



A University of Sussex DPhil thesis

Available online via Sussex Research Online:

<http://sro.sussex.ac.uk/>

This thesis is protected by copyright which belongs to the author.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

Please visit Sussex Research Online for more information and further details

TEACHING DEAF LEARNERS IN KENYAN
CLASSROOMS

CECILIA WANGARI KIMANI

SUBMITTED TO THE UNIVERSITY OF SUSSEX FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

FEBRUARY 2012

I hereby declare that this thesis has not been and will not be, submitted in whole or in part to another university for the award of any other degree.

Signature:

Table of Contents

Summary.....	ix
Acknowledgements.....	xi
Dedication.....	xii
List of tables.....	xiii
List of figures.....	xiv
List of photographs.....	xv
List of acronyms	xvi
Chapter 1 Introduction	1
1.1 Introduction	1
1.2 Purpose of the study	1
1.3 Background and Rationale	2
1.4 Structure of the thesis	4
Chapter 2 Research Context: General overview of education in Kenya.....	6
2.1 Introduction	6
2.2 The status of disability	6
2.3 The general current education status	6
2.4 Trends in the education of children with disabilities	8
2.5 Deaf education.....	9
2.5.1 Learning environments for deaf learners	10
2.5.2 Language of instruction.....	11
2.5.3 Assessment for deaf learners.....	12
2.5.4 Teacher training.....	12
2.6 Conclusion.....	13

Chapter 3	Contextual information on the development of Kenyan Sign Language	14
3.1	Introduction	14
3.2	The development of Kenyan Sign Language	14
3.3	KSL as a subject for deaf learners.....	22
3.4	Training of teachers for special educational needs	25
3.5	Conclusion.....	27
Chapter 4	Deaf Children's Teaching and Learning: A Review of Literature.....	28
4.1	Introduction	28
4.2	Definition of terms	28
4.3	Language and cognitive growth	32
4.4	Language and early literacy development.....	40
4.4.1	Limited language that results in slow acquisition of cognitive growth.....	41
4.4.2	Learning to read and write in a new language	44
4.4.3	Learning to read and write in a speech-based language.....	45
4.5	Language systems, language development and education	48
4.5.1	Sign languages and manually coded sign systems	48
4.5.2	Views on sign bilingualism and Simultaneous Communication.....	51
4.6	Special education, Integration, and Inclusive education	54
4.7	Language and pedagogy for deaf learners.....	61
4.8	Curriculum considerations and teaching approaches	67
4.9	Teacher characteristics for effective teaching and learning	73
4.10	Assessment and Learning.....	74
4.11	Conclusion: The Conceptual Framework.....	77
Chapter 5	Methodology and Methods.....	79
5.1	Introduction	79
5.2	Methodological considerations – Ontology and epistemology	79

5.3	Research Strategy	84
5.4	Positionality	87
5.4.1	My identity – Insider and Outsider	88
5.5	Case study Research Design	90
5.5.1	Selection of cases	91
5.6	Negotiating Access	99
5.7	Ethical considerations	102
5.7.1	Informed Consent	102
5.8	Methods of data collection	104
5.8.1	Preparation of research instruments	104
5.8.2	Observations	106
5.8.3	Interviews	109
5.8.4	Collection of documents	114
5.8.5	Transcriptions	114
5.9	Analysis of data	119
5.10	Limitations of the study	120
5.11	Conclusion	122
	Chapter 6 Preparation for Teaching and Learning Social Studies	124
6.1	Introduction	124
6.2	Learning environments in the units	124
6.2.1	Learning in a multi-grade setting	129
6.3	Textbook publishing and distribution	131
6.4	Learners’ use of textbooks	132
6.5	Accessibility	134
6.6	Textbooks design and deaf learners	135
6.6.1	A lot of text	135
6.6.2	Illustrations	138

6.6.3	Vocabulary	140
6.7	Ministry of Education approved school textbooks.....	142
6.8	The use of wall maps, wall charts and atlases	144
6.9	Use of the chalkboard.....	149
6.10	Other visual teaching and learning materials	149
6.10.1	Videos and CDs.....	150
6.10.2	Field trips.....	151
6.10.3	Artefacts	152
6.11	Conclusion.....	153
Chapter 7 Pedagogical Strategies: Use of sign language and classroom talk		154
7.1	Introduction	154
7.2	The use of sign language during instruction: KSL, ASL or SEE?	154
7.3	KSL and SEE as modes of communication in teaching and learning,.....	161
7.4	Pupils' views on the use of sign language as the mode of instruction	167
7.5	Sign language and existing knowledge	169
7.6	Pedagogical strategies used during instructions.....	171
7.6.1	Classroom talk in teaching and learning activities.....	172
7.6.2	Assessing learners	178
7.7	Differences between deaf and hearing teachers	182
7.8	Barriers to learning as expressed by the learners	185
7.8.1	Texts, reading, and comprehension.....	185
7.8.2	Visual aids and field trips.....	186
7.9	Conclusion.....	187
Chapter 8 Assessing learning among deaf learners.....		189
8.1	Introduction	189
8.2	The purpose of assessment.....	189
8.3	Assessment accommodations.....	191

8.4	Summative assessment for deaf learners.....	193
8.5	Teachers' views on assessment of deaf learners	198
8.5.1	Heavy Syllabus content.....	198
8.5.2	The use of negative questions	200
8.5.3	Vocabulary used in questions.....	202
8.5.4	Too many questions in the Social Studies examination.....	204
8.5.5	Questions requiring general knowledge outside the syllabus	206
8.5.6	Questions with a 'Narration' or a 'story'	207
8.5.7	Testing rote memory	208
8.6	Pupils' views on style of assessment.....	209
8.6.1	Vocabulary used in questions.....	209
8.6.2	Questions derived from topics not covered.....	212
8.6.3	Too many questions	213
8.7	Conclusion.....	214
	Chapter 9 Discussion and Conclusion	216
9.1	Introduction	216
9.2	Summary of findings	216
9.3	Reflections on the methodology employed	220
9.4	Interventions to promote deaf children's learning	221
9.5	Contribution to knowledge.....	222
9.6	Implications of the study	223
9.7	Conclusion.....	225
	Bibliography	227
	Appendices	246
	Appendix 1: KCPE Performance 2006 – 2009	246
	Appendix 2: Sample of KSL KCPE examination.....	247
	Appendix 3: Lesson observation guide	252

Appendix 4: Semi-structured interview guides.....	253
4.1 Interview with Head teachers.....	253
4.2 Interview with teachers	254
4.3 Interview with deaf teachers	255
4.4 Interview with deaf learners	257
4.5 Interview with the KIE Officers.....	258
4.6 Interview with the KISE Officers.....	259
4.7 Interview with the KNEC Officer	260
4.8 Interview Guide with KSDC Staff	261
4.9 Interview with deaf organisations	262
Appendix 5: A deaf teacher's story.....	263
Appendix 6: Lesson Observation	266
Appendix 7: Social Studies Textbook Analysis.....	269

UNIVERSITY OF SUSSEXCecilia KimaniDoctor of PhilosophyTeaching Deaf Learners in Kenyan ClassroomsSUMMARY

This thesis examines the teaching and learning of deaf primary-school learners in Kenya in order to explain their poor examination performance and to find ways of better supporting their learning. While language and communication are perceived as the main problems encountered by deaf children, it is assumed that if teachers and learners are able to communicate through sign language, deaf learners can learn. The main argument of this thesis is that although proficiency in sign language among teachers does play a great role in the education of deaf learners, it is not sufficient in offering quality education in this context. Other needs of deaf learners should be addressed during the teaching and learning process through appropriate teaching and learning materials and teaching and assessment approaches.

The thesis reviews literature looking at the relationship between language, thought and learning in the education of deaf learners. The study was partly informed by Vygotsky's theory of social learning and language which recognises that children learn through their interaction with the social environment. A discussion on the difference between the concepts: 'special education', 'integration', and 'inclusive education' is raised in the review of literature leading to the discussion of whether deaf learners require 'special' pedagogy. Different views have been held regarding the type of pedagogical approach used in the teaching and learning of deaf learners in Kenya who learn in specialist units attached to mainstream schools: whether this is 'special', integrated or inclusive education.

The research took an exploratory approach and focused on the teaching and learning of Social Studies in specialist units in urban and remote rural areas in Kenya. Data were collected mainly through lesson observations and semi-structured interviews with deaf

and hearing education stakeholders including learners, teachers, education officials and representatives of deaf people's organisations. Kenyan Sign Language and English were the main languages used in data collection.

