education and disability related services.
wide in-service programme involving classroom teachers and centre coordinating tutors (CCTs)\textsuperscript{53}. The training supplemented the effort of teacher education that was being carried out at the Uganda National Institute of Special Education (UNISE) now Kyambogo University\textsuperscript{54}. Many of these SNE/EARS trained teachers were deployed as Special Needs Education Coordinators (SNECOs\textsuperscript{55}). The SNECOs and CCTs acquired qualifications in special needs education/ inclusive education which motivated others to enrol for Diploma in Special Needs Education through the distance education programme at Kyambogo University (Kristensen et al., 2006).

To supplement state training programmes, other institutions and organizations engaged Kyambogo University and the Ministry of Education and Sports to provide in-service training in specific areas. Cooperation projects that have contributed to in-service training and capacity building of teachers include among others a NUFU funded “Capacity building in teacher education for children with disabilities and special needs”, the “Research, Innovation and Postgraduate Competence Building in Special Needs Education towards Inclusion” and an ACP-EU funded “Human Resource Development in Inclusive Education in Botswana, Swaziland, Kenya and Uganda”. Locally, Sight Savers International, Leonard Cheshire International - Disability Programme, World Vision- Uganda, Goal Uganda and the Uganda Parents of Children with Learning Difficulties (UPACLED) have been building capacity of teachers in their catchment areas on inclusive education. Teachers of the deaf were trained in sign language and specialized methods of teaching children with deafness. The Uganda National Association of the Deaf (UNAD) cooperate with Kyambogo University to see that the Uganda Sign Language dictionary and training of sign language interpreters is developed and strengthened. The existing challenge is the non-existent recruitment mechanism for the recruitment and deployment of these interpreters to serve the intended beneficiaries in the government institutions and organization.

Other attempts are to avail educational opportunities targeting unique communities where persons with disabilities including deafness could participate through non-formal programmes. The non-formal programmes focus among others on the pastoralist and fishing

\begin{itemize}
\item A CCT is a College tutor (teacher educator) assigned to a cluster of schools to coordinate and support the teachers and head teachers, and work with voluntary community mobilizers towards quality education in their schools
\item After the merger of three institutions (Institute of Teacher Education Kyambogo –ITEK, Uganda Polytechnic Kyambogo – UPK and Uganda National Institute of Special Education –UNISE), UNISE become the Faculty of Special Needs and Rehabilitation and retained the objectives for which UNISE was established.
\item A SNECO is a special needs education teacher with additional assignment to coordinate, support and guide other teachers in a cluster of schools on matters related to special educational needs in their classrooms/schools
\end{itemize}
communities whose life style necessitated a special needs education kind of provision. Some of the non-formal programmes include Alternative Basic Education for Karamoja (ABEK)\textsuperscript{56}, Basic Education for Urban Poor Areas (BEUPA)\textsuperscript{57}, Complementary Opportunities for Primary Education (COPE)\textsuperscript{58}, Child-Centred Alternative, Non-formal Community Based Education (CHANCE) and Accelerated Programme for the Conflict Areas (Omagor-Loican et al., 2002). In the case of the youth and young adults, the Functional Adult Literacy (FAL) programme covering literacy, numeracy and life skills education is in place to address their learning needs (MoE&S., 2004).

District and national insights were put in place before the phasing out of Special Needs Education /Educational Assessment and Resource Services (EARS/SNE) programme in 2003. The structures include establishing offices at the Uganda National Examinations Board (UNEB)\textsuperscript{59}, National Curriculum development Centre (NCDC)\textsuperscript{60} and Education Standards Agency (ESA)\textsuperscript{61}. The level of success of the above intervention in ensuring quality and equity in the education of learners with special educational needs including children with deafness is not within the scope of this study and may necessitate a comprehensive evaluation and documentation. In addition, the adoption of the Community Based Rehabilitation (CBR)\textsuperscript{62} programme approach to education was a strategy to provide early intervention at family level. CBR is a strategy which aim at spelling an end to the exclusion of people with disabilities from mainstream activities and thinking (Hartley & Okune, 2008). The inclusiveness of the CBR intervention strategy\textsuperscript{63} exposed deaf learners to enrolment and placement in schools nearest to their homes. CBR is the best strategy to help those children from poor families who may not afford boarding fees\textsuperscript{64}.

\textsuperscript{56} For what ABEK is all about refer to footnote 10  
\textsuperscript{57} For what BEUPA is all about refer to footnote 9  
\textsuperscript{58} For what COPE is all about refer to footnote 8  
\textsuperscript{59} UNEB is mandated to oversee the conduct and supervision of examinations at primary and secondary levels of education  
\textsuperscript{60} NCDC is mandated to develop curricula and related materials for pre-primary, primary, secondary and tertiary levels of education, organise capacity building courses for stakeholders on curricula and matters related to curriculum  
\textsuperscript{61} ESA is tasked with the mandate to ensure the enforcement of minimum standards for education in primary teacher education, pre-primary, primary, secondary schools and Technical Vocational Education and Training institutions  
\textsuperscript{62} CBR is a programme that focuses on enhancing the quality of life of people with disabilities and their families, meeting basic needs and ensuring inclusion and participation.  
\textsuperscript{63} CBR strategy is home-based, school-based and community-based  
\textsuperscript{64} Many children with deafness were originally educated in boarding schools which is fee paying and costly. The trend still continues for parents who can afford it. Many parents prefer boarding facilities to save them from communication difficulties they encounter, by sending their children to those who can communicate with them easily.
2.7 Summary

This chapter demonstrated the implication of deafness on the individual and the family. How deafness impact on the learner has close relationship to how they respond to the teachers’ contribution towards ensuring their academic and social participation. It is also important to recognise that collaboration of parents and the teachers have greatly contributed to academic and social participation of deaf learners. In discussing the policy provision in support of special needs and inclusive education, opportunities and the challenges that Uganda encounters in implementing the policy provisions and deaf education have been identified. Teachers’ awareness of these policies and challenges provides them with a framework within which they can function to meet the academic and social participation of deaf learners. In spite of these challenges a lot is taking place in formal education, special needs education and deaf education and training. The interventions and strategies Uganda has adopted are geared towards ensuring that deaf learners have equitable access to quality education. It is though quality and equitable access that deaf learners can be empowered, independent and leads fulfilling lives. Teachers’ capacity to conceptualise these strategies would also help them to improve their skills to communicate with and train deaf learners with the required skills as well as collaborate with parents and other stakeholders.
3. Chapter Three: Teacher Education for Teachers of the Deaf – A review of related literature

3.1 Introduction

This chapter reviews literature that relates to teacher preparation, the knowledge and skills needed for facilitating academic and social participation of deaf learners and the relevance of teacher self-efficacy and beliefs in educating deaf learners.

3.2 Teacher preparation in support of deaf education

There are studies on teacher education that advance scholarly understanding of what constitute teacher education and can be applied in guiding the education of the deaf. Some of these studies particularly in Africa, argue that college training of teachers has continued to be characterised by traditional approaches emphasising knowledge transmission, theory over practice and superficial understanding of learner-centred education (Plessis & Muzaffar, 2010). The practice of teaching is said to be traditional in its approaches (Kanu, 2007), the relationship between student teachers and their teacher educators is normally formal, hierarchical and pedagogy focused on traditionalist approach (Stuart & Tattoo, 2000). Reforms in teacher education are also not keeping pace with reforms in the primary sector (Plessis & Muzaffar, 2010) where there are more learners with special needs including deafness that need a more close attention.

Many arguments are advanced to explain lack of flexibility in teacher education in spite of the move towards Education for All which increasingly demand for inclusive teacher education. For example, the annual graduate rates from most colleges in Malawi, Zimbabwe, South Africa, Mauritius and Uganda could not meet the increasing demand (UNESCO, 2002). Even the skills that graduates in teaching deaf learners demonstrate do not serve as models of good pedagogy. There seem to be lack of opportunities for deep understanding, exploration and provision of alternative views during teacher education emanating from the pressure of exams as a measure of student performance (Plessis & Muzaffar, 2010).

To guide the theories and practices in the education of the deaf, an understanding of the two epistemological perspectives (positivism and constructivism) of knowledge is of relevance. A positivistic perspective of knowledge assumes that knowledge is separate from the knower, fixed and waiting to be discovered. According to Dewey, the positivist view of knowledge limits participation in knowledge construction assuming that individuals observe pre-existing knowledge commonly known as the separator of knowledge (Dewey, 1960), arguing that
learning processes are viewed as the transmission of knowledge. Constructivism regards knowledge as a process of constructing new information and interacting with prior knowledge and experiences of learners (Plessis & Muzaffar, 2010). Constructivists regard knowledge as being constructed in interaction with the environment, through dialoguing with others and reflecting in relation to culture and language.

The perspective advanced in this dissertation is the constructivist approach which recognises that reconstructing teacher preparation is needed to respond to the increasing diversity and inclusiveness in deaf education. The approach evolves from discussion, debates and initiatives in the teacher education programmes globally (Boe, Shin, & Cook, 2007; Darling-Hammond, Chung, & Fellow, 2002; Zientek, 2007). The argument is that the human right approach to disability and special needs education, and the advancement in technology increased the number of learners with deafness in various schools. The increase in the number of learners challenges teacher of the deaf preparation programs to adapt themselves to meet the changing needs of education of the deaf (Mitchell & Karchmer, 2006) and prepare teachers who are ready to match with the challenge. The capacity to effectively teach deaf learners and match with the challenge is what is referred to as a master teacher.

What makes a master teacher varies in context and within professions. For the purpose of this study, a master teacher is one who has clear, realistic and important goals that reflect the needs of deaf learners as well as all other learners under his/her guidance; prepared to teach and design educational programmes that take advantage of the new dynamics within deaf education. Sheetz and Martin (2008) while exploring the question of whether teacher of the deaf preparation programmes were preparing pre-service teachers to possess the qualities of master teachers, identified six characteristics and a variety of practices that should be used by teacher preparation programmes to teach students to become master teachers. The six characteristics identified included: employing cognitive strategies, being up-to-date, having a passion for teaching, working collaboratively, demonstrating strong communication skills and creating independent learners. In addition, there are thirteen (13) characteristics of effective teachers that is summarised into four central themes (Bond, 2000). The first characteristic is that teaching includes using content knowledge, using deep representations, making use of problem solving skills, and using improvisations. The second characteristic of an effective teacher is planning which includes setting up optimal classroom environments, providing high expectations for students, and imparting sensitivity to context. The third is attitude which aims at promoting inquiry and problem solving skills, having a passion for teaching, and showing
respect for students. The forth characteristic—assessment aims at employing multidimensional perception, monitoring progress and supplying feedback, and testing hypotheses.

While Bond identified these characteristics for general educators, the same characteristics can be applied to effective teachers of the deaf (Smith & Allman, 2010). The argument is that education content remains the same no matter the setting. These elements of teacher quality are not independent, as excellent teacher preparation and qualification programmes should lead to exemplary teaching behaviour and practices. Programmes for teachers of the deaf training programme should combine, in its characteristics the training of an effective teacher of the deaf, the qualities advanced by Bond (2000) and Sheetz and Martin (2008).

In order to address teacher quality in the education of deaf, there are factors that should be understood and considered. Scholarly discussions about teaching deaf learners focus on which communication to use (Goodman, 2006; H. A. Johnson, 2004), which method to use and which curriculum to follow (D.F. Moores & Martin, 2006). It should be taken into consideration that deaf learners are not a homogenous and do not possess a stable population, not only with respect to outcomes or different geographical locations but also in respect to hearing loss, language, school placement, background characteristics and social circumstances (Mukuria & Eleweke, 2010). These characteristics require that a master teacher has experience, knowledge, skills, a strong desire to make a difference and regard to pupils, other teachers and parents (Scheetz & Martin, 2008).

3.3 Teacher education knowledge and skills necessary for facilitating academic and social participation

Despite years of policy and programme reforms, teacher education programmes seem to be trapped in traditional ways of training teachers most of which do not encourage active learning because of the direct instruction, knowledge transmission and not being learner centred (Plessis & Muzaffar, 2010). This practice tends to make novice teachers teach in the same way they were taught, reproducing traditional norms which in most instances work against change and improvement (Stuart, 2002). Studies have shown that social, emotional, ethical and academic educational guidelines can predictably promote the skills, knowledge and disposition that provide the foundation for the capacity of learners to love, work and be active members (Cohen, 2006).

According to Plessis & Muzaffar (2010), learning through participation in a community is consistent with the views of African indigenous learning which holds that
learning is holistic, takes place in the community and is on-going in everyday life. A school is a community where deaf learners participate in academic and social pursuit. Mirenda (1998) and Beukman & Mirenda (2005) arguing for learner participation, identify four levels of participation that can be applied to contribute to the accommodation of deaf learners included in classroom activities. The four levels of participation are categorised as competitive, active, involved and no participation. These participation levels are relevant when considering debates that relate to the best way of educating deaf learners.

Beukman and Mirenda (2005) argue that learners, who competitively participate, are engaged in the same educational activities as their peers and are expected to meet the same academic standards. However, they may not complete the same amount of work in the same amount of time with the same level of independence as their peers. Active participants are involved in the same educational activities as their peers and learn content related to academic subject areas. However, the expected learning outcomes are not the same as those of their peers and their progress is evaluated according to individualized goals or standards. Involvement is when learners participate in the same educational activities as their peers although they may require extensive adaptations. They are primarily expected to learn content in cross-curricular areas such as communication, social, and motor skills, rather than in academic subjects. No Educational Participation may arise as a result of two situations in the general education classrooms. The argument is that some students may be engaged during the same activities as their peers but are passive and uninvolved while other students are engaged but participate in substantially different activities than their peers and receive separate instruction. The authors contend that this highly undesirable option requires prompt remediation and involvement of teaching assistants or co-teachers and for deaf learners’ sign language interpreters.

Applying each level of participation to the teaching of deaf learners would consider issues like lag in language processing, grammatical syntax and limitation in exposure and experiences in the language of instruction, pace - rate of presentation by instructor, the number of speakers involved, language and cultural difference, and the use of space - physical arrangement in the classroom and communication - interpreter’s familiarity with the content (Lang, 2003). The theories advanced by Mirenda (2000) can be used during teacher education to orient teachers of the deaf on the knowledge and skills necessary for practice in deaf education. These knowledge and skills would help novice teachers to identify and categorise their deaf learners so as to meet their academic and social needs. Similarly teacher educators could use the theories to identify student teachers who need additional support during the
training. The identification and support provided to teacher trainees would help to put in perspective how the four levels of participation can be applied to facilitate academic and social participation. An attempt is made to identify the knowledge and skills needed by teachers to facilitate academic and social participation and the knowledge and skills that learners need to academically and socially participate.

3.3.1 **Teacher education knowledge and skills necessary for academic participation**

The current trend in most countries is to, as much as possible have children with deafness educated in mainstream public school environment (Adoyo, 2002; MoE&S, 2011; S. Powers, 2001; Standley, 2005) with the aim of ensuring their active involvement and participation (Anita, 1999). The concept of participation used in this context involves being able to inform, communicate and take part in education. The participation of deaf learners as a process either through signs or written expositions could allow for their inclusion with other individuals in academic relationship. According to Sampaio and Kurigant, one of the common targets for participation is the emergence of interpersonal relationship (Sampaio & Kurigant, 2009).

Teachers of the deaf need necessary knowledge and skills for facilitating academic participation. In preparing teachers for the requisite knowledge and skills, teacher educators ought to take into consideration two factors. The first is that deaf learners are a heterogeneous group (Mukuria & Eleweke, 2010). Deaf learners come from different family, cultural, social, economic and linguistic background and enter schools with different academic levels, expectations and educational necessities. This variation influences how they will participate. Their involvement and participation creates an opportunity to comprehend and come to terms with some tensions in their academic pursuit. The second consideration is that deaf education is undertaken within institutional organizations that influence the possibility for academic and social participation. How teachers organise and manage school routines, activities, space and classroom setup guarantees (or undermines) how deaf learners academically participate. Creating a receptive atmosphere in the classroom, where deaf learners spend most of their time and have space and opportunity to generate all forms of knowledge building, present opportunity for academic participation.

Teachers from different ideological groups, working in the same space and sharing the same tasks can seek to and assume beliefs and values that allow for the discovery of alternative pathways for participation (Sampaio & Kurigant, 2009). Schools must ensure that
deaf education and the academic and social participation enable the experiences of children with deafness to be as conducive and as receptive as possible (Mason & Mason, 2007).

According to Mirenda (2007), when teachers reflect on their current practice and service models, they are able to ensure an all-inclusive participation. Applying the four levels of participation shows how students who use Alternative Augmentative Communication (AAC) can participate in the same general education activities with their peers (Beukelman & Mirenda, 2005; Mirenda, 1998).

3.3.2 Teacher education knowledge and skills necessary for social participation

Social participation is the active involvement of deaf learners in all social activities. Social participation contributes to gaining knowledge, skills and values necessary for personal development. The benefit of social participation is inclusion and an opportunity to interact with peers without disabilities which in turn may generate academic benefits (Katz & Mirenda, 2002).

Inclusion and inclusive education is well documented in international and state policies (MoE&S, 1992, 2011; Uganda, 1992; UNESCO, 1990; UNESCO, 1994). There are studies conducted suggesting that inclusion enables children with deafness to be accepted and interact more with their hearing peers through communication (Angelides & Aravi, 2007; Hadjikokou, Petridou, & Stylianon, 2008; D. Powers & Hyde, 2002; S. Powers, 2001). Other contradicting studies argue that when children with deafness are placed in the same school or class, they demonstrate a feeling of isolation, rejection and loneliness (Stinson & Antia, 1999). A major problem associated with limitation in social participation involving deaf learners is communication (S. Powers, 2003; Stinson & Antia, 1999). When communication access is limited, effective participation in the classroom and other settings is hindered and the growth of a healthy social relationship is blocked (Hadjikokou et al., 2008). Although this assertion may be true, there are many other barriers within the learner and in the learner’s environment that may influence their participation.

A growing child with deafness is open to learning. His/her cognitive ability has the capacity to absorb, develop and coordinate. The social structure, mediating factors and the environmental support system and services are other factors that limit the opportunities for the child with deafness to learn, participate, communicate and be involved in daily family routines. The support systems and services include training in sign language, interpretation, modification of the classroom environment, note taking, tutoring and counselling sessions outside the classroom (Hadjikokou et al., 2008; Stinson & Antia, 1999). Active social
participation by deaf learners in the classroom is partly influenced by how the teacher manipulates and explores the environment. Environmental factors such as acceptance, access to information through a mutually agreed upon communication modes and support from prejudice influence the extent to which the child with deafness learns and experiences the reality of life. A child with deafness will also learn other means of communication, other than sign language from the playmates (Eron, 2011). These social milieus, that should be exploited during teacher education, are pivotal to growth in the child with deafness’s social and cognitive skills (Herman & Morgan, 2011).

Social participation is built from the constructivist approach to learning (Antia, Stinson, & Gaustad, 2002). The core concern of the constructivist approach is the ability of social groups to share meaning and images and to use these ideas to shape their world. The central concept here is shared ideas, knowledge, identities, discourse and persuasion leading to new understanding and normative change. In education this implies that all learning is constructed and not directly perceived by the senses. The loss of hearing has implication on the social relation and active participation of the child with deafness in the classroom.

Teachers are facilitators of the process and should help deaf learners reflect on their experiences and use them to solve daily challenges. The kind of learning that leads to development takes place through active participation in purposeful and collaborative activities (Wells & Glaxton, 2007).

Engaging and involving children with deafness in the learning processes needs all domains. Even if the child with deafness is independent, self-reliant, assertive and achieving, s/he still displays appropriate instrumental and emotional dependence (Mason & Mason, 2007). The child with deafness needs the affective domain (emotions, moods and feelings), communication (language), behavioural and cognitive understanding that help to promote their social and emotional competence. The behaviour, emotional awareness, affective-cognitive control and socio-cognitive understanding of the child with deafness would reflect his/her coping. The school and/ or any educational settings may facilitate or hinder the child with deafness’s learning, participation and development. The responses provided by the teachers may contribute to how peers of the child with deafness would socially accept him/her. Creating supportive inclusive environment for deaf learners is vital for their social participation. The school ought to be a space for social relations. It is at school that the child with deafness experiences the reality of participation in an inclusive manner.

Schools should engage and be influenced by one of the four potential levels of inclusive participation patterns described by Beukelman & Mirenda (2005). Beukelman &
Mirenda argue that socially influential learners relate with friends including their classmates without disabilities and assume leadership roles in their peer social groups. Within this level, they initiate activities with group members after school hours and exert direct influence over group decisions and social choices. Those learners who are socially active (but not socially influential) have friends and are involved in the social activities of their peer groups but may not exert much direct influence over the social climate of the group or its interaction patterns. They will often survive but not able to perform a variety of tasks that others typically do (Mason & Mason, 2007). Frequent overprotection by parents and caregivers creates further impediments to social interdependence. Socially active students may be shy, artistic, or studious and have small circles of like-minded friends. The socially involved learners have smaller circles of friends without disabilities, exert less influence in social situations, and are often passive participants or observers in social activities. Students may be socially involved by their own choice or because they require additional support to be more active or influential. Beukelman & Mirenda (2005) note that many times socially involved students do not have adequate alternative augmentative communication systems to enable social participation with typical peers. Beukelman & Mirenda (2005) identifies the last group of learners as those who are social nonparticipants. This category of learners have limited or no access to peers without disability during school hours thus failing to have any opportunities to form friendships with them. Social nonparticipation is generally undesirable and requires remediation. In parts, this situation may result from children with deafness emerging from homes with a restricted range of interpersonal interaction (Mason & Mason, 2007).

Since extensive interaction with a variety of partners is not automatically guaranteed by inclusive education, it is important that school environments are engineered to ensure explicit opportunities for communication (Mirenda, 2007). Teachers and paraprofessionals should rethink their methods for facilitating social interaction within the classroom setting (Mirenda, 2007) and explore strategies that result in optimising potentials of the families (Mukuria & Eleweke, 2010). Parents and families should endeavour to solicit and acquire knowledge and skills that supports them in providing optimal and equal opportunities for the social participation of their children with deafness.

3.4 Teacher beliefs and self-efficacy

What belief means in many literature is not conclusive but may be summarised as implicit views that guide teacher’s behaviour and filter the interpretation of teaching experiences without the teacher’s awareness (Fives & Beuhl, 2012). Self-efficacy is construed
to be those beliefs that teachers hold about their capacity to make a difference in student outcome (Garberoglio et al., 2012). Perspectives as applied in this dissertation refer to what Wormnæs (2008) termed values, views and orientations. Teacher beliefs about their capacities are argued to make a difference in student outcomes (Garberoglio et al., 2012). Similarly teacher perceived self-efficacy motivate students, increase their self-esteem, self-direction and enable learners to develop a more positive attitude towards school achievements in many ways (Capara, Barbaranelli, Steca, & Nalone, 2006). According to Garberoglio et al (2012), teachers’ perceived self-efficacy has strong influence on their behaviour in working with deaf learners in the school/classroom, level of effort, perseverance, openness to new innovations, willingness to experiment and apply new strategies and belief about deaf students’ outcome. The assumption is that teacher beliefs and self-efficacy could influence directly or indirectly the extent to which teachers meet the needs of, in this case, deaf learners.

The school as a professional context is multifaceted and includes policies, facilities and resources, colleagues, supervisors, students and parents (Garberoglio et al., 2012). These multiple factors and other psychological demands that affect teacher’s motivation and performance such as professional aspirations, recognition, respect and ultimately the satisfaction they draw from the profession influences their self-efficacy and beliefs (Capara et al., 2006). There is the need for a flexible teaching-learning methodologies that involve, in this case teachers of deaf learners, other teachers, classroom support staff and school leaders in planning and developing programmes on a daily basis (UNESCO, 2009). Teachers of the deaf and their learners are subjects involved in the teaching-learning process, representing and influencing positively the compliance of learning. Teachers’ beliefs and actions are interactive (Wormnæs, 2008) meaning that the beliefs teachers hold influence their performance and retention in schools having deaf learners. How teachers coordinate and manage the lesson and whole class activity greatly influence how the child with deafness participates academically and socially.

An overarching concern in deaf education that may impact negatively on teacher beliefs and self-efficacy is the continued debate and controversy relating to the language of instruction (Adoyo, 2002) and education placement (S. Powers, 2003). This is partly because children with deafness come to school without the language fluency necessary for them to benefit from instruction and this lag continues through school making children with deafness fall far behind every academic year (Swanwick & Marschark, 2010). To Adoyo (2002) teachers’ lack of competence in the language of instruction is a major obstacle to the academic and social development of deaf learners. Language, although not specifically the
item for discussion in this section, is especially significant in the education of the deaf as it is the central factor in the formation of relationship between the learner with deafness, the teacher, other learners and members of the community within which the child with deafness participate academically and socially. When communication and language barriers are removed, children with deafness learn as much like their hearing peers (Scheetz & Martin, 2008). Examining how language influences teacher’s perception of their self-efficacy, implies considering the teacher’s proficiency in the language being used in that setting (Garberoglio et al., 2012). According to Wormnæs (2008), if education is to have an effect, student-teachers’ pre-conceived beliefs’ and perspectives may have to be elicited and challenged. Teacher’s self-efficacy accounts for their performance satisfaction and to students' achievements and students' achievement most likely reflects teachers' capacity to transfer knowledge, skills and experience to promote students' learning. Teacher beliefs and self-efficacy are essential components for students’ learning and achievement (Garberoglio et al., 2012) that needs to be understood.

3.5 Summary

The chapter demonstrates that reforms in teacher preparation programmes do not function at the pace of reforms in the primary schools. It advocates for a positivist and constructivist approach to teacher education. It recognises the importance of teachers’ knowledge and skills as necessary for academic and social participation. It provides levels of participation that learners can engage in and shows its implication to managing support systems. Teachers’ belief and self-efficacy is considered as a means of guiding teacher’s behaviour in any classroom setting.
4. Chapter Four: Theoretical Framework

4.1 Introduction

Extensive literature on deaf education the world over has demonstrated varying degrees of successes and failures depending on the social, cultural and historical context. Teaching deaf learners is a multifaceted and a complex practice worth closer scrutiny from a social interaction perspective. This chapter presents the Activity System Theory and how it is used as a frame of reference for interpreting and discussing findings about the experiences and perspectives of teachers of the deaf. Activity system is used as a tool for understanding the social cultural issues within the workplace - in this case a school/class and the teacher education institution where a common goal is shared but in which individuals hold different contributory roles. The “activity” in the activity system is the carrying out of socially-formulated, goal-oriented actions (teaching) with the mediating tools (teaching as a practice).

The generations and principles of the activity systems theory as presented by Engeström’s (1987) triangles, start the presentation. The chapter follows by presenting the five basic principles for applying activity system theory and how these systems are used in understanding deaf education and teacher education follows in the next presentation. The chapter further discusses the tensions within and between the activity systems and ends with a justification for using the activity system theory in this study.

4.2 Generations and Principles of Activity System Theory

Activity systems theory is reported to have ‘its origin in the classical German philosophy (from Kant to Hegel), the writings of Marx and Engels’ (Engeström, 1999a) and in the ‘works of Vygotsky, Leont’ev and Luria’ (Engeström, 1999a; Hedegaard, Chaiklin, & Jensen, 1999) and have evolved through three generations of research (Engeström, 2001 ). As collective, artifact-mediated and object oriented, the first generation of activity system is drawn from the concept of mediation, where cultural artifacts are commonly expressed through a triad of human actions (Fig.4.1). Mediation is this case is the provision of a suitable stimulus to enable reflection not only on the solution to the problem but also on how the solution was arrived at.
In figure 2, the subject is an individual or individuals engaged in the mediated action (Yamagata-Lynch & Haudenschild, 2009). Mediating artefacts are tools, signs, beliefs, traditions, schema and discourses that shape the object of learning and are created and shaped in the interactions between different parties in the activity system (Law, 2010). The object would be an initial idea or the goal of an activity. This first generation of activity system was considered limited in its unit of analysis as it focused on individuals overlooking other components of the activity system (Engeström, 2001; Uden, Valderas, & Pastor, 2008).

A second generation of activity systems theory was therefore developed (Fig. 3) explaining the crucial difference between individual action and collective activity.

The second generation focused on the study of artifacts as integral and inseparable components in human functions (Uden et al., 2008) emphasizing the collective nature of human activity (Yamagata-Lynch & Haudenschild, 2009). The seven elements- subjects, tools, object, rule, community, division of labour and the outcome, each element represent
specific, transactional aspects of human activity. Subjects are participants in an activity motivated towards a purpose or attainment of the object (Yamagata-Lynch & Haudenschild, 2009). An object is the goals of an activity or the subject’s motive for participating in an activity, and tools are socially shared cognitive and/or material resources that subjects can use to attain the object. Rules, whether formal or informal, are considered to regulate the subject’s participation while engaging in an activity. The community according to Yamagata-Lynch and Haudenschild (2009) is the group or organization to which the subject belongs. Division of labour is the shared participation responsibilities in the activity determined by the community which may result in an outcome - the consequence that the subject faces because of his/her actions driven by the object.

The internationalization of activity system theory resulted in the need to deal with the questions of diversity and dialogue between the different activity systems. The challenge related to diversity and dialogue in the activity system brought about the third generation of activity theory which focused on joint activity or practice (rather than individual activity) as the unit of analysis (Engeström, 1999a; Uden et al., 2008). The third generation of activity system exceeded the limits of a single activity system and adopted as its unit of analysis multiple activity systems that mutually interact (Yamazumi, 2008). In the third generation of activity system (Fig 3) the unit of analysis is the joint activity - Outcome 3 (Yamagata-Lynch & Haudenschild, 2009). It is in the third generation of activity system that the conceptual tools for understanding dialogue, multiple perspectives and networks of interacting activity system is developed (Yamazumi, 2008). Within the third generation of activity system, instability (internal tensions), contradictions and reorganization within and between activity systems are motive forces of change (Engeström, 1999a) that form part of the evolution that engages the subject (teacher trainees) and the environment (teacher education institution).

Fig 3 Third Generation: Interacting activity system adapted from Engeström (1999)
The actions at each of the three generations represent a framework of how the subjects and object is directly linked to the outcome in the activity system. Five basic principles that are shared by people working in the same field (Hardman, 2005) can be summarised using the activity system (Engeström, 1999b). The five principles are adopted for understanding the processes in this thesis:

In the first principle, collective, artefact-mediated and objects oriented activity is seen by its network (Engeström, 1999b) at school and the teacher education institution settings as prime units of analysis. The understanding is that people live and participate in activities that in a broad sense collectively originate within the social realm (Cole & Engeström, 1993). People engage in goal-oriented actions which are interpreted using socially and culturally defined properties. In this case the facilitation of academic and social participation at school is partly based on the knowledge and skills that teachers of the deaf come with from their teacher education in addition to the practical experiences acquired overtime.

According to the second principle, Engeström considers an activity system as a community of multiple points of views, traditions and interests - coining the term multi-voicedness. This multi-vocieness may be a source of innovation or tension. He explains that participants in an activity system carry diverse histories as they engage in the division of labour of the activity system with multiple layers and stands of histories, artefacts, rules and conventions. In an activity system, people are active agents who act in sites that are not necessarily of their choosing with tools that constrain and afford their actions (Hardman, 2005).