The study found that although textbooks were mostly available for learners in the units, they did not benefit from them due to their design which did not respond to their learning needs. However, some textbook design features that would benefit the learners were identified by the deaf teachers and learners. In addition, while deaf teachers did not generally encounter communication problems in teaching, most hearing teachers lacked sufficient proficiency in Kenyan Sign Language (the language of instruction), a phenomenon that affected dialogue in teaching,. Assessment practices seemed not to be suitable for deaf learners to express what they knew. Although teaching and learning took place in sign language, assessment was through reading and writing in English.

A combination of a general quality improvement of educational resources which would be relevant for all learners and some deaf-specific interventions for deaf learners is an approach that would support deaf learners to achieve more in their learning. Recognising the expert knowledge of deaf teachers gained from their experiences as teachers and formerly as deaf learners, and their proficiency in sign language would contribute towards providing the learners with opportunities to learn more.

Acknowledgements

I would like to acknowledge the help of various people and to thank them for the time, support and interest that have made the writing of this thesis possible. Above all, I am deeply indebted to my two supervisors, Dr. Alison Croft and Dr. Angela Jacklin. I would like to thank Dr. Croft for her invaluable guidance and intellectual stimulation throughout my doctoral studies and also for her consistent encouragement and patience. I am equally grateful to Dr. Jacklin for her ardent support and constructive comments that have greatly contributed to this achievement.

My studies at the University of Sussex were funded by IFP – Ford Foundation and I am much obliged to the organisation for offering me this remarkable opportunity. However, the views expressed in this thesis are entirely mine and IFP – Ford Foundation has no responsibility for the content.

I would like to thank all the faculty members at the School of Education and Social Work, University of Sussex. My special thanks go to my wonderful DPhil colleagues for their friendship and for being part of my unique academic experience in Sussex University. I am lucky to have met and shared a lot with them.

I would like to acknowledge the contribution of the numerous people who supported my fieldwork in Kenya. My deep appreciation goes to all the Headteachers, teachers and deaf pupils that I interacted with in all the schools I visited during my field studies. Amongst others, my special thanks go to my research assistant, Peter Ondiege, for his Kenyan Sign Language proficiency and understanding of Deaf culture which offered invaluable support to my field studies. I would also like to thank all the participants, particularly deaf adults, for giving up their precious time for my research.

Last but not least, my special thanks go to my family, particularly my mother, and all my friends for having been wonderfully supportive throughout my studies. From a distance they all journeyed with me and I never felt alone in this endeavour. Special gratitude go to Everlyn Anyal of IFP-Ford Foundation Kenya, Professor Kimani Njogu, George Kahiga, Dr. Thuo Kamau, Bonita Ayuko, Norkhairolizah Hamzah, and Ann Kiigi for encouraging me and cheering me on to the end.

Dedication

To my family who encouraged me all along to complete this degree, and to all the deaf children in Kenya for whom this study is intended.

List of tables

Chapter 5

Table 5:1	Characteristics of the selected schools
Table 5:2	Research participants in schools
Table 5:3	Other participants
Table 5:4	Number of observations conducted
Table 5:5	Number of interviews conducted

Chapter 6

Table 6:1	Number of Social Studies textbooks approved for upper primary
Table 6:2	Prices of Social Studies textbooks for Upper primary

Chapter 8

Table 8:1	Social Studies KCPE results for Tumaini School
Table 8:2	Social Studies KCPE results for a regular school and a special school

List of figures

Chapter 4

Figure 4:1 The process of teaching and learning among deaf learners

List of photographs

Chapter 6

- Photograph 6:1 A room serving as the special unit in a primary school in an urban area
- Photograph 6:2 A room for deaf learners in Tumaini school
- Photograph 6:3 A room serving as the unit for deaf learners

Chapter 7

- Photograph 7:1 A chalkboard in Huruma school
- Photograph 7:2 An example of an assessment task

List of Acronyms

ASL	American Sign Language
BSL	British Sign Language
CBR	Community-Based Rehabilitation
DCW	Deaf Children Worldwide
DEO	District Education Officers
DFID	Department for International Development
ECDE	Early Childhood Development and Education
EFA	Education for All
FPE	Free Primary Education
GDC	Global Deaf Connection
RoK	Republic of Kenya
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICF	International Classification of Functioning, Disability and Health
KCE	Kenya Certificate of Education
KCPE	Kenya Certificate of Primary Education
KEMRI	Kenya Medical Research Institute
KIE	Kenya Institute Education
KISE	Kenya Institute of Special Education
KNBS	Kenya National Bureau of Statistics
KNEC	Kenya National Examination Council
KSDC	Kenya Society for Deaf Children
KSL	Kenya Sign Language
KSLRP	Kenyan Sign Language Research Project
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
NGO	Non-Governmental Organization
RNID	Royal National Institute for the Deaf
SEE	Signed Exact English
SEN	Special Educational Needs
UNCRC	United Nations Convention on the Rights of the Child
UNCRPD	United Nations Convention on the Rights of People with Disabilities

UNESCO	United Nations Educational, Scientific and Cultural Organization
UPE	Universal Primary Education
WHO	World Health Organization
ZPD	Zone of Proximal Development

Chapter 1 Introduction

1.1 Introduction

This thesis is a record of an empirical study of deaf education in upper primary schools in Kenya. Upper primary classes include Standard 4 to Standard 8 with learners ranging between approximately ages 9 to 13 years. It took place at a time when the first cohort of the Free Primary Education was in its last year of primary school and it focused on the teaching and learning of Social Studies in the upper primary classes for deaf learners. Social Studies has three main disciplines within it – Geography, History and Civics. Being a qualitative multiple case studies research study, mainly based on learning taking place in units, reaching learners in a remote rural area, and cognizant of existing deaf teachers, it complements studies that have largely concentrated on single cases within urban or rural-urban areas. This study aimed at identifying areas that need to be addressed in order to provide deaf learners an opportunity to learn without encountering barriers related to their impairment.

The thesis focuses on the teaching and learning of deaf pupils in Kenya paying attention to the physical facilities available to them in the different environments in which they learn and access to teaching and learning materials. It goes deeper into the use of sign language as language of instruction and how it is used in classroom interactions during lessons. Another area that the study focuses on is the style used in assessing the learners in relation to the purposes of assessment.

1.2 Purpose of the study

The purpose of this study is to explore the relationship between hearing impairment, language and learning within the context of upper primary schools in Kenya and to identify the challenges of teaching and learning of deaf pupils. The study hopes to contribute positively towards the implementation of the Special Needs Education policy (2009), which aims to achieve quality and inclusive education to all children with disabilities.

The central research question investigated in this study is: What are the challenges faced in teaching and learning of Social Studies among deaf learners in Kenya?

1.3 Background and Rationale

After teaching in mainstream schools in Kenya for about ten years, I felt the need to do something different and I enrolled for a degree course in Special Education. It was only after I discovered that one of the lecturers¹ in the department was deaf that I realised I had not come across a deaf student in the university which had enrolled some students with visual and mobility impairment, some of whom were enrolled in the same department. This triggered an interest in the education of deaf learners in Kenya which later resulted in a further interest in the right to education for children with disabilities as I worked for an NGO for human rights. I wondered why deaf people in Kenya had been left behind in educational attainment. I then became eager to understand how deaf learners learn and through interactions with some teachers I gathered that they were most uncomfortable teaching Social Studies than any other subject and that it was in this subject that attainment was lowest among deaf learners nationally (See Appendix 1). In order to understand the cause of the general low level attainment, I decided to conduct an in-depth study of deaf learners' teaching and learning narrowing down to Social Studies.

There exists a close link between education, disability and poverty. 'People with disabilities are more likely to be poor than their non-disabled peers' (DFID, 2010: 9). It is estimated that 20% of the global population living in poverty are people with disabilities (DFID, 2010). It is also estimated that one third of the 72 million children of primary school age who were not in school by 2007 have a disability and that over 90% of children with disabilities in the world's poorest countries do not go to school (UNESCO, 2010a). Out of the estimated 150 million children living with disabilities worldwide, about four in five children are in developing countries where many live in poverty (UNESCO, 2010a). Restricted access to basic services, poor nutrition, disease and the inability to pay for healthcare sometimes result in some form of disability. Persons with disabilities experience worse educational and labour market outcomes making them more likely to be poor than persons without disabilities (WHO, 2011). While disability may increase the risk of poverty and poverty may increase the risk of disability (Sen, 2009), education can help lift people out of poverty and can act as a medium in breaking cycles of poverty. Since low level educational attainment is

¹ The lecturer, who was not Kenyan, was post-lingually and profoundly deaf and communicated through speech and lip-reading.

associated with higher poverty levels (UNESCO, 2010a), access to quality education can help reduce educational marginalisation and provide job opportunities for people with disabilities.

The inequalities experienced by people with disabilities have made disability to be considered as a human rights issue (WHO, 2011). People with disabilities have over the years been denied equal opportunities to health care, education, and employment. The right to education for children with disabilities should be addressed in the implementation of Education for All (EFA) so that they are not deprived their right and remain excluded from the rest of the society. International conventions such as the United Nations Convention on the Rights of the Child (UNCRC, 1989: Article 23) and the United Nations Convention on the Rights of People with Disabilities (UNCRPD, 2008: Article 24) have identified the importance of social development and integration of every child including those with disabilities. These legislations underscore the need for nations to ensure that children with disabilities access education without encountering barriers that are related to their impairments. Education systems are expected to identify any existing barriers and define strategies of eliminating them to create room for easy accessibility to quality education for all learners.

The Constitution of Kenya promulgated in 2010 recognises the need to protect the rights of people with disabilities. Nevertheless, Article 3 of the Persons with Disability Act (2003) which was enacted and came into force in 2004 established the National Council for Persons with Disabilities which has been charged with the responsibility of ensuring that the curriculum used in schools is adapted to suit the needs of learners with disabilities and to ensure that other needs are met for quality teacher-learner interaction. This thesis looks into the process of teaching and learning, focusing on the role of language in learning among deaf pupils, the nature of the teaching and learning materials used and how they are used. It discusses some of the challenges faced in the use of sign language during instruction and the practices used while assessing what has been learned.

It has been noted that only a small percentage of deaf learners in Kenya who acquire primary school education proceed for further education at secondary school and university levels (MoEST, 2004d). Since communication is the major drawback that deaf children encounter, one cannot help wondering: Is there any relationship between

language and learning? What are the language issues that affect the acquisition of literacy skills among deaf learners? What kind of curriculum adaptations and teaching approaches are required to address the learning needs of deaf learners? Since previous studies have generally focused on learning in special schools, this study focused on learning in units for deaf learners. For example, while Mukangu's (2008) study investigated the resource and pedagogical constraints experienced while teaching Social Studies in one special school in the Eastern region of Kenya, it did not have deaf teachers and deaf learners as participants. This study recognised the existence of deaf teachers for deaf learners and as a result, it gave room for their voices and that of deaf learners to be heard.

Given the above rationale, the questions addressed in this research are:

1. What factors are considered when preparing for teaching Social Studies to deaf learners in Kenya?

This question focuses on the learning environments, and teaching and learning materials which are used as sources of information.

2. What pedagogical strategies are adopted while teaching deaf learners Social Studies?

The focus of this question is on the use of sign language in the classrooms and the nature of interactions that take place in the classrooms during teaching.

3. How is the learning of Social Studies by deaf learners assessed?

The final question focuses on how what has been taught and learned is assessed to determine the level of achievement.

1.4 Structure of the thesis

The first chapter is an introduction of the issues raised in the thesis and a brief background of the areas that the study concentrates on as well as the rationale for the study. Chapter two outlines the Kenyan context of the study which serves as a more detailed rationale for the study. Chapter three gives some contextual information on the development of the Kenyan sign language. A review of literature on the relationship between language and learning as well as the general learning process amongst deaf children make up chapter four while chapter five explains the research methodology and the design adopted by the study.

Chapters six, seven and eight outline the research findings on the teaching of Social Studies. While chapter six describes the preparation for teaching and learning focusing on the learning environments and learning resources, chapter seven centres on the pedagogical strategies that are adopted by the teachers during their teaching and chapter eight concentrates on the assessment of what deaf learners have learned.

Chapter nine discusses the issues raised in the thesis and what might be the best pedagogical approach to adopt in the education of deaf learners. It concludes by arguing for the recognition of the expert knowledge of deaf teachers gained through their experiences as teachers and as deaf students and that the teaching approaches adopted by teachers play a big role in determining the amount of learning achievements gained by deaf learners.

Chapter 2 Research Context: General overview of education in Kenya

2.1 Introduction

Kenya is located in Eastern Africa with more than 40 ethnic communities/languages spoken in the country, all of which have their own cultural values and practices. This chapter gives a general overview of the status of children with disability in Kenya, a summary of the education system and some background information on the status of deaf education in Kenya.

2.2 The status of disability

The statistics of people with disabilities in developing countries has always been estimated resulting in varied figures being recorded. An accurate picture of the prevalence of disability in Kenya is not clearly known due to lack of recent up-to-date data. The 2009 Kenya Census indicated that the population was approximately 40 million with an estimated 1.3 million people with disabilities (KNBS, 2009). This seems to contradict other estimates that show the proportion of people with disabilities in Kenya is about 10% of the total population or slightly over three million people (WHO, 2006; MoE, 2009a). Going by the 2009 census, this amounts to approximately 4 million people. The varied definitions of disability and the reliance on information provided by households during national censuses might explain the large discrepancy since the data provided at the census purely depends on what families define as disability. Considering the rapid population increase it is likely that the estimations indicated by the census are erroneous.

2.3 The general current education status

Education in Kenya is offered through eight years in primary school, four in secondary and four at university level. The first two objectives of primary education are ‘to acquire literacy, numeracy, creativity and communication skills, and to enjoy learning and develop desire to continue learning’ (MoE, 2009b: viii). Social Studies is one of the five subjects offered at the primary level and it ‘aims to provide learners with knowledge, skills, desired attitudes and value necessary in preparing them to live appropriately in the physical and social world....’ (ibid: iv). Kenya’s commitment to provide equal

access to quality and relevant education to all children can be witnessed by the ratification and domestication of various international policy frameworks that spell out the need to offer quality education that is accessible to all children without any form of discrimination.

Free Primary Education (FPE) was introduced by the government in January 2003 in an effort to attain Universal Primary Education (UPE) by 2010 and Education for All (EFA) by 2015. One of the thirteen objectives of Kenya's education laid out in the Sessional Paper No. 1 (Republic of Kenya, 2005) and that is important to note is '*to ensure that all children including girls, children in difficult circumstances, and those from marginalized or vulnerable groups, have access to and complete free and compulsory primary education*'. Children with disabilities can be said to fall in this group. The main objectives of the FPE programme are to enhance access, quality, and retention; improve participation, progression and completion rates; reduce the parents' burden of financing the education of their children in primary schools and implement sector policy goals, including universally accepted conventions on the provision of education (UNESCO, 2010b).

FPE saw the number of children enrolled in primary schools increase from 5.9 million in 2002 to 7.3 million in 2003, 7.6 million in 2006 and 8.6 million in 2008 (UNESCO, 2010b). The current approximated average student-teacher ratio is 80:1 (Daily Nation Newspaper, 6th September, 2011). According to Oketch & Somerset (2010), in 2002 the enrolment was at 6.13 million and in 2003, it moved to 7.16 million recording a 35% increase in enrolment into Standard one from 0.969 in 2002 to 1.312 million in 2003. Although from a distance the trend seems to create a picture of continuous growth, the study by Oketch & Somerset (2010) noted that in addition to the withdrawal of children from public schools by some parents due to overcrowding and overstretching of learning resources, low enrolment rates into Standard one were recorded in some schools. This implies that the push to public schools caused by FPE had declined and instead the numbers were reducing in some schools maybe due to the overcrowding that sabotage the quality of education.

This general overview suggests that there are other factors related to learners staying out of, spending longer time in, and dropping out of school other than lack of school fees.

2.4 Trends in the education of children with disabilities

Special education was pioneered in Kenya by churches and voluntary and charitable organisations during the colonial days. Education for learners with disabilities continued to be offered only in special schools until the 1970s when units and integrated programs were put in place (MoE, 2009a). After independence, several commissions have been set up to look into matters related to the general development of education in Kenya with the government, through the Ministry of Education, taking over the management of most of these institutions. Notably, the recommendations of the Kamunge Report (RoK, 1988) led to the expansion of special units within regular schools.