Activity systems are transformed over a lengthy period of time. This forms the third principle of historicity. Activity systems are constantly subject to change and activity system theory considers the changes as driven by contradictions (Engeström, 1987; Hardman, 2005). Engeström (1987) argues that the history itself needs to be studied and should be looked at against the overall action. For example, changes in special needs education and teacher education for the deaf are historical factors that may influence the way academic and social participation of deaf learners is facilitated.

The forth principle according to Engeström deals with the central role of contradictions as a source of change and development within and between activity systems. He notes that when an activity system adopts a new element from the outside (for example new teaching methods or language), it leads to secondary contradictions where some old elements (for example the rules or division of labour) collide with the new one. It is through these contradictions that conflicts and innovative actions arise that may change the activity.
In the *fifth principle*, the possibility is for expansive transformations in activity systems. Engeström argues that activity systems move through long cycles of qualitative expansive transformations which get accomplished when the object and motive of the activity is reconceptualised. For example, expansive learning activity, as it is called, produces a culturally new pattern of activity in which teacher trainees engage in, question the sense and meaning of the context from their teacher education and construct a wider alternative context of how to facilitate academic and social participation at school.

Expansive learning includes change in all the elements of the activity system (Morch, Nygard, & Ludvigsen, 2010). A full cycle of expansive transformation may be understood as a collective journey through the *zone of proximal development*. The zone of proximal development of the activity system presupposes an interaction between the teacher education institution and the school on facilitating academic and social participation. The assumption is that the teacher trainees acquire the knowledge and skills and become competent, independent and proficient at what was initially a jointly-accomplished task (Chaiklin, 2003). For the case of this dissertation, the empowerment of teachers-trainees (*subjects*) with knowledge and skills (*outcome*) enhance their competence to facilitate academic and social participation (*outcome*) at school.

### 4.3 The Activity System Analysis as used in understanding Deaf Education and Teacher Education

The purpose of this study was to explore the experiences and perspective teachers of the deaf and how these experiences and perspectives can inform teacher education. The Activity System Framework (Engeström, 1987) provides us with insights into how social actions in teacher education and at school where there are deaf learners can complement each other. The premise for using activity system is based on its interactive web of actors, artefacts and the situation (Spillane, 2001) which is best understood through the unit of analysis viewed from a complex learning environment. Complex learning environments are situations in natural settings where multiple individuals are involved in shared activities within a single or multi-organizational context (Yamagata-Lynch, 2010). In the case of this study, it is the school system and classroom where learning, participation and development take place and the teacher education institution where the teacher trainees acquire the knowledge and skills necessary for the facilitation of the academic and social participation.

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65 For meaning see 4.2
Learning in the activity system theory differs from the Piagetian model of learning. In the activity system, learning is expanded horizontally through participation, involvement, interaction and responsibility within the team (Lave & Wenger, 1991) while in the Piagetian model learning is a vertical progression towards a higher level of cognition and competence (Law, 2010). Learning should be understood as a process of participation in communities of practice (Lave & Wenger, 1991) aimed at addressing the need for facilitating academic and social participation of deaf learners.

For a child with deafness to learn, participate and develop, there are multiple relations between the different elements within and between the activity systems at school and teacher education institution (Fig 4.4). In analyzing the activity system, there is mediation of one component by another within an activity system and the multiple relations between the activity systems (at school or teacher education institution). For example, the teaching (object) is undertaken by a teacher or teacher trainees (subject) mediated by the curriculum, methods, language (tools). In the process, some cultural factors, policies and/or regulations (rules) within the school or teacher education institution may influence how the different members who form the school or teacher education system (community) undertake their roles and social strata (division of labour). The mediation is represented by the two oval circles intersecting each other as knowledge and skills (outcomes) at the teacher education institution and academic and social participation (outcome) at school.

![Figure 4 Relationship within and between activities at school and teacher education institution](image)

Activity system is fundamentally concerned with the context through which human development takes place (Grossman, Smagorinsky, & Valencia, 1999). In analysing the activity setting for this study, the elements of the activity system theory framework (Fig 4) are discussed in relation to the context within which the activities occur.
The first activity system level is the school setting. The subjects are the teachers of the deaf whose immediate goal or motive (object) is to teach. The outcome to be achieved by the subject through the object is the academic and social participation of deaf learners in education. The curriculum, methods of teaching, sign language and other communication modes (tools) are often shaped and altered during the development of the activity and are either tangible (equipment and learning materials) or psychological (sign language, teaching methods and attitude) in nature.

To achieve the set objectives in education, the subject engages in activities that relate to the community, rules/norms and the division of labour. The community is made up of those individuals or sub-groups who share the same general objectives or identify with the object (Engeström, 1999b) and who construct themselves as distinct from other communities. Communities can be a group of interested parties, in the case of a school, the administrators, other teachers, pupils, parents and other stakeholders in education of the deaf. Alternatively, they might be others who provide context for the work being done by a subject, for example sign language interpreters.

The rules are explicit or implicit regulations, norms and innovations that in varying degree affect how the activity takes place influencing the actions of the subjects. Rules may be written or unwritten, but they both constrain or justify actions by the subjects. Rules also govern what the subject can and / or cannot do when using the specified tools to affect the object. In the case of this study, rules included the national and school policies, regulations and timetables that guide the implementation of the curriculum, its assessment and identification of individual needs of the learners.

The way the division of labour is handled in the activity system plays an important role in the acquisition of knowledge and skills at school and its pursuit to achieve academic and social participation at school. A division of labour is both a horizontal division of tasks between members of the community and the vertical division of power and status. Division of labour specifically addresses who should and/or can do what. In every activity system, dividing labour ensures that the object is implemented to achieve the intended outcome. Division of labour therefore justifies but also constrains actions. In this case the roles and responsibilities of individuals within the school particularly the relationship between the teacher of the deaf, other teachers, parents, the learners and the administration has influence on the academic and social participation.

The second activity system setting is the teacher education institution (university) where knowledge and skills acquisition is the motive. The subject is the teacher trainees. It is at the
university where teachers of the deaf acquire theoretical knowledge and practical skills that translate to how the academic and social participation of deaf learners are facilitated at school. The subjects work closely with each other to ensure that they undertake the object (learning) that motivated them to join as trainees in deaf education. The specific goals or expectations for each course unit during the teacher education are likely to influence how the subjects attain the outcome (knowledge and skills). The perceived difference between the current state of the object and the desired outcome provides the motivation for the subjects to develop goals and actions that transform the object into desired outcome (Waite, 2003). It is the object that changes the outcome of the activity system. Hence, the quality of knowledge and skills these teacher trainees attain determines the nature and quality of academic and social facilitation that will be offered to deaf learners. The intended benchmark is the demonstration and unintended modelling of the behaviour of deaf learners who freely interact and actively participate in academic and social activities.

The tool that guides the acquisition of the knowledge and skills includes the equipment used for training as a tangible tool and the curriculum content and activities as psychological tools. How the roles are shared promptly among the community to achieve the outcome is classified as division of labour in the activity system. The community may comprise other students, their lecturers, administrators and technical staff. How the community members interact and relate with the subjects influence the quality of the outcome in the activity system. To guide the interaction rules are developed and applied. The rules within the university include policies and guidelines about admission, training and graduation that subjects and the community in the activity setting have to comply with. Systematic demands within the rules, for example the amount of time dedicated to learning skill related content, cause potential tensions in the activity system that directly or indirectly affect the manner in which the activity is implemented.

4.4 Tension within and between the activity systems

In analyzing an activity system, all the seven elements identified by Engeström (1987) are considered unique. Each of the seven elements is examined in relation to the others and in doing so, tensions can be identified. Tensions emerge within each element of the activity system, between elements within the activity system or between elements of the two activity systems. As shown in Figure 4.2, the point where the object is has an oval shape indicating that object-oriented actions are always explicitly or implicitly characterized by ambiguity, surprises, interpretations, sense making and potential for change (Engeström, 1999b). These
circumstances generate possibilities of tension within the two activity settings (the school and university) and/or between the two settings. Tension may emerge between object of the activity at school and the university due to the recently established tools or interest and needs of the community.

It is important to identify tensions that exist within the community and between the community and other elements of the activity system. These tensions may influence activities in the hierarchies and networks within elements and between different phases of the same activity. According to Uden, Valderas & Pastor (2008), these tensions manifest themselves as problems, ruptures, breakdowns or clashes.

Engeström (1987) identifies four levels of tensions that must be attended to in analyzing human activity, in the case of this thesis deaf education. He categorises them as primary, secondary tertiary and quaternary tensions. To Engeström, tension within a single node of an activity is a primary tension which is often a root cause of subsequent tensions. A secondary tension occurs between the constituent nodes, for example, between the outcome and the tools or between the rules and the object in the activity system. Engeström argues that tertiary tensions arise between an existing activity and what may be described as a more advanced form of the same activity. This may happen when an activity is remodeled or redesigned to take into account new motives or ways of working (Uden et al., 2008). For example, the review of the curriculum at the university to meet the new trends may cause a variation in the knowledge and skills of the graduates at different times. Quaternary tension arises between the central activity and the neighboring activities. In this case, the role of the community, the rules and the division of labour may be examined in pursuit of the object and outcome and in the process tensions arise. This quadrennial tension could be due to the transformations that teacher-trainee undergo to become responsible classroom teachers at school. The strategies that teacher-trainees develop as they take up the full-time role of mentoring children with deafness are influenced by the circumstances they were interfaced with at the university. For example how teachers of the deaf adjust their teaching to suit classes having deaf learners so that the general curriculum package is delivered within the 30 or 40 minute time frame is influenced by the quality theoretical knowledge and practical skills attained.

66 In Uganda a lesson in the lower primary classes lasts for 30 minutes while in upper classes lessons take 40 minutes.
4.5 Justification for using the activity system theory

The selection of activity system as the theoretical framework in this study is based on the need for describing, analysing and understanding teachers’ actions as a situated activity in deaf education and for describing, analysing and understanding the interaction between the activities at school and the teacher education institution. Teaching and learning as a situated activity is a phenomena within the teachers experiences that are undertaken with consciousness, in cognitive and perceptual acts that have to be valued and appreciated (Wilson & Schutz, 2004) by the teacher him/herself. As a theory, activity system provides a way of understanding how the experiences from teaching deaf learners can inform the process of learning to teach in the teacher education institutions. In general, the use of activity system theory is based on the understanding that a person’s framework for thinking is developed through participation and being engaged in problem solving situations, and it is from the framework that future actions is improved upon. Activity systems is an object-oriented, collective and culturally mediated human activity (Engeström, 1999a).

Engaging the activity system theory offers a vocabulary for talking about teaching as an activity in meaningful subjective terms. Our experience of the world, upon which our thoughts of the world are based, is inter-subjective because we experience the world with and through others (Wilson & Schutz, 2004). In Activity System, focus is shifted from the interaction between isolated and stand-alone teaching, to a larger more dynamic and involving interaction between the teacher and the environment through which knowledge and skills is acquired. In the case of this dissertation, activity system is used to make sense of what takes place in the classroom having deaf learners and how it can inform the process of training teachers of the deaf at the university. The emphasis on the setting in which activities take place distinguishes activity system theory from theoretical perspectives which assume that teaching is a solitary profession (Grossman et al., 1999).

Similarly, activity system theory is a useful tool for understanding the different components that influences the teacher’s professional practice. An understanding of, in this case, the experiences and perspectives of teachers of the deaf help to direct and guide teachers’ beliefs and self-efficacy, actions and values. Activity system theory helps to explain how individual teachers act in particular ways when teaching, the experiences and perspectives they consider relevant for the purpose of understanding of how institutional

67 As stated earlier in 3.3
support could be redeveloped to contribute to the quality of teaching provided to deaf learners.

The teacher’s experiences and perspectives present a “collective” view which involves the views of cooperating teachers and all other members of the community in the activity system at school and the university. Activity system theory helps to extract meaningful information from the massive and complex situation of events that takes place in the school to conceptualize how real world phenomena (L. C. Yamagata-Lynch, 2010) can be used in training teachers of deaf learners at the university. Using the components in the activity system helps to answer the motive (answering the why?), specific goal (answering the what?) and a specific condition surrounding the goal (answering the how?) of the dynamic nature of the teacher education as an activity, the object and motive that are continually reflected upon, questioned and perhaps adapted (Kuutti, 1996).

4.6 Summary

Activity system theory is considered a worthwhile framework for understanding experiences and perspectives that are within deaf education. The elements of an activity system form a dynamic interaction within which common goals are shared within and between an activity setting, and where individuals in each activity system hold different contributory roles. A dysfunction in the activity system arises when there are tensions within an element, between elements within an activity system or between activity systems. The justification for choosing activity system as a theoretical framework is its socio-cultural historical perspective to actions and how it can be used to look at teacher education from a broader perspective than classroom teaching.

In activity system, analysis of an activity is viewed not as a simple individual action, but as a culturally and historically, goal oriented actions mediated by tools. Activity systems therefore underpin an understanding of the complex and dynamic human actions within the school and classrooms practicing deaf education and the teacher education institution. Activity system is geared towards practices which offer different lens for analyzing processes and outcomes within deaf education.

In this chapter, an outline of the generation and principles of activity system theory has been provided. To relate it to deaf education, explanation is made as to how activity system theory can be used to analyze teacher’s experiences and perspectives. A discussion of the tensions that may arise within and between the activity systems followed. The chapter ends with presenting the justification for using activity system theory.
5. Chapter Five: Research Methodology

5.1 Introduction

The aim of this study is to explore how the experiences and perspectives that teachers of the deaf have can inform how teacher education programme can prepare teachers to facilitate academic and social participation of deaf learners. This chapter describes the overall process of conducting the study. Addressed in this chapter is the philosophical assumptions and positioning of this study, the study design (qualitative case study), population and sample procedure, methods and process of data collection and data analysis. Interviews (individual and focus group) and observations are used with a limited sample of teachers from two schools having deaf learners. The chapter ends with presenting a systematic process of how the site was accessed, data collected and analysed.

5.2 Philosophical assumptions and positioning of the study

Different assumptions are made by researchers about the nature of the social world and about the nature of knowledge. These assumptions influence the type of research which individuals can conduct. Various labels which have been used to refer to these distinctions include post-positivism (Gall, Gall, & Borg, 2007) and interpretivism (Brymann, 2004). These two organic paradigms direct and provide some understanding of science. According to Guba and Lincoln (1994), a paradigm is the basic belief or worldview that guides the investigator, not only in the choice of method but in the ontological and epistemological fundamental ways. A paradigm is a basic ontological and epistemological assumption that underpins the study.

The philosophy within which this study is positioned is interpretivism. The interpretativist advocates for understanding the complex world through lived experiences and by interpreting it in context. Interpretative researchers argue for the importance of discovering meaning and interpretations of events that actors themselves have. To understand the world of meanings one must interpret it based on accounts of the experiences shared by people who have lived there. According to interpretativists, human action is for the most part deliberate and people do not simply react to events and situations, but reflect on the situation and act on these reflections.

As the objective of this thesis was to solicit experiences and perspectives of teachers of the deaf on how they facilitate academic and social participation to inform teacher
education, an interpretative paradigm underpins the study. The decision to situate this study within the interpretative paradigm is to emphasise the subjective and objective understanding of past and present experiences and perspectives that teachers of the deaf have. These subjective and objective experiences, the central meaning to social life are important social and cultural contexts which situate different meanings and interpretations (Yates, 2004).

Employing a qualitative approach and an interactive technique helped to provide sufficient understanding and interpretation of the observations and interviews that solicited the experiences and perspectives of teachers of deaf in context. The interview and observation helped to document accounts of experiences and perspectives in working with deaf learners, challenges and coping strategies that account for the success or lack of it that can inform teacher education.

5.3 The Study Design

Design represents a structure that guides the collection and analysis of data (Bryman, 2008). According to Yin (2003) a design is a logical sequence that connects empirical data to the initial research question of the study and ultimately to the conclusion.

The approach of this thesis which followed a qualitative research design, explored the experiences and perspectives of teachers of the deaf. Patton (2002) describes a qualitative design as a way of finding out what people do, think and feel by observing, interviewing and analysing documents. A qualitative research, according to Denzin & Lincoln (2003), is a situated activity that locates the observer in the world, consisting of a series of interpretative, material practices that make the world visible. Qualitative research is viewed to be a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values, etc) within their social world (Ritchie & Lewis, 2003). This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them.

Education researchers, in particular, have made wide use of qualitative research to examine contemporary situations in education and to provide the basis for the application of ideas and extension of methods (Qi, 2009). The understanding in this study is that, qualitative research captures considerable depth of what is “going on” in the classroom where academic and social participation is being facilitated, including environmental factors believed to impact on the teachers’ knowledge and skills. Ritchie & Lewis (2003) summarize six key
elements which are commonly agreed upon by many scholars to give qualitative research design its distinctive characteristics as:

- Having aims which are directed at providing an in-depth and interpreted understanding of the social world of research participants by learning about their social and material circumstances, their experiences, perspectives and histories,

- Samples that are small in scale and purposively selected on the basis of salient criteria. Silverman (2005) contends that qualitative research tends to work with a smaller number of cases and yet solicit a scope of details.

- Data collection methods which usually involve close contact between the researcher and the research participants, which are interactive and developmental allowing for emergent issues to be explored. Its suitability for this study is the magnitude of interaction with real life situations and the ability to notice, collect and think about the similarities and contradictions (Patton, 2002).

- Data which are very detailed; information rich and extensive. The key emphasis of qualitative research is on “voice” and “subjectivity” of human experiences (D Silverman, 2010).

- Analysis which is open to emergent concepts and ideas and which may produce detailed description and classification, identify patterns of association or develop typologies and explanations, and

- Outputs which tend to focus on the interpretation of social meanings through mapping and representing the social world of research participants. The design tends to use a non-positivist model of reality and stresses the socially constructed nature of reality and the intimate relationship between the researches, what is studied and the situational constrains that shape inquiry (Denzin & Lincoln, 2000).

The common element in all the definitions provided above is the position that qualitative research design seeks answers on how social experiences are created and given meaning. This study employed a qualitative research design for two main reasons. The first motivation is the use of personal experience in the choice of a research approach (Creswell, 2003). The second reason is the nature of the research problem. Qualitative research requires explanation or understanding of social phenomena and their context, exploring issues that hold some complexity and studying the process that occurs overtime.
The process may not be as clean as outlined in Bryman (2008) but involves what could be referred to as a “messy” interaction between the conceptual and empirical world on the one hand; and deduction and induction on the other, which occurs simultaneously (Holmarsdottir, 2005).

Contrary to quantitative studies where data analysis takes place after data collection, in qualitative studies, data collection and analysis are concurrent, helping to build coherent interpretation of data in great depth (Kvale & Brinkmann, 2009). The spiral process attempts to create an understanding of the meaning that people give to a phenomenon (D. Silverman, 1997; Strauss & Corbin, 1998) and allows in-depth investigation of, in this case, opportunities available in the experiences and perspectives of teacher of the deaf as they work with deaf learners.

5.3.1 Case Study
The approach in this exploratory, descriptive study was to examine the experiences and perspectives of teachers of the deaf within a real-life natural context. The lived experiences of the teachers of the deaf could clearly reflect how they cope with facilitating the academic and social participation of deaf learners in the complex learning environment. Two schools having deaf learners was the case under investigation. The two schools are chosen because of the unique characteristics they have (ref. 5.4.2.2).

The phenomenon investigated was the experiences and perspectives of teachers of the deaf from the two schools. Table 5 shows that all the teachers involved in the study had at least 5 years’ experience with children with deafness after their training. It is also evident that at least three teachers had concurrent experience teaching children with deafness with other special needs. The strategy used for investigation was the exploration of the experiences and perspectives teachers considered relevant to their practice and how aspects of their teacher education facilitated the academic and social participation of deaf learners.

5.4 Population and Sample
The success of a study depends on whether the right setting and group of people or subjects are identified and selected. Selecting research settings and participants involves identifying those which, by virtue of their relationship with the research questions, are able to provide the most relevant, comprehensive and rich information (Ritchie & Lewis, 2003).
5.4.1 **Accessible Population**

The target population for the study is the teachers of the deaf. Teachers of the deaf according to this study are those with specialism in hearing impairment and are teaching in the primary schools having deaf learners. The Ugandan policy provides that teachers with special needs education background including teachers trained to teach deaf learners are supposed to be placed in any type of school. The assumption is that inclusive education created opportunities for children with disabilities and special educational needs to be in all schools. This assumption is however not feasible as most deaf learners are found in selected schools. Teachers of the deaf are mainly found in schools where there are children with deafness due to the uniqueness in communication and sign language they share and have to use for learning and participation.

The numbers of teachers of the deaf is small and disperse. Moreover some of them are managers at school and district levels leaving a few in the classroom throughout the country. This means that the number of professionals who are specialists working with deaf learners in the classroom are equally small.

5.4.2 **The Sample and Sampling Procedure**

A sample is the set of people that have the chance to be selected given the sampling approach that is chosen (Fowler, 2009). According to Miles and Huberman (1994) no study, whether qualitative, quantitave or both, can include everything as you cannot study everyone, everywhere, doing everything. They argue that sampling should be done in relation to the settings and process. Sampling units are chosen because they have particular features and characteristics which will enable detailed explanation and understanding of the central themes and processes which the researcher wishes to study (Ritchie & Lewis, 2003). There were six schools meeting the set criterion\(^68\). Thus, purposive sampling was applied to select the schools used in the study.

5.4.2.1 **Sampling Procedure and criteria**

Purposive sampling was adopted for the study. Purposive sampling is ‘that which seeks out groups, setting and individuals where the process being studied is most likely to occur’ (Denzin & Lincoln, 2000). The key argument behind purposive sampling is the selection of participants who have the necessary information and meet the set criteria. Purposive sampling helped to identify schools and participants for the pilot study and the main study.

\(^68\) For details see 5.4.2.1 below and for their location see appendix 4 (c)
To be able to identify schools and participants who met the criteria, an inventory of teachers who graduated from Kyambogo University – the sole institution mandated to train teachers for special needs education - was made. Follow up investigation was meticulously conducted to locate where the graduates are placed especially in schools where there were deaf learners. In spite of the fact that schools having deaf learners are scattered throughout the country and the limited data documenting teacher placement that could ease tracing the graduates and school sampling, 8 schools for the deaf and 16 inclusive schools were recorded. These schools were identified through the Uganda National Association of the deaf records (Appendix 10). A survey of these schools to locate teachers of the deaf had to be made. Six schools met the criteria of having:

1. at least three teachers of the deaf
2. teachers who graduated with specialisation in hearing impairment and are teaching deaf learners, and
3. teachers who have taught deaf learners for at least two years after completion of their studies.

5.4.2.2 The Sample

Two schools out of the six schools were therefore purposively sampled to participate in the study. The two schools were identified as pragmatic cases (Flyvbjerg, 2006) since they represented practices considered positive within special and inclusive schools having deaf learners. The efforts and practices in the schools, described below, could be a lesson from which other schools can learn from.

Some major characteristics that are of interest to this study which prompted the choice of the two schools referred to in this study as Olel and Opit were that:

(i) They are among the oldest schools for the deaf established in the country that have been graduating deaf learners through the national Primary Leaving Examinations (PLE).
(ii) These are large schools having more than 20 teachers each, comprising a combination of qualified teachers of the deaf, teachers with ordinary training and deaf adults engaged as instructors.
(iii) They represent a cross-section of the possibilities available in the provisions within which deaf education is being undertaken in Uganda.
**Detailed description of the two schools**

Olel and Opit primary schools are government aided schools. This means they receive financial support and posting of trained teachers. In addition, they receive support from development partners for infrastructural and specific development initiatives. Because of being government aided schools, they have continued monitoring and supervision from officials at the district and national levels. They are among the schools having deaf learners and a long history of preparing candidates for Primary Leaving Examinations. Some of their graduates are reported to having progressed and attained higher qualifications. These schools are among special schools that have continually sent teachers for training in special needs education, most of who return to serve in the school.

Sign language is considered and practiced as one of the languages of instruction. There are also indications in both schools that the principle of total communication⁶⁹ is being practiced with the claim that some children are hard of hearing. Total communication is also meant to cater for the hearing learners in Opit primary school. There are no interpreters employed, although the teachers of the deaf also serve as interpreters in the event that interpreting services are needed. This, however, seems to be ad-hoc as these teachers continue to carry a teaching load.

The schools, however, exhibit some variations in their mode of operation. Olel Primary School for the Deaf is purely a special school while Opit School for Children with Special Needs Education provides for hearing learners and other learners with special educational needs (motor impairment and learning difficulties/mental retardation). Opit primary school was originally a special school but adopted an approach to admit hearing children. This approach is referred to as ‘reverse inclusion’. Deaf learners in the lower section at Opit primary school have a separate class with the presumption that this separation would help the deaf learners to master sign language before joining the mainstream class. Deaf learners join the mainstream class in standard four (P.4). In the mainstream class, interpreting is provided by the teachers of the deaf. Olel Primary School for the Deaf has a pre-school programme which serves as a pool to identify candidates for the primary section. There are limited vacancies as this is a special boarding school. This implies that not all deaf learners who participate in the pre-school programme can be admitted in the school each year. Those deaf learners who are not enrolled to start the primary education either continue in the pre-

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⁶⁹ Total communication is an education philosophy that encourages the use of all means of communication within disposal to put forward a message and includes but not limited to Uganda Sign Language, English or the local language, pantomime, finger spelling, lip/speech reading.
school programme waiting for the next opportunity or join any other school that admits deaf learners.

From these two schools, 16 teachers met the criteria (Table 5.4.1). Four teachers of the deaf participated in the pilot study. Two teachers (N=2) were sampled from each school for the pilot study. The sample provided for a male and female teacher from each school. For the main study, eleven teachers (N = 11) participated. Two female teachers and four male teachers (N=6) from Olel Primary School, and one female and four male teachers (N=5) from Opit Primary school were involved as participants (see table 5.4.1). These teachers were believed to have day-to-day experience and perspective encounters with children with deafness that they could share for the purpose of this study.

Table 4: Number of teachers who met criteria at each school and their sampling

<table>
<thead>
<tr>
<th>School</th>
<th>No. of teachers meeting Criteria</th>
<th>No. of teachers sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olel</td>
<td>9</td>
<td>Pilot Study – 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Main Study - 6</td>
</tr>
<tr>
<td>Opit</td>
<td>7</td>
<td>Pilot Study - 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Main Study – 5</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

**Demographic Characteristics of Respondents**

In this section, demographic information of the eleven participants sampled is presented under the five categories, of gender, general experience in teaching, experience in teaching deaf learners before and after the training and experience in teaching other children with special needs. Six of the participants come from Olel primary school and the other five were from Opit primary school.

Table 5  Demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th>Teacher’s Code</th>
<th>Gender</th>
<th>Overall teaching experience</th>
<th>Experience with Deaf Learners</th>
<th>Experience with Deaf after training</th>
<th>Experience with other children with special needs/ disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alai</td>
<td>Female</td>
<td>13</td>
<td>7</td>
<td>7</td>
<td>Never</td>
</tr>
<tr>
<td>Mwanga</td>
<td>Male</td>
<td>19</td>
<td>17</td>
<td>10</td>
<td>Never</td>
</tr>
<tr>
<td>Nalu</td>
<td>Female</td>
<td>23</td>
<td>14</td>
<td>10</td>
<td>Never</td>
</tr>
<tr>
<td>Nsereko</td>
<td>Male</td>
<td>15</td>
<td>5</td>
<td>5</td>
<td>Never</td>
</tr>
<tr>
<td>Lutu</td>
<td>Male</td>
<td>32</td>
<td>13</td>
<td>6</td>
<td>Never</td>
</tr>
<tr>
<td>Oja</td>
<td>Male</td>
<td>29</td>
<td>13</td>
<td>10</td>
<td>Never</td>
</tr>
<tr>
<td>Name</td>
<td>Gender</td>
<td>Age</td>
<td>Experience</td>
<td>Special Needs</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-----</td>
<td>------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Omego</td>
<td>Male</td>
<td>22</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 (Visual Impairment)</td>
<td></td>
</tr>
<tr>
<td>Okello</td>
<td>Male</td>
<td>25</td>
<td>25</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25 (Concurrently)</td>
<td></td>
</tr>
<tr>
<td>Nyako</td>
<td>Female</td>
<td>16</td>
<td>13</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Never</td>
<td></td>
</tr>
<tr>
<td>Megwa</td>
<td>Male</td>
<td>12</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 (Concurrently)</td>
<td></td>
</tr>
<tr>
<td>Okea</td>
<td>Male</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 (Concurrently)</td>
<td></td>
</tr>
</tbody>
</table>

Experience of the teachers varied greatly when it comes to working with deaf learners. Only one teacher had taught deaf learners concurrently with other category of learners (ordinary and children with other special needs) throughout his 25 years teaching profession. Another teacher with the experience of 22 years had worked with learners with visual impairment for 4 years before joining deaf education in the last 5 years. Two other teachers with the experiences of 7 years each in deaf education had a concurrent experience with other special needs. The rest of the teachers involved in the study worked with ordinary children before joining deaf education. It is evident that only two teachers started teaching deaf learners after training while the rest started teaching deaf learners before training.

There were 8 male teachers and 3 female teachers involved in the study. Four of the teachers involved in the main study had also participated in the pilot study. All the teachers from Olel primary school reported having no experience working with learners having other impairments. The reason for this lack of experience with other special needs was because of it being a special school for the deaf. These teachers however gave reference to deaf blind children who are in their school. Teachers from Opit primary school reported having taught other learners with special needs alongside those with deafness. Only one teacher from Opit primary school reported teaching deaf learners only.

5.5 **Data Collection methods and procedures**

Data Collection is planning for and obtaining useful information. Data collection requires careful planning for the researcher to get adequate, reliable and valuable data. To achieve this, a data collection plan had to be formulated. A data collection plan was particularly important because of the phases that the study had to take. First, it looked at teachers’ experiences and perspectives in their practices with teaching children with deafness. The second part focused on how they applied the knowledge and skills acquired from teacher training.

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70 It was evident that teachers who participated in the pilot study had more reflective responses during the main study possibly due to their prior exposure to similar questions. These reflections were more complementary and enriching to the data collection process and did not have any other substantial influence.
education in the process of facilitating academic and social participation. Instruments for the study were therefore developed based on the key concepts of teacher preparation, academic participation, social participation and factors considered for supporting academic and social participation.

This section further outlines the methods and procedures that were followed to ensure successful data collection. It starts by detailing the preparatory processes and later presents the procedure followed in collecting data for the main study.

5.5.1 Accessing the Site

The search for relevant information took place among practicing teachers of the deaf in primary schools in Uganda. Uganda has adopted an inclusive approach to education. However, there are few schools in Uganda with children with deafness and teachers trained with required knowledge and skills to teach them in the same schools. Most schools have teachers with a general teachers’ education without training in teaching children with deafness but acquire skills of working with deaf learners “on the job”. Some of them acquire the knowledge and skills through workshops and seminars given by the department of Special Needs and Inclusive Education of the Ministry of Education and Sports.

To access the schools, letters of clearance and permission were sought from relevant authorities. Permission to carry out the study was sought from the Norwegian Data Protection Official for Research (NSD)\(^71\), Uganda National Council of Science and Technology (UNCST)\(^72\), the Ministry of Education and Sports (MoE&S)\(^73\), the District Education office and schools (head teacher and teachers). The process of seeking permission from the relevant authorities is in line with ethical requirements for research.