A report by MoEST (2004d) estimates that there were 750,000 children with disabilities of school going age and that about 30,000 were in school, half of whom were enrolled in special schools and the other half were integrated in the regular schools. MoE (2009a) acknowledges that the majority of children with disabilities do not access educational services citing that only 22,000 were enrolled in special schools, units and integrated programs in 1999. It further states that in 2003 the number rose to 26,885 and in 2008, it had reached 45,000. A report by UNESCO (2010b) quoting MoE (2008) as its source indicates that in 2003 there were 86,424 disabled children in school: 13,303 were enrolled in special schools and 73,121 in special units and integrated while in 2008, the numbers were 37,202 in special schools and 171,079 in special units recording a total of 208, 281. While these figures vary significantly, they display a substantial improvement although it remains a small percentage of the estimated number of learners with disabilities who should be in school. In general, it is evident that the available statistics do not give an accurate picture of the actual prevalence of children with disabilities including those in and out of school.

While the government places emphasis on inclusive education for learners with disabilities, it recognises the role of special schools and special units as suitable environments for the teaching and learning of learners with severe special needs in the area of hearing, visual, intellectual impairments, and serious mobility challenges (MoE, 2009a). In addition, the implementation of inclusive education is reported to have been faced by many challenges such as inadequate facilities, inadequate capacity of teachers to handle learners with special needs in the regular schools, inappropriate placement of children with disabilities, inadequate and expensive teaching and learning materials,

among others (MoE, 2009a). As a result of this, some of the disabled learners who have been placed in regular schools learn in environments that do not recognise their 'special' learning needs and have had to try and fit in the system that deny them equal access to education with other learners.

The recommendations of several commissions and legal guidelines indicate that there exists the knowledge of what can be done so as to ensure that learners with disabilities are not left behind and that plans and strategies to be followed in order to create equal access to quality and relevant education for these learners have been put in place.

2.5 Deaf education

Education for deaf learners is offered in special residential schools, special units attached to regular schools and in integrated settings. The exact number of institutions with deaf learners is not known. The list of institutions from the Ministry of Education is not comprehensive because it does not include private primary schools and some units for deaf learners in public and private primary schools and Early Childhood Development and Education (ECDE) centres. This implies that the number of institutions is not up-to-date and consequently, the number of deaf children attending school is also not updated. The latest published statistics on the enrolment of deaf learners do not offer reliable information since they do not show enrolment in primary and in secondary schools separately. The most recent figures recorded by MoE (2009a) are 23,459 pupils enrolled in 2003 and 36,239 in 2006 in all the primary and secondary schools.

In general, most deaf learners in Kenya enter school later than their hearing counterparts and, as stated above, they spend more years in school than some of the hearing learners who attend pre-school before they enter school (Ngao, 2005). In their study in regular schools Lewin & Sabates (2011) attribute a pattern in Kenya whereby the age range in a class widens from Standard 4 onwards partly to repetition. While they note that Standard 8 pupils fall between ages 12 and 18 years for regular learners, some deaf learners in Kenya leave primary school when they are much older due to late entry and compulsory repetition of classes (Mundi, 2009).

2.5.1 Learning environments for deaf learners

Although the government has made some effort to socially integrate some of the learners with disabilities in mainstream schools, most of the deaf learners are enrolled in special schools which are residential. The schools enrol learners whose hearing loss ranges from mild to profound and some learners who have a hearing impairment together with one or more forms of disability, for example, autism or intellectual impairment. There are also some hearing learners who have problems with the use of speech and others who have a post-lingual hearing impairment, i.e. they can speak but have lost their hearing. Once enrolled in school, learners start from pre-school which is divided into two: the Beginners class and the Pre-unit class if they have not had any early childhood education prior to enrolment². Some of the schools offer an extra year after completion of primary schooling for vocational training³. Many learners who start their schooling in these schools spend a minimum of 11 years in the same institution if they do not repeat classes and/or transfer to other schools.

Special units in Kenya are classrooms within regular schools that are set aside for learners with disabilities. MoE (2009a) defines a special unit as a class set aside in a regular school to cater for the needs of learners with special needs and should not be less than 15 pupils. Though the definition gives a minimum number of pupils (not adhered to in some cases) it is short of a maximum limit of learners enrolled in a unit. Units have been understood differently and as a result they operate differently in different schools to which they are attached. In most of the schools, it is a classroom where all the learners, regardless of age and level of education, learn together. Generally, with a few exceptions, the deaf learners do not learn in the same classrooms with the hearing learners. Since the units are attached to day schools, they go to and from school every day. Some of the units serve a wide geographical area so some of the learners walk for long distances to school. Learners who enrol in these units are mainly children from families which cannot afford to pay the boarding fee in special schools and/or children of parents who do not feel comfortable with having their children far from home for long periods and learning in a far away school since they would like to offer them assistance and any form of protection from their vulnerability (Mundi, 2009).

² There are a few private ECDE Centres in the capital, run by individuals with funding from INGOs that enrol deaf children.

³ Information gathered during the initial visits to schools prior to the fieldwork

While there is a special school in almost every district across the country, there are only 4 units attached to regular public schools and no public special school in the capital city which has a population of about 3 million people (KNBS, 2009).

While in some units multi-grade teaching is practised with all the learners learning together, in others one classroom is sub-divided and the learners are grouped according to their grades where they learn separately at their different grade levels. Some learners in upper primary learn in separate classrooms in their different grades whereas some learn in their different grades but in integrated classrooms with hearing learners due to lack of adequate space within the schools or teachers. It is likely that factors such as the number of learners enrolled in a unit, the available physical facilities, and the Head teacher's perspective on the presence of the unit in the school, determine the operations of the unit.

Whereas special units in the Kenyan context are expected to offer some form of social inclusion to deaf learners learning mainly takes place in separate classrooms, with a few exceptions. Very few studies, if any, have focused on the education of deaf learners learning in the units. Examples of other studies that have directed their attention to special schools are Mukangu's (2008) which investigated the resource and pedagogical constraints experienced while teaching Social Studies in one special school in Central Province and Ngao's (2005) study in a special school in Eastern Province which looked into the socialisation of deaf children. While the two learning environments might be viewed as similar, they are likely to differ in a number of ways stemming from the fact that the units are only a small part of a larger school.

2.5.2 Language of instruction

Since 2004, Kenyan Sign Language (KSL) has been the official language of instruction and it is the language that learners should be taught once they join school (MoE, 2009a). Previously, learners were taught American Sign Language (ASL) which was also used as the language of instruction. Whereas they join school having acquired signs that they use at home, they are taught the manual alphabet so that they can fingerspell written words. They are also taught new signs for new concepts and how to articulate the signs mainly for the purposes of communication with the teachers and amongst themselves. KSL is currently taught as a subject concurrently with English (MoEST, 2004b). Its

written form is in English although its structure is significantly different from that of English.

2.5.3 Assessment for deaf learners

The Kenya National Examinations Council (KNEC) is the only examining body that conducts national examinations for schools and colleges in Kenya. Since the introduction of deaf education in Kenya in the 1960s, deaf learners were not allowed to sit for national examinations. After completing the seven year primary school curriculum, the same one used by hearing learners they would remain in school for an extra year and focus on learning vocational skills. A few of them who would join the special secondary schools would only learn some academic subjects superficially and attend vocational classes. They would then leave school after the third year with a certificate graded on vocational skills acquired and with no academic certificate⁴. The certificates were awarded by the respective schools. It was not until 1980 when deaf learners were able to sit for the primary national examination. Those who later joined the two secondary schools for deaf learners which existed at that time, sat for the Kenya Certificate of Education (KCE) in 1984. The change happened the same year that KNEC was established and Kenya was able to make decisions regarding the education of her deaf citizens as previous examinations were under the East African Examinations Council.

2.5.4 Teacher training

The training of teachers for learners with impairments is conducted by Kenya Institute of Special Education (KISE) which admits teachers who have acquired the initial general teacher training and have had teaching experience in regular schools for either a Certificate or a Diploma level program. The training which is offered through full-time, part-time, and, distance learning modes includes hearing impairment as one of the 9 areas of specialisation. Teachers enrolled for this course learn sign language skills and currently, KSL is offered as one of the certificate courses (KISE website). Teachers enrolled for the Diploma program study all the areas during the first year and specialise in one area for the rest of the period. Although the institute admits teachers every year, there is a shortage of trained teachers for deaf learners which has resulted in teachers handling larger classes than expected.

⁴ Verbal communication with a deaf adult who showed me his certificate for carpentry skills

An American-based NGO, Global Deaf Connection (GDC), in partnership with the Ministry of Education and Deaf organisations has supported the training of deaf teachers to teach deaf learners in Kenyan primary schools for the last five years. The teachers are supported to acquire the initial teacher training for regular learners but not the specialised training at KISE.

2.6 Conclusion

A report by the Ministry (MoEST, 2004d) noted that only a small percentage of deaf learners in Kenya who acquire primary school education proceed for further education in secondary school. My study presumed that one possible reason for this phenomenon is poor performance in KCPE, the national examination taken at the end of primary school education, which is used as the criteria for selection for admission to secondary school. KCPE results for deaf learners in a number of schools have shown a trend over the last five years where attainment was lowest in Social Studies and Kiswahili when compared with other subjects. My study therefore sought to understand how deaf children learn and to identify any possible barriers that could be a hindrance to their learning and how they can be overcome so as to facilitate their full participation in the learning process.

Chapter 3 Contextual information on the development of Kenyan Sign Language

3.1 Introduction

The chapter describes the development of Kenyan Sign Language (KSL) and demonstrates that despite being a language used in a multi-ethnic country, it is used nationally and has all the characteristics of other sign languages used in other countries. The chapter illustrates that the various regional variations brought about by different regional cultural practices in Kenya have enriched its vocabulary and should therefore not be viewed as making it a language of less value when compared to other sign languages. The chapter tries to justify that although it has been influenced by ASL and has borrowed some signs from ASL, it qualifies as the most suitable language of instruction for Kenyan deaf learners since it serves as their mother tongue. It also gives a brief overview of the introduction of KSL as a subject for deaf learners and the challenges likely to be encountered while teaching to write a manual language. The chapter ends by showing briefly the kind of training that is offered to teachers of deaf learners.

3.2 The development of Kenyan Sign Language

Deaf education was introduced in Kenya in the nineteenth century by European missionaries who established schools for deaf learners that mostly served deaf children from a few rich people who lived in the urban area and left out the majority poor who lived in the rural areas (Kiyanga & Moore, 2003). These schools did not allow any use of manual communication rather they insisted on the use of the aural/oral mode of communication. In 1957, Andrew Foster, a deaf African American missionary and a graduate of Gallaudet University, travelled to Africa and contributed a great deal to the education of deaf children (Kiyanga & Moore, 2003) by building a total of thirty one schools in Africa. Kenya was one of the African countries where he helped to establish schools and the first one was set up in 1958. During that time, there was emphasis on the use of the oral method of communication, use of hearing aids, speech-reading and auditory training in schools which ‘deprived the deaf child to acquire language naturally through sign language’ (Ndurumo, 1993:153). According to (Ndurumo, 1993) between

1960 and 1980, around 23 schools and units for deaf children had been set up. All this time, learners were taught through oral methods and could only use sign language when communicating among themselves in class and outside class⁵. The official language policy at that time advocated for the use of speech and speech reading. The learners used Kenyan Sign Language (KSL) to communicate among themselves.

In 1985, while working at the KIE, Ndurumo, a deaf Kenyan educator who obtained a PhD in 1980 in America, advocated for the introduction of the use of 'systematic sign language following signed English medium' (Ndurumo, 1993: 21). As a result, in 1986, Machakos School for the Deaf was established and the Ministry of Education selected it to be the first school to instruct learners in sign language. Ndurumo introduced the ASL alphabet, English-based signs⁶ and the use of total communication⁷ at the school. In 1988, the Ministry of Education conducted a study aimed at assessing the impact that had been made by this initiative and found out that the use of total communication facilitated faster learning and that once introduced at an early age it was more effective and was reported to improve cognitive growth than when introduced in later years of school. During the same year, the government introduced the use of sign language and Signed Exact English under the philosophy of total communication in all schools and units for deaf learners⁸.

Kenya Sign Language Research Project (KSLRP) was registered as a national Community Based Organisation in 1991 and as a joint project between Kenya National Association of the Deaf (KNAD), University of Nairobi, and the Swedish Association of the Deaf with funding from the Swedish Association of the Deaf and Swedish Organization of Handicapped International Aid Foundation who have been its main donors until 2004⁹. It is based in Nairobi and is involved in KSL research, training, advocacy, and production of materials. Currently it relies on funds raised through providing basic training to hearing people in the use of KSL and as KSL interpreters. The Project is headed by a hearing Director and has a number of deaf staff. It works closely with relevant government institutions as well as other related non-governmental organisations. The project's long term objective is to create an opportunity where deaf

⁵ Conversation with my deaf research assistant who attended school during this time

⁶ Signs that are signed along with the mouthing of English words/concepts

⁷ The use of signs, facial expressions, finger-spelling, lip-reading, miming, etc

⁸ Telephone communication with the head of the KSL Department in KISE on 10th March 2011

⁹ Interview with the Coordinator of KSL training programmes

people in Kenya can become medical doctors, lawyers, professors and even members of parliament (Okombo & Akach, 1997).

KSL, just like any other language, evolved to meet the need for communication among a group of deaf people in Kenya. According to Okombo & Akach (1997), the growth of a national sign language in Kenya can be attributed to regional mobility of deaf persons and the growth of deaf awareness, among other things. KSL has developed through interactions among deaf people in schools and training institutions, deaf organisations and deaf communities based in different institutions which have their own distinctive signs. According to a deaf adult (verbal communication), social interactions have played a great role towards the growth of KSL. Narrating his own experiences as a deaf person, he explained how he was born in one region, attended a special school in a different region, and was at the time working in the capital city where he belonged to a Deaf community made up of people from different regions. Since deaf people acquire sign language through socialisation, schools have been conducive and vital places for social interaction among people who are deaf. Learners take to schools different signs used at home and some of them are taken up by the rest of the pupils and become signs associated with a particular school. When pupils transfer to other schools, they take with them the unique signs used within their schools which are likely to be taken up by their new schools while they too learn new ones. The movement of deaf adults to urban areas in search of jobs have also facilitated the formation of various deaf communities within the different cities where signs from the various regions are shared. Deaf Churches, Mosques and sign language services have been established in the capital city and other areas where many deaf people meet on worship days. The formation of deaf organisations and clubs has played a big role in inculcating a sense of identity and community among deaf people. All these factors have led to the convergence of different sign systems that have led to immeasurable growth and enrichment of KSL in terms of vocabulary.

Currently, since Kenya is a multi-lingual society, KSL has the advantage of having users who belong to about 42 different ethnic cultures and who originally used emerging regionally distinct sign languages. These languages form the basis of KSL after their convergence through social interactions between their users. They have resulted in a sign language that has many variations (different signs) for one concept, similar to synonyms in spoken languages. Their regional variations possibly brought

about by ‘different associations and lines of creativity’ (Okombo & Akach, 1997: 135) based on their different life experiences, have become lexical variants that constitute the vocabulary of the language. Whereas some Kenyans from different ethnic groups are not able to understand one another’s language, deaf people from those ethnic groups understand one another because their language is not based on ethnic orientation rather on the Deaf community that uses it. Nonetheless, the existence of regional sign language variations characterised by regional features similar to those found in dialects in spoken languages, cannot be disregarded.

These regional variations are characteristic of sign languages used in other countries. However, the KSL variations are not as many as the ethnic spoken languages since they are determined more by the geographical region rather than ethnic languages used by the parents of deaf people. These are mainly influenced by the activities that take place in those regions that are mostly associated with the region’s geographical features, e.g. fishing, arable farming or cattle herding. As mentioned above, there are signs that are associated with specific schools for deaf learners. Nevertheless, due to the interactions that take place among deaf adults, the majority of them are familiar with these different variations. Hearing people learning KSL are taught some of the different variations. When I was learning KSL, I would learn about three to four different signs for some particular concepts and my tutor would associate each sign with a particular region where it applied or simply explain the reasons behind the different signs. These variations appeared to be perceived positively by deaf people who are the main users of the language as contributing to the richness of the language in terms of vocabulary, rather than being divisive among the different users in the different regions.

According to Okombo & Akach (1997), the existence of regional features of KSL is likely to be something faltering due to the likelihood that such features could spread into other regions and become national or they could simply die away. Their study noted that while the grammar and the phonology of KSL are stable and fairly uniform, there exists innovation in the field of vocabulary (individual signs). This seems to contradict the previous claim since language is never static and it would be expected that even at the regional level the new innovations would continue thus retaining the regional variations. Indeed, there exists a standard variety of KSL which is associated

with deaf people who have the opportunity to interact with deaf people from other regions of Kenya and is in use in the major cities (ibid).