Letters seeking permission to undertake the study in the selected schools were hand delivered to the head of the school. The purpose of the hand delivery was three folds: First, to explain the study to the head teacher and seek permission for meeting the teachers and to access the classes having children with deafness. Secondly, the visit was meant to introduce myself as a researcher in an environment where most of the teachers were former students of the researcher. The visit, interaction and explanation about the new role as a researcher was therefore to demystify the teacher-student gap that could have been created during the teacher education and to enable the graduates freely express their experiences and perceptions as they often done with any other researcher. Thirdly, the visit was to identify and confirm the

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\(^71\) See appendix 4 (a)
\(^72\) See appendix 4 (b)
\(^73\) See appendix 4 (c)
existence of teachers of the deaf who meet the criteria set for sampling the respondents and to build rapport with them.

Request for permission included the request to stay in the school, observe the classroom teaching and interview the teachers individually and in groups (focus group discussion). The permission given by the head teacher provided for the overall consent to carry out the study. The head teachers had express authority to permit the interaction with pupils after consulting with the school management committee on behalf of the parents. The boarding setup of the schools implied that parents are a distance away and only come to the school when invited or to collect the children for holidays. The school management committee of which the head teacher is the secretary acts on behalf of the parents. No individual parent or learners were therefore consulted to seek permission. Informed consent was however sought from individual teachers (see sample on appendix 5 -c). The frequent visit to the school, explanation made and rapport built greatly contributed to free interaction during individual interviews, group discussion and classroom observations.

5.5.2  **Pilot Study**

A pilot study was arranged to test the validity of the observation and interview guides. Another purpose of the pilot study was to orientate the researcher to the equipment to be used during the main study and procedure in data processing and analysis. According to Fowler (2009), one of the reasons many researchers do pilot study is to measure a range of ideas or opinions that people have or the way that research questions seem to hang together.

The pilot study was carried out in the months of February to April 2010 with focus on soliciting information related to policy and practice. The dimensions explored during the pilot study covered awareness of teachers’ experiences and perspectives on policy, impact of knowledge acquired during training, informants’ knowledge about training content and their opinion about what should be changed in teacher education. The pilot study was carried out in two schools. Two teachers from each of the two schools who met the criteria for the main study\(^74\) were observed and interviewed. Using the same criteria was to ensure that participants with the same educational background were sampled. The classroom observations were done after the interviews.

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\(^74\) See 5.4.2
5.5.2.1 Procedure for data collection during the pilot study

The main sources of information were document analysis, observation and individual interviews. Observation guide and individual interview guide\(^ {75} \) were developed for the pilot study. Table 6 gives a summary of the instruments.

Table 6: Summary of data gathering technique for pilot study

<table>
<thead>
<tr>
<th>Technique</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document analysis</td>
<td>Policy documents, curriculum, statistical abstracts and graduation records were studied during the pilot study</td>
</tr>
<tr>
<td>Observation</td>
<td>Recordings of classroom interactions were made focusing on academic and social participation and the relationship between the teacher and the learners and between the learners themselves</td>
</tr>
<tr>
<td>Individual Interview</td>
<td>Structured open-ended thematic questions were administered to teachers</td>
</tr>
</tbody>
</table>

The above table shows the numbers of instruments that were used in the pilot study. The purpose for using each of the instruments is also provided. Document analysis was particularly to solicit information about the graduates, deaf learners and training curriculum content that would be relevant for facilitating academic and social participation and the relevant policies in place to support deaf education. Observations focused on how academic and social participation were facilitated. Individual interviews solicited experiences and perspectives of teachers of the deaf on their teacher education and practices.

Document analysis formed the first part of the pilot study. The document analysis was followed by individual interviews and thereafter observations. Attempts to try out focus group discussions failed because there was no opportunity to have the teachers together. No focus group discussion was carried out. The process of the pilot study is described below.

Document analysis prior to the pilot study

Documents were sought and received from two different sources. The first set of documents was obtained from the university and included the university curricula, graduation lists and statistical abstracts. The main purpose of analysing the curricular was to find out if

\(^ {75} \) The guides are attached as appendix 3(a), 3(b)
the objectives\textsuperscript{76} and purposes of the programme and individual courses provided opportunities to facilitating academic and social participation of deaf learners. The graduation list was used to particularly identify the names and the number of graduates who qualified in deaf education so as to trace them up to their places of work. The graduation statistical abstract at the university helped to analyse the number of teachers trained over the years and whether this number could meet the needs for teachers of the deaf in the field.

The second sets of documents were obtained from the Ministry of Education and Sport and other government departments. These documents included the statistical abstracts of pupils and teachers as well as the policy and legislative documents. The statistical abstract from the Ministry of Education and Sports provided information about the number of learners with deafness in schools compared to other impairments. It showed the magnitude of deafness in schools and demonstrated a justification for more and technically trained teachers for the deaf. The policy documents studied related to education and other rights with a focus on special needs and inclusive education. Reviewing the policy documents helped to identify the strategic positions of the government relating to provisions put in place for the welfare, education, training and rehabilitation of deaf learners.

\textit{Individual interview during pilot study}

Two teachers of the deaf from each school were interviewed individually. The interview started with assurance of confidentiality, seeking permission for audio recording and note taking of the interview. Basic information about each interviewee was solicited thereafter. It was at this time that rapport was built before getting into the details of the interviewee’s professional experiences and perspectives. Questions related to policy, teacher education content, how they were facilitating academic and social participation were paused. A follow up interview was held to seek clarity on some aspects in the first interview and emerging issues from the classroom observations.

\textit{Observation during pilot study}

Observations were carried out in classes where the interviewee teach and during out of class activities. Permission was sought from the head teacher and the teachers to have these observations video recorded. Observations focused on the interaction between the teachers and learners, among deaf learners and between deaf learners and hearing learners (in the case

\textsuperscript{76} An objective of a programme may not necessarily translate into practice as there are many factors in play that influence practice. It is however important to have in mind the purpose for which a programme was initiated for a study of this kind.
of the inclusive school). These observations were reviewed and some emerging issues taken up during the follow up interview. Aspects such as classroom arrangement, learning materials, classroom interactions, methods and language use were the focus. These aspects emerged as issues that needed to be included in the follow up interviews.

5.5.2.2 Lessons Learnt from the pilot study

The pilot study was useful in achieving the purpose for which it was included in the study. In the first instance, it helped in getting acquaintance with the audio and video equipment used in the study. How to approach respondents, gaining rapport, sequencing the questions and balancing between questions during the interviews was another important experience in the pilot study. For example, one of the critical skills acquired was that of moderating and focusing the discussion on the topic without injuring the feeling of the interviewees.

The responses and comments received from the participants were very helpful in improving the final instruments and methods of carrying out interview and observations. The pilot study allowed for modification of the instruments, research questions and field procedures. In summary the following were some of the lessons learnt:

1. Some items in the questions were not clear or irrelevant. Some questions were modified while others had to be left out completely,

2. Most teachers were not interested in contributing to questions related to policy possibly for fear of reprimand later or tarnishing the image of their profession. Although they could perfectly identify and refer to the policies, they never wanted to comment about their implementation, probably because they are not able to properly interpret the policies,

3. Responses to questions related to their training especially content they felt was not relevant was not responded to but the respondents instead paraphrased to capture the content they wanted emphasised during the training,

4. The structure and format of the instruments were found to deter teachers of the deaf from being interested in the interview as it started with their training rather than discussing their practice as teachers of the deaf.

Adjustments Made

Adjustments that were made after the pilot study included:

(i) Setting the stage by asking individual teacher of the deaf to talk about themselves as a means of soliciting their teaching experiences and building rapport for further discussions

(Tell me about yourself as a teach generally and as a teacher of the deaf? Please
highlight aspects related to length of service as a general teacher, teacher of the deaf and whether you have ever taught other learners with special needs). Follow up questions that were pre-set for the interview followed.

(ii) The question related to policy which was the first to be asked during the pilot study was modified and considered at the end of the interview process, particularly if it did not emerge from the discussions. (Reflect on how the existing policies support your effort as a practicing teacher of the deaf?)

(iii) Classroom observations were made prior to interviews. The interviews therefore included questions that were pre-set to solicit information as well as some reflections that emerged from the classroom observations. Dimensions observed and more clarifications sought included (a) reason for sitting arrangement (b) the varying learner abilities and how they were managed (c) the relevance and use of learning materials, and (d) experiences with the class size.

(iv) Invitation for the focus group discussion was made formally and follows up telephone calls used. Advance overview of information to be asked relating to classroom observations and follow up interviews were provided. This approach seems to have created the willingness to participate and yielded response during the meeting.

5.5.3 Procedure for Data Collection during the main study
The main methods of data collection were the individual interview, focus group discussion and observation. Interview questions used were on thematic issues relating to their teacher education, facilitation of academic and social participation and policy support. Qualitative interviewing, which was not structured, allowed for greater flexibility and exploration of responses. It gave opportunity for respondents to take up issues that they see important as they make sense of their world of work. This was undertaken with the understanding that there was a level of trusting relationship and emotional engagement developed between the interviewer and the interviewee. Qualitative observation similarly has the unique advantage of studying the complexity in the world where connection, correlations and causes can be witnessed (Adler & Adler, 1994) as they occur in the natural context. Observation was made to document what was taking place in the field and helped to structure follow up questions.

The rationale for audio and video-recording of these observations and interviews was to give opportunity to focus attention on the actual interview and to provide a more accurate representation of the interview for transcription. It was also meant to provide convenience of
attention, facial and body language of the interviewee and capture a more accurate interaction in the classroom especially as an area of interest. The audio and video records also provide a permanent source of information to be referred to during the detailed analysis in the later stage of the study.

It was important to attend and observe interactions in the classroom to capture issues related to academic and social participation, and to understand not only the what but also the why of the teachers practice in the classrooms having deaf learners. The process was ethnographic in nature. Ethnography means, literally, a picture of the “way of life” of some identifiable group of people (Wolcott, 1997) in this case the teacher and his/her deaf learner. As educationists, we conduct ethnographic studies every time we relate to the learners. We are surrounded regularly and repeatedly prompted by questions about human actions, interactions and behaviours in society. Ethnographic studies help us to learn about, record and ultimately portray the culture of the other group. The nature of this study necessitates combining instruments in order to understand the complexity in the classroom and identify the relationships between teachers and their learners. Combining interviews, observations and documents analysis is also referred to as data triangulation (Patton, 2002 ). Triangulation in this study was done through instrumentalistaion77.

The process of data collection during the main study started with classroom observations and was followed by individual interviews and thereafter focus group discussion. The decision to start with classroom observation was based on the experience that the participants were not forthcoming in the beginning. Classroom observations therefore created rapport, enhanced participants’ active participation in the study and enabled observation of classroom organisation and management that were taken up during the interviews and focus group discussion. The process concurs with Williamson (2009) assertion that the most important aspects of qualitative inquiry is that participants should be actively involved in the research process rather than receiving an intervention or being observed for some risk or event to be quantified. The process of data collection is reflected below.

5.5.3.1 Individual interviews

Interviews are considered the most common in ethnographic studies and conducted in different forms. Robson (2002) identifies three types of interviews – structured, semi-structured and unstructured interviews. He points out that the appropriate degree of structure varies according to the purpose of the interview and the ‘depth’ of the response sought.

77 The instruments and how they are used are described in details under 5.5.2.1, 5.5.3.2 and 5.5.3.3.
This study engaged semi-structured ‘in-depth’ individual interviews as a means of capturing reflections of what teachers were doing, why they were doing so, how they come to do it that way and what modification they could have expected. In essence, the in-depth interview not only involved asking questions but also the systematic recording and documentation of responses and intense probing for deeper meaning and understanding of the responses. The questions probed teacher’s epistemic experiences and perspectives about their teacher education. The questioning process followed the stages of conducting in-depth interview namely: thermalizing, designing, interviewing, transcribing and analysing (Kvale, 1996; Rubin & Rubin, 2004; Willis, 2004 ). Emphasis was put on the relevance of the teacher education content, those needing attention to enhance their knowledge and practical skills and factors they considered to facilitate or hamper the academic and social participation of children with deafness during learning.

The interview guides consisted of three main parts. The first part focused on how the knowledge and skills acquired through teacher education are applied to facilitate academic and social participation of deaf learners. The second part solicited aspects in teacher education considered relevant and those that required more attention. The third part focused on factors that facilitate and challenge their capacity to facilitate academic and social participation of deaf learners. This structure was arrived at after the pilot study78.

Interviews were used as a means of entering into the graduates’ experiences and perspectives. Interviews helped to validate subjectively information from the participants’ classroom observations. The use of interviews was in line with Sarandakos (1998) who compared interviews with observation and noted that there are issues that do not lend themselves to observation like personal, sensitive issues or causes and consequences of social phenomenon. Sarandakos argues that those issues include past and future events that can only be relayed through a discussion. Using individual interview demanded courage, curiosity, fortitude and a willingness to accept that there are always opportunities for further development. Care was taken to ensure ethical considerations and confidentiality during data gathering, handling, processing and custody at the end of the study. This was done through anonymity in documentation and reporting. The interview guides that were developed helped to steer the interview process but also allowed for emerging questions that helped to seek clarifications on some topical issues.

78 Pilot study described in details under 5.5.2
Individual interviews with the teachers of the deaf were conducted after class observations. Permission was sought for audio recording and note taking of key points. Each recording was assigned a number rather than using the teachers’ names for anonymity and confidence building. Transcriptions of the interview were done soon after. One follow up interview was done with each of the teachers as a means of cross-checking emerging issues. The follow up interviews arose after listening to the recorded interviews and noting some questions that were not asked or some aspects within their responses that needed more clarification. Other questions in the follow up interview related to the teaching process observed. The follow up interviews were done three weeks after the first interview. Each interview lasted approximately one hour.

As the researcher is looking for qualitative rather than quantitative data, the rule of “probing non-directly” and “not answering for the respondent” was used. To ensure that the process was followed, each question was put in context, paraphrased where necessary and probed deeper as the interview progressed especially on each of the aspects of the research question. The only straightforward process was at the time when background information of the interviewee was being sought. Soliciting background information conformed to Bryman’s (2008) perspective that one basic guide in the preparation of an interview guide is to ensure that you ask or record “face-sheet” information which is of a general nature (age, gender, experience, name and any other relevant information). He argues that such information is useful in conceptualising respondents’ answers.

The individual interviews were conducted in different places agreed upon by the parties. While some were conducted in the office, others were conducted at home as that was what the respondents preferred. All venues offered privacy with a fairly good acoustics and silence. The venues selected were within the school vicinity as the staff quarters were part of the school campus and therefore agreed upon as being convenient to both the respondents and the researcher. My role during the individual interview was to ask questions and allow participants to explain based on their experiences and perceptions.

5.5.3.2 Focus Group Discussions

A focus group is a group of individuals selected and assembled by researchers to discuss and comment on, from personal experiences, the topic that is the subject of the research (Powel & Single, 1996). It is a special type of group in terms of purpose, size, composition and procedure (Krueger & Casey, 2009). Although commonly used in the market research, focus group discussions have been adopted in educational research because of their
ability to generate rich details of complex experiences and reasoning behind actions, beliefs, perceptions and attitudes. In this thesis, focus group discussions elicited comments on teachers’ practical experiences and perspectives related to the knowledge and skills, the relevance of their teacher education, policy issues and challenges that influenced how they facilitated academic and social participation. In doing so, it elicited their expectation of the organisation and management of special needs education and teaching as a practice. The focus group discussion reinforced what was individually said relating to the experiences, perspectives and challenges in facilitating academic and social participation of deaf learners as teachers trained to work with deaf learners. Some of the questions in the focus group discussion guide related to questions asked during the individual interview. The strategy was to seek more explanation on thematic issues particularly on policy, academic participation and social participation.

Focus group discussions were held after the individual interviews were conducted. The individual interviews, rapport built after staying in the schools overtime and experience gained from the pilot study eased the organisation and convening of the focus group discussions. The focus group discussions started with a low engagement mood but gained momentum to a free interaction and participation. Gender and experience seem to have had limited implication.

Focus group discussions were held with the same participants who were individually interviewed from each school. Participants in the focus group discussion share common characteristics (Powel & Single, 1996), of being homogenous as they are a group of graduates from the same institution. Eleven teachers (6 teachers of the deaf from Olel primary school and 5 teachers from Opit primary school) participated in the two focus group discussions. The venue was within the school in a place conveniently organised by the school administration. In one school it was in a free classroom while in the other it was the office of the deputy head teacher. The strategic choice of the venue was meant to allow for free interaction, limited disruption and no possibility of attaching special significance of the topic to the environment.

Informed consent for recording the discussions and assurance of confidentiality of information were made before the focus group discussions. Both concrete information and opinions were treated as relevant (Sherraden, 2001). Rabiee’s (2004) advice on questioning in terms of context, frequency, meanings and the intensity of comments during data collection and analysis was taken into consideration. During the focus group discussion, my role was therefore more of a moderator than an active participant allowing for free and relatively equal opportunity for contribution in the discussion by participants.
5.5.3.3 Observations

Gall, Gall and Borg (2003) argue that observation looks at behaviour and its environmental setting from a holistic perspective. Observation allows behaviour to be observed directly (Bryman, 2008). For this reason, observation was considered necessary to explore how academic and social participation was being facilitated in the classroom and at school.

An observation guide that was used during the pilot study was modified for the main study. The observation guide focused on classroom activities, interactions, communication, contact between the teachers and the deaf learners. The observation guide developed included taking note of action taken by the teacher, how it was done and the learners’ responses. Other aspects included how the teacher conducted the questioning, probing, explaining, used materials and resources in the classroom, body language, eye contact and humour, signing and overall lesson presentation. The list of items observed seems long but the study had provisions to allow for emerging items during the process of observation (see appendix 3-c).

Observation helped to capture details of what takes place in the classroom that complemented teacher’s responses during interviews. According to DeWalt, DeWalt & Wayland (1998), the strength of observation and interaction over long periods of time is the discovery of discrepancies between what participants say -- and often believe -- should happen (the formal system) and what actually does happen. Yin (1994) further argues that observation covers events in real life, covers context of events and is insightful into interpersonal behaviour and motives. Yin recognises that observation is time consuming, has a broad coverage and costly, and as a result calls for selectivity.

Observations were done in class during lessons, during free time and when children were having break. Key factors observed during this time included pupil-pupil interaction and pupil-teacher interaction. Prior observations were made in four classes at Olel primary school (P.1, P.2, and P.4 & P.7) and two classes at Opit primary school (P.1& P.2) on different days without any recording. Other observations were recorded as the teacher and the learners had got used to the researcher. Each observation took 40 minutes for upper classes and 30 minutes for lower classes. In each session the presence of the camera in the class was noted as having affected the attention of the learners for some time. This is not an uncommon phenomenon, as Gall, Gall and Borg (2003) recognise that observation often changes the situation being studied. The camera was therefore used in the class for two sessions to help

79 A full lesson in upper classes lasts 40 minutes while it takes 30 minutes in lower classes.
expose it to the learners and get them to be used to its presence. The camera also made the
teacher conscious during the teaching making it not so natural. The teacher and the learners
adjusted after two series of recordings thereby insignificantly affecting the collection of data.

It is possible that the face-to-face contact with the teachers of the deaf during
interviews and observations could infringe on their rights. It is also possible that carrying out
a study within my ‘own culture’ – among my former graduates- could be a limitation as well
as an opportunity. As an opportunity, it was studying a field well-known to me. It was also an
opportunity for the graduates to open up since they had got a chance of being heard – voice
their concerns – an opportunity they rarely get within the education system. The other
opportunity was for the graduates to comment, criticise and reflect on their practice with an
understanding that it would help benefit the candidates after them.

As a limitation, it was difficult to sieve whether the information which was being
provided through individual interviews and focus group discussions were not glittery
academic information aimed at not discrediting the programme of which they are a product. It
was difficult to organise and engage in classroom observation. While, some of the teachers
freely accepted classroom observations, others were sceptical and continued to give excuses
that could not allow for the classroom observation. The experience with interviews and focus
group discussions in the main study was however very natural and easy to organise.

Teachers’ reluctance to classroom observation and focus group discussions had
implications on time for data processing. In spite of these challenges, rapport was built to
enable participants overcome the stressing factors. Ethical consideration was observed\(^{80}\) and
triangulation of instruments for data collection was undertaken and unreservedly followed.

\(\textbf{Table 7: Summary of data gathering technique for main study}\)

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document analysis</td>
<td>Policy documents, curriculum, statistical abstracts and graduation records were studied during the pilot study</td>
</tr>
<tr>
<td>Observation</td>
<td>Recordings of classroom interactions were made focusing on academic and social participation and the relationship between the teacher and the learners and between the learners themselves</td>
</tr>
<tr>
<td>Individual Interview</td>
<td>Structured open-ended thematic questions were administered to teachers</td>
</tr>
</tbody>
</table>

\(^{80}\) See section 5.7 for details.
Focus Group discussion were held with the teachers who participated in the study after the first individual interviews.

The above table summarises the instruments that were used to collect data in the main study. Besides each instrument is the category of respondents with whom the instruments were administered to.

5.6 **Data Analysis**

Data was analysed qualitatively. Qualitative data analysis provides ways of discerning, examining, comparing, contrasting and interpreting meaningful patterns of themes from data (Miles & Huberman, 1994). Marshall and Rossman (1991) add that qualitative data analysis brings order, structure and interpretation to the mass of data collected. In reality, qualitative data analysis was appropriate to help search for all the dimensions emerging from the analysis of the experiences and perspectives as presented by the teachers about their practice and teacher education.

The interview and observation data were coded, transcribed and reviewed to generate themes that appeared to be salient within the social world of those being studied (Bryman, 2008). These themes were constantly and indicatively reviewed until no more modifications could be made. The constant comparison uncovered and explained the pattern and variations in the events (Bitsch, 2005) that were gathered during the interviews and observations.

5.6.1 **Analysis of interviews (individual and focus group discussions)**

The analysis of individual interviews and focus group discussions took a series of stages, as indicated below.

**Transcription**

The individual interviews and focus group discussions were audio-recorded and data was transcribed verbatim. In other words, a word by word transcription of the interviews was done for each question. Each interview was word processed on a personal laptop computer and generated between four to six pages of data. The process of transcription was time consuming (Bryman, 2008) but beneficial as it helped in understanding the data and offered opportunity for identifying codes and eventual themes that was used during analysis. The transcription also helped to give insight into what was said about each question. The transcription made it easy to relate what had been said to the research question.

The audio recording was listened to over and over again while reading through the transcript. This process helped in many ways. Firstly, it helped to cross-check that all the
information generated from the individual interviews and focus group discussions including ‘talk over statements’ (Bryman, 2008) were captured. Secondly, listening to the recordings and reading the transcripts helped to identify some issues that were used during follow-up for clarity. Thirdly, the process provided insights into and acquaintance with the data in relation to the research question. Finally, in the process of reading through while listening to the audio-recording, opportunity to identify codes and themes was availed. The codes and themes served as a guide for analysis of the data and theory development.

To protect the identity of the informants in line with the ethical requirements for research, pseudonyms were used. The pseudonyms served as identifiers meant to ease analysis. An initial was included at the end of each pseudonym to distinguish whether the response was an interview or a focus group discussion. One of the respondents was given a pseudonym Alai, another one Mwanga while the others are as captured in table 5.4.2. The illustration below provides an example:

- **Alai I** - represent response provided by Alai during an individual interview (I)
- **Mwanga FG** - represent response provided by Mwanga during the Focus Group Discussion (FG).

**Coding data**

The process of coding was done tentatively following ideas presented by Bryman (2008). The first phase followed the three research sub-questions. Codes were created under application of knowledge and skills acquired through teacher education (coded as TE), aspects considered relevant and needing more attention (coded as R&A) and factors facilitating or hampering teachers’ capacity (coded as F&H). Sub-codes (themes) were generated from the main codes. Each of the sub-codes had segments of what was stated during the individual interviews and focus group discussions. In the process of coding and segmenting, adjustments were made that resulted into the final list.

An indicative category coding with a simultaneous comparison of all social incidents observed followed (Goetz & LeCompte, 1981). The process compared responses between elements in the activity system at school and its emergent relationships to elements within the activity system at the university. Thus, the discovery of relationships based on the research questions started with the analysis of the segments from each coded category. This process underwent continuous refinement throughout the data collection and analysis process, continuously feeding back into the process of coding categories within each activity setting. As events were constantly compared with previous events, new topological dimension, as well as new relationships were discovered (Goetz & LeCompte, 1981).
The process of coding and segmenting created opportunity to familiarise with the data and to identify themes\textsuperscript{81}. In other words, key words, phrases and/or sentences that contained ideas relevant to the study were identified and put together under a theme derived from the answers. Patterns, themes, and categories of analysis indicatively emerged out of the data rather than being imposed on them prior to data collection and analysis (Patton, 1990).

The act of categorising enabled the reduction of the complexity, gave direction for activity, identified the objects of the study, reduced the need for constant comparison, allowed for ordering and relating classes of events (Dye, Schatz, Rosenberg, & Coleman, 2000). Categorising rendered discriminately different things equivalent and allowed the categories to be temporarily built up. The essential task of categorising brought together into temporary codes the data bits that apparently relate to the same content (Lincoln & Guba, 1985). To illustrate this, teaching and training were considered similar for the purpose of this study and treated as “teaching methods and approaches”.

**Constant comparison**

The constant comparative analysis was used to maintain a close connection between data and conceptualisation, so that correspondence between concepts and categories with their indicators is not lost (Bryman, 2008). In essence all responses to the same issues generated from different respondents through individual interview and focus group discussion were clustered together. The constant comparison was useful in two main ways: In the first instance, it helped to collate whether all the questions were administered to all the respondents. Secondly, it helped to assess the level of responses provided and whether there were emerging questions that could be generated for follow-up interviews. A cross-case analysis of the eleven interviews were made using the constant comparison method "to group answers to common questions and analyse different perspectives on central issues" (Patton, 1990). The analysis followed the four distinct stages of comparing incidents applicable to each category, integrating categories and their properties, delimiting the theory, and writing the theory as applied in the process of analysis (Lincoln & Guba, 1985).

In actuality, the constant comparison began during the process of breaking down the data into bits. The transcription and reading of all individual interviews and focus group discussions to identify data bits helped to put all questions and their responses together in a sequence. There was evidence to show that some questions were not answered by some respondents. The question on “the content they felt they could have covered to help in

\textsuperscript{81} The themes are presented in chapter six (findings)
facilitating academic and social participation” and “the inconsistencies in the policy that could affect their practice as a trained teacher of special needs education” were ignored to various reasons and instead provided answers that fell under content that needed more emphasis and policy challenges respectively.

The process of analysis was undertaken manually. The NVivo 9 research software for analysing qualitative data could have been a quicker means of coding and thematizing data. However, it was not possible to use the NVivo 9 software because by the time of exposure to the software, the process of coding had already started manually. It was more practical and easier to progress with the manual system which was in its advance stages. It was equally difficult and confusing to use the NVivio 9 on the data within the time frame of the study. The knowledge and experiences obtained from NVivio 9 would nevertheless be used in subsequent studies.

5.6.2 Analysis of Observations

To ease analysis of a series of observations that were recorded, a detailed description was made. The transcript of the observations facilitated the creation of segments that related to the research question. During the analysis, consideration was made to how knowledge and skills acquired through teacher education were applied to facilitate academic and social participation. The main items of analysis therefore involved contact and interaction between the teacher and deaf learners, the teacher and other learners who are hearing (in the case of inclusive school) and between the deaf learner and other learners in the class (see Figure 5).

Figure 5 The interaction web in the classroom
The segments from the observations are presented as excerpts of what was taking place in the class and school environment in chapter six. The focus of the excerpts was on the method applied by the teacher, communication engagement, classroom organisation and management, availability and use of learning materials (See Table 8).

Being able to generate excerpts from the observations during analysis helped to identify how each element in the activity system framework related to each other. The interaction identified was particularly between the subject (teacher) and the community (deaf learners, peers, other teachers, interpreters, administration), and how the tools (curriculum, teaching/learning materials, sign language) were used. Observation excerpts were also able to show how the rules (policies and rules) and division of labour (role sharing) were or not undertaken to achieve the outcome (facilitating academic and social participation of the deaf learners).

<table>
<thead>
<tr>
<th>Table 8</th>
<th>Sample observation Excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class: Primary Seven</td>
<td>Lesson: Social Studies</td>
</tr>
<tr>
<td>Duration: 1 hour</td>
<td>School: Opit School for the Deaf</td>
</tr>
</tbody>
</table>
| It was a fully packed class exclusively of deaf learners. Some of the deaf learners had additional impairments of vision and intellect. All the learners were seated on personal lockers placed in pairs with a space in between the pair to ease access. A seat was reserved at the back of the class clearly marked “visitors’ seat”.

The class had enough lighting (one width of the class had open windows) and the electricity bulbs were switched on. At the back was cupboard where some learning materials, text books and teachers work are kept. One side of the wall had charts on different subjects.

Before the start of the lesson, the teacher wrote the text on the chalkboard. Learners were engaged to read (sign) in chorus as the teacher explained the text. While some had little difficulties, others could be seen consulting their neighbours or watching on. Some learners asked questions related to the meaning of specific words and the activities that take place in the forest. Explanation of the types of forests as taught in the previous lesson was made.

In their groups as they are seated, learners explained to each other what the teacher meant. Some walked to the chalkboard to point to specific words or phrases, to exemplify what they
These excerpts augment teachers’ submissions during the individual interviews and focus group discussions in relation to how they facilitate academic and social participation. They excerpts are presented immediately below such interview statements.

5.7 Addressing Validity and Reliability

Validity and reliability are important criteria in assessing and establishing the quality of a research. Silverman (2005) argues that research is pointless unless it shows the procedure used to ensure that methods used were reliable rendering the conclusion as valid. Although Kvale and Brinkmann (2009) argue that some qualitative researchers ignore or dismiss the question of validity, reliability and generalizability arguing that it stems from oppressive positivist concepts that hamper a creative and emancipative qualitative research. Broke-Utne (1996) argues that the question of validity and reliability within research are just as important within quantitative as well as qualitative methods though they have to be treated somewhat differently.

In order to circumvent the concept of validity and reliability in qualitative research, some researches (Kvale & Brinkmann, 2009; Lincoln & Guba, 1985) used concepts such as trustworthiness, credibility, dependability and conformability as the essential criteria of justifying the truth and serving the criteria of quality. Considering the common language and applying it to research, credibility would refer to how believable the findings are, transferability to how it would apply to other situations, and conformability to how the researcher has allowed his / her values to intrude the study. Kvale and Brinkmann (2009) argue that the understanding of verification starts in the lived world and daily language where issues of reliable craftsmanship, and reliable observations of valid argument, of transfer from one case to another, are part of everyday social interaction. They equate validity in the ordinary language to truth, the correctness and the strength of a statement. In social science, validity pertains to whether a method investigates what it purport to investigate. Punch (2005) claims that there are no fool proof procedures to establishing validity and that validation of a method depends on the situation. Kvale and Brinkmann (2009) contend that the issue of what is valid knowledge involve the philosophical question of what truth is. They argue that within
philosophy, three classical criteria of truth are discerned: correspondence—whether known statements correspond to the objective world, coherence concerned with consistency and internal logic of statements and pragmatic utility—which relates to the truth of knowledge statement to its practical consequence.

In this thesis, measures were taken to address validity and reliability during the whole process. In general terms, a pilot study was carried out (ref 5.5.2). The pilot study was to test the instruments to be used for the main data collection. As noted by Silverman (2010) the best way to test whether different question formats produce different answers ... is to pre-test questions before the main research starts. The pilot study involved testing the individual interviews and observation guides.