With the emergence of formal deaf education, KSL has since developed but has been influenced greatly by ASL. The manual alphabet used today is the same as the American manual alphabet although according to a claim by older deaf people in Kenya, an old Kenyan system for manual alphabet existed before the introduction of formal education¹⁰. KSL has been influenced by a number of different sign languages with ASL probably having the greatest influence. This could have been brought about by the fact that the sign language used by the proponent of the use of sign language in schools had many ASL signs and this is the language that teachers of deaf learners learnt during their training at KISE. The existing personal and professional exchanges of Kenyan deaf people and deaf learners with American volunteers through organisations such as the Peace Corps¹¹ could be another contributing factor. Although different countries in the world have different sign languages, some have similar signs for some concepts. KSL, for example, has signs for some concepts that are similar to those used in ASL and British Sign Language (BSL), such as the sign for 'true' and 'same'. However, the majority of the signs for nouns, verbs and adjectives are different. These are closely related to the different Kenyan cultures that people can easily identify with. Lewis (2009) claims that before the ASL manual alphabet was adopted in KSL, the BSL manual alphabet was used (probably due to the influence of British colonialism) and that one school in Mombasa still uses the same alphabet.

The sign language used in schools since 1988 was not considered as the authentic KSL due to the amount of American signs that had been incorporated into it. Some signs do not have any association with Kenyan culture and to the learners they are 'foreign' since they cannot relate them with their life experiences in Kenya. For example, while the sign for 'farm' in ASL involves moving the thumb along the chin from left to right with other fingers straightened, the sign for the same concept in KSL is signed with both hands stretched out with claw hand-shapes and with palms facing down making movements towards the body as if imitating digging or raking the ground, then the

¹⁰ Informal conversation with a deaf adult on 3rd March 2010

¹¹ The Peace Corps was established in 1961 by John F. Kennedy to promote world peace and friendship. It works, through American volunteers who are paid a small stipend by the U.S. government, in 139 countries in the areas of education, environment, health & HIV/AIDS, agriculture, youth development, and business development.

palms, facing down, move away from each other indicating the ground (KSLRP, 2004). Some teachers still use the ASL sign and they teach it to the learners. This has resulted in the language introduced to learners in school being considered as ASL by deaf people and other users of the language although some claim that it is a combination of both. The identification of KSL as the language of instruction for deaf learners (MoE, 2009a) implies that the learners should therefore be introduced to a sign language which uses as many local signs as possible when they enrol in school since this can be considered as their mother tongue.

KSL seemed to win favour among deaf adults in Kenya over any other sign language because it is a language that the users can identify with and one that serves their purposes. Local learners of the language need not memorise signs but rather they can easily master them since they represent concepts that they see and interact with in their day to day lives. It is estimated that KSL currently has about 340,000 users throughout Kenya (Lewis, 2009). The majority of users of KSL are deaf people and a few hearing people who have learned the language to be able to communicate with them. The majority of teachers have been using ASL signs but now with KSL as the official language of instruction for deaf learners and as a subject in the curriculum, every teacher will be compelled to learn and use KSL during instruction. Other hearing people who use KSL are children born to deaf parents, some parents of deaf children, people training to be KSL interpreters, and those working with or for deaf people.

The government language policy requires that mother tongue be used as the language of instruction up to Standard 3 and English be used from Standard 4 onwards (Republic of Kenya, 1976). However, since Kenya is a multi-lingual country, schools that serve communities that are heterogeneous choose English or Kiswahili as the language of instruction up to Standard 3. Instruction in institutions with deaf learners in Kenya has over the years been taking place through ASL and Signed Exact English (SEE). This may have been guided by the language policy where sign language was probably considered to be the mother tongue for deaf learners and SEE as representative of English. A question to ask here would be: Does the use of any sign language respond to the need for a mother tongue for Kenyan deaf children? What signs are used while using SEE – KSL or ASL signs? KSL has since been adopted as the language of instruction for deaf learners throughout all the levels of education. At the time of this study, instruction was done through a combination of ASL, SEE and KSL.

The effective implementation of the language policy in Kenya is almost impossible. Muthwii (2004), in a study on the language of instruction in Kenya noted that teachers are not able to implement the policy effectively ‘because of a serious lack of instructional materials written in the mother tongue languages’ (pp. 16). She underscores the need to find out how much the language policy and the existing practices, in relation to the language of instruction, hamper or encourage ‘the acquisition of desirable learning competencies’ (ibid). Although her study focused on hearing children, her observation on the use of the translation approach as a means to make the pupils understand the curriculum content was of concern to this study. Translations are used because texts are in English but teachers use mother tongue to instruct according to the requirements of the policy. With regard to deaf learners, the situation is even worse, since their language of instruction is sign language, which is not a written language. The use of SEE, as noted in chapter five, has been noted to support deaf learners in learning to read and write in English. SEE entails the translation of every word into signs following the structure of English. Due to the fact that the textbooks are in a written language and teachers instruct in a different language, translation of the subject content is inevitable. The question to ask is: how can the quality of translation be ensured by having teachers fluent enough in both languages? As Muthwii (2004) noted, there is need to understand the role of translation as a fundamental part of teaching and learning in multi-lingual settings.

Due to the recognition of Kiswahili as a national and official language alongside English and KSL in the new Constitution of Kenya (2010), the Ministry of Education, through Kenya KIE, has been debating on having teaching and learning materials for Standard 1 – 3 translated into mother tongue languages since they are the languages of instruction according to the language policy. However, according to a newspaper article (The Daily Nation newspaper website on 13th February 2011), book publishers have declined to venture into the undertaking arguing that most schools no longer followed the policy and therefore they would get low sales out of them. While KIE was in support of the use of a familiar language with learners who have just enrolled in school, the article did not mention any proposals that were made in relation to sign language as the language that deaf learners are familiar with. It would be interesting to know what provision has been put in place to cater for learners whose mother tongue is KSL, a manual rather than a spoken language. If plans were put in place to publish textbooks in

the various mother tongues in Kenya for hearing learners in lower primary, what would need to be considered with regards to textbooks for deaf learners to ensure that they are not excluded?

KSL appears to be the most favourable language of instruction for deaf learners in Kenya. However, one question that arises is: Is KSL developed enough to be able to express all the concepts used in education and in particular in subjects such as Science, Mathematics and Social Studies? Since some abstract concepts are unavoidable and indeed desirable in the process of teaching and learning, what options do teachers and pupils have in the event that they encounter terminology or an idea that is difficult to express in KSL? Users of spoken languages encounter ideas or things that are foreign to their original culture and in most cases they borrow and incorporate vocabulary from other languages. This move is considered enriching to the recipient language in terms of vocabulary since it facilitates the language to play a bigger role in communication. Bearing in mind that languages such as ASL and BSL may be more developed than KSL in terms of academic vocabulary, would borrowing signs from other sign languages be considered as diminishing KSL or would it be considered as a way of developing the language? KSL has been a language for communication among deaf people for years and with its new role as a language of instruction in all the subjects taught to deaf learners, it is likely to encounter challenges. This, however, can be taken as a great opportunity to develop its vocabulary either by borrowing existing signs from other sign languages or by creating new ones that the pupils can easily identify with. Deaf Science teachers participating in a Norwegian study confessed that creating signs together with their Physics teacher for concepts that did not have signs, though it was a hard task, helped them excel in the subject as students. They also acknowledged that teaching Physics was easy for them because they were using the same signs that they had created with their teacher (Roald, 2002).

Okombo & Akach (1997) suggest that any effort aimed at developing KSL should create room for the 'natural process of diffusion' by watching the trends and stating the regional spread of various innovations and view the standard KSL as a continuously growing body with signs from different regions existing as synonyms. They however do not mention the possibility of adopting and assimilating signs from other sign languages. While spoken languages are known to adopt and modify terms from other languages, Okombo & Akach state that new signs should be invented 'naturally' by

Kenyan deaf people. They suggest that deaf people should be exposed to a wide range of new ideas that will provide them with communicative stimulus which would result in inventing signs when the need arises. It is not clear whether they are limiting themselves to the communicative sign language only when suggesting this or they are considering KSL as a language of instruction in schools as well. Maybe for the latter, it would be good to consider adopting existing signs from other sign languages which can be used concurrently as variations with the naturally, locally invented signs for particular scientific, technological and other abstract concepts encountered during teaching and learning. As noted in Roald's (2002) study, schools would be better placed in creating signs that suit the concepts that the teachers encounter in the curriculum and gradually the same signs would be adopted for use in the future. For KSL to have full capacity of instructing in schools, invention or creation of new signs would be unavoidable.