Kvale and Brinkmann (2009) advise that validation does not belong to a separate stage in an investigation but permeates the entire research process. They add that validation is not only a matter of conceptualisation and of the method used; the person of the researcher including his or her moral integrity and especially the practical wisdom in their discussion of ethics is critical for evaluating the scientific knowledge produced. Internal validity was considered critical. Internal validity as applied in this thesis included the process of control and rigour that helped to establish confidence in the findings (Lincoln & Guba, 1985) and included the triangulation of instruments. Factors controlled include following strict selection criteria for sampling participants to the study, the questions used to elicit information designed in cognisant to research questions and follow up interviews held as a means of getting a detailed account of specific parts of the statements made. The follow up interviews also increased the confidence of participants as they already knew the level of interaction in the interview, hence creating more openness. The questions were varied and modified based on the nature and quality of responses during the interviews. These actions can be justified by Kvale and Brinkmann (2009) assertion that validity is ascertained by examining the sources of invalidity. The follow up interviews and observations served as a process to continue checking on the credibility, plausibility and trustworthiness of the findings. All the teachers who participated in the study graduated from the same institution—Kyambogo University, thus the conceptual understanding of academic and social participation and needs of deaf learners remain similar.

Considering classroom observation and interviews as a strategy, the researcher becomes the instrument (Patton, 2002). Validity therefore hinges to a great extent on the skills, competence and rigour of the person doing the fieldwork. In this case, I have been a teacher educator in the same field since 1996, experienced the phenomenon under study and carried out research with similar methods (Eron, 2011; Kato et al., 2007). I was however conscious
that my experience should not reduce the validity of the study through what Brock-Utne (1996) referred to as cultural blindness – being blind to what you experience every day. Viewing the phenomena from a teacher educator perspective paved way for a different angle from classroom teachers’ daily experience and perspectives. Therefore borrowing from Seidman (1998) advise to attain validity in interviewing, I tried to minimise the interviewer effect by engaging into a frequent visitor in the schools, did not participate in any teaching and conducted the interviews in such a way that I was an active listener dedicated to making the interview sessions participant oriented. My role was more of a “moderator” with a consciousness to avoid leading questions.

Finally, source triangulation - comparing data from different qualitative methods e.g. observation, interview and document analysis - was used (Denzin, 1978, in Ritchie and Lewis, 2003). Interviews were audio recorded while observation was video recorded to aid in accuracy while analysing.

In relation to reliability, Liebert and Liebert, (1995) contends that arguing for and attaining reliability is of prime importance in any study. Reliability in qualitative research is regarded as what the researcher documents as data and what actually occurs in natural setting that is being researched. Issues of reliability during interviewing, transcribing and analysing (Kvale & Brinkmann, 2009) have generated a lot of discussion as they have implications on creativity and innovations. In the case of this thesis, prolonged engagement in the field, persistent observation of classroom and school activities were geared toward reliability. As noted by Liebert and Liebert (1995) the value of any scientific observation depends in part on its reliability.

5.8 Ethical consideration

Ethical issues are present in all kind of research and arise at any stage of research. The research process creates tension between the aims of research and the rights of participants. Discussions about ethics brings us into a realm where the role of values, morals and principles become a topic of concern revolving on how to treat people we conduct research with and activities we should or should not engage in with them. Informed consent is a key issue in research with human beings (Bogdan, 1992 ; Evans & Jakupec, 1996). It is a mechanism for ensuring that people understand what it means to participate in a particular research study so they can decide in a conscious, deliberate way whether they want to participate or not.

A study of this magnitude could not be carried out without permission from the state authorities responsible for education. Permission was sought from the Uganda National
Council for Science and Technology (UNCST)\textsuperscript{82} and the Norwegian research “watchdog” – the Norwegian Data Protection Official for Research (NSD)\textsuperscript{83}. In addition, permission was sought from the Ministry of Education and Sports\textsuperscript{84}, District Office\textsuperscript{85} and the Head teacher\textsuperscript{86} of each of the two schools involved in the study to gain entry and ensure the study is conducted within the laws of Uganda. These processes had to be accomplished in order to allow protected entry into the study site. As noted by Gall, Gall and Borg (2003) the process of gaining entry varies greatly depending on the nature of the research problem and requirements of the case. This particular study was based within an educational setting and therefore required both institutional and individual clearance.

In the case of the schools, a written description of the project and the obligation of the researcher and the respondent were clarified. The document was read by the respondent, explained to by the researcher and agreed upon by both parties to cast out doubt of coercion. For the case of deaf school children, the head teacher was contacted for clearance and approval. This was done in consultation with the management committee as it’s a boarding school where parents stay a distance away from the school and the responsibility of the children is entrusted to the school administration and the management committee.

Another key consideration was confidentiality and privacy particularly as the participants are teachers who operate within a code of conduct. These participants were also former students of the researcher. Cottrell & Downie (2000) argue that confidentiality and privacy is best expressed as an agreement between the researcher and participants. Obviously upholding individuals’ rights to confidentiality and privacy is a central tenet of every researcher’s work. Confidentiality was guaranteed through the ethics protocol form\textsuperscript{87} that was signed and retained by both the researcher and the participants. There were discussions with the participants on their willingness to talk about sensitive policy and practice issues in the profession and how this will be recorded and stored. The recorded information and their transcription were securely locked in a drawer only accessed by the researcher. A password was given to the data that was saved on the personal computer so that no other person may have access.

Similarly some anxiety arises in the research process. Hammersley & Atkinson (1995) note that social scientists have recognized the risks participants point out in taking part in

\textsuperscript{82} See appendix 4 (b)
\textsuperscript{83} See appendix 4 (a)
\textsuperscript{84} See appendix 4 (d)
\textsuperscript{85} See request letter on appendix 5 (a)
\textsuperscript{86} See request letter on appendix 5 (b)
\textsuperscript{87} See sample on appendix 5 (c)
research as anxiety in and exploitation of participants, that publication of research findings may damage the reputation of participants or members of their social groups. In this case the graduates may not be sure of what the findings will reveal and how education managers up to the Ministry of Education and Sports would take it. Even if this prediction is possible and believed to be positive on their side, the open ended nature of the question still cause the participant to question whether all that they have said should have been said.

A vital step taken by this study was to guarantee privacy and anonymity. Pseudonyms were provided for each school and participant in the process of data collection, analysis and reporting. As Kvale (1996) notes to protect the subjects and guarantee privacy, fictitious names are used in producing results. Continued contact with the participants and their exposure to other researchers done in the school by disability organizations and /or other parties created a basis for their understanding of the importance of research, hence reducing the anxiety. A concerted effort to treat all participants in the study with considerable respect and dignity was taken. This included enabling them to listen to and view recordings and as mentioned earlier, taking time to talk about the research. I was explicit about my role as a researcher not as a university lecturer.

Potential biases that could influence this study were taken into consideration. According to Merriam (1998), reducing a researcher’s bias involves clarifying the researcher’s assumptions, worldview, and theoretical orientation at the beginning of the study. As a teacher educator and administrator of the graduates under study, I have been intimately involved in the deaf education arena. I have a commitment and empathy for teachers of the deaf. Throughout this study, I tried to balance my allegiance to the teaching profession, the deaf community and to ensure that these biases do not impose themselves on my study. I purposefully took the following measures to minimize my bias: triangulation of data sources through the use of individual interviews, focus group discussions and observations; production of audio and videotaped and written records of all data gathered; and the creation of records explaining how data analysis was undertaken.

It is summed up that some of the benefits accrued from the research process were the valuable knowledge and insights I got from teachers’ experiences and perspectives on their practice and teacher education for deaf learners. Teachers also had the opportunity to share their experiences and challenges within an educational sphere as most studies reported done in the school were by social workers, non-governmental organisations and journalists. I have endeavoured to present and discuss the results as candidly as possible in the subsequent chapters.
5.9 Summary

This study sought to elicit information about the experiences and perspectives that teachers of the deaf consider relevant in facilitating academic and social participation of deaf learners and how these experiences inform teacher education. In this chapter a presentation of the methodology adopted for the study was outlined. It started by presenting the philosophical assumption on which the study is positioned. Considering that the study seeks an understanding of the complex world of lived experiences shared by people who are actively involved in it, interpretivism was identified and chosen as the most appropriate philosophical position. An exploratory, descriptive approach was chosen as the most suitable way of presenting the lived experiences and perspectives of the teachers of the deaf. Two schools having deaf learners was the case under investigation.

How the population was sampled and data collected followed. Eleven teachers of the deaf from the two schools who are directly involved with these deaf learners participated in the study. The individual interviews, focus group discussions and observations formed the key instruments. Document study was also used. To ensure that these instruments solicit the necessary information, a pilot study was undertaken. Lessons learnt from the pilot study contributed to the refining of the instruments and procedures for data collection, analysis and presentation.

Qualitative study implies that the researcher is in constant contact with the informants. Measures were undertaken to ensure that ethical considerations persist. The procedure, data management and processing ensured that confidentiality prevails. Ethical considerations helped to curtail potential bias and provided for confidentiality and privacy requirements. The validity and reliability of the results that could be threatened by factors relating to the researcher, participants and the process were controlled. A step by step process was documented as a demonstration of consideration for validity and reliability. It is possible that segments of data may be identifiable by respondents; however no clear identity can be traced. The information generated from the experiences and perspectives of teacher of the deaf in this study are analysed and presented in the next chapter.
6. Chapter Six: Presentation of findings

6.1 Introduction

The purpose of this thesis was to explore the experiences and perspectives that teachers of the deaf have and how these experiences and perspectives can inform teacher education preparation programmes particularly for teachers of the deaf. This chapter delineates the findings outlining the experiences of teachers of the deaf as they facilitate academic and social participation. The data and findings are clustered and presented in relation to the six sub-questions\(^{88}\). The six sub-questions are the thematic areas that are identified to capture the positive and challenging experiences in teaching.

Interview data sources are presented with codes I for Individual Interview Excerpt and FG for Focus Group Discussion Excerpt. Observation Excerpts are presented in the box below the relevant interview excerpts.

As the positive and challenging experiences are presented, vignettes drawn from collected data are integrated as narratives to illustrate how academic and social participation is facilitated.

6.2 Experiences and perspectives relating to teaching methods and approaches

As university objectives dictates, teacher education is designed to equip teacher trainees with knowledge, skills and attitudes to enable them perform their tasks effectively in the school and classroom. The teacher education programme has subject content and topics that are covered over a period of time to provide the knowledge and skills. The theoretical and practical content is meant to prepare teacher trainees to facilitate academic and social participation of deaf learners. The application of the knowledge and skills that teacher trainees acquired varies from teacher to teacher and is also dependant on the school settings.

One of the commitments of the teachers (subject) at the school level is to attend to the individual needs of each learner. Teacher education is pivotal in building the capacity of these teachers as they prepare pupils to take their place in society and in the world of work. A key aspect that teachers have to achieve at school is to demonstrate practical hands-on experiences with the available curriculum, methods and language (tools) to facilitate academic and social participation (outcome). The teachers (subjects) plan the teaching (object) and other activities based on the available tools and the national and school policies and guidelines (rules). In the process teachers are engaged with other teachers, learners, parents and deaf adults.

\(^{88}\) Research Sub-questions are under the subheading 1.3 of this thesis.
(community) and ensuring that the persons mentioned in the community take up their roles (division of labour) does not affect any members of the school or breach the rules.

Data from the teacher education curriculum for the bachelors and diploma programmes show that teacher trainees cover aspects that intend to enable them acquire methods and approaches to facilitate academic and social participation in a class having deaf learners (appendix 8 & 9). Teachers involved in the study provided contradictory account (positive and challenging experiences) about their teaching.

The positive experiences identified included: using appropriate methods and better approaches to handling deaf learners, categorizing and assessing them, breaking down tasks and making lessons more practical. The main challenges mentioned during the individual interviews and focus group discussions included how to manage large classes, working with children with deafness of varying abilities with some having additional impairments, and the lack of willingness by some teachers within the school to take up roles involving deaf learners.

Positive Experiences

Teachers of the deaf contend that their teacher education has empowered them with methods and approaches that they use to facilitate academic and social participation of deaf learners. Data that recounts positive experiences and perspectives on how they are applying the method and approaches acquired through their teacher education is illustrated by a number of statements. In relation to appropriateness of methods, Nyako (I) noted that:

‘I learnt some methods of teaching them. In fact I learnt that when I want to achieve, I have to try as much as possible to make my lessons practical’.

Alai (I) shares a similar view noting that:

‘I now know how to vary the methods as I deliver my lessons’

During the focus group discussion, a heated debate indicated the central role methods and approaches have in facilitating academic and social participation of deaf learners. Justifying the relevance of methods during their teacher education, Lutu (FG) argued that:

‘In fact in my training…what they were teaching us about methods of teaching children with deafness has helped us so much because I know how to handle the deaf generally’.
Nsereko (FG) singled out how concepts vary and may be confusing to deaf learners. He argues that these concepts must be used in context and affirms that these were clearly brought out during their training:

‘There are concepts that cut across other subjects which you don’t just transfer directly. For example “respectively” when using it in mathematics it should not be the same as in English. So I gained on that methodologically’.

According to Nalu (FG) their teacher education had aspects that were broad enough to enable them work with all disabilities and special needs in education. She singles out methods and approaches that were particularly taught during core subjects as relevant for deaf learners:

‘In core subjects, we learn how to handle all disabilities, but in particular how to meet the needs of learners with deafness; this has helped me to vary my methods’

An observation of a special class from Opit primary school showed the efforts teachers put in to vary their methods to the benefit of the deaf learners.

**Observation Excerpt I**

**Class: Primary 3 Lesson : Mathematics – Place Values**

Teacher picked the abacus and asked the pupils to count the number of place values on it. She leads the pupils to identify the place values. She draws the abacus on the chalk board. She writes besides it the figure that has to be fitted on the abacus. Learners’ fingerspell the number and one by one they come and place the figures on the single abacus that was available in class. The result was represented on the chalkboard. Individual learners are asked to fingerspell the number written on the chalkboard by the teacher and fit them in the abacus. They repeat the same process as a group. The teacher then draws the numbers on the abacus and asks the learners to fingerspell and copy in their books the numbers drawn before an exercise is given with varied alternatives of how to interpret the abacus.

The approach was relevant for the lesson and group. There were however very limited learning materials for the small class of deaf learners. In spite of this, learners actively participated and were fully engaged by the teacher.

On how to work with children with deafness better, all the participants who contributed argued that the way they “handled” deaf learners greatly improved after their training. Alai (I) noted that:

‘Before I had SNE training, teaching children with deafness was very difficult, communication was hard but after the course, I adjusted, I am able to give assistance based on individual needs’.
Nalu’s (I) statement focuses beyond the classroom activity stretching to include extracurricular activities and personal traits when she said:

‘Ok! My training has helped me to handle these children better in class, outside and it has helped me to be patient with them’.

This position is correlated by Mwanga’s (FG) statement when he said:

‘Teaching children with deafness needs a lot of patience. Because some of the children, the degree of their deafness also matters. Some are not only deaf but have other disabilities. The training has helped me to handle these differences’.

In addition to meeting individual needs, teachers of the deaf were able to identify and categorize learners according to their abilities. Some teachers of the deaf share their experience as in the following excerpts.

Mwanga (I) notes that:

‘After the training, we are able to categorize them at whatever given time and try to assist them properly. In fact in this class we have learners with different abilities and other special needs. As you can see the one who was seated at the corner has a visual problem, the other one has residual hearing and the other is a slow learner but we are attending to all of them’.

Lutu adds:

‘I identify their interest, what they can do, because they cannot be completely having nothing. When you try to intervene seriously, you find there is a certain area where they can excel. You can discover the talent that the child can follow. It is your initiative as a teacher to discover the talent of the child. I feel that the training has helped me to achieve this’.

The experiences shared by teachers of the deaf on how learners were being encouraged to work closely with each other were minimally observed. There was limited indication that teachers were attending to the individual needs of the learners. The whole class was seen to be treated as having the same ability hence the same approach was demonstrated to teach them. An observation of a social studies lesson in standard seven attest to a generalised teaching, recognising the differing abilities but not minding so much about meeting these individual needs.

Observation Excerpt II

<table>
<thead>
<tr>
<th>Class: Primary 7    Lesson: Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>This was a fully packed classroom with each learner having his or her own locker. The lockers were</td>
</tr>
</tbody>
</table>
arranged in pairs and space left between the paired lockers to allow easy access. All the learners were facing the chalkboard, the direction where the teacher was. One side of the wall had wide and open windows that could allow proper lighting in the class. Additional lighting was provided by switching on the electric bulbs. The learner with a visual problem sat at the side of the class near the window.

The lesson started with the teacher writing the notes for the lesson on the chalkboard. Learners were engaged to read through in chorus as the teacher explained the text. While some had little difficulties, others could be seen consulting their neighbours or watching on. Some learners asked questions related to the meaning of specific words and the activities that take place in the forest. Explanation of the types of forests as taught in the previous lesson was made. In their rows and while seated, learners explained to each other what the teacher meant. Some walked to the chalkboard to point to specific words or phrases, to exemplify what they mean to the teacher or fellow students. One learner with additional learning difficulty copied from a fellow learner. The teacher maintained the position at the front of the class addressing all the learners as a group. The congested class had no space for the teacher to move around freely.

It is evident in this excerpt that the classroom environment was both conducive and restrictive. The spacing and lighting was evidently satisfactory. The sitting arrangement was restrictive as it could not allow for easy accessibility (viewing) of learners contributing in sign language from behind and opportunity for the teacher to reach out for an individualised attention. The child-to-child consultation learners demonstrated was a strategic opportunity for academic and social participation.

Another critical strategy demonstrated by the excerpt above is the breaking down of tasks to a more manageable and understandable bits. The reading aloud and explaining the different units was meant to provide opportunity for all learners to academically and socially participate. The teachers of the deaf affirmed the ability to break down tasks during their teaching as one of the ways through which they apply knowledge and skills from their teacher education. They consider both theoretical knowledge and school/teaching practice as being of great value to their practice.

Alai (I) recounts that:

“From the time I did my first teaching practice, it was hard for me to break down tasks for these kids. But now I can handle any subject. For me it’s only maths at upper level which can be difficult. Even the way I explain things, I can easily notice children who may not have understood and then we start by maybe telling riddles, dancing, discussing and after putting them into mood, you see you can teach so well.”
Lutu (I) shares his strategies thus:

“In most cases when I am in class, I have in mind that I am planning for three categories of children. First, for all those who are bright, the second group are those learners who are average and I consider those who cannot cope. I say meanwhile these children are doing this, Justine will be doing this or will be arranging a jig saw or will be painting this picture or doing this and that. I try to plan for them so that I can cater for all for them’.

On how to achieve in teaching, participants noted that they have to make the lesson practical. Nyako (I) recounted:

‘In fact I learnt that when I want to achieve, I need to try as much as possible to make the lesson practical. In fact when I make my lessons practical, I normally achieve what I intend to’.

Variation in the ability may be attributed to many factors some of which are within the child while others are environmentally engineered.

**Challenging Experiences**

In spite of the positive attributes to their teacher education, teachers of the deaf observed three main challenges that hinder their effort. They identified large class size, varying abilities of the deaf learners and lack of interest and involvement of teachers without special needs education training. These factors were considered to influence and dictate the levels and nature of academic and social facilitation. A number of teachers’ excerpts highlight experiences related to large classes some of which had learners with varying abilities.

Alai (I) noted:

‘There is a problem with the teacher-pupil ratio, you find a teacher teaching maybe 15 kids with different disabilities in addition to deafness. It can be a challenge particularly on the opportunities to give individual attention’.

Nalu (I) observed:

‘like now you see the class, it is too big. It is a very big challenge for me because with such a class you fail to give individual help’

Megwa (I) specifically shared an example of deaf learners having other impairments thus:

‘Now we are having a lot of challenges especially these days. We are receiving children who are partially deaf and those who have partial vision. It brings a combination of deaf blind. In this class we are handling one with multiple disabilities, the vision is not clear, the hearing is not there and s/he is also physically handicap. So when you try to sign when the light is not strong enough, s/he cannot pick it, you cannot ask them to come in front to contribute, it will take a lot of the teaching time, making us not to complete the requirements of the syllabus’.
Observation Excerpt IV

*Classes P1-P7 Olel primary School*

The classes were crowded with limited space to move. In spite of this, all the learners were sitting on chairs with individual lockers. The teacher created space between the rows for the learners and the teacher to use as a passage. The space between learners is squeezed. Learners had difficulties getting up or moving to the front to give an answer or explanation where all learners can see.

In lower classes (P1-P3) deaf learners were seated in a U shape with two lines one in front and the other behind. In the upper classes (P4-P7) pupils sit in rows facing the teacher and the chalkboard. An extra seat is placed behind for a visitor. The learners are paired and there is space created after every two lockers as passage to the cupboard used for storing items. It also served as a passage for learners to get in and out. There is limited space between learners causing difficulty in the movement of the teacher or learners. The teachers were most of the time in front of the whole class. There was evidence of difficulties with the signing space and standing up to contribute as the school/class culture dictates.

All the classes from P.1 to P.7 were having exclusively deaf learners being a special school. The lack of space was due to the overpopulation in class. The presence of the teacher permanently in front of the class was similarly due to the overcrowding in class and the lack of space to enable the teacher to move around.

Observation Excerpt V

*Classes P1-P7 Opit primary School*

The lower classes (P1-P3) have deaf learners separated from their hearing peers. Classes having deaf learners only were small with between 3-9 learners in each class. The inclusive class was large in the range of 55 to 90 learners. All the deaf learners in each of the lower classes were comfortably seated on desks in a U-shape. In the inclusive class the desks were placed in rows all facing the chalkboard and the teacher.

In the upper classes (P4-P7) all the learners were seated at a desk. Deaf learners were seated alongside the hearing learners. There was little space between the desks. The learners were seen sharing information with their peers and using the only learning material provided by the teacher and placed in front of the class. Hearing learners demonstrated some level of sign language mastery to communicate with their deaf peers.
The crowding in class gave little freedom for learners to write and for teachers to provide individual support to learners during exercises. There was evidence that the crowding affected the signing space for the deaf learners. The inclusion of deaf learners with their hearing counterparts was an opportunity for promoting child-to-child support. Deaf learners and their hearing peers were seen to be sharing notes and discussing with each other during the period they were doing exercises.

The above factors were problems that could basically be associated with the learners. However, there were concerns related to role sharing and involvement between teachers of the deaf and teachers having ordinary training in providing academic and social support to deaf learners. Excerpts from interviews evidenced the actions of ordinary teachers towards children with deafness. The lack of support from other teachers could be argued to create a situation where deaf learners become attached to their teachers.

Nyako (FG) observed:

‘another thing is that other teachers who are not trained in special needs education or who don’t teach these children, where there is a problem, they don’t come in to help. Even children themselves, even if you are not on duty they come to you leaving the rest of the teachers’

Nsereko (FG) gave an example when they are involved in extra-curricular activities:

‘In sports there is no way you can instruct that kid to change style during play if he does not see you because we are playing with a mixture of kids- hearing and the deaf. During athletics, the kids have to see us as they start, for the hearing children their teachers use whistle. In most cases the others have already started and ours have already delayed. Even if they are the first if you are not there these ordinary teachers will pick hearing children’.

Nyako (I) shares the experience where former students still follow the teachers and their former school peers during holidays:

‘There are some children who studied here sometimes back; they are now in higher education. They are far away from here; they are in another district. So these children during holidays sometimes they come to visit me. They ride over 20 km to come and visit me. Then there is a certain man who was a teacher here, he is also deaf, after visiting me, they proceed to that man – sometimes they spend a night there or they make a return journey that they have just come to see – greet you. And also sometimes when they want to pray, there is a church for the deaf where these teachers started I think some few deaf people go and pray there. When they go to other churches and they fail to pick the message, they ride the whole way from (village name) coming to pray here. That’s why am saying that they have that attachment’.
Many factors could be advanced for the attachment including the shared mode of communication and language, the attention they receive from the teachers and deaf adults and the ability to understand deaf culture.

Table 9: Summary of a range of positive and challenging experiences related to teaching methods and approaches

<table>
<thead>
<tr>
<th>Positive Experiences</th>
<th>Challenging experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attained better methods and approaches</td>
<td>Class size too big to give individual help</td>
</tr>
<tr>
<td>Acquired better ways of handling children with deafness</td>
<td>Teacher-pupil ratio not suitable for attending to children with deafness with additional impairment</td>
</tr>
<tr>
<td>Were able to categorize and assess children with deafness properly</td>
<td>Lack of help from teachers without special needs training or those not teaching deaf learners</td>
</tr>
<tr>
<td>Were able to make lessons practical</td>
<td>Difficulty in instructing deaf learners in sports especially where there are hearing competitors</td>
</tr>
<tr>
<td>Could easily break down tasks</td>
<td></td>
</tr>
</tbody>
</table>

The interviews and observations seem to indicate a contribution to the methods and approaches that teachers use in working with the children. Teachers of the deaf demonstrated the capacity to categorise and assess the children, break down tasks and make the lessons practical. The teachers of the deaf were concerned with the large class size in terms of providing individual help and meeting the needs of deaf learners with additional impairment. Excerpts from the interviews highlight the lack of commitment from teachers without special needs education training in the schools and negative treatment of children with deafness by teachers from other schools without special needs education training particularly in extra-curricular activities. Teachers of the deaf noted the difficulty they encounter in instructing deaf learners in sports.

6.3 Experiences and perspectives relating to communication and language

Data indicated that all the participants contend that their teacher education contributed to improved communication and knowledge of sign language among teachers of the deaf.
Aspects of total communication, sign language, speech and lip reading and gestures were recounted as means of communication that was adopted. The same teachers contradict their statements when it comes to practical use of the communication modes. These participants argue that teachers, the learners and their parents lacked interest, knowledge and ability to communicate in the most appropriate mode. The said group experienced difficulties in using sign language or some other means of communication.

**Positive experiences related to communication and language**

Teachers described their training as having contributed to their ability to communicate in sign language, to train children with deafness in sign language, to mobilize the community and to simplify language in examinations, tests and exercises. Excerpts of typical statements made by teachers include comments below.

Omego (FG) stated:

‘The most interesting thing is that I had difficulties communicating with them. Now with the training our interaction with them is very easy, we know how to tell them what to do and what not to do. There is a close relationship’.

Alai (FG) specifically referring to sign language said:

‘I gained proficiency in sign language, I can handle children without any difficulty, even teaching, I can do it perfectly well’.

Communication by deaf learners is only possible after ensuring that your attention is towards them. The ways deaf learners draw other people’s attention sometimes affect their relationship with others. This method of attention seeking had to be understood by the respondents. Nyako (I) elaborating on her experience with the way deaf learners engage teachers in communication stated that:

‘Sometimes when these children want to communicate with you, they want to alert you, they will come to you without minding how dirty the hand is, they just come and pat you. In fact before I went for training, I felt that they were slapping me but now I have learnt they have their words into their hands’.

This statement seems negative in a sense but is a clear exemplification of the fact that the teachers now understand that the language of the child with deafness or person is in the hands. Deaf learners sign, tap or wave to draw your attention to engage you in a communication process.

Apart from the classroom communication in sign language, another angle of communication is the sensitisation and mobilisation of parents and other stakeholders.
Teachers involved in the study noted that they talk to parents and share experience with stakeholders about deafness and mobilize them to support deaf education. This statement implies engaging deaf learners and the community in the activity system in communication and awareness of how to interact with others. The interaction has implication on the division of labour in support of deaf learners in different ways.

Okello (FG) states:

‘Generally, I would say I help them to communicate with the community, to understand the community so that the community can accept them. You have to talk to them, visit them, and talk to them. Everything is done through what our Lord Jesus Christ did – Talking’.

Oja (FG) shares his experience in working with the community, when he stated:

‘Outside these, when we go out we meet and talk about the pupils with deafness and indeed to love and treat them as members of the society. We have also gone ahead to interact with them to get some help from them to support the learning of these learners with deafness. I have always called the parents and visitors to take interest in children with deafness, sit at the back to see how they learn’.

The last part of this statement shows why there was a chair in all the classes labelled “visitors seat”. The aim is to bring the hearing community nearer to the deaf community and be able to appreciate the abilities and challenges of deaf learners.

Realizing the uniqueness of the language of the deaf, teachers reported that they take consideration to modify the language used in exercises, tests and in the end of term examinations. The aim is to enable deaf learners conceptualise the content in the question being asked. Nsereko (FG) summarized the purpose of simplifying the questions when he stated:

‘We simplify the language because there are certain concepts which are not applicable to the deaf. Because the English of children with deafness is not the same English commonly found in papers. For them they sign without prepositions. For example “which body is responsible for UNEB” As soon as the child sees the word ‘body’ he thinks of a person, he thinks of the body parts without internalizing the contextual meaning of the word body in the statement’.

**Challenges related to communication and language**

Although teachers acknowledged that the knowledge and skills obtained from the university have built their capacity in sign language, they raised concern related to using the sign language with deaf learners. Teachers who participated in the study noted that not all teachers are proficient in sign language which makes it a challenge when facilitating academic
and social participation. They sight an example of some teachers not being able to or not liking to engage in interpreting. The contention is that some of these teachers of the deaf may not know sign language in spite of their ability to use signs. To this Mwanga (I) noted:

“Much as all teachers are supposed to know sign language, when I take children to church in most cases I am alone, other teachers are not willing to join or interpret for the children with deafness. Much as I know sign language fine but it is really tasking to interpret for two or three hours continuously when you are just alone”.

There was reported lack of knowledge of sign language by parents and lack of follow up by technical people which affect the language and socialization process of children with deafness. A typical statement on lack of sign language knowledge by parents is seen from the following interview excerpt with Omego (FG):

‘Sign language! Parents are complaining that they find difficulty communicating with their children unless you go through somebody. They say ah! ah! ah! We feel easy when they are at school, when they are at home they are a headache to us’.

Deaf learners were also reported to have poor mastery of the language. Nsereko (FG) attributes the lack of sign language knowledge by deaf learners to reporting late and starting to study at an older age. He states:

‘Children with hearing impairment report back late to school after their holidays and also come late to school – say at 10 years - he is just joining P1. He does not know sign language; they cannot communicate and socialize with others for that matter they get frustrated’.

Table 10: Summary of range of Communication and language indicators according to the individual interviews, focus group discussions and observations

<table>
<thead>
<tr>
<th>Positive Challenges</th>
<th>Negative Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ease in communication</td>
<td>• Lack of interest by some teachers to interpret for children</td>
</tr>
<tr>
<td>• Proficient in sign language</td>
<td>• Parents failing to communicate with their children</td>
</tr>
<tr>
<td>• Understanding touch as their way of communication</td>
<td>• Children lacking sign language due to late reporting</td>
</tr>
<tr>
<td>• Talking about deaf learners to the community</td>
<td>• Misinterpretation of the language used by deaf learners</td>
</tr>
<tr>
<td>• Simplifying language in exercises</td>
<td></td>
</tr>
</tbody>
</table>
6.4 Experiences and perspectives relating to collaboration with parents and other stakeholders

The relationship between teachers of the deaf (subjects) and the community may influence the way they teach (object) and how they facilitate academic and social participation of deaf learners (outcome) within the school setting. There are many stakeholders who have to ensure that deaf learners succeed academically and socially. Some of the main and very important stakeholders include and are not limited to parents, deaf adults, hearing peers, administrators, policy makers and the community.