3.3 KSL as a subject for deaf learners

Kiswahili, together with English and Mathematics, is a compulsory subject for all learners in primary and secondary schools in Kenya. Nevertheless, deaf learners have notably been performing very poorly in Kiswahili. A report on the 2005 KCPE results analysis for deaf learners (MoEST, 2005b) noted that 'deaf students performed best in Mathematics and English and worst in Kiswahili'. According to the Programme Coordinator at Kenya Society for Deaf Children (KSDC), there was an outcry from teachers and parents on the poor performance of deaf learners in Kiswahili which resulted in dropping their overall performance in the national examination and depriving them places in secondary schools. KSDC, with the backing of teachers of deaf learners, lobbied through the Ministry for the replacement of Kiswahili with KSL. An officer working at the Special Needs Education Department at KIE clarified that KSL was introduced as an optional subject for deaf pupils. Since Kiswahili is the national language in Kenya, the pupils were given the opportunity to choose between KSL and Kiswahili. According to Wasanga (2010), 'the decision to examine Kenyan Sign Language for the Hearing Impaired was taken after consultations with the relevant stakeholders and critical review of the circumstances for the affected pupils. This was meant to mitigate the language challenges they have been facing...'. However, although the teaching of KSL was meant to take off from January 2007 in Standard one, Standard

five and Form one, Kiswahili had remained on the timetable while KSL was learnt and taught informally until the end of 2009¹².

Nonetheless, there are possible repercussions that may have been overlooked when considering the rationale behind this move. KSL is a language that is mainly used among deaf people and a small population of hearing people who are directly involved with them. The majority of hearing people who use KSL are teachers of deaf learners while the language of the larger society is Kiswahili. Although KSL was introduced as an optional subject alongside Kiswahili, it had replaced Kiswahili on the timetable. According to one head teacher, this resulted from the difficulty of fitting in the two subjects to be taught concurrently and the fact that there were no pupils who opted to learn Kiswahili instead of KSL. Though the move was aimed at improving the examination results with the hope that it would increase the chances of deaf learners to join secondary schools, it is feared that it might lead to their social exclusion after school inadvertently. Even though the majority of Kenyans did not need to go to school to learn spoken Kiswahili, the situation is different for deaf learners due to the fact that the majority of them cannot learn a spoken language through incidental learning experiences. They are likely to lack familiarity with Kiswahili vocabulary and therefore not benefit from lip-reading while they are not with people who understand KSL. Conversely, there are chances that more Kenyans might develop interest in learning KSL since the promulgation of a new Kenyan Constitution which elevates KSL to the level of an official language. This elevation of KSL in the Constitution and in the recently launched National Special Needs Education Policy, once implemented, can be perceived as a move towards achieving inclusion of deaf people with respect to their education and the national language policy.

As mentioned earlier, Kiswahili is a written language as opposed to KSL which relies entirely on signs. Teaching and learning KSL as an examinable subject dictates that a lot more need to be taught and learned beyond mastering the vocabulary (signs). The pupils are expected to be able to write sentences and essays using the KSL sentence structure with English vocabulary. KSL is signed together with the mouthing of English words and the same English words are used in the written form of KSL. English is also taught to deaf learners as a compulsory subject.

¹² Informal conversation with a Headmaster of a school for deaf children (not included in the study)

Although teaching English entails some use of SEE in order to emphasise the correct usage of the English sentence structure, there is likelihood that learners might find themselves mixing the two different structures due to the use of the same vocabulary. One significant structural difference I noticed was that KSL is written in capital letters with one slash in place of a comma and two slashes in place of a full-stop (e.g. NAME MINE CECILIA//) (Sample KCPE paper, 2010). For hearing learners, the difference is quite obvious when it comes to learning and writing a different language. It can be argued that learning KSL and English subjects together would be easier than learning English and Kiswahili because the words are the same and the two languages can be considered to be complementing each other. The teaching and learning of writing skills in a language which is not a written language is something that needs to be reflected upon and the challenges that are likely to be encountered put into consideration. What seems to be more important in learning a manual language is fluency in signing it and understanding other people's signing and therefore rather than expect learners to write essays in KSL, telling their stories in sign language would be a better skill to teach them and examine them on. In the same way oral skills in an additional language are tested through audio recording, the KSL examination can be in form of video recording aiming at assessing comprehension and fluency.

The first KSL dictionary was published in 1991 by the Kenya National Association of the Deaf (KNAD). The Kenya Sign Language Research Project (KSLRP) produced other resource materials in 1997: Introduction to KSL Teachers' Manual, Teachers' Manual KSL Stage 1, and three KSL vocabulary pamphlets. These were aimed at aiding teachers in learning and teaching deaf learners KSL instead of ASL. However, this did not seem to take effect probably due to lack of coordination between KSLRP, KIE and KISE. In 2004, after the introduction of Free Primary Education and with the introduction of a new primary school curriculum based on the 8-4-4 curriculum, a curriculum for KSL was ready for implementation. KSL was to be taught to deaf learners as a major subject alongside other subjects. However, when the textbooks for the new syllabus were being published, none was published for KSL. KIE had published a KSL dictionary meant for use in schools in 2002 but the teaching of KSL did not take off until circulars were sent to schools for deaf learners informing them that the teaching of KSL would officially start in 2007 from Standard 5 in primary schools and Form 1 in secondary schools. Nevertheless, there were no pupils' books and no teachers' guide

books approved by the Ministry for use in schools as instructional materials to facilitate the implementation of the initiative until 2009 when the Standard 5 and Form 1 pupils' and teachers' books were published (KSDC). Formal teaching of KSL started at the beginning of 2010 the same year that Kenya National Examinations Council (KNEC) had made plans to administer sample KSL examinations (See Appendix 2) in readiness for the national examinations at the end of the year.

Since the introduction of the 8-4-4 system of education in 1985, KIE was the sole government institution that had the mandate to publish educational materials for primary, secondary and teacher training colleges. Materials for teaching and learning KSL were not published together with those for all the other subjects after the 8-4-4 curriculum was revised in 2003. This could be partly due to lack of competent manpower to verify quality. Reporting on the constraints faced by the Quality Assurance and Standards Investment Programme, MoEST (2005b:170) noted that the liberalization of production of curriculum support materials resulted in commercial publishers only venturing in the publishing of more profitable textbook titles and leaving out the less profitable ones. It is likely that textbooks for KSL were not considered profitable by these publishers and therefore they opted not to publish them.

KIE therefore took up the responsibility of publishing KSL materials but the pace at which they were being produced was slow. According to a Programme Coordinator at Kenya Society for Deaf Children (KSDC), the institute had started organising writing workshops with teachers of deaf learners as early as 2006 but the three years elapsed before textbooks for the first phase – Standard 1, 5 and Form 1 – were produced and without formal learning of KSL taking place. At the time of this study, the only KSL resource book used in schools was the KSL dictionary published by KIE.

3.4 Training of teachers for special educational needs

The Salamanca Declaration, UNESCO (1994: 38) recommended that for inclusive education to become a reality, 'those training to be teachers at pre-school, primary and secondary levels must be provided with a generic and broad-based special educational needs component as a compulsory element of initial training'. It also recommended that single disability training programmes be adapted to include a core course on all disabilities and specialization in one. Training programmes should focus on the skills required to work with other teachers avoiding the development of an 'elite special

education teacher group' (pg. 41). In order to bridge any gap between the existing regular teachers in the field and the fresh graduates exposed to special education 'a general policy of in-service training should be put in place' (pg.41). This recommendation seems to suggest that training should be continuous, relevant, and one that offers individuals an opportunity for regular reflection and review of new knowledge and skills required in their field.

Every teacher training to teach deaf learners in Kenya learns sign language skills. At the time of the study, the same two year course focused on preparing teachers for inclusive education so it had an 'inter-disciplinary' component for the first year where all student teachers were expected to gain knowledge and skills to identify, assess, and provide appropriate intervention to learners in all the areas of disability. During the second year they specialised in only one area of disability¹³. Teachers who specialised in the field of hearing impairment learned KSL at three levels: elementary, intermediate and advanced. They also learned about speech and language development, auditory training, speech training, educational audiology and some elementary KSL interpreting. Methods of teaching language and other aspects of communication, signed English and methods of teaching other subjects were included in their syllabus¹⁴.