Data indicated that teachers reported positive encounters with the stakeholders at school, a factor that they attribute to their training. They contend that their training developed their capacity to collaborate with the different stakeholders to provide the academic and social support deaf learners needed. The teachers of the deaf (subjects) involved in the study however noted unfavourable encounters that affect how they implement the policies (rules), share roles (division of task), during teaching and other activities that benefits the learner with deafness. These experiences are elaborated as excerpts capturing positive and negative experiences.

Positive Experiences

Data indicates that there are positive experiences and perspectives relating to the support that administration, well-wishers and fellow teacher offer in relation to social and academic development. This aspect was greatly beneficial particularly on services and support provided to the deaf learners and among teachers of the deaf. Participants in the study recognise the important role that stakeholders play. They affirm that parents and other stakeholders were willing to be engaged and involved, to a great extent, so as to ensure academic and social participation. As Oja (I) noted:

‘Now as I came back and began teaching them, I realized I should not work in isolation. We have to work with stakeholders in order to help these children. We have to involve the parents, the service providers and the children themselves’.

Collaboration makes the teachers of the deaf closer to the community. In doing so, teachers identify children with deafness who are more needy than the others so that support can be sought for them. Excerpts from the following interviews exemplify this:

Mwanga (FG)

‘Because I also help in administration; I moved closer to both the children and their parents’.

And Alai (FG) states:
‘We identify children whose parents cannot afford or those who are totally orphans and have left school. We identify sponsors for those children so that they can continue their education’. The other positive experience is how the community supports the schools. Data indicates that members of the community were working closely to identify children with deafness in families and inform the school which make follow ups. In the event that children with deafness are lost or disappear from school for various reasons, the community is reported to greatly contribute in intercepting, reporting and returning these deaf learners to school. To this effect Omego (FG) recounts:

‘One child with deafness was escaping from school, walking back home but followed a different direction. He was got through somebody who said this one might be a child from Olel, because Olel has children who cannot speak or hear. That is how they managed to bring him back’.

Other ways through which the stakeholders collaborated with the school is through contact with other sign language users that positively contribute in many ways. These contacts arise from seminars, workshops or study visits where different professionals are involved. The contacts help teachers (subjects) to improve their sign language or to acquire new signs that they use to facilitate academic and social participation.

According to Okea:

‘You find that when you meet with people from different places you come up with some new words and maybe some words that you had forgotten, because you find that some words are changing and you have to be so dynamic so we encourage that at least they should be calling us for more workshops’.

Challenges related to support and collaboration with stakeholders

In spite of the positive relationship with the community, participants reported that there are situations where the different stakeholders do not provide the necessary support. They argue that parents were not interested in supporting the education of their children with deafness. For example, most parents tend to send their children with deafness to school with limited materials that are needed to support their education. The excerpts below highlight statements made during the interviews:

Nserekko (FG):

‘There is lack of support from the stakeholders, government, the parents, community and finally we as teachers’.

According to Mwanga (I):
“The biggest challenge is little parental involvement in their children’s education. Because however much you want to help you may find that children are lacking a lot. Like, or even as we talk now, this term, it has been bad for us as a teacher and administrator. Parents seem to have given very little scholastic materials to the children, so every time you try to teach, the child says, I don't have a book, I don't have a pen”.

In addition to failure to provide scholastic materials, parents do not visit the school to see how their children are performing. Data indicate that, for parents of children with deafness who do visit, most of them tend to focus on the welfare of the child with deafness, ignoring discussing the academic needs of the child with teachers. There is no way the teachers can have the opportunity to conference with the parents on the needs of the child and what parents should take up during the time the child is with them during holidays. Participants reported that parents consider teachers of the deaf to have the knowledge and skills necessary for teaching children with deafness and that they, as parents, have nothing much to contribute.

As Omego (FG) stated:

‘Most of the children with deafness are boarders, a few not more than ten are coming from home. The negative thing is that when parents don’t come and visit them (children) you find them lacking some materials, because on visitation most of the parents are of normal children’.

Alai (FG) adds that:

‘Even parents – many parents don’t come to class. The school normally have education week like we will have next week, but parents never enter the classroom to find out their children’s performance. For them when they come, they report to office and then house parents. They ask about the performance of their children from the matrons who I don’t think are the best to give information. By the end of the day, what you have taught at school cannot be applied at home by the time the child comes back from holiday, they have already forgotten. So you find that you teach and again you go back. That business of going back to what you had covered wastes time’.

On payment of boarding fees Nalu (I) said

‘Parents, - their support is not very promising. They support those who can and there are those who are saying let the child be in school. Because you can see half of the class have not paid and tuition fees, a quarter they have paid full, and others are in debts of hundreds of thousand, so they are also frustrated maybe as we are. And normally, they tell us that they first pay for
the other normal children. Even to visit their children, you can also see, there are only six parents who have so far registered.’

Data indicates that there is lack of collaboration between teachers of the deaf, teachers without special needs education training and deaf instructors. Participants attributed the failure to work together to other engagements that some teachers would be having that attracts monetary gains. As Mwanga (I) notes

‘Collaboration among us even as teachers could be a barrier. There may be an activity that people need to participate together but you fail to work together especially when there is no allowance. Colleagues will leave without informing you to work somewhere where they know there is a gain especially. They even leave without informing you’.

<table>
<thead>
<tr>
<th>Positive experiences/perspectives</th>
<th>Negative experiences/perspectives</th>
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<tbody>
<tr>
<td>Support from administration</td>
<td>Limited parental involvement</td>
</tr>
<tr>
<td>Involving parents and other service providers in identifying children and informing the school to follow up</td>
<td>Failure to provide scholastic materials for use by the pupils</td>
</tr>
<tr>
<td>Linking orphans to sponsors</td>
<td>Teachers without SNE training not willing to support children with deafness</td>
</tr>
<tr>
<td>Community returning children who are lost to school</td>
<td>Interference by deaf adults in guiding children</td>
</tr>
<tr>
<td>Sharing new signs with teachers from other schools and communities</td>
<td>Lack of professional recognition and support from government</td>
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<tr>
<td></td>
<td>Lack of collaboration between teachers due to other engagements attracting monitory gains</td>
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6.5 Aspects in teacher education that teachers of the deaf considered relevant and those needing more attention

At university level, teacher trainees as teachers of the deaf \textit{(subjects)} are taken through different content areas. The purpose is to strategically prepare them with knowledge and skills \textit{(outcome)} to facilitate academic and social participation of deaf learners. This section presents experiences and perspectives of teachers of the deaf on the content in teacher education that
they considered relevant for their practice and content they felt needed more emphasis during teacher education.

**Teacher education content considered beneficial during their teacher education and training**

Data from the teachers of the deaf involved in the study indicate that some of the teachers appreciated that everything taught to them was relevant for their practice. Others identified three main themes of communication, methods and psychology as very relevant. Data also indicate that some teachers considered audiology as a necessary content area in assessing and identifying the hearing ability of deaf learners for placement, choice of communication and planning for their education. The following interview excerpts exemplify experiences and perspectives relating to contents that the teachers considered relevant.

Omego (FG) on all the contents noted:

‘There is nothing to be left out as all of them are beneficial to teaching children with disability. You cannot go with one aspect and you leave others’.

Okello (I) specifically on communication stated:

‘Things related to communication, because there is a difference in deaf language, you have to master and use sign language’.

Alai (I) and Nalu (I) focused on sign language when they said in summary that

‘First of all it is sign language. As you upgrade, you learn more sign language to work effectively with the child with deafness’.

Mwanga on audiology stated:

‘I think audiology is the major one. Audiology also has helped us because most of the children here are referred by doctors to us for educational purpose, so we are able to read those audiogram assessment and we know exactly where to place them’.

To Alai (I)

‘Audiology, I can now interpret the hearing level of the child. If that child has some residual hearing, we use it to teach using total communication’.

There were different aspects that were considered under methods of working with deaf learners. These ranged from methods of teaching to activities of daily living, education of persons with special needs, child psychology, counselling, neurology, cultural studies to administration. Lutu (FG) noted that:

‘the theories and methods of teaching the deaf, that course definitely has helped us so much because I know how to handle the deaf generally’.

To Nsereko (FG)
‘We did Activities of Daily Living (ADL), of course that one has also helped me because I can teach life skills to children with deafness for the wellbeing of their lives when they grow up’.

According to Nyako (I)

‘We also learnt about education of persons with special needs. This one has made me understand that these children can be taught and do any other thing that the ordinary person can do, only that we should know how to guide them and have those relevant resources’.

Data from the focus group discussions and individual interviews identified other aspects that were found to be beneficial and included psychology and counselling. Nyako (I) says:

‘We learnt about child psychology which has really helped us in observing how these children behave. It has also helped us to know how to handle them as far as behaviour is concerned’.

Lutu (FG) specially referring to psychology of deafness said that:

‘In fact what has helped me during my studies is the psychology of deafness, so that you can understand the feelings of a deaf in psychological terms. The second thing why we are doing things this way is because of psychology of deafness. For example when someone is deaf and hyperactive then you know – I think it’s because of this and that. In fact it gives you an overview of how a deaf can be handled in my daily teaching. Psychology of deafness has also helped me because I know a child with deafness as he is deaf has to behave in such and such away’.

Guidance and counselling was considered as an important aspect when Okello (FG) said:

‘The best one is counselling. Because, without counselling parents will not understand, you have to counsel, you have to talk to them, visit them, and talk to them – the best word is counselling’.

Data further identified the importance of neurology and neuropsychology for understanding causative factors of deafness and possible intervention strategies. To this effect Nyako (I) said:

‘We learnt about neology and neuropsychology which has helped us to know some causes of special needs or causes of disability. So this has also helped us to know what to do with the child when that child is brought and maybe if it means referral we have to do so or it can guide you when you are carrying out the assessment and maybe for the case of educational placement, this one has helped us’.

Other aspects considered relevant were cultural studies and administration, as seen from the excerpts below. Omego (I) notes:
The most important subject was cultural studies – we come to a point where some children were neglected in the community or in society/local villages. In studying that one and going deep we found that at first we were neglecting these children with disability and in finishing the course I realized what we are doing was to segregate them so they are normal children like anyone else. It’s now making my work easier’.

According to Nsereko (I)

‘Administration and management has made me what I am today’.

In the focus group discussion, Okello (FG) brings in a new dimension of motivation, arguing that in spite of the relevance of all the contents the performance of the teachers of the deaf is dependent on how they are motivated to do their work. He states:

‘Everything was okay, but it is based on motivation. We really do things based on motivation and if people are motivated, things go well. I don’t know where the motivation can come from but teachers have their social and psychological needs’.

Content that needed more emphasis during teacher education and training

Despite the special training they had received, teacher trainees for teaching deaf learners (subjects) in their experiences and perspectives felt there were aspects of the curriculum content (tools) at the teacher education institution that were very important for the knowledge and skills (outcome) they could use but little emphasis was put on them. Data from these teachers involved in the study identified assessment, communication, methods, deaf culture, guidance and counselling and research as content areas that needed more emphasis. Assessment was central in their submission. The participants argued that little and very general content was given and that there was limited practical demonstration on how diagnostic assessment of hearing loss, language and communication skills and summative assessment could be carried out. Nsereko (FG) emphasized this point that:

‘For me I think that part which was not emphasised enough is the assessment component of the course. We are able to explain part of assessment but surely that is not enough to enable us carry out proper special needs assessment. Because when you look at assessing these talented children, the autistic and whatever, for me I have little knowledge. I would imagine others have the same problem. We need assessment skills. It needs to be emphasized – like the assessment of hearing loss, assessment of the abilities and summative assessment. For example when you now have a class of 27 children, the baseline is that they are deaf, but they have different levels of hearing loss, some have additional impairment to deafness and others have multiple disabilities. Like in my class, an exercise of 1+1=2 can be understood by some very quickly, while there are other children who may not get it at all and there are those who are not attentive at all - jumping up and down – like Moses. We need skills to assess their
needs and skills of how to help them. If we have these skills that probably he could have done this, we would go further to care for them. For you are one teacher and teaching all the learners in the class.’

As seen from Excerpt II, some deaf learners had additional impairments. In the two schools involved in the dissertation, there were learners who are deafblind and others having other specific learning difficulties. The additional impairment has tremendous effect on the rate and quality of mastery of sign language by learners. Similarly, the time allocated to teaching and training in sign language has influence on the quality and level of mastery that teachers of the deaf would have. As Alai (I) noted:

‘They should give more time to sign language. The way they teach it is not good. It is given little time for practice. By the time you finish, you have attained little knowledge from the sign language that you cannot competently train a child or interpret sign language to any child with deafness’.

Another aspect of communication that teachers of the deaf raised related to working with deaf learners having additional impairments particularly deafblindness. As noted by Omego (FG)

‘There is an aspect we missed there, we have deaf blind children and communicating with them is not easy. We got training in Iganga so far that is the first and the last and whenever we come across them it is a bit difficult for us to communicate with them. They are there in the villages’.

This statement is consistent with what Nalu (I) who is in another school stated regarding the challenges she faces in facilitating academic and social participation of deaf blind learners.

‘At least if I had learnt how to handle children with multiple disabilities like deaf blind. Because you cannot rule out that you will be in a class where there are only children with deafness. You meet somebody with partial sight; you find that it’s difficult to handle such a child, so that course is really needed’.

Data indicated that another aspect that needed more emphasis was method of teaching specific content subjects and managing large classes. The concern is when and how the subject content is taught and the amount of demonstrations given during teacher education to enable the teacher trainees appropriates the methods. As stated by Omego (FG)
'I think that method is very important; I think it should be taught immediately you enter at the beginning, not certain semesters going without the method course and it is taught in the second semester of the final year. At least that methodology course could help us because if you go around many schools, you see that the methods of teaching are very poor. Especially when it comes to handling children with different disabilities, most of us adopt the method that we learnt for teaching normal children. We try to apply the known methods to help children with special needs benefit in their academically'.

Megwa (FG) adds that

‘Normally, the method that a teacher uses can help him or her succeed. They should give us a specific method of teaching a specific subject to special needs children’.

Another finding regarding facilitating academic and social participation is the consideration that deaf learners are identified by the deaf culture. Failure to understand and appreciate the deaf culture affects the way learners are supported, advised, treated and how deaf learners relate with other people. If they are not helped to appropriate their culture, their response to the teachers would also be negative. Oja also observes that:

‘These kids are always tuned to the deaf culture. I don’t know how you can advise them (teachers). The main problem is that in most cases, they are misinterpreted. We use culture to the benefit of ourselves and not children with deafness although the deaf know their culture. But issues of deaf culture should be given emphases’.

Helping children with deafness to appreciate their culture and their teachers to understand deaf culture can ably be done through guidance and counselling. However, the findings show that little knowledge and skills related to guidance and counselling were provided during teacher education. Mwanga (FG) advocates for more time for guidance and counselling and thinks that:

‘We should take guidance and counselling as a very important aspect. If it was about 50%, it should be pushed to about 75% because it’s all about perseverance to work with these people’.

On research, Mwanga (I) notes that

‘The other part could have been research. There was something left out to make us be able to carry out satisfactory research. If you see how people are doing research and how we did at that time, we cannot match them. A number of people come and they really want us to help them and through them we have learnt a little more than what we got that time from the university. I feel we were not given enough dose to empower us to carry out research, much as we went through, I think there was something left out’.
An emerging concern was on vocational skills, and Alai noted that:

‘Another issue is the teaching of self-help skills at an early age, because we are finding it as a problem in vocational centres. They don’t want -these deaf- I don’t know how they imagine they will be in the world. Because if you tell them that learning how to weave a mat or a basket or what – that is the area which they don’t want to touch. So if at the lower level from home they are taught life skills I think it will help more’.

Table 12 Summary of a range of content considered beneficial and content that needed more emphasis during teacher education

<table>
<thead>
<tr>
<th>Content considered beneficial</th>
<th>Content that needed more emphasis</th>
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<tbody>
<tr>
<td>• All the content was relevant for teaching special needs children</td>
<td>• Assessment of competence and impairment</td>
</tr>
<tr>
<td>• Sign language and communication</td>
<td>• Sign language- methods of teaching it and more time for practice</td>
</tr>
<tr>
<td>• Audiology so as to interpret the audiogram, placement and communication</td>
<td>• Communicating with deaf blind and other multiple cases</td>
</tr>
<tr>
<td>• Theories and methods of teaching</td>
<td>• Method of teaching specific subjects</td>
</tr>
<tr>
<td>• Activities of daily living for independence</td>
<td>• Guidance and counselling</td>
</tr>
<tr>
<td>• Child psychology</td>
<td>• Deaf culture</td>
</tr>
<tr>
<td>• Education of persons with special needs to guide, teach and have relevant resources</td>
<td>• Research – applied research methods</td>
</tr>
<tr>
<td>• Counselling</td>
<td>• Self-help skills- prevocational skills</td>
</tr>
<tr>
<td>• Neurology and neuropsychology to understand the causes and for assessment and referral</td>
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<tr>
<td>• Cultural studies for attitude change</td>
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</table>

6.6 Policy and Guidelines that impact on education

The data shows that teachers of the deaf (subjects) are aware of the policies and guidelines (rules) that influence the way they should relate with all the stakeholders (community), share roles (division of labour), use the curriculum and methods (tools) to teach (object) and help
learners to participate academically and socially (*outcome*). These policies and guidelines have influence on the way teachers of the deaf perceive and handle the teaching and involve the community. Data indicate that teachers of the deaf were able to identify supportive and challenging policies and guidelines and to facilitate academic and social participation.

**Supportive policies and guidelines**

Data show that teachers identified policies and guidelines that determined the broader perspective of working with learners with special educational needs including deaf learners and the girl child. The policy on inclusion, Education for All (EFA) and sign language were particularly mentioned. The teachers also argued that these policies have positively supported the enrolment of children who were neglected, provided for interpreters during national examinations, enabled a smaller teacher-pupil ratio in many classes and created possibilities for diagnostic assessment. There are commitments in many policy documents that support the education of children with special needs (see Chapter 2). These policies are reported by many teachers of the deaf as being very relevant in enrolling, retaining and enabling deaf learners to complete education. Alai (I) looking at policy from a broader perspective including the girl child and all learners with barriers to learning, participation and development applauds:

> Education for All that gave propriety to a child with disabilities in the home, the provision of extra 30 minutes allowance for children with special needs when sitting national examination, the engagement of sign language interpreter for the deaf during national examinations and the recognition of sign language as a national language for the deaf in the constitution.

Okea (FG) focusing on inclusion states:

> ‘the policy of inclusion is good for us, because before the policy was put in place children with disability were neglected so now that the policy is there everybody is getting admitted at least to get education. It is making the girl child with disability access education’.

Although the implementation of the policy seems to have come as a directive, teachers later embraced inclusion. As Omego (I) observed:

> ‘Information came from the Ministry or district about the policy of inclusive education, so we merged these children in upper classes to be in an inclusive class’.

The inclusive education policy came along with it reforms in the primary school curriculum. According to Mwanga, the thematic curriculum guidelines requiring children in lower classes to study half day and rest in the afternoon is relevant for child development:
‘The thematic curriculum guideline dictates that the fellow has to stop being in class by 12 noon, be free in the afternoon, and say they go and sleep. This provision for younger children to rest is very important for their development’.

**Policy challenges**

In table 6.4.2 a number of policy challenges that the teachers of the deaf mentioned are outlined. The challenges point to the gaps that exists in the implementation of policies (*rules*) at different levels and include among other things class size, the curriculum, teaching / learning materials, inclusion, teaching subject syndrome, examinations, employment and remuneration. In relation to class size, Lutu (FG) noted that

‘Another policy issue that I want implemented is that of the ratio of teacher to pupils’.

Megwa (FG) adds

‘The government is saying at least 3 pupils per teacher but here it’s a different story. We are supposed to be 86 teachers but we are 15 special needs education teachers. I am supposed to go to P7 to interpret, at the same time am expected to be teaching P2, this is impossible and it affect our teaching and performance’.

The teacher- pupil ratio is perceived differently by teachers in the two schools. While the preceding statement talked of the ratio of 1:3, in a focus group discussion with another school a 1:10 teacher-pupil ratio was reported. The ration of 1:10 was a concern and Nsereko’s (FG) proposal of reduction received a chorus answer of affirmation from the participants involved in the focus group discussion.

‘Another policy issue maybe is that they should revise the ratio of the teacher to pupils from 1:10. They should lower it a bit for SNE because the teacher is being double worked, interpreting the content from the books to the learners and also trying to check the appropriate methods used. So I think the policy should change from 1:10 to 1:6 (the part in italics and bolded was the chorus answer)’.

Another striking policy concerns raised by the teachers of the deaf is the question of teaching subjects. Mwanga (I) recounts the question raised in relation to qualification and teaching subjects at the primary school. He states:

‘Here we have diplomas, degrees and even masters but no teaching subjects. The government comes to us and says at Diploma level you must have a teaching subject so what is your teaching subject! When the head teacher sits down to allocate subjects, s/he says all diploma
/degree holders are to handle major subjects, then you also find somebody coming to say I don’t know mathematics, I can teach English’.

Teachers involved in the study reported that they were being asked for content subjects taught in primary schools, to which hearing impairment (deafness) is not included. The concern raised is that the policy does not provide for the methodology of teaching primary school subjects given in relation to deafness as being equivalent to the academic content that the national policy states. At school level, there is administrative demand that challenges teachers of the deaf. Teachers report that they are allocated subjects to teach without due consideration to their interest and competence. The argument is that they are assumed to have general knowledge and skills to take up any subject content in the primary school. Mwanga (I) expounding on this challenge states

‘The government comes to us who have Diploma, Degree and others have Masters and say you must have a teaching subject. They say "what are your teaching subjects?" what is your area. You say hearing impairment, and they continue to ask where you are going to teach it! Even the teachers here have got problems, when the head teacher sits down to allocate these subjects, they say all diploma holders are to handle the major subjects, then you find somebody coming to say, I don’t know mathematics, I want to teach English. The diploma or degree is there fine but I can’t teach mathematics, I can teach English. So the head teacher says you are the qualified people I cannot, for instance get a GIII teacher, to teach P7 when the Diploma or Degree teachers are there’.

A similar problem exists in inclusive schools. Data indicate that the focus on inclusive education has often been a source of confusion in both practice within the classroom and emphasis during their teacher education. The concept of inclusion is complicated and often confused (Booth & Ainscow, 2002). Most teachers criticise an inclusive practice even when they were implementing it. Experiences and perspectives of the teachers of the deaf indicate that there are conflicting opinions about inclusion. They argue that for inclusion to succeed issues relating to socialisation, remedial teaching, remuneration and language of instruction should be taken into consideration.

According to Nyako (I), deaf learners may isolate themselves from the other learners:

‘What I have learnt from them, I see that they prefer sitting alone, rather than sitting in the mainstream. When these learners with hearing impairment are separated in their own class, you find that they are always full-time in their classroom. They like sharing and when it is
time for going back to class, you find that they are already back seated in their classroom. When they are in the mainstream class, the experience is that most of the time they are frequenting going out even during lessons’.

Okea (FG) focusing on the social aspect adds that:

‘With social aspect what I could term as being a challenge is that first of all they socialize too much among themselves and the ones who interact with them – the teachers, their instructors and hearing pupils who know sign language. But for whoever is a bit far from them they tend to be far apart’.

Mwanga (I) advocating for exclusion in education, further explains that:

‘I don’t think children with deafness would survive in inclusion. Because practically I tried it here, with 4 children in the neighbouring school, and it failed. These are children actually that become deaf when they were really big and they were talking. They would go to the ordinary school where we have placed them and when it comes to 10:30am they run for their porridge here89. Their porridge was the other side but they could come here to share with the deaf learners. When it comes to lunch they would run here and before 4pm, immediately they are out of class, they are already here. They had no friends and learnt nothing from there that time’.

The issue of remedial teaching, time tabling, remuneration and language of instruction in an inclusive class was brought up. According to Omego (FG):

‘The policy on inclusive education has effect on teaching in an inclusive class. We teach all children together and then find some time to give remedial teaching to children with deafness to at least make them understand what they have learnt while in the mainstream class in details. That is an aspect which was not on the time table implying additional work load causing a problem of timetabling and poor remuneration. We also separate them because sign language is their first language. As the normal children are learning luo90 as their first language, we also separate them to learn sign language as their first language. So they have to learn sign language first because that is the language that they will use in future. Because when we do not want to mix two languages at this early stage, we separate from P1 to P3’.

Okello adds:

89 Here refers to the school for the deaf where these children were originally enrolled before being placed in the ordinary neighbouring school
90Luo is a dialect of a tribe in Northern Uganda.
‘With children having deafness we have these functional words, so separating them in lower classes, we want them first to learn, to let them sign the functional words. Because without that their hearing impairment will make them run very low academically’.

On language of instruction, Okea (FG) notes:

‘Thematic curriculum has a policy of teaching learners from P1-P3 in their local language. The challenge we face is related to the grammar for sign language as a local language’.

As Lutu (I) states:

‘I have a different view about inclusion. Go back and revise your syllabuses, a teacher of the deaf narrow him down to that area, because that is what he is supposed to handle. The parents would also tell you this child was in a hearing school but was not happy, other children were teasing and beating him, but even when you cross check with the child he has not learnt anything. Even now I have a boy like Mike, Mike is hyperactive but when you sit with him, he can become friendly and listen. I have discovered that he is interested in playing in-door games and arranging things. Another boy in the same category is Daniel. I am still assessing them but I know I will discover something good for them’.

Data indicate that deaf adults were not supportive of an inclusive education at primary level. Okello (FG) recalled a statement made by a deaf adult against inclusion:

‘One of the lecturers who is deaf, he went and studied in America – He said children with deafness will never learn in what they so call the thematic curriculum’.

Data from observation shows the only child with deafness in the P5 inclusive school immersed among other learners observing the teacher. She did not however attempt to contribute in class activities. During exercises, she had a lot of discussion with a hearing learner. They were sharing the bench. The impression is that the deaf learner, without an interpreter relied on fellow learners for guidance. Nyako (I) confirms this fact in the following statement:

‘First of all these children were being put in the main class- in an inclusive setting and they were already used to that kind of setting. But what I observed in that kind of setting is that the children were not in a position to pick clearly what the teacher is trying to communicate to
them and it was difficult for the children to pick what each other is trying to communicate because they have to turn

The problem is said to steam from lack of curriculum. Data indicate that the national primary curriculum that teachers use with deaf learners does not have provisions for teaching sign language and lacks flexibility. Children with deafness are being taught sign language based on what teachers feel is appropriate which vary from teacher to teacher and from school to school. As noted by Alai (I):

‘we teach what we think is important for the kids. There is need to standardize the curriculum for sign language’

Okea (I) acknowledging what is done in schools states:

“we use our experiences to teach using the guideline provided in the English syllabus”.

The lack of flexibility dictates the pace at which teachers have to move in order to accomplish the curriculum content to benefit all learners. The findings also show that schools lack learning materials to support curriculum implementation. An excerpts that support these statements is provided by Alai (FG) who stated:

‘Nationally, strict rule in following the curriculum affect our work. There are other children with multiple disabilities and they are better off in other areas like arts. But the National Curriculum Development Centre (NCDC) has not provided for them. If this children were taught these skills, they would excel better than when you are forced to teach them academics where the child cannot do anything’.

Mwanga (FG) adds that:

“some of these topics even may not be beneficial. Like now they are going to start next year examining music, how are our children going to perform there, when I have never heard of that music at all. And we are not teaching it by the way! Maybe they bring agriculture as a subject. Children can do agriculture, even sign language – with that we would be the happiest”.

The policy provision for automatic promotion was welcomed by some participants in the study but resented by others. Those participants who resent the implementation of

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91 Deaf learners rely mainly on visual clues for signs and speech reading. The sitting arrangement in the schools is where all learners face one direction towards the chalkboard and the teacher which makes it difficult for deaf learners to attend to contributions from behind.
automatic promotion argue that it has implications on the quality of knowledge and skills that learners progress with to the next class. Those who resent automatic promotion argue that classes having deaf learners are selectively teaching curriculum content that they feel comfortable with and are able to teach deaf learners, assess and evaluate them based on those same parameters. At the end they may not measure to the level of all other learners. Megwa (I) notes:

‘The policy where a child is not supposed to repeat is challenging. Now for children with deafness somebody comes from P1 he has not even mastered the alphabet, yet you promote that one to P2, P3 a child reaches P5 when he cannot even understand what we are signing’.

The lack of learning / teaching materials that support the teaching of such content in classes where children with deafness are was reported as another challenge. Omego states that:

‘The teaching / learning materials most often are not there. Very few teachers are making materials. The children here are also still very behind in making materials because some of the materials should have been made by them. Most of the materials are just these bought charts’.

Data from the lesson observation had similarly conflicting scenarios. While there were locally available materials that supported the learning in lower classes for example in the vocabulary class, in the SST class the teacher taught about grassland and forests without any chart for urban deaf learners to see and conceptualise what it looks line. When the learners asked for the promised chart, the teacher was quick to acknowledge and to promise that he will bring it in the next lesson. There were however signs of dissatisfaction in the face of the learners:

**Observation Excerpt VIII**

<table>
<thead>
<tr>
<th>Class P2</th>
<th>Lesson English – Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The lesson starts with naming items in the class in Sign Language.</td>
</tr>
<tr>
<td></td>
<td>Teacher asks the class in sign language “<em>This what?</em>”92” Touching the chair, table, door, window, chalk. Learners answer in chorus while others put up their hands the sign name of the items: Chair, table, door, window, chalk</td>
</tr>
<tr>
<td></td>
<td>Teacher then draws the pictures of household items on the chalkboard and picks them one by one to</td>
</tr>
</tbody>
</table>

92 Italics written in sign language and would literally mean different in English.
show them to the class, as he names them (signing). He matches the real objects to the pictures drawn on the chalkboard. Learners move in front one by one to match the items and the pictures – soap, toothbrush, tooth paste, comb, mirror

Teacher asks learners to name the items (signing) “Name what?” Learners are picked at random. While some learners name the items, others fail to do so

Teacher finger spell the names of each household item he picks up after signing its name. Learners imitate the finger spelling of the item names.

Teacher asks the learners to explain what each of the items is used for. Learners individually provide the use and the teacher demonstrates accurately how it should be signed after the learners’ attempts. Learners practice how each item is used

Teacher asks pupils to identify household items after signing its name. Learners pick at random the household items named. Some two learners continually get problems with identifying the items signed.

Teacher: Asks the learners to sign the names of the items picked. One learner names (signs) the items shown while others fail to identify the items as signed. Teacher repeats the signs and demonstrates their uses going through the lesson once more to help those who have failed. The other learners support their colleagues to master the name sign. Some learners in the class had difficulties mastering the signs, matching the items to the pictures leave alone finger spelling the names. They demonstrated ability lower than the level they are in yet their chronological age fits or is above the class level. Other learners demonstrated excellent proficiency in signs and finger spelling.

Participants in the study differed in their experiences and perspectives on the way assessment is carried out particularly for deaf learners. Those who look at assessment positively cite support like interpreting and extra time given during exams as enabling children with deafness to perform well. Others criticise that educational and diagnostic assessment were not satisfactory and attribute it to many factors. Data from all teachers who criticised the way assessment is carried out their views are seen from these excerpts. On summative assessment Alai (FG) states:

‘Another challenge in education is the way these children are assessed. There are other children who have multiple disabilities, but Uganda National Examinations Board (UNEB) cannot provide for these children’.
Omego (I) adds:

‘Concerning examinations for us here for the first 2 years we have been failed, UNEB have never sent interpreters. They are on and off – other years they send other years they fail’.

On diagnostic assessment Mwanga (I) notes:

“I am sure if all these children were assessed, not all of them would fit being in this class. You saw some children who were totally not participating, those ones sometimes we have learnt to live with them and just let them go because really their level of understanding is not even of this class but you can’t send them out, you have to keep them there”.

Lutu (I) providing the category of learners diagnosed in the class argued that his class had three different categories of learners whose academic and social needs had to be met:

‘In fact I have three categories of children. Those who are bright, immediately you teach in fact you may not even know that they are deaf. They get everything very quickly, then there are those who are “mediocas” whom you teach and you feel they have not got the concepts and you have to keep on repeating that concept and eventually they get it. There are those who cannot even do anything at all but you can at least keep them to develop a skill. You can try to identify their interest- what they can do and what they cannot do because they cannot completely fail to do anything. When you try to intervene seriously, you find there is a certain area where they excel’.

Relating to deaf blind learners Nserekos (FG) states

“There is even one who has been in the deaf blind unit but because they have operated upon his eyes, he is able to see reasonably, but the child cannot copy the work am putting on the chalkboard. So the assessment policy does not cater for such, it is not very friendly to the deafblind also”.

**Observation Excerpt IX**

<table>
<thead>
<tr>
<th>There were two learners in P7 at Olel primary school with evidential low vision. One of the learners was putting on corrective glasses while the other strained to look at the chalkboard and the signs being made by other learners signing without any spectacles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In P1 two learners were hyperactive and had specific learning difficulties. They could not write but enjoyed games/outdoor activities. Assistant teacher and volunteers were engaged with these learners</td>
</tr>
</tbody>
</table>

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93 A term used locally to literally describe children who cannot cope at the same level with others
to make them be part of the class.

Two learners in P2 at Opit primary school had multiple impairments. While one had a motor problem (biplegia), the other was spastic. Although the learner identified to have a biplegia had a chronological age above the class, she was having a mental age matching a P2 class. He was reportedly enrolled very late and had to learn sign language, adjust to social interaction with the group and cope with academic demands.

The issue of remuneration is taken further to relate to qualification and the complexity involved in teaching children with deafness and special needs education in general. Specific remarks were made on low salary and lack of promotion after attaining the special needs education qualification as an issue that negatively affect their motivation. Nyako (I) described it in the following manner:

‘From the discussion of the teachers when we sit together, teachers normally say that to teach children with hearing impairment it is tough. Even if you are not on duty children with deafness come to you, even if you are at home, they follow you at home leaving the rest of the teachers. If it were possible it could have been a top up on the general payment that the government gives. They feel that there is too much work for them’.

Alai’s (I) expressed a similar view:

‘The issue of a teacher going for training and after the course you still earn GIII\(^\text{94}\) salary, it demotivates teachers’.

A similar sentiment is shared by Omego (FG) who states:

‘The employment policy is not favouring us because after graduating that you have added more strength to your education, your daily living allowance should have been added something, but the government has not given us clear information about that. You read and you get the same salary you were getting – basic and yet dealing with these children with special needs is very difficult. So we are thinking that if government could at least do something for these teachers who have undergone training in special needs education and have attained higher qualifications than the ordinary certificate teachers in the classroom, this should be done immediately to motive teachers of special needs’.

\(^{94}\text{GIII is a basic training for all teachers to be certified to work in the primary school in Uganda.}\)
<table>
<thead>
<tr>
<th>Positive experiences in support to policy</th>
<th>Challenging experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Neglected children now enrolled</td>
<td>• Large classes</td>
</tr>
<tr>
<td>• Priority given to children with special needs and the girl child</td>
<td>• Lack of sign language curriculum</td>
</tr>
<tr>
<td>• Provision of extra time to learners in national examinations</td>
<td>• Rigidity in national curriculum</td>
</tr>
<tr>
<td>• Provision of interpreters for the deaf during national examinations</td>
<td>• Limited teaching/learning materials</td>
</tr>
<tr>
<td>• Smaller teacher-pupil ratio</td>
<td>• Problem with summative assessment</td>
</tr>
<tr>
<td>• Possibilities for diagnostic assessment</td>
<td>• Problem with automatic promotion</td>
</tr>
</tbody>
</table>

### 6.7 Factors that facilitate or hamper teachers capacity to facilitate academic and social participation

There are Policies (*rules*), on how the different role are shared (*division of labour*) and curriculum and methodological issues (*tools*) that may facilitate or hamper how the teaching (*object*) is undertaken to facilitate academic and social participation (*outcome*) at school. These factors in one way other or the other dictate how the teacher (*subject*) functions and how he/ she relate with other teachers, parents, deaf adults (*community*) at school. In analysing the experiences and perspectives of teachers of the deaf, data excerpts identified four factors that summarised as attitudes demonstrated towards deaf learners and teaching, policy and guidelines that impact on the education of the deaf, chid-to-child interaction, and guidance and counselling.

#### 6.7.1 Attitude towards deaf learners and teaching

Attitudes of the teachers, learners and all other players in education influence the outcome in the activity system at school. This is because a classroom is a very complex social environment with unique learners that ought to be recognised in the organisation and management of the school as an activity setting. Data indicates that all the eleven teachers of the deaf intuitively made statements that implied that their training contributed positively to
changing their attitudes. They acknowledged having a negative attitude towards children with disabilities in general and deaf learners and/or sign language prior to the training. There are conflicting statements in the data which show the existence of negative attitudes that can presumably affect children with deafness directly or indirectly. These statements were made about the system, parents, deaf adults and learners in their classes.

*Statements attributed to positive attitudes*

Data presented in table 14 show six main indicators of attitudes that are considered positive: fighting stigma, being sympathetic, working with stakeholders, support to reduce dropout, patience as well as willingness to categorise and assess deaf learners. Data indicates that the positive change of attitude has helped teachers of the deaf in working with parents, mobilizing members of the community, retaining pupil in school, being patient, planning for individual needs and having a sense of belonging to the deaf culture. Another attitudinal indicator attained was helping to meet the needs of not only deaf learners but all other children with disabilities and special needs found in the class. These excerpts of statements made by teachers do support the fact that their training has positively impacted on how they work with deaf learners. On patience Mwanga (FG) noted

‘Teaching children with deafness need a lot of patience. The training helped me so much because the lecturers dwell much on this area. Because some of these children, the degree of deafness also matters. They are not only deaf but have other disabilities. The training has helped me to handle these differences. …we could have all these groups of children even autistic children are there, we could have all of them and for us we could think some of these children were just stubborn, but after the training we are able to categorize them at whatever given time and try to assist properly’.

Nyako (I) contributing to their training as having contributed positively stated that:

‘First of all it has contributed positively. I had negative attitude toward teaching children with special needs’.

Alai (FG) also observed that:

‘Starting from the time I did my first teaching practice the experience was too hard for me. I was so tough a teacher that whatever mistake you could make I would feel I should not even forgive you. But these children can train you to change your attitude. I become sympathetic and empathetic. Sincerely, I can handle children; I can guide them which was difficult before I become a special needs teacher’.

Megwa (FG) adds:

‘There is interest in us to help these children. What we are doing is beyond teaching now. You find us calling them, staying with them, and trying to find out their problems. So inside us
there is a lot of interest though there are problems we are just pushing on because of our commitment to the training we attained’.

These statements are indications of positive attitudes contributed by their teacher preparation that enabled them to attend to individual needs of deaf learners. The fighting of stigma is consistent with the international and national trend (see 1.2) advocating for inclusive education. Data showed that subjects were able to fight stigma associated to inclusion.

Inclusion and the teaching of deaf learners have the sole purpose of ensuring that learners are retained at school and complete a full cycle of their education. Storbeck (2008) in her study about deaf education in South Africa argues that teachers of the deaf take responsibility for fighting stigma and to ensure that pupil are retained at school and actively participate in their education. As Okello (FG) noted:

‘The training has empowered us on fighting stigmatization. We are fighting this word here – stigmatization. We have seen that some parents find it difficult to accept their children. For some teachers, when teaching children with deafness and hearing children, they take time fighting against stigma’.

Okea (FG) observed that:

‘The training has helped us a lot to reduce the number of dropouts, especially children with deafness. Because now like here, when you see the number of children with deafness turning up for school is higher than the previous years before the specialized trained teachers in the department of special needs were sent and started helping the deaf learners’.

**Statements attributed to negative attitudes**

Data indicate that teachers of the deaf (subjects) raised concerns related to learners’ ability, attitudes of other learners, teachers, parents, deaf adults and the school system as a whole. These are stakeholders with different roles (division of labour) aimed towards academic and social participation (outcome). Data indicate that the different stakeholders, who are supposed to support and work with children with deafness, lack the zeal and interest to ensure that the outcome is achieved. Omego was specific on learners and the teachers’ attitudes when he stated that:

‘The general thing is the negative attitude, it is still there. I don’t know how we shall manage to eradicate it among learners themselves and the teachers, especially those who have not undergone special needs education training. They still have negative attitudes. When a child with hearing impairment comes to him/her, s/he will say –you just go to your teacher, s/he is there’.
Mwanga adds that:

‘Another thing is that other teachers who are not trained in SNE or who don’t teach these children, where there is any problem they don’t come in to help, so these people who teach special needs children feel that there is too much work for them. For instance, the way I told you that even if you are not on duty they come to you, even if you are at home, they follow you at home leaving the rest of the teachers’.

Alai contends:

‘You have to strain and make sure you take them to a certain level to make sure they sit the end of term, end of year exams and national exams. Normally they don’t measure to the level of hearing children. When the results come and these children have failed, as teachers, we feel sad because the children have not performed to our expectation and that of the parents, after all these efforts’.

When it comes to inclusion, data indicates that many teachers argue that deaf learners do not perform well and may not be accepted. They argue that, in some instances, there are negative reactions demonstrated towards deaf learners which negatively impact on their academic and social participation. As noted by Okea:

‘You know when the deaf is put with the hearing, they lag behind and sometimes they are ignored. This makes them to have low self-esteem and fail to measure to the level of hearing children’.

Luttu (FG) commenting on negative attitudes that contribute to their poor performance noted that:

“Sometimes you find that certain groups of people may not readily accept them. You find that they are not ready to do an activity with them (deaf learners). They hesitate a bit and eventually our children feel a bit offended and frustrated. In a nutshell, sometimes it’s not easy to be easily accepted as part and partial of that group”.

Exclusion did not only affect the deaf learners. Even within deaf education, exclusion was seen to exist. Observing the physical education lesson of a P3 class, there was evidence of some learners not being involved. There was a girl who was physically impaired and using clutches. She was made to sit by the playground watching others participate. Another child having multiple impairments was playing at the side of the field and imitated what the class was doing without being involved.
Observation Excerpt III

**Class: Primary 3  Lesson: Physical Education**

The class was led outside by the teacher in two rows. The learner with physical impairment joined and matched together with others to the field. Later she was made to sit down by the field. Another learner who seemed sick joined her. They watched cursorily as others engaged in the different physical education exercises. Warm up activities, individual and group activities were done. During the group activities, one of the learners who was sitting down joined in the games. She participated up to the end of the lesson.

Besides the field was another child with multiple impairment who imitated all the activities being carried out in the field with curiosity and interest. The teacher seems not to have noticed or did not mind about this learner, and the learner was not called to join and participate in the physical education activities.

The teacher however, guided the rest of the learners, explained all the activities and solicited activities from the learners. The mastery of content and the explanation in sign language as seen from the lesson plan and activities was excellent. The involvement of all the learners who participated in the field was perfect.

Data also indicated that stigmatisation exists in extra-curricular activities where deaf learners are taking part with their hearing peers. According to Nsereko (FG):

‘The children are still stigmatized. Like when we go to higher levels doing games, they say these children with deafness should not participate. Like the scenario of last year when the kid qualified for national levels in athletics. At these lower levels he participated very well but at national level the child with deafness came back stigmatized and asking why she was taken for national level competitions and was not made to participate’.

This sentiment was supported by Alai (FG) when she recounted that:

‘In athletics, when the children with deafness are the first and there is no teacher of the deaf around, they give cards to other children from the hearing school’. Children have talents but if you are not there to support them, they are always oppressed by other people’.

Although parents may meet their obligations to pay tuition and other fees, they are often seen distancing themselves from identifying with their children and collaborating with teachers to reinforce what is taught at school. Data indicated that when parents come to school they go to the administration to clear school requirements and meet the house parents. These are
important welfare support that needs to be concurrently attended to alongside the academic needs – the classroom. As noted by Alai (I):

‘Parents! Many parents don’t come to class. When they visit, it’s the office, then house mother. By the end of the day, what you have taught at school cannot be transferred at home. By the time the child comes back from holiday, s/he has already forgotten’.

On academic performance, Mwanga (FG) noted

“we have right now parents on our neck seriously. There is even a child who has been in the deaf blind unit but because they have operated upon his eye. The parents want the child to do Primary Leaving Examinations (PLE), but the child cannot even copy the work on the chalkboard”.

Okea (FG) added that:

‘Most of the day scholars are on and off or come late most of the time. When you ask them, they say parents still need them to do at least something before coming to school’.

Some of the reasons as to why children with deafness report late to school could be because their parents pay their tuition and other school requirements as a last resort after paying for the other children. Nalu (I) recognised this attitude when she said:

‘Normally parents tell you that they first pay for other normal children, and as a teacher you really wonder whether these are dead or what’

The situation is even made worst when they take children with deafness to boarding schools without paying on time as required and without picking them during holiday time. Worst still they are not visited and not provided with scholastic materials for use during the term. Omego (I) explaining this situation stated:

‘Most children with deafness are boarders, the parents don’t come to visit them and yet you find they are lacking materials. Others are brought at the beginning of the term and collected in the third term. During holidays, you find these children moving here and there, the head teacher has to keep them here and give them some work. The parents also leave a wrong telephone number and when you call it is switched off’.

Deaf adults working at the schools were reported to be negatively influencing deaf learners. They are reported to look at teachers’ roles in guiding, disciplining and involving children to participate in community work as an abuse of the child with deafness’s human right. Data
indicates that deaf adults discourage or withdraw the deaf learners from participating in community work. As noted by Alai (FG)

‘Another thing is the influence of deaf adults. When you come in to discipline the children they look at us the hearing teachers as oppressing the deaf. You are trying to solve a problem of maybe stopping these children from engaging in pre-marital sexual relationships at this early age but you find the deaf adults working in the school fail to appreciate your efforts. They incite the deaf learners against you and it becomes very difficult to discipline these learners’.

Oja (FG) complementing on such an experience noted that:

‘Another incident was of recent when the lorry had brought firewood and the cook wanted the children to give a hand and put things in the other room (store) but then one of the deaf adults had instructed the children never to do so. As a senior man teacher I called the children and explained the importance of working together and to put these things in a proper place. So these children listening to me as their teacher went and put the firewood inside the container. But before they could finish one of the deaf adults came and said that it was wrong for them to do so and ordered them to stop it, so he sent the children away. I was left with nothing to do’.

The fact that deaf adult command respect among deaf learners and could instruct them to stop contributing to their welfare which is also part of learning shows that deaf adults can manipulate the deaf learners in whichever way. This manipulation can affect the morale and attitude of the teachers. Mwanga (FG) shares this view when he stated that:

‘Sometimes you find children signing that teacher so and so hates all the deaf and they take it as a gospel truth and they will never have respect for that teacher. Therefore what we have seen is that even some hearing adults take that advantage and ignore the relationship that could have been built with the children’.

Table 14: Summary of a range of attitudinal indicators according to interviews, focus group discussions and observations

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Teachers responses Interviews/FGDs</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrating positive attitude</td>
<td>• Fighting stigmatisation • Being sympathetic • Working with stakeholders</td>
<td>• Involvement of volunteers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mastery of sign language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Support during meal time</td>
</tr>
</tbody>
</table>
...and other activities
- Support to reduce dropout
- Patience
- Categorising and assessing them

<table>
<thead>
<tr>
<th>Demonstrating negative attitude</th>
<th>They are not fast learners</th>
<th>Not involving a child with multiple impairment in Physical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>Have communication problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We get frustrated when they fail</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>Some people don’t accept them</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative attitude persists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>They are stigmatised</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Children with talents are oppressed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parents don’t visit classes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Influence of deaf adults</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Children believing that teacher hate the deaf</td>
<td></td>
</tr>
</tbody>
</table>

The findings summarised in table 14 above represent attitudinal statements made by teachers during individual interviews, focus group interviews and from what is documented through observations.

### 6.7.2 Child-to-Child Interaction

Data from interviews, focus group discussions and observations indicate that some approaches that teachers use enable child-to-child interaction both in class and within the school. The child-to-child interaction influences how learners relate with each other. Data from interviews and observations indicate that deaf learners and their peers were involved in different activities that enhance child-to-child interaction. Learners were reported and were seen to mix freely in class, sports and at meal time. During these free interactions, learners used sign language and other forms of communication. According to Lutu (I)

‘As they go they interact with hearing children in different sports activities where they can participate. They mix with the hearing children during athletics, during rugby, any game and any sports in the division. They are involved, so when they get into these activities, they
socially interact with those children and they are accepted and those children also they start
learning sign language which they can use to interact with deaf children”.

To this effect Omego states:

“They share all the activities. At meal time they line up together, helping each other and even
communicating in sign language. Many of our hearing pupils learn sign language because of
this and when we stress95 the importance of speaking English at school, they all turn to sign
language in fear of English”.

An observation at mealtime showed the relationship between learners, the support they
provide to each other and the use of sign language.

**Observation Excerpt IV**

*Break time in the Inclusive School – Serving Tea*

Learners line up to receive break tea at the dining hall. Pupils with various impairments stand in the
queue with ordinary learners. Some stand in groups to communicate in sign language. Others carry
the cups and plates for their friends with disability. Teachers on duty supervise the activity. The cooks
use both sign and speech with the deaf learners.

In class, a similar situation was experience.

**Observation Excerpt V**

*Class: Primary 7      Lesson: Social Studies*

The teacher and student interacted freely among themselves. The learners could be seen reading and
asking each other questions. They also followed and started discussing what teacher Mwanga was
writing on the chalkboard. There was engagement of learners in providing answers, spelling words
and writing them on the chalkboard. Learners sought clarification on concepts that were not clear
from the teachers or colleagues.

At some point, the teacher solicited related experiences from the learners. Different learners were also
asking questions that the teacher could redirected to the class. Other learners were able to engage in
providing responses and explanations to fellow pupils. The learners were using sign language freely.

The above caption may give the impression that child-to-child interaction was fully
embraced. In spite of this, there were challenging scenarios of child-to-child interaction.
Limited child-to-child interaction was demonstrated among visiting hearing pupils. Excerpt
from Lutu’s (I) statement attest to this:

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95 All Ugandan schools use English as the official language and learners are expected to speak English while
within the school compound. Failure to do so attracts punishment.
‘Sometimes you may find that certain groups of people may not readily accept deaf learners as part of the learners. For example sometimes when these visiting children arrive, you notice that they are not readily willing to do an activity with the deaf. They hesitate a bit and eventually our children with deafness feel a bit offended. In a nutshell sometimes it’s not easy for the deaf learners to be accepted of that group’.

Table 15  
Summary of a range of positive and challenging indicators of child-to-child interaction according to interviews and observations

<table>
<thead>
<tr>
<th>Positive Indicators</th>
<th>Challenges</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mixing freely during sports with hearing pupils</td>
<td>• Visiting pupils reported not eager to share activities with them</td>
<td>• Copying from each other</td>
</tr>
<tr>
<td>• Sharing all activities e.g. meal time</td>
<td>• Deaf children reported to prefer sitting in their group</td>
<td>• Explaining to each other content that might not have been clear</td>
</tr>
<tr>
<td>• Communicating in sign language</td>
<td></td>
<td>• Sharing materials and items</td>
</tr>
</tbody>
</table>

6.7.3  Guidance and counselling

Data from interviews and focus group discussions indicate that teachers of the deaf were able to provide guidance and counselling. The knowledge and skills they attained to provide the guidance and counselling were useful in working with hearing learners, their parents and in supporting deaf learners in fighting stigma, mobilising for support and encouraging all stakeholders to be open, participatory and to contribute to the education of their children. Data also indicate that the knowledge and skills acquired from guidance and counselling helped in the management and administration and working with parents, as the following excerpt exemplify. Okello (I) states:

‘The training has helped me to fight stigma when teaching children with deafness and hearing children. Even some of the parents, it is difficult for them to accept their children; we had to work on that, talk to them’

Mwanga (I) states that:

‘The other aspect I have added on is because I also help in administration; I moved closer to both the children and their parents. This has helped me to counsel and guide the parents to take an extra mile to assist their children with scholastic materials and also meet other people who have given us some advice on how to continue working with these children and their parents’.
Focusing on deaf learners Nyako (I) states,

‘As a teacher also I need to guide them. Sometimes I have to help them to understand the world around them, to help them to create relationship with other children who hear and speak also’.

6.8 Summary

The experiences and perspectives of teachers of the deaf provided positive and challenging experiences. These experiences and perspectives are recounted based on what they learnt at the university (teacher education institution) which is one activity system and how they are applying them at school which is another activity system.

They are able to identify relevant university courses for their practice. They contend that all content are relevant. They were also able to identify content that needed more emphasis. Some of the content that was reported as relevant was also reported to need more emphasis.

At the school level, the teachers reported that they developed the capacity to utilize the method of teaching specific subject areas, communication (instruction and interpretation) in class and were able to interpret curriculum content. These capacities influenced the way teachers of the deaf carry out assessment and examination of learners, and their perception about inclusion. Teachers of the deaf also reported being able to work with parents and other stakeholders, changed their attitudes and were able to sensitise and change attitudes of others, guide and counsel as well as facilitate child to child interaction. Teachers of the deaf who participated in the study reported that they were aware of the policies and guidelines that they should follow in their practice. They were also able to identify the challenges associated to all the above factors.

In the subsequent chapter a discussion of these findings is made. Attempt is made to relate to the activity system theory. The conclusion and implications for teacher education, schools having children with deafness and further research ends the chapter.
7. Chapter Seven: Discussion, Conclusion and implications of Findings

7.1 Introduction

The purpose of this thesis was to explore the experiences and perspectives that teachers of the deaf have and how these experiences and perspectives can inform teacher education preparation programmes particularly for teachers of the deaf. Six research sub-questions guided the study.

The study involved collection of data through individual interviews with eleven teachers of the deaf, focus group discussions in the two schools having deaf learners, observations of interactions in the classroom and document analysis. Data analysis began with the first interview and continued until no more categories and valuable information could be generated. The findings resulted in the identification of major categories and sub-categories highlighting positive and challenging experiences. The categories and sub-categories are clustered under six sub-questions as described in chapter one (see 1.3). The understanding is that teachers of the deaf are at the centre of teaching and learning within a dual network of interacting activities (Engeström, 1987) at the schools and in teacher education institution.

Teacher education preparation programmes consider many competences and factors when planning for deaf learners however, this discussion focuses on considerations needed for the teacher of the deaf to develop knowledge and skills for facilitating academic and social participation. The first part presents selected dimensions of activity system as a theoretical framework for discussing the findings. It is followed by discussions of selected themes on experiences and perspectives of teachers in facilitating academic and social participation of deaf learners. The two last parts presents conclusions and implications of the findings.

7.2 Teacher Preparation for facilitating academic and social participation: An Activity Systems Analysis

The discussion in this section is based on the notion of activity systems as a multilevel analysis (Engeström, 1987, 1999b) of the experiences and perspectives of teachers of the deaf. In chapter 4 activity system provided insights on how social actions interact within complex learning environments. In the case of this study, it is how experiences at school can inform practices in teacher education at the university. Briefly stated, activity system theory suggests that subjects at each level have an immediate object aimed at achieving an outcome. The achievement of the outcome is determined by how the tools are utilized and how the rules and division of labour are understood and shared between and among the community. The two
activity systems in this thesis have the same kind of subject whose role varies from one activity setting to the other. The first activity system is at school with the subject (teacher) implementing the object (teaching) to achieve an outcome (academic and social participation of deaf learners). The other activity system is at the university where the subject (teacher-trainees) is having a different object (learning) with a different outcome (knowledge and skills acquisition as student teachers). The rules, tool and community that guide the division of labour at the university are also different from those within the school setting. The interrelationship within and between the two activity settings facilitates or serves as a tension to the achievement of the different and shared outcomes.

Activities undertaken by the subjects at each of the two activity systems are directly and/or indirectly influenced by the objects, outcome, rules, tools, community and division of labour as a collective nature of human activity. Mapping Engeström’s (1987) expanded activity system theory to explore how the experiences and perspectives of the teachers can inform teacher education helps to exhibit the inter-relationship that exists in the shared goals between the school and teacher education institution; and how the outcome expected from the teacher education institution relate to and serve as a tension to the different elements at school (Fig 6)

In essence, the illustration in Figure 6 shows that the knowledge, skills and attitudes acquired at the university have an impact on subject (teacher), the tools (methods) they use and the division of labour (roles of different stakeholders) at school. The subject (teacher) at
school is involved in an object (teaching) as a socially constructed activity where the rules (policies), tools (methods), community (other teachers, peers to the learners with deafness, deaf adults and interpreters), and division of labour (roles of different stakeholders) are different from those at the university. Although at the university, the subjects (teacher-trainees) remain the same, the object (learning), rules (policies), tool (curriculum, lecturers), communities (other students, administrators and technicians) and the division of labour (roles of the stakeholders) are different. In spite of the difference, it is assumed that the activities undertaken by the same subject at the university would contribute to the activities undertaken at school after the teacher education.

Based on findings in Section 6.2, 6.3 and 6.4, it may be argued that the knowledge and skills acquired from the university have influence on how academic and social participation are facilitated. The influences include how the teachers of the deaf applied the methods, used the language, and collaborated with stakeholders, provided guidance and counselling and enhanced child to child interaction. These teachers’ conscious and unconscious actions (Ross, Cornett, & McCutcheon, 1992) contribute to revealing the difference in their beliefs, norms, values, habits and behaviours that makes them a master teacher (Scheetz & Martin, 2008). A master teacher is one who manages to adapt the curriculum to suit the needs of all learners in the class. Becoming a master teacher is particularly relevant as candidates for teachers of the deaf in Uganda are enrolled from among teachers who had a general training. The general training as stated in Section 2.4.1 is supposed to equip all teachers with theoretical and practical skills necessary to become a professional and a certified teacher, but does not specifically orient them to teaching deaf learners. The purpose of the training at the university is meant to provide the knowledge and skills that orient teachers of the deaf to facilitate academic content and social participation of deaf learners. The understanding is that the rules and division of labour that governs the teaching differ in the two socio-cultural contexts at school and teacher education. The policies and roles of different stakeholders at the university are different from the policies and the roles at school where deaf learners are.

For example, at the school level the division of labour (role of different stakeholders) calls for collaboration between the teacher and other stakeholders to achieve the outcome (academic and social participation). Working collaboratively is one of the characteristics expected of a master teacher (Scheetz & Martin, 2008) and must be developed overtime as well as emphasized during the teacher education at the university. The teaching methodology, content and school community practice (appendix 8 & 9) provided at the university is expected to orient teacher trainees to work collaboratively. In Uganda the policies of inclusive
education and universal primary education led to increased number of pupils in schools including increase in the number of children with varying special needs in classes. It implied that teachers with special needs education background had to work collaboratively with other teachers for the benefit of all learners. Findings in Chapter 6, section 6.2 indicated that there is limited collaboration among these teachers. In order to ensure academic and social participation, teacher education preparation programmes should emphasise collaborative teaching and demonstrate how collaborative teaching in an inclusive setting should be implemented. This indicate that there is need to orient teacher educators as well as revise the curriculum especially the components on teaching methods and approaches with the view to emphasise collaborative teaching and working with partners in deaf education.

7.3 Opportunities and challenging experiences associated to methods and approaches for teaching deaf learners

The mastery of knowledge and skills is a process that is intended to help new comers fully participate in the social/cultural practice of a community (Lave & Wenger, 1991). Applied to this dissertation, a community is the professional field of deaf education that uses specific tools to achieve an outcome. Data from interviews, focus group discussions and observations suggest that the outcome from the university contributed to a great extent to how these teachers varied methods and approaches during teaching. Teachers engaged the learners to utilize available tools as they worked towards achieving the outcome. The process undertaken demonstrated how the outcome from the university was being utilized to achieve the object at school (Fig. 4) and how the division of labour engaged the subjects and community at the university to enable them acquire the knowledge and skills.

Findings in section 6.2 shows the attempts teachers are making to facilitate academic and social participation of deaf learners. This finding is in line with what a master teacher should possess (Scheetz & Martin, 2008). Although the most appropriate word could be ‘working with’ rather than ‘handling’, the statement that teachers of the deaf made symbolises a promising trend that the outcome at the university had a contribution to the outcome at the school (Fig 4). From an activity system theory perspective, the use of the tools at the school was a contribution to the object at the university.

Is this quality authentic?

When one considers the outline of the curriculum at the university, it appears to be true. The curriculum and its objectives at the university are crafted to achieve a specific goal. It is possible to argue that the theoretical and practical components of the courses (Appendix 8
& 9) undertaken at the university contribute to how the subjects (teachers) undertook the object (teaching) to achieve the outcome (academic and social participation) at the school. How the community (other students, lecturers, administrators and technicians) at the university take up their roles (division of labour) provide greater opportunity for teacher trainees (subjects) to learn (object) the skills that they use to teach deaf learners.

However some teachers raised intriguing challenges which are administrative and professional in nature. Section 6.2 identified large classes, having children with other impairments in addition to deafness and lack of contribution from teachers without special needs education background. Challenges like these, might have emerged in the field and were not directly addressed during their teacher education. This might be the reason as to why they did not feature in aspects that needed more attention during teacher education (see section 6.3). It is also possible that these aspects may not have received much attention during teacher education or that the teacher education tools (curriculum and lecturers) could not have prepared the teacher-trainees to adapt methods to suit the needs of the deaf learners in all class settings. These assumptions could result from the content in the curriculum or the amount of time and exposure given to the practice component outlined in the curriculum during the teacher education.

Considering that the aim of the government policy, (see Section 2.3), is to ensure an inclusive education, these challenges become critical in influencing the attitudes and action of the teachers of the deaf. Preparing teachers to attend to the needs of this increased population of deaf learners and large classes amidst the rigid curriculum, summative assessment, automatic promotion, limited trained teachers and a limited number of facilities for the complex classroom environment is a new challenge that teacher education had to cope with.

**Opportunities and tensions associated to large classes**

Within the Ugandan policy, a large class is defined as a class of over 50 learners. In special needs education, a teacher – pupil ratio of 1:6 is provided for (MoE&S, 2011). Any number beyond six children with special needs in a class is considered a large class. A large class size may be considered as an opportunity as well as a challenge. As an opportunity, large classes are seen to enhance child-to-child relationship, creating opportunities for

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96 Implication of inclusive education is discussed later under policies
97 Attitude issues are discussed later in this document
98 See below for detailed discussion
99 Detailed discussion in the sub-sections
learners with different abilities to freely interact. Section 6.7 provides evidence of data demonstrating opportunity arising from an inclusive large class for both hearing and deaf learners. Findings indicate that the learners were able to communicate in sign, read for each other, consult each other and help one another on academic activities. Observation in a large class having deaf learners (Excerpt VI) exemplifies this assertion. The benefits of inclusive education were that learners of different abilities were able to interacts, support each other, participate and develop academic knowledge and social skills.

As a challenge, large classes having learners with deafness has implication in how the teachers had to attend to individual needs, adapt their methods and manage language and communication variation in the diverse classroom without the support of an interpreter. 

*Interpreting for deaf learners in the large inclusive class*

To meet the needs of deaf learners in the inclusive class, there should be a provision for interpreting services, as it would be difficult for the teacher to teach while speaking and signing concurrently. A body of literature emphasise the importance of sign language interpreters in inclusive classes having deaf learners (Sharilin, 2011, Adoyo, 2007, Schneider, 2002). Data indicated that some teachers were providing interpreting services to learners with deafness in inclusive classes. Although this was being done, the interpreting services were not structured leaving these teachers to have their own and equally demanding teaching load. The presence of a full teaching load may imply that teachers volunteered to interpret at the time they are free, when they feel like or through mutual agreement with the subject teacher. The lack of structure for interpreting services may impact on the quantity and quality of interpreting provided to the deaf learners in the inclusive class.

*The child-to-child relationship arising from large classes*

The debate about the notion of large class size, however, includes its benefit in enhancing child-to-child relationship and engagement in an enriched learning environment. Although no conclusive literature supports this assertion (Dachs, 1998), it is possible that its inconclusiveness is a demonstration of the lack of a clear or simple relationship between class size and effective learning. The argument is that there are always many other variables at play in the classroom. The variables which include and not limited to teacher's attitude, knowledge and skills, motivation, teaching and learning strategies, availability and the use of support materials, pupil attitudes, skills and motivation makes discussions about class size challenging. Data relating to attitudes indicated that some teachers, especially those not trained in special needs education were not willing to support learners with deafness. It was also reported that parents were providing limited scholastic materials to their children with
deafness. Learning materials would support greatly the efforts of the teachers to facilitate the academic participation and would equally enable sharing of materials which is in essence social participation. Some of these variables are theorised in this dissertation as socio-cultural\textsuperscript{100} decompiles of the activity system (Engeström, 1987).

The associated challenges of large class size are that it could not easily allow for individual attention. In this study, there was evidence of large numbers of learners with deafness in each class (see table 2.1 & 2.2) which limited opportunities for individualised education programme (IEP). IEP could reduce the challenges associated to academic participation and achievement. The struggle to meet the varying needs of learners in a large class was reported to affect the quality of education provided by the teachers of the deaf (see 2.5.2). Teachers of the deaf felt that a large class size complicated their professional role of giving individual help to the many learners in the class with varying levels of deafness in addition to other impairments some learners had (see 6.2). This challenge could be viewed from different angles. First, that little consideration was given on how such a complex classroom environment having deaf learners could be managed during teacher education. Secondly, it could be that the teacher-trainees failed to adapt the methodological guidance shared during the training, and thirdly it may imply that little practical exposure was provided to help teacher trainees cope with the complex classes thereafter.

If the performance of the subjects (teachers) is based to a large extent on the outcome at the university (knowledge and skills), then it is possible to argue that the outcome at the school (academic and social participation) could appear to be a challenge. The teachers of the deaf certainly reflected this in their experiences and perspectives when the same aspects they consider very important were the aspects they encountered challenges in (table 10). Suffice to note that it is in the same content areas that student teachers consider important that the university is aware of and allocated more credit units (see appendix 9). The main implication is that teacher education preparation may not be effectively utilising the time allocated to empower teacher trainees to be prepared for the large complex classes.

\textit{The socio-cultural context and dilemma at school}

The socio-cultural-historical context of the school significantly impact on the way deaf learners, the teachers and the community engage to ensure quality academic and social participation. In Uganda for example, parents were originally contributing to their children’s education through the Parents Teachers Association (PTA) meetings, resolutions, monitoring

\textsuperscript{100} Discussed in more details below in this section
and fees\textsuperscript{101}. The requirement that parents contribute PTA fees limited access to education by all children as some parents could not afford or took advantage to leave out children with disabilities, special needs and the girl child. Through Universal Primary Education (UPE) many learners with disabilities, special needs and deafness were enrolled in schools nearest to their homes. Most parents who were not able to pay for the expensive educational facilities benefitted from sending their children with deafness to the nearest schools. Universal Primary Education (UPE) created opportunities for all learners. UPE was however misinterpreted to imply free education hence the withdrawal of PTA contributions and reduction in parent participation in school programmes.

Data indicated that while UPE increased enrolment of neglected learners in school, it is faced with limited parent contribution and teaching/learning materials. Parents considering UPE to be free education sent learners with deafness to school without the necessary contributing scholastic materials and resources needed for their children. This situation left deaf learners and their teachers to function with limited scholastic materials and resources. The implication is parents had to be re-oriented to ways of engaging in their child’s education and for teachers to intensify on making locally available educational materials for use in the classroom.

Another socio-cultural challenge relates to the nature of passive learning learners are subjected to as a sign of respect. Learners are neither expected to question teachers’ actions nor give a conflicting opinion as this is viewed to be disrespectful and breaking class rules. Learners follow instruction and contextualise the content being delivered by the teacher. These demands at school often give learners little time to interact, participate, socialise, explore, play and freely innovate. This state of affair contradicts the argument advanced by Mason & Mason (2007) that the experience of deaf learners should be made as ordinary as possible. It is possible that the strict class rules limit opportunities for child-to-child interaction and could be the probable reason as to why deaf learners preferring to sit in their group (see 6.6).

The demand that a teacher’s efficiency is proved by the pace at which the curriculum is completed and on how well pupils are ‘drilled’ to pass national examinations compounds the problem. The demand for excellence in national examinations\textsuperscript{102} make teachers rely on

\textsuperscript{101} The PTA fees was decided by parents and teachers in their general meeting as a contribution to infrastructural development, scholastic materials, pupils’ and teachers’ welfare.

\textsuperscript{102} At the end of the seven years of primary education learners are subjected to Primary Leaving Examinations (PLE) which is a national examination to qualify them to the next – secondary level. Those who perform poorly drop out of school
pedagogical practices which promote rote learning. The anxiety to ensure that learners attain good grades stresses both the teacher and the learner, as the teacher had to drill the learners to master the theoretical content expected in national examinations. In the process of drilling, learners get minimal opportunity to engage the teacher in academic pursuit where they might have not understood. This practice contradicts the assertion that the quality and quantity of students’ academic participation provide more opportunities for cognitive satisfaction and increase the rate of student retention (Astin, 1999). For deaf learners to be retained at school actively participate in social activities, activities at school should enable them to feel accepted. According to Sampaio and Kurigant (2009) the common target of participation is the emergence of interpersonal relationship. Recognising that deaf learners do not form a homogenous group (Mukuria & Eleweke, 2010), activities initiated by teachers should ensure that interpersonal relationship takes centre stage. Teachers, who might not have had adequate orientation on how to accommodate the complexity in their classes, could face more challenges in supporting pupils with special needs (Bartolo, 2010; Storbeck, 1999). As data indicated teachers faced challenges in instructing learners with deafness in activities that involved hearing learners.

7.4 Opportunities and challenges associated to communication and language

As mentioned in Chapter 2, a key impediment on the impairment of deafness surrounds communication and language. In this study, sign language was identified as a necessary and unavoidable tool at school that teachers of the deaf (subjects) utilize to be able to facilitate academic and social participation (outcome). Data indicated that the training helped teachers to have proficiency in sign language, eased communication between them and the deaf learners, and helped teachers to simplify language during exercises. Some of the teachers (subjects) engaged sign language (tools) to undertake multiple roles of teaching and interpreting for deaf learners and other stakeholders (community). Although these multiple roles were very important activities, it was evident that the role of interpreting was outside the policies and guidelines (rule) governing the teacher (subject) and therefore could not be satisfactorily fulfilled. Data indicated that the teachers who interpreted had full teaching load making it difficult for them to appear in two places at the same time, having no time to rest and the overload affected their effectiveness.

_Uganda sign language use in schools_

To support the learning of deaf children in inclusive classes, there is need for interpreting services. Interpreting helps the ordinary teacher who would be working with the
whole class and the special needs teacher who should mind about the individual difference and yet unable to interpret and speak at the same time. Recognising that interpreting is a professional line that has its ethics and code of conduct and not currently well developed and accredited in the Uganda Public Service structure and in most communities, interpreters are hard to come by or simply too expensive to hire. Teachers of the deaf are the available resource persons to recon on, serving as sign language interpreters. For these teachers to efficiently provide the sign language interpreting services, they need adequate knowledge and skills in sign language, ethic, principles, voicing and language generally. Sign language interpreting is also an added responsibility.

The use of sign language among learners facilitated opportunities for child-to child interaction in academic activities. Sign language used by hearing learners also provided opportunities for social participation and friendship among learners which was a grey area for attitude change. Language acquisition provides opportunities for interaction, communication and getting exposed to other stimulations (Habber, 2007; Wedell-Monnig & Lumley, 1980). Failure to communicate and to use common language on the other hand, has consequences not only on the academic participation but equally on the social interaction between the child with deafness, the teachers (subjects) and the stakeholders (community) at school. Much as the mastery and use of signs was a useful resource for inclusive learning, data indicated that it affected the mastery of grammatical tense and proficiency in English language. Hearing learners were reported to misuse the benefits accrued from learning sign language to evade reprimand for not using English\textsuperscript{103} - the official language of instruction and examination at school.

Data indicated challenges relating to lack of communication and language skills among some teachers of the deaf, teachers without special needs education training, hearing pupils from ordinary schools that interface deaf learners, some learners with deafness and their parents. Some teachers of the deaf were not willing or failed to interpret in gatherings for example in church, implying that these teachers may lack the requisite sign language skills. The lack of sign language knowledge and skills in an environment where sign language is prominently used may be viewed in many ways. Either the teachers of the deaf manage to learn only word signs rather than sign language during their teacher education programme, as there are many other courses to cover as part of the training\textsuperscript{104} or that the teachers lack the

\textsuperscript{103} English language must be used within the school premises and often breach of its implementation by pupils in the primary school attracts a punishment

\textsuperscript{104} The discussion is taken up further when talking about scientific and technical signs
motivation to learn sign language. If the failure to master sign language arose from the teacher education, it could also imply that there is a problem in the method used in sign language training at the teacher education institution or that, although trained with the requisite skills, some of the teachers of the deaf did not develop the positive attitude to support deaf learners. A key characteristic of a teacher of the deaf is his/her ability to use the language and communication that is understood and appreciated by deaf learners. The works of Meadow (2005) and Kirk and Gallagher (1987) support this claim.

Data indicated that most parents of deaf learners had difficulties communicating to their children in sign language and felt comfortable when their children were in the boarding school. The boarding facilities provided little opportunity for parents of children with deafness to engage in social interaction, communication and getting the opportunity to learn Uganda sign language. The fact that most deaf learners are born to hearing parents imply that they get exposed to sign language only when they join school. For deaf learners already enrolled, data indicate that they report back late to school after holiday when they have forgotten the little signs learnt while at school in the previous term. Some children with deafness are reported to have enrolled to school when they have passed the vital age of language acquisition. Other learners with deafness have additional impairments that impede their ability to learn sign language.

Another challenge is associated to communication and language as a language used in exercises, tests and examinations. This challenge has many dimensions. First, that teachers and deaf learners lacked knowledge of scientific and technical words to use in some subjects. The proficiency in sign language, which teachers report to have is limited to word signs rather than sign language. Adoyo (2002) found the same tendencies in his study. He claims that most teachers of the deaf use what could be referred to as simultaneous communication system which is often a prone zone for lack of mastery of sign language. Although simultaneous communication is better than no communication at all, the lack of scientific and technical signs limits the capacity of teachers to facilitate learners with deafness in some academic content which is a pre-requisite for a competitive academic participation. The lack of Uganda sign language mastery by teachers of the deaf could also be the probable reason as to why many teachers were not willing to contribute in providing interpreter services during classroom lessons, in church and other social activities. While, the works of Bandura (1986) and Kirk & Gallagher (1987) emphasise the importance of focusing on communication and language intervention as a means of enhancing academic participation, the fact that English is the official medium used in national examinations challenges the concept that teachers
simplify language and match signs to concepts so as to avoid misrepresentation of words used in context by deaf learners. Such simplifications are centred within schools and are not taken up during setting and marking of national examination. When deaf learners answer in sign language which has a completely different grammatical tense to the ordinary English language, it is possible that examiners consider the deaf grammar as wrong without taking note of the context provided in the answers. This socio-linguistic challenge is a tension for teachers of the deaf in balancing between teaching and assessment.

7.5 Opportunities and challenges associated to policy provisions

In order to achieve effective deaf education, there is need to transform policy in to practice. Uganda has many well formulated policies that support special needs education; deaf education and inclusive education (see 2.3). Teachers of the deaf at school or student teachers (subjects) at the university tend to negotiate between conflicting policies, legislations and guidelines (rules) to interpret the curriculum, chose appropriate method and language (tools) in the process of their teaching or learning (object). The support or neglect that the stakeholders at school or university (community) provide and how the roles within the two activity settings are shared (division of labour) contribute to how to facilitate academic and social participation (outcome) using the knowledge and skills they acquire.

Awareness of policy provisions related to class size, curriculum and assessment

An awareness and understanding of policies that support education can enable teachers of the deaf to facilitate and support academic and social learning. Data indicate that teachers of the deaf were able to trace policies that support their practice in deaf education as emanating from the strategic objectives of the Uganda Government White Paper (MoE&S, 1992) and contributing to achieving Education for All (UNESCO, 1994). They however, argue that these policies are poorly or never implemented. They cite examples of the large teacher-pupil ratio, limited teaching/learning materials and rigidity in curriculum and assessment. According to Nakabugo et al (2007) the challenge associated to teacher-pupil ratio is a matter that cannot easily be resolved. However, an appropriate teacher-pupil ratio is necessary for meeting the individual needs of all learners.

The policy challenge that relates to the curriculum has two dimensions - of the national syllabus and the sign language curriculum. Data indicate that the common practice in implementing the national curriculum is emphasizing rote learning for academic and summative examinations excellence and ranking rather than on the individual needs and abilities of every individual learner in the class. Previous studies perceive such challenges to
originate from the overload in the curriculum and for deaf learners, the incorporation of among others, speech and audiology training (Johnson, Liddell, & Erting, 1989). Data also indicted that the teaching of sign language varied according to schools as it lacked a curriculum to guide its teaching. The absence of a Uganda sign language curriculum for primary schools leaves teachers to use their experiences which may vary from teacher to teacher to effectively teach and guide the standard of teaching Uganda sign language at the teacher education institution. For a sign language curriculum for the primary school to be formulated, adequate research, resources and skills are necessary. Evidence shows that there is limited research on sign language in Uganda. So far limited studies undertaken include documenting and coming up with the Uganda Sign Language Dictionary as well as an analysis of some sign language transmission in Uganda sign language (Lule & Willan, 2010). These studies however, do not provide guidance on how sign language should be used in assessment, how the competence in sign language should be assessed and how the students would be prepared to develop competence needed to use sign language as part of the national curriculum.

The challenge associated to assessment of performance may not be surprising. Studies by Johnson, Liddell & Erting (1989) and Johnson (2004) show failure of deaf learners at all levels to live up to the promised curriculum results when compared to their hearing peers. This failure arises in part from lack of access to the curriculum content in the most user friendly linguistic means (Johnson et al., 1989; Standley, 2005).

Policy provision related to teacher remuneration

Another policy challenge that may be affecting academic and social participation pertains to teacher employment. As mentioned in Chapter 1, the main focus of this study was to find teachers’ experiences and perspective in facilitating academic and social participation. Consequently, teacher employment and welfare are critical components to teacher performance. Data indicated that teachers faced challenge related to poor remuneration, lack of proper appointment as teachers of the deaf and the demand that they should have a teaching subject. Low or poor teacher remuneration and improper appointment is not surprising. As a matter of national policy, expenditure in education and in particular teacher welfare in Uganda is considered in relation to other political priorities. Uganda could therefore be interested in the statistical increase in the learner population in school for political merit, without taking into consideration the increased costs associated to infrastructural development and human resource development and retention, particularly in areas of special needs as part of the strategies to achieve the millennium development goals targets.
The policy guideline on appointment and remuneration is tagged to having a teaching subject. Although this policy guideline on the teaching subject was developed bearing in mind the teachers of ordinary children, its indiscriminate application negatively impact on the enthusiasm of teachers of special needs education and indeed the teachers of the deaf. In Uganda, a teacher of the deaf builds on the general methods and content of the primary school curriculum where s/he returns to teach. In addition to the general methods (Aguti, 2003), the curriculum goals demand teachers of the deaf to acquire methods of teaching and meeting the needs of deaf learners in the primary school classroom. This provision seems not to be properly understood or is ignored by the appointing authority. Recognition and appointment in line with teacher’s academic qualifications could be one way of motivating and remunerating teachers of the deaf.

Teacher remuneration is a critical factor in teacher performance. Different forms through which teachers could be remunerated includes salaries and other cash payments, food, training or special assistance such as shelter, transport or agricultural support (UNESCO, 2006). A study carried out in the OECD countries support this view arguing that higher pay attracts more able graduates to the profession and serves as a strong initiative to improve pupils’ educational attainment (Dolton & Marcenaro-Gutierrez, Autumn, 2011). Remuneration and retention can protect the investment made in teacher training especially in areas like deaf education where new teachers are difficult to find.

7.6 Content considered beneficial and content that needed more attention during teacher education

In order to appreciate teacher performance, it is necessary to appreciate how teachers view their training content. Such comments are derived from teachers’ perspectives on content coverage during their teacher education. Findings from the individual interviews and focus groups discussions with teachers of the deaf indicated that all the content offered during their teacher education were relevant. Although this was a common position among most of the participants, they specifically singled out some content areas that they considered very critical for their practice. These content areas included methods, sign language, communication, audiology and activities of daily living. Although these content areas were identified as relevant, teachers of the deaf also categorised them as content that needed more emphasis. It is not surprising that these teachers (subjects) appreciate all the content. They assumption is that they join deaf education with the eagerness to acquire adequate knowledge and skills (outcome) to change their attitudes and enable them perform better when teaching
deaf learners (object). Moreover, the content that was taught to them was already prescribed (see appendix 8 & 9), therefore their comments could to a larger extent be focused on the relevance of the content to their practice.

Findings relating to methodology are significant in many fronts. First, there are many learning outcomes for the specific subject areas in the primary school that should take into consideration the needs of deaf learners. Reforms in education also focus on the methods of teaching and the teaching/learning environment. As mentioned in Chapter 2 section 2.6 teacher education reforms focused on improving access, equality and quality for improving pupils learning. Consequently, teacher education should provide all opportunities for the theoretical knowledge, practical skills and attitudes needed under each topic to develop the abilities to facilitate learners’ academic participation. Secondly, the skills acquired during the methods’ lectures help teachers of the deaf in their practice to particularly understand the social and psychological needs of their learners so as to provide the necessary guidance and counselling skills to help deaf learners cope with academic and social participation. Thirdly, aspects in the methods of teaching should enhance the capacity of teachers to interpret the learning outcomes in specific content areas taught in the primary schools and to assess them locally and nationally at the end of the primary cycle in the most suitable mode.

Assessment was looked at from two perspectives – assessment of competence and assessment of impairment. Assessing competence is the prime role of all teachers. The focus of the curriculum and the policy outlines is to achieve the learning outcomes. Assessing impairments helps in identify abilities, barriers to learning, participation and development and is critical as some learners have additional impairments and specific learning needs in addition to deafness. The identification of abilities and needs enable teachers in planning how to meet these barriers in whichever classroom setting. Data indicate that audiology, neurology and neuropsychology were relevant to assessing impairment. The importance of assessment of impairments is three folds; first, is the evidence of different levels of deafness in the classes, second is that some deaf learners have other impairments which impact on their academic and social participation and the thirdly, in spite of the different abilities, deaf learners have to actively participation in academic and social activities. Data indicate that although deaf learners were participating in class, they preferred clustering among themselves or only identified with specific teachers trained in special needs education. The clustering can be assumed to limit their full participation especially in an inclusive class or in engaging teachers. In chapter 3, Mirenda (2005) outlines the different levels of participation that can be influenced by the impairment a child has. Although focused on learners with augmentative
communication difficulties, it can be argued that deafness is a factor that affects a learner’s communication. Assessing the impairment of a child helps the teacher and other teachers, peers, instructors, administrative staff and parents to plan how to engage the child with deafness to participation.

7.7 Attitudes towards learners with deafness and teaching

The attitude of teachers, the deaf learner, other learners, administrators, deaf adults employed in the school and parents may influence how academic and social participation of the deaf learner is facilitated. This study recognises that there is much more than teacher’s knowledge about education and skills in different aspects of teaching that influence how s/he performs. In addition to attitudes, how a teacher performs, may be influenced by how s/he organises the learning environment, the way learners relate to each other and support provided by the stakeholder in the school and university settings.

A positive or negative attitude, for example influences how the teacher trainees would focus and master the content and skills delivered to them while still students at the university. It also influences how the knowledge and skills acquired from the university would be appropriated at school to facilitate academic and social participation. The appropriation of these knowledge and skills could include facilitating child-to-child interaction, guidance and counselling and collaborating with stakeholders in the school for the benefit of the child with deafness.

Data from teachers’ statements indicate a demonstration of positive attitudes and a sense of belongingness to the profession. Teachers reported that they were identifying learners’ needs, planning for the identified needs and collaborating with other stakeholders to see that the needs of deaf learners are met. There was evidence through classroom observation that showed collaboration between teachers, volunteers and deaf instructors in supporting learners acquire academic, linguistic and social competences. Storbeck (2008) in her study about deaf education in South Africa argued that trained teachers should identify linguistic and cultural knowledge, practical teaching skills and classroom management. Storbeck’s argument implies that teachers of the deaf should take responsibility to carry out activities which are beyond classroom teaching which should include assessment, fighting stigma, ensuring that pupils are retained at school and actively participating in their education. Earlier studies argue that experience, knowledge, skills, having strong desire to make a difference and regard to pupils, other teachers and parents contribute to success in deaf education (Scheetz & Martin, 2008 ). Using this position as an analytic concept of attitude, it is possible
to argue that the retention of teachers within deaf education is a demonstration of positive attitudes that the teachers of the deaf have. Data indicate that the teachers involved in the study had long experiences in working with deaf learners. In one instance, a teacher had served deaf learners throughout his teaching career. Some teachers had also not sought transfer or been transferred after qualifying and after being posted to schools for the deaf. This argument is therefore, important for individual and system sustainability within deaf education. These positive attitudes could be arising from (a) the benefits teachers gain from teaching deaf learners as a profession, (b) responsibilities and expectations required of them within the school and the community as an activity setting, and (c) the policies that support their teaching as a profession. Thus, any new social order that conflicts with these arguments may negatively influence the attitudes of these teachers and dictates how they facilitate academic and social participation of deaf learners.

As data from statements arising from teachers’ experiences showed, negative attitudes towards deaf learners and inclusive education existed. Participants expressed sentiments on how children with deafness were unable to compete with hearing learners in academic activities, not accepted by some hearing people and that parents did not accept their deaf children. These arguments could be interpreted in many folds: First, the expectation of parents, teachers, administration and the overall education system is academic excellence. When learners with deafness fail to academically perform, parents tend to place the blame on the teachers. Teachers will also transfer the blame on the deaf learners. Secondly, teachers of the deaf and other teachers compare learners with deafness to hearing children and do not take into consideration the circumstances leading to them lagging behind in academic activities. The attitudes of the teachers, peers to learners and parents of learners with deafness grossly impact on level and nature of their academic and social participation. Thirdly, These negative attitudes affect the academic and social engagement and the child-to-child relationship.

7.8 **Indicators of child-to-child interaction**

Child-to-child interaction may create significant change in the life of children with deafness. Failure to utilise child-to-child approach to teaching may have negative impact on the social relationship that deaf children would develop with other learners and their teachers. The limited social relations may subsequently influence negatively the academic participation. Data indicated evidence of child-to-child engagement and encouragement in learners. As the findings show, deaf learners were engaged in religious activities, extracurricular activities and visits to neighbouring schools. These activities helped to prepare deaf learners for social
participation. Earlier studies emphasise the need for learners with deafness to develop positive interpersonal relationship (Sampaio & Kurigant, 2009), for teachers to make learning as conducive and receptive as possible (Mason & Mason, 2007) and ensure active involvement and participation (Anita, 1999) of deaf learners. The encouragement of child-to-child interaction both in and out of class contributes to improved participation.

The limitation in the process of child-to-child interaction involving deaf learners included lack of a shared communication mode. According to Lang (2003) factors that inhibit the participation of deaf learners in academic and social activities include pace, language, culture and physical space. Other challenges include deaf culture and identity in the classroom and in social activities. In Chapter 3, delayed interaction, communication and lack of stimulation were identified as factors that limit participation of children with deafness.

7.9 What teacher education can learn from teachers’ experiences and perspectives

The experiences and perspectives that teachers of the deaf have in working with deaf learners may play a pivotal role in shaping how teacher education programmes should be organised. If student-teacher experiences and perspectives are elicited, it may provide vital information to rethinking teacher education practices. The constructivist approach to knowledge acquisition (Plessis & Matuzaffar, 2010) which regards knowledge as a process interacting with the environment is consistent to activity system theory (Engeström, 1987). The understanding is that the beliefs and perspectives that student-teachers have while the teacher education institution has a lot of implication in driving their actions at school. The positive evidence and challenges experiences during teacher education and practice provide relevant information that can help teacher education.

First, there are content areas within the curriculum that have been identified by the teachers of the deaf as core for their practice in deaf education. The curriculum is the legal document for preparing teachers of the deaf. Those core aspects of the curriculum should therefore be focused on considering experiences in the field of practice as well as reforms and innovations that continue to arise in special needs education, inclusive education and deaf education.

The second concern related to the need for more practical exposure during their teacher education. These practical exposures could be through attachments, observations, school visits and school practice. The use of technology such as video recordings of classroom situations and online literature could be adopted. The recordings of the realities in the classrooms and school, for example, large classes having deaf learners and the modified environment could
help to expose teacher trainees to the best practices and challenges existing in managing situations having classes with mixed abilities. These exposures could enable teacher trainees reflect on and match the significant gap between the knowledge, skills and attitudes they acquire through their teacher education and the realities of its application in the classroom and schools. Practical aspects also call for increased financial, material and human resource investment at the teacher education institution.

Third there is evidence of changing dynamics in deaf education arising from the inclusion agenda and the universalization of education that Uganda has adopted. The efforts being put in training teachers of the deaf should take into consideration these changing dynamics and the challenges it brings to the education system. These emerging reforms and innovations within the primary schools, primary teacher education and disabled people’s organisation (DPOs) - as the consumers of the services, calls for constant research and reviews in teacher education practices. Reviews that are informed by research will enable the teacher education programme to prepare teachers that ready and commensurate to the challenge.

Finally, there are a lot of information and experiences that teachers generate while in the field. These experiences are valuable information needed for teacher education to improve on its practice. The experiences gathered can be disseminated through continuous professional development, investigated further or utilised in policy reforms with the aim of improving practice.

7.10 Conclusion

The study provides evidence of positive and challenging experiences and perspectives of teachers of the deaf at school and teacher education institutions. The same subject can have the different objects, tools, rules, community and outcome (Grossman, Smagorinsky & Valencia, 1999, Hashim & Jones, 2007). For the purpose of this study the outcome at the teacher institution can directly or indirectly impact on activities at school where there are deaf learners. Within the activity system perspective, the actions of the teachers (subjects) represent the process of learning and doing from an individual context, where collective actions lead to knowledge, skill acquisition and attitude change (outcome) at the university and academic and social participation (outcome) at school. Through the activity system, activities of the same subject are viewed not as an individual action but as a collective cultural and historical context of human behaviour. From these experiences and perspectives, the following conclusions are drawn:
First, there are salient factors identified from the study. The study shows that teachers of the deaf were able to identify content from their teacher education that were important for their practice and content that needed more attention during their teacher education. It was evident that the content recognised as relevant were the same content areas that they considered to be in need of more attention. Teachers’ capacity to identify the content relevance and gaps could be evidence of achievement from the teacher education institution. Most of these content areas were practical. Data indicate that the provision put in place for practical components is inadequate. The manner in which it is implemented including the amount of time given to practical components of the programme is not sufficient which imply that there is need to reconsider how the practical components are managed.

Secondly, in spite of the fact that there are valuable policies to support the education of children with deafness, sufficient gaps still exists in implementing the policy provisions. These gaps relate to teacher deployment, assignment of teaching subjects and remuneration. There is limited attempt to prepare teachers of the deaf to cope with the policy requirement of teaching subject for primary schools. Although the teacher education institution attempts to train teachers on methods all subject areas, they are viewed not to provide an in-depth approach to specific subject content needed for the different levels\textsuperscript{105} of the primary classes. This very valuable effort in training teachers on teaching methods is not clearly incorporated in the employment policy that demands every teacher to have a teaching subject.

Thirdly, teachers recognise the important role sign language plays in their quest to facilitating academic and social participation of deaf learners. Data indicates that some teachers are assigned to provide interpreting services to deaf learners in inclusive classes. Although this is a positive development teacher interpreter is still given a full teaching load making it difficult to effectively manage the two roles. The interpreting role is not incorporated as part of the teaching (working) load.

Forth, the teacher education content is recognised as having greatly changed teachers attitudes, provided teachers with methods and approaches to facilitate child-to-child approach, guide and counsel both learners and parents, interpret, implement policy as well as work with stakeholders. In spite of all these promising findings, data indicated evidence of negative attitudes from the statements of teachers of the deaf, sentiments of parents, actions of and statements of other teachers not trained in special needs education, deaf adults employed in the schools and hearing learners. The demonstration of the negative attitudes by teachers of

\textsuperscript{105} Primary schools in Ugandan are divided into lower and upper classes. The language policy dictates that local or area language used in lower classes and English in upper classes.
the deaf has implication on the level and nature of how academic and social participation is facilitated. This indicates that there is need to continue training, retraining and sensitising the different stakeholders on the needs of children with deafness and what is expected to enhance academic and social participation.

Fifthly, there were a number of challenges that teachers of the deaf reported to be encountering in the classroom that impacted on the way they applied the methods and approaches that they had learnt. Data reported the challenge of large classes having learners with varying abilities; the unwillingness of teachers without special needs education training to support deaf learners and that some teachers of the deaf were not ready to interpret for the children in activities which necessitate the use of sign language because of the presence of other hearing people. These challenges could be interpreted to mean that the training has not greatly contributed to enhancing most the positive attitude in teachers and mastery of skills to work with complex classrooms. It may also mean that even the teachers of the deaf did not acquire adequate sign language skills that can enable them interpret were there are no interpreters – recognising that interpreting is a profession of its own.

Sixth, as a general observation, this study shows that there are positive indicators of inclusive education where deaf learners are involved. The use of signs by hearing pupils in an inclusive setting was a demonstration of the importance of inclusion although according to the teachers, sign language use was negatively impacting on the mastery of English grammar. The fact that sign language was being used to facilitate social participation can be argued to contribute to academic participation in the long run.

Finally, there is evidence of supportive educational policies and guidelines that have enabled the enrolment, teaching and examination of deaf learners and other learners with special educational needs. The significant challenge was reported in relate to absence of sign language curriculum that made teachers to teach sign language differently, the absence or limited teaching / learning materials, assessment materials and processes, poor teacher motivation, recognition and remuneration which could impact on the quality of support given to deaf learners.

In summary, by discussing the positive and challenges inherent in the two activity systems – the schools and universities – there are new insights from teachers’ experiences and perspectives that can inform teacher education. The experiences and perspectives of teachers implies that in spite of the efforts, a lot more needs to be done to facilitate provisions and support to human activity and development (Grossman, et al 1999, Yamagata-Lynch, 2010) in special needs teacher education and deaf education.
7.11 Implications of the findings

The findings although not intended to be generalized, points out some implications that can inform teacher education, schools having deaf learners and future researchers on the education of the deaf. It is true that the implications identified may require substantial financial resources, however it is also possible that most of them can be implemented using the available institutional resources if well planned.

7.11.1 Implications for teacher education

Findings based on teachers experiences and perspectives show that the attempt made to develop the capacity of teachers of the deaf is deficient to enable them effectively facilitate academic and social participation. In Chapter 6, it is mentioned that some content in teacher education needed more emphasis. This implies that there is need to revise the curriculum to give more emphasis on the aspects identified as needing more attention. The revision should also be in line with the overall national education reforms. Among the issues that should be addressed are the practical skills that will facilitate the teaching of subject content in the primary schools for which the teachers are being prepared.

Chapter two show that learners with hearing impairment are increasingly being enrolled in both special and inclusive Ugandan schools. It is also known that the current approach is towards inclusive education. This implies that there are more children with hearing impairment in the mainstream classes. It is therefore necessary that the curriculum for teacher education considers the need for an inclusive approach in the teacher preparation and to teaching in schools. Findings also show that there is significant gap in knowledge and skills teacher of the deaf demonstrate in their capacity to facilitate academic and social participation. Although teacher of the deaf were exposed to methods of teaching including using sign language, only a small number had the confidence to interpret and apply the information in inclusive classes. This implies that there is need to revise the training approaches. More time and funding should be allocated to enable adequate practical exposure. The use of information communication technology should be adopted as the most appropriate way to expose trainees to best practices and challenges existing in Ugandan schools having deaf learners.

It is also noted that the teacher-pupil ratio in both special and inclusive classes are high. Data indicates that teacher of the deaf find difficulties providing sufficient support to individual learners and facilitate academic and social participation in the large classes. The
implication is that teacher of the deaf might be using the traditional approaches in working with large and complex classes or that they might have had limited exposure to best approaches of managing the modern large and complex classes during their teacher education. It is therefore necessary that teacher trainers are given refresher courses to re-orient them to new approaches and reforms needed in the primary classroom so as to enable them support teacher trainees accordingly.

7.11.2 Implications for schools having deaf learners

First, the universalization of education which is enshrined in Uganda’s education policy (GoU, 1997, MoE&S, 1992, MoE&S, 2011) and the practice in many schools (table 1 & 2) are well understood by the teachers of the deaf. There are serious challenges to its implementation which include inadequate materials, rigid curriculum, sign language deficiencies and poor assessment procedures. The national primary school curriculum should be reviewed in incorporate the critical needs of deaf learners - sign language, methods for early identification, procedure for proper school placement and recognition of deaf culture in the methodological interventions and as subject content taught in schools. A supplementary teacher’s manual / guide to accommodate these aspects should be developed by the National Curriculum Development Centre (NCDC) for use in schools.

Secondly, the study recognises reforms that are taking place both at primary and the teacher education sectors. To efficiency implement the reforms the curriculum delivery and assessment should be considered especially using the most appropriate language for deaf learners. The language of deaf learners is sign language. The implication is that for deaf children to learn and use sign language with their teachers there is needed to have a sign language curriculum. Currently primary schools in Uganda have no sign language curriculum to guide teachers of deaf learners and the teaching of sign language in schools is not uniform. It is important that a Ugandan sign language curriculum for primary schools is developed. The teaching of sign language should be open to all learners to demystify myths associated to deaf culture and language. It is through sign language that the inclusion of deaf learners would be a reality.

Thirdly, the findings recognised the challenge of unfriendly school /classroom environment and limited teaching/learning resources. The lack of teaching/learning materials has adverse effect on the learning process. There is need to focus on re-orienting teachers to making local materials and utilising the environment. The child-to-child approach to education which exists in all Ugandan schools should be exploited. This will enable learners
to share the available learning materials and bring with them some local learning materials that are available within their communities. There is also need to create awareness among all teachers and learners to facilitate an inclusive academic and social participation.

Fourth, there is a renewed call for investment in education. Investment in education implies that adequate allocation is given to special needs and inclusive education and that provision for recruiting, placing and remunerating human resources (teachers and their administrators) especially in special and inclusive schools is considered by the public service and the decentralised local government. Consideration should be made on the specialisation of the teacher-trainees during their teacher education when posting them after the special needs education training. Proper posting and placement will ensure that the knowledge, skills, attitudes and experiences acquired through teacher education are effectively utilised in the field and that the investment made in their education is justifiable.

7.11.3 Implication for further research

Given the amount of existing knowledge base available on the education of the deaf and special needs education in Uganda, this study is one of the few that attempt to explore teachers’ experiences and perspectives in facilitating academic and social participation. The implication is that the university needs to develop a comprehensive research agenda for deaf education particularly on what should be taken into consideration when preparing teachers for learners who are deaf. Although it is argue that the training activity at the university to a large extent impact on the activity at school, these findings are not conclusive. More studies should be carried out in relation to the following:

First, this is a qualitative study that involved a limited number of teachers and schools. A large scale, mixed method study (Bryman, 2008) could establish the complexities associated to the activity systems at each activity setting (school and university). The use of a qualitative design (Bryman, 2008; Yin, 2003) is a rather flexible way of soliciting experiences of participants. A quantitative design that engages questionnaires and other tools would involve many more respondents across the country. Since this study served as a benchmark of what is taking place in deaf education in Uganda, it would be valuable to statistically explore how age, gender, knowledge domains and school setting correlate with the way academic and social participation is facilitated. It would equally be useful to test the effect of organisational contribution to the engagement of teachers of the deaf.

Second, considering that sign language is a key component in deaf education, the need to investigate how it can be utilised to enhance academic and social participation is crucial.
Most of the current studies in sign language in Uganda have tended to focus on linguistic components. Information about the socio-cultural and methodology of sign language use is an area of interest for further research. These could contribute towards ensuring good quality of life for deaf learners. Further studies in methodology and socio-cultural parameters may contribute valuable information that would enhance teaching, knowledge, skills and attitudes necessary in deaf education.

Third, a replica of this study could expand the sample to include experiences and perspectives of other teachers outside deaf education, the learners, parents and other stakeholders. Experiences and perspectives from these other sources, which face similar environmental and institutional challenges, will shed more light on the contextual factors of human activity at school and at the university.


Evans, T., & Jakupec, V. (1996). Research ethics in Open and Distance Education: Context, Principles and Issues. *Distance Education 17*(1), 72-94. doi: 10.1080/0158791960170106


The Universities and Other Tertiary Institutions Act (As Amended in, 2003 and as Amended in, 2006) (2001).


Passey, D. (2003). *Higher Order Thinking Skills: An exploration of aspects of learning and thinking and how ICT can be used to support this process*.


Appendices

Appendix 1  Uganda – General Context: Maps and some demographic information

Some Demographic Information about Uganda

**Total Surface Area:** 241,500 square kilometres (*Source* NEMA, 2001)

<table>
<thead>
<tr>
<th>Population</th>
<th>34,612,250 people; Population Growth rate is 3.576% (<em>July 2011 est</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Life Expectancy 53.24 average (Male- 52.17yrs, Female – 54.33yrs)</td>
</tr>
<tr>
<td></td>
<td>Education Expenditure – 3.2%of GDP (2009), Literacy Rate -76.8% (Male),</td>
</tr>
<tr>
<td></td>
<td>57.2% (Female) – (2002 Census), Fertility rate – 6.69 children per woman</td>
</tr>
<tr>
<td></td>
<td>(2002 census).</td>
</tr>
<tr>
<td>Note:</td>
<td>These estimates may change taking into account the effects of excess</td>
</tr>
<tr>
<td></td>
<td>mortality due to many factors including poverty, HIV/AIDS, accidents,</td>
</tr>
<tr>
<td></td>
<td>the civil strife and other disasters resulting to lower life expectancy,</td>
</tr>
<tr>
<td></td>
<td>higher infant mortality, higher death rates, lower population growth rates,</td>
</tr>
<tr>
<td></td>
<td>and changes in the distribution of population by age and sex than would otherwise be</td>
</tr>
<tr>
<td></td>
<td>expected</td>
</tr>
<tr>
<td>Ethnic Groups</td>
<td>Baganda 16.9%, Banyakole 9.5%, Basoga 8.4%, Bakiga 6.9%, Iteso 6.4%,</td>
</tr>
<tr>
<td></td>
<td>Langi 6.1%, Acholi 4.7%, Bagisu 4.6%, Lugbara 4.2%, Bunyoro 2.7%, other</td>
</tr>
<tr>
<td></td>
<td>29.6% (2002 census)</td>
</tr>
<tr>
<td>Religion</td>
<td>Roman Catholic 41.9%, Protestant 42% (Anglican 35.9%, Pentecostal 4.6%,</td>
</tr>
<tr>
<td></td>
<td>Seventh Day Adventist 1.5%), Muslim 12.1%, other 3.1%, none 0.9% (2002</td>
</tr>
<tr>
<td></td>
<td>census)</td>
</tr>
<tr>
<td>Languages</td>
<td>English (official national language, taught in all grade at schools, used in</td>
</tr>
<tr>
<td></td>
<td>courts of law and by most newspapers and some radio broadcasts), Luganda</td>
</tr>
<tr>
<td></td>
<td>(most widely used in the capital and major towns in the south, east and west of Uganda), Luo (main language of the north, Lugbara in West Nile, Ateso in the east. Swahili and Arabic languages are also used across the country</td>
</tr>
</tbody>
</table>
Appendix 2

Figure: 1 Structure of Uganda Formal Education System

106G V (Grade Five) which stands for Teachers’ Diploma is attained through a 2 year pre-service (A-Level) training for secondary school teachers and through 3 year in-service (College, SNE and Primary School teachers) training after GIII; and GIII (Grade Three) which stands for a Teachers’ Certificate is a qualification attained during initial teacher education in Uganda.
Appendix 3 Instruments for Data Collection

Appendix 3 (a)
GUIDING QUESTIONS FOR INTERVIEWS WITH TEACHERS OF THE DEAF

1. May you tell me about your experience as a teacher generally, special needs education teacher and teacher of the deaf in particular? Please highlight aspects like length of service as a teacher, teacher of the deaf, and after graduating as a teacher of the deaf.

2. May you reflect on your training and how it has helped you in your teaching with a class having deaf learners?

3. Please identify subject matter that you feel was relevant to you as an in-service teacher of the deaf. Is there anything that could have been left out?

4. What more do you feel you should have covered which would support you in facilitating academic and social participation of child with deafness?

5. Which content do you feel should be more emphasised to help you facilitate academic and social participation better?

6. May you describe some challenges you have identified that affect the deaf learner’s participation in academic and social activities?

7. What would be the specific contribution of the school in facilitating academic and social participation of deaf learners?

8. Identify home related factors that contribute to or affect your efforts in facilitating academic and social participation of child with deafness?

9. Please reflect on the different support you get and how they contribute to your efforts in facilitating learner participation in academic and social activities?

10. May you reflect on how the existing policies support your practice as a teacher of deaf learners?

11. Are there some inconsistencies in the policy that affects your practice as train special needs education teacher particularly for deaf learners, what would be your expectation?

12. Do you have anything to add that should be considered during the training or in your practice we might have not discussed that may contribute to facilitating academic and social participation of deaf learners in your class / school?
Appendix 3(b)

GUIDING QUESTIONS FOR FOCUS GROUP DISCUSSION WITH TEACHERS OF THE DEAF

1. Introduction
Introduce myself as a student and meeting them for the purpose of research
Stress the importance of their experience and perception as graduates of special needs education in contributing information that should guide practice in teacher training.
Inform that discussion will centre on their experience and perspectives, not academic knowledge although issues of content studied will feature
Assure them of confidentiality and information purposely for research.

2. Main Discussion
1. Please describe the set up under which you are teaching in terms of class and school organisation.
   – How convenient is it
   – What challenges do you encounter?
2. What are some of the aspects in your training that has greatly contributed to your endeavours to facilitate this academic and social participation of deaf learners?
3. May you therefore identify those aspects in your training that contributed greatly to the way in which you facilitating
   a) Academic participation of deaf learners
   b) Social participation of deaf learners
4. Are there aspects that you feel has hindered your endeavours to facilitate this academic and social participation?
5. Overall, what content in your teacher education would you consider relevant to your practice?
6. Are there some content areas that you felt could have been left out or possibly needed more emphasis?
7. From your experience and perspective, what could be the main factors that facilitate or hamper your efforts to facilitate academic and social participation of deaf learners
   - General social and professional factors
   - Policy related factors
   - School and classroom related factors
   - Family related factors
3. **Concluding Statement**

Is there any other issue that we might have not discussed that you would wish to point out arising from this discussion or from the individual interview we had?

Thank them for participation and seek to meet them for any other enquiries and explanation where need arise.
Appendix 3 (c)

OBSERVATION GUIDE FOR LESSONS HAVING DEAF LEARNERS

Location (School) ______________________________________________
Date and time:_________________________________________________
Duration:____________________________________________________
Brief statements on
1. Ways in which teachers provide feedback to learners who contribute

Comments made on exercises marked

2. How teachers organise group work

3. How group activities are managed

4. How teachers praise learner achievement

5. Availability of awareness record (descriptive and summative

6. The language being used in the class for communication with the def learners

Is it understood by all learners

Does the teacher demonstrate proficiency in the language of instruction

Which language of instruction is commonly used in class

The willingness of learners to ask and respond to questions
<table>
<thead>
<tr>
<th></th>
<th>Ability of learners to initiate communication: request, inform, guide others and the teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Lesson plan management</td>
</tr>
<tr>
<td>7</td>
<td>Use of teaching learning materials</td>
</tr>
</tbody>
</table>
Appendix 4  Letters of Authority

Appendix 4(a)  Norwegian Research council

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES

Lawrence Eron
Instytut for spesialpedagogikk
Universitetet i Oslo
Postboks 1140 Blindern
0318 OSLO

Vår ref: 22409 / 1 / 0L
Deres dato:
Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 12.08.2009. All nødvendig informasjon om prosjektet forelå i sin helhet 16.12.2009. Meldingen gjelder prosjektet:

22409  Special Needs Teacher Education in Uganda. Facilitating Academic and Social Participation of Deaf Learners
Behandlingsansvarlig  Universitetet i Oslo, ved institusjonens øverste leder
Daglig ansvarlig  Lawrence Eron

Personvernområdet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernområdet tilrår at prosjektet gjennomføres.

Personvernområdets tilrådning forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, vedlagte prosjektvurdering - kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.


Vennlig hilsen

Bjørn Henrik Jensen

Kontaktperson: Juni Skjold Lexau tlf: 55 58 26 35
Vedlegg: Prosjektvurdering
Appendix 4(b)  Ugandan National Council of Science and Technology

Uganda National Council For Science and Technology
(Established by Act of Parliament of the Republic of Uganda)

Your Ref:.......................... 
Our Ref:........................ SS 2289 
Date:........................ 01/12/09.....

Mr. Lawrence Eron
Kyambogo University
P.O Box 1
Kyambogo

Dear Mr. Eron,

RE: RESEARCH PROJECT, “SPECIAL NEEDS TEACHER EDUCATION IN UGANDA: FACILITATING ACADEMIC AND SOCIAL PARTICIPATION OF DEAF LEARNERS”

This is to inform you that the Uganda National Council for Science and Technology (UNCST) approved the above research proposal on November 02, 2009. The approval will expire on November 02, 2010. If it is necessary to continue with the research beyond the expiry date, a request for continuation should be made in writing to the Executive Secretary, UN CST.

Any problems of a serious nature related to the execution of your research project should be brought to the attention of the UN CST, and any changes to the research protocol should not be implemented without UN CST’s approval except when necessary to eliminate apparent immediate hazards to the research participant(s).

This letter also serves as proof of UN CST approval and as a reminder for you to submit to UN CST timely progress reports and a final report on completion of the research project.

Yours sincerely,

Leah Nawegulo
for: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

---

LOCATION/CORRESPONDENCE
PLOT 3/57, Nasser Road
P.O. Box 6884
KAMPALA, UGANDA.

COMMUNICATION
TEL: (256) 414-250499, (256) 414 785500
FAX: (256) 414-234579
EMAIL: uncest@starcom.co.ug
WEBSITE: http://www.uncest.go.ug
November 17, 2009

The Resident District Commissioner, Kampala District
The Resident District Commissioner, Kumi District
The Resident District Commissioner, Lira District
The Resident District Commissioner, Apac District
The Resident District Commissioner, Masaka District
The Resident District Commissioner, Luwero District
The Resident District Commissioner, Tororo District
The Resident District Commissioner, Mbarara District

This is to introduce to you Mr. Eron Lawrence a Researcher who will be carrying out a research entitled “Special needs teacher education in Uganda: Facilitating academic and social participation of deaf learners” for a period of 03 (three) years in your district.

He has undergone the necessary clearance to carry out the said project.

Please render him the necessary assistance.

Alenga Rose
FOR: SECRETARY, OFFICE OF THE PRESIDENT
28th October 2009

Mr. Lawrence Eron
Kyambogo University
KAMPALA

Dear Mr. Eron,

PERMISSION TO CONDUCT RESEARCH IN SCHOOLS HAVING DEAF LEARNERS

Reference is made to your letter dated 26th October 2009.

This is to inform you that you are permitted to carry out your PhD research on Special Needs Teacher Education in schools. You should abide by the research ethics required of you.

By copy of this letter, the Headteachers and all concerned are requested to cooperate.

Yours faithfully,

Omagor Loican Martin
COMMISSIONER, SPECIAL NEEDS EDUCATION
Appendix 5

Appendix 5 (a) Sample Letter to the Resident District Commissioner

KYAMBOGO UNIVERSITY
FACULTY OF SPECIAL NEEDS & REHABILITATION
Department of Special Needs Studies
P. O. BOX 1, KYAMBOGO
Off. Tel:041-285584/285001/2 Fax: 041-220464
E-Mail: www.kyambogo.ac.ug

16th February 2010

The resident District Commissioner
Kampala District

Att. Nakawa Division

Dear Sir,

Permission to Conduct Research in Schools having Deaf Learners

Reference is made to the attached letters.

I am a staff of Kyambogo University and currently a PhD Scholar at the University of Oslo Norway. The study is organized in such a way that research is done in Uganda. My area of study is Special Needs Teacher Education with particular emphasis on how practices in teacher education enhance special needs education graduate teachers’ knowledge and skills to facilitating Academic and Social Participation of Deaf Learners.

The purpose of this communication is to seek permission to carry out this study in Schools having deaf children in Kampala district especially Nakawa Division. I will interview teachers and observe classroom teaching. The interviews will be tape recorded and observations video recorded. The information gathered will be anonymised (no names, contacts or any aspects that may identify the source), used with utmost confidentiality and for the purpose of the research only.

Yours faithfully,

ERON Lawrence
PhD Research Fellow
0782 558 228
11th February 2010

Dear Madam,

Permission to carry out study in your school

I am currently undertaking a PhD study at the University of Oslo – Norway. As part of the requirement, am to carry out research. My study is focused “how graduate teachers are facilitating academic and social participation of learners who are deaf”. I have chosen your school as one of the study centers because of the presence of a graduate teacher.

The purpose of this letter is to seek permission for the study, interact with the teachers, observe and record pupils in classroom and outdoor activities. The study will end in 2012. All information got from this school will be kept confidential and for the purpose of the study.

Please find attached clearance from Uganda National Council for Science and Technology, Presidents Office and Ministry of Education and sports.

Yours Sincerely,

ERON Lawrence
Research Scholar
Dear Sir/Madam,
I am currently a PhD student at the University of Oslo-Norway and carrying out a study on teacher preparation to facilitate participation of deaf learners in their academic and social activities. The aim is to explore how successful teacher education is in preparing teachers to support academic and social participation of deaf learners. It is hoped that this study will document competencies needed for teachers of the deaf and influence teacher preparation policies and practices.

As a head of this school, I firstly requesting you to share your experience and provide information related to practices involved in teaching deaf children. Secondly, I am requesting for your permission to interact with the teachers in class and record (audio- and Video) the proceedings. Your participation and that of this school in this study is voluntary. There will be no consequences whatsoever on your behalf or on behalf of the school in the event that you do not wish to participate or later plan to withdraw from the research project which will run up to April 2012.

**Anonymity and Confidentiality**
Information and any document received from you will be anonymous in all reportings of the study (no names, contacts or any aspect that may identify you), kept confidential in all reporting of the study and only used for research purposes. Published data will be generic rather than specific. The responsibility for interpreting data remains with me as the researcher. Personal information will be anonymised, and audio and video recorded information will be deleted at the end of the project, no later than April 2010.

**Feedback**
A summary of the research findings incorporating your information will be available for all participants at the conclusion of the study by contacting the researcher. Copies of the report will be in the library for reference.

I look forward to working with you and sharing your experience. Please append your signature here as indication of having understood your obligation and consent to participate in the study.

Name ........................................ Sign and date: ..............................

Yours, Sincerely,
ERON Lawrence
Researcher
Appendix 6 Statistics of primary school pupils with special needs (2008 – 2009)

<table>
<thead>
<tr>
<th>Class</th>
<th>2008 Male</th>
<th>2008 Female</th>
<th>2008 Total</th>
<th>2009 Male</th>
<th>2009 Female</th>
<th>2009 Total</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>21,300</td>
<td>16,869</td>
<td>38,169</td>
<td>22,410</td>
<td>17,613</td>
<td>40,023</td>
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<tr>
<td>P2</td>
<td>15,194</td>
<td>13,308</td>
<td>28,502</td>
<td>16,419</td>
<td>14,011</td>
<td>30,430</td>
<td>6.8</td>
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<td>P3</td>
<td>16,287</td>
<td>14,541</td>
<td>30,828</td>
<td>19,122</td>
<td>17,406</td>
<td>36,528</td>
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<td>P4</td>
<td>15,387</td>
<td>14,185</td>
<td>29,572</td>
<td>17,390</td>
<td>16,406</td>
<td>33,796</td>
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<td>P5</td>
<td>12,652</td>
<td>12,229</td>
<td>24,881</td>
<td>14,261</td>
<td>14,026</td>
<td>28,287</td>
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<tr>
<td>P6</td>
<td>9,950</td>
<td>9,635</td>
<td>19,585</td>
<td>11,074</td>
<td>10,912</td>
<td>21,986</td>
<td>12.3</td>
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<tr>
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<td>6,666</td>
<td>5,334</td>
<td>12,000</td>
<td>7,308</td>
<td>5,994</td>
<td>13,302</td>
<td>10.9</td>
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<tr>
<td>Total</td>
<td>97,436</td>
<td>86,101</td>
<td>183,537</td>
<td>107,984</td>
<td>96,368</td>
<td>204,352</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: Uganda Bureau of Statistics, June 2011

A total of 204,000 children with special needs in education are enrolled in primary school in 2009 generally. This enrolment is an increase of 11% between 2008 and 2009. The table however shows that fewer learners complete the Primary school cycle of education.
### Appendix 7  Summary information about the Primary Teacher Education curriculum

The Primary Teacher Education programme lasts for two year covering a total of 2640 hours. The Mode of assessment is through course work and written examinations internally and externally conducted. Internal examinations and course works is for continuous assessment while external examinations is a written examination done at the end of each academic year. The child study is not supervised while school practice is supervised. Supervision is meant to mentor the student teacher on classroom management and content preparation/delivery.

<table>
<thead>
<tr>
<th>Programme details (Major aspects of the Curriculum)</th>
<th>Allocated Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theoretical Courses Titles and specific time allocated to each</strong></td>
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<tr>
<td><strong>Professional Education Courses</strong></td>
<td>324hrs</td>
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<tr>
<td>Foundations of Education</td>
<td>216hrs</td>
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<tr>
<td>Special Needs Education</td>
<td>54hrs</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>54hrs</td>
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<tr>
<td><strong>General Education Courses</strong></td>
<td>540hrs</td>
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<tr>
<td>Mathematics Education</td>
<td>216hrs</td>
</tr>
<tr>
<td>Science Education</td>
<td>216hrs</td>
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<tr>
<td>Social studies</td>
<td>108hrs</td>
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<tr>
<td><strong>Language Education</strong></td>
<td>378hrs</td>
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<tr>
<td>English</td>
<td>216hrs</td>
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<tr>
<td>Local Language</td>
<td>54hrs</td>
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<tr>
<td>Swahili</td>
<td>108hrs</td>
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<tr>
<td><strong>Production Skills</strong></td>
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<tr>
<td>Agricultural Skills</td>
<td>162hrs</td>
</tr>
<tr>
<td>Technical skill</td>
<td></td>
</tr>
<tr>
<td>Commercial skill</td>
<td>66hrs</td>
</tr>
<tr>
<td>Management skill</td>
<td></td>
</tr>
<tr>
<td>Electives-chose one</td>
<td></td>
</tr>
<tr>
<td><strong>Cultural Studies</strong></td>
<td>378 hrs</td>
</tr>
<tr>
<td>Spiritual/Religious Education</td>
<td>54hrs</td>
</tr>
<tr>
<td>Physical Education</td>
<td>108hrs</td>
</tr>
<tr>
<td>Music Education</td>
<td>108hrs</td>
</tr>
<tr>
<td>Art and Crafts</td>
<td>108hrs</td>
</tr>
<tr>
<td><strong>Practical Exposure</strong></td>
<td>12 Weeks</td>
</tr>
<tr>
<td>Child Study <em>(Unsupervised/no mentoring)</em></td>
<td></td>
</tr>
<tr>
<td>School Practice <em>(Supervised/mentored)</em></td>
<td></td>
</tr>
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</table>
Appendix 8  Summary of content for the Bachelor of Education (Special Needs Education – Hearing Impairment\textsuperscript{111})

<table>
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<th>Category</th>
<th>Title</th>
<th>Credit Units</th>
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<tbody>
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<td>Professional Educational Studies</td>
<td>Foundations of Education</td>
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</tr>
<tr>
<td></td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Curriculum Studies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Development Studies</td>
<td>3</td>
</tr>
<tr>
<td>Special Needs Education Studies</td>
<td>Background to Special Needs Education</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Education of Persons with Special Needs</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Neurology and Neuropsychology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Introduction to Child Psychology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Child Psychology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Research Methods and Design</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Early Intervention</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Cultural Studies</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Management of Special Needs Education</td>
<td>4</td>
</tr>
<tr>
<td>Hearing Impairment Studies(Deaf Education content)</td>
<td>Introduction to Uganda Sign Language</td>
<td>4</td>
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<tr>
<td></td>
<td>Educational Audiology</td>
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<tr>
<td></td>
<td>Communication for Persons with Hearing Impairment</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Hearing Impairment and its Educational Implications</td>
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<td></td>
<td>Uganda Sign Language</td>
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<td></td>
<td>Teaching Methods adapted to persons with Hearing Impairment</td>
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</tbody>
</table>

\textsuperscript{111} Hearing impairment is a broad term used to cover all spectrum of hearing loss in the classroom which includes the most severe cases – Deafness that makes the focus of this study.
## Appendix 9 Summary of content for Diploma in Special Needs Education

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<td></td>
<td>Educational Psychology</td>
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<td></td>
<td>Supervision, Evaluation and Teaching I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Guidance and Counselling</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Educational Planning and Management</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Curriculum Studies</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Supervision, Evaluation and Teaching II</td>
<td>4</td>
</tr>
<tr>
<td>Special Needs Education</td>
<td>Background to Special Needs Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Barriers to Learning and Development</td>
<td>5</td>
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<td></td>
<td>Introduction to Assessment and Intervention of Learning Needs</td>
<td>3</td>
</tr>
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<td></td>
<td>Neurology and its relevance to special needs education</td>
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</tr>
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<td></td>
<td>Sociology for persons with special needs</td>
<td>3</td>
</tr>
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<td></td>
<td>Assessment and intervention for persons with special needs</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Children under Difficult Circumstances</td>
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<td></td>
<td>Inclusive Education</td>
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<tr>
<td></td>
<td>Habilitation and Rehabilitation</td>
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<td></td>
<td>Mobility and Rehabilitation</td>
<td>2</td>
</tr>
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<td></td>
<td>Research Report</td>
<td>5</td>
</tr>
<tr>
<td>Specialisation (Inclusive education)</td>
<td>Introduction to Communication and Communication Difficulties</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Educational Approaches</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Working with persons having communication difficulties</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Educational Materials adapted to learners with Special needs</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Specific Learning Difficulties</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Braille and Typing</td>
<td>5</td>
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<tr>
<td></td>
<td>Sign Language</td>
<td>5</td>
</tr>
<tr>
<td>Practicum</td>
<td>School / community Practice I</td>
<td>5</td>
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<tr>
<td></td>
<td>School/ community Practice II</td>
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### Appendix 10 Some primary schools having deaf learners in Uganda

<table>
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<th>Schools</th>
<th>District</th>
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<td>Arua unit for the Deaf</td>
<td>Arua</td>
</tr>
<tr>
<td>Agururu unit for the Deaf</td>
<td>Tororo</td>
</tr>
<tr>
<td>Budadiri Unit for the Deaf</td>
<td>Sironko</td>
</tr>
<tr>
<td>Buckley School for the Deaf</td>
<td>Iganga</td>
</tr>
<tr>
<td>Butambala unit for the Deaf</td>
<td>Mpigi</td>
</tr>
<tr>
<td>Ikwera Negri School for the Disabled</td>
<td>Apac</td>
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<tr>
<td>Etori Primary School Unit for the Deaf</td>
<td>Arua</td>
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<tr>
<td>Good Samaritan School for the Deaf</td>
<td>Masaka</td>
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<tr>
<td>Gulu Unit for the Deaf</td>
<td>Gulu</td>
</tr>
<tr>
<td>Hoima Girls Primary School unit for the Deaf</td>
<td>Hoima</td>
</tr>
<tr>
<td>Ibanda School for the Deaf</td>
<td>Mbarara</td>
</tr>
<tr>
<td>Kamuli Unit for the Deaf</td>
<td>Kamuli</td>
</tr>
<tr>
<td>Kavule Unit for the Deaf</td>
<td>Palisa</td>
</tr>
<tr>
<td>Kojcha School for the Deaf, Kakiri</td>
<td>Wakiso</td>
</tr>
<tr>
<td>Masaka Centre for the Disabled</td>
<td>Masaka</td>
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<td>Nancy School for the Deaf</td>
<td>Lira</td>
</tr>
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<td>Ojwina unit for the Deaf</td>
<td>Lira</td>
</tr>
<tr>
<td>Rukungiri Unit for the Deaf</td>
<td>Rukungiri</td>
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<tr>
<td>St. Mark School for the Deaf, Bwanda</td>
<td>Masaka</td>
</tr>
<tr>
<td>Tukore Centre for the Disabled</td>
<td>Mbarara</td>
</tr>
<tr>
<td>Uganda School for the Deaf, Ntinda</td>
<td>Kampala</td>
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</table>

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112 This list is not conclusive as more schools and Units continue to be established as a result of increased awareness, advocacy and response to the human rights of deaf people
List of Errata

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<td>Table</td>
<td>5.6.2.2</td>
<td>Table 8</td>
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<td>116</td>
<td>Table</td>
<td>Table 6.2 ---according to interviews and observations</td>
<td>Table 9 -- related to teaching methods and approaches</td>
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<td>Table</td>
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<td>Table 13</td>
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