The development of distance education programmes which 'include materials for self-study, audio-visual materials and face-to-face tuition by locally appointed tutors' was recommended (UNESCO, 1994: 42). A part-time three year Diploma course for practising teachers via distance mode has been introduced by KISE with training taking place in designated centres all over the country during the school holidays. According to the Academic Registrar, KISE had ninety staff and about three hundred part-time lecturers who conducted the training sessions. The same syllabus content for the full-time two year course is used. Since its main aim is to prepare teachers for inclusive education, it has the same inter-disciplinary component in the first year while in the second and third years teachers select one special area. KISE also offers a certificate course on KSL.

¹³ Verbal communication with the head of KSL Department in KISE

¹⁴ Verbal communication with the Academic Registrar, KISE

3.5 Conclusion

This chapter outlined the development of KSL and its current status as a language of instruction and as a language taught in schools to deaf learners as their local language which can be considered equivalent to other Kenyan mother tongues. It has shown how KSL has different variations that originate from its use in different regions of Kenya and how it has also been influenced by ASL due to its previous use in schools as a language of instruction.

KSL as a language of instruction and as a subject taught to deaf learners in place of Kiswahili has encountered many challenges. As a language of instruction, it is faced with the challenge of appropriate vocabulary in the different subject areas and as a subject, the risk of learners mixing English with written KSL. There is also lack of textbooks to aid the teaching and learning of the subject.

Chapter 4 Deaf Children's Teaching and Learning: A Review of Literature

4.1 Introduction

Despite the recognition of the fundamental right to education for all children and the commitment to address the exclusion of the disabled children in education by the EFA Dakar Framework for Action (2000) and the UNCRC (1989), little is known about the actual status of education for children with disabilities in Kenya. There is very scanty literature in this area and specifically on education for deaf children. Some related research that has been conducted in some developed countries and some sub-Saharan African countries will be reviewed due to the shortcomings of such research in relation to the Kenyan context.

This chapter starts with a definition of terms that will be commonly used in the review. It focuses on the concept of language in relation to cognitive growth and learning so as to address the focus of my research which assumes a linkage between language and the low level of literacy among deaf learners in Kenya. It reviews literature that addresses the role played by language in the growth of mental processes and literacy development through spoken, signed and written language. However, although there are a number of studies that focus on language policies in Kenya and other countries in sub-Saharan Africa, very few studies focus on language and learning among deaf learners. The chapter will review literature related to pedagogy for deaf learners aiming at understanding arguments concerning whether they require a special pedagogy for effective learning. Preparation of teachers for deaf learners will be discussed as well as the benefits of strong communication skills that facilitate interactions between teachers and learners. Literature on assessment for learning will also be reviewed in this chapter.

4.2 Definition of terms

There have long been debates surrounding the terminology used to refer to disabled people. From the 1980s the US Disability Rights Movement has been advocating for the move from the use of 'handicapped', a term viewed as one that associates people with disabilities with beggars (Barnes, 1992) – 'cap in hand' (Oliver 1996) to 'people with disabilities', a 'people-first' terminology (Fox, 2007). The use of the term 'disability'

was considered to play a crucial role in instilling disability identity and culture within the US society (Haller et al., 2006). Nonetheless, not all disabled people agree with this proposal arguing that since ‘disabled’ means ‘having no abilities’, people would question their eligibility to claim equal opportunities such as, employment (Haller et al., 2006). In explaining the meaning of the different usages of the prefix ‘dis’, Linton (1998: 30) concluded:

The prefix creates a barrier, cleaving in two, ability and its absence, its opposite. Disability is the ‘not’ condition, the repudiation of ability.

Due to the different perspectives held by different people while defining disability, it has been described as ‘complex, dynamic, multidimensional and contested’ (WHO, 2011: 4). There has been a transition from an individual, medical perspective to a structural, social perspective which has witnessed a shift from a ‘medical model’ to a ‘social model’ of disability. In the latter, organisations for disabled people have argued that disability is a result of societal influences rather than defects in the bodies of individuals, as construed by the medical model (Oliver, 1990). However, there have been arguments that since the health conditions of persons with disabilities can result in other complications, disability should not be viewed as purely medical or as purely social (Thomas, 1999).

The UNCRPD’s definition of disability which views it as an interaction rather than a characteristic of the person has also been criticised as supporting the ‘medical model’:

[D]isability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others (UNCRPD, 2008).

Based on the International Classification of Functioning, Disability, and Health (ICF), WHO (2011: 4) considers disability as ‘the umbrella term for impairments, activity limitations and participation restrictions referring to the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors)’. To contribute to the debate, Leonardi et al. (2006: 1220) recommended that a definition of disability should be:

... applicable to all people, without segregation into groups, be able to describe the experience of disability across many areas of functioning, ... should allow comparison of severity across different types of disability, and recognise the effects of the environment on a person’s disability.

Leonardi et al. therefore define disability as ‘a state of decreased functioning associated with disease, disorder, injury, or other health conditions, which in the context of one’s environment is experienced as an impairment, activity limitation, or participation restriction’ (pg. 1220).

In most African cultures, the birth of a child with impairment is still viewed with a lot of suspicion whereby it is seen as the repercussions of the mistakes made by the parents that displeased God or the spirits of their ancestors (Anthony, 2009). The belief in many African countries that disability is a curse could be the reason behind this negative perspective towards disability. In Kenya and Tanzania where Kiswahili is the lingua franca, for example, the general Kiswahili term used for people with disabilities is ‘*wasiojiweza*’, which expresses the idea of dependency and portrays them as people who are not capable of any gainful employment. ‘*Kiziwi*’ is the official Kiswahili vocabulary for a person with hearing impairment (‘*viziwi*’ in plural) but the term ‘*bubu*’ (‘dumb’ in English) is commonly used. ‘*Kiziwi*’ is considered to carry some negativity due to the presence of the prefix ‘*ki*’ which is generally used as a diminutive and also to denote a lifeless thing. The same prefix is used in ‘*kipofu*’ for a person with visual impairment and ‘*kiwete*’ for one who has mobility impairment. These terms and others used in some of the other Kenyan local languages are not only negative but also stigmatising. Such negative labels result in making people with disabilities, especially the younger ones, accept those labels and become passive recipients of whatever is offered to them by those in positions of power.

The debate surrounding the English terms used to describe people with disabilities started in Kenya in the late nineties. The use of terms such as ‘visually impaired’ and ‘hearing impaired’ instead of ‘blind’ and ‘deaf’ is now commonly used mostly within the educational domain while referring to programs or issues related to pupils with disabilities. Despite being considered to be more polite than the latter, most people with disabilities that I met did not like the use of the term ‘impairment’. This illustrates how people hold different views and the need to seek the opinion of those concerned when making decisions that affect them directly. While speaking about people with hearing loss, terms such as Deaf, deaf, hard-of-hearing and hearing impaired are used globally. Although not all of these terms are used in this review, it is important to elaborate the meanings of these terms so as to facilitate easier understanding of the issues raised.

Hearing impairment is a general term, which refers to any type or degree of hearing loss that causes a degree of difficulty in functioning. The term hearing impairment therefore, encompasses a continuum of hearing loss from mild to profound. The terms ‘Deaf’ (with a capital ‘D’) and ‘deaf’ (with a small ‘d’) are sometimes used to represent different ideas of deafness. Whereas ‘deaf’ tends to refer to the concept of partial or severe hearing loss it is often used to describe people with severe or profound hearing loss in the UK and US. ‘Deaf’ refers more to the language and culture of people with hearing loss (Geers, 2003). Although the term ‘hard-of-hearing’ in the US and in Kenya is used to describe people with some degree of hearing loss (mostly mild to moderate) but who can benefit from amplification, Ladd (2003) states that in the UK it is used to mean the same but it is mainly used to refer to hearing people, especially the elderly, who have lost some of their hearing. Although Action on Hearing Loss (formerly Royal National Institute for the Deaf – RNID), a UK based charity use the term hard-of-hearing, in the UK people with mild to severe hearing loss are generally referred to as deaf or hearing impaired rather than hard-of-hearing (Ladd, 2003). ‘Deafened’ is another term used in the UK to describe ‘people who were born hearing and became severely or profoundly deaf after learning to speak’ (Action on Hearing Loss website). Indeed, many deaf and hard-of-hearing people, especially those who recognise culture and language as an important and beneficial part of their identity, prefer not to be viewed as ‘impaired’ or as having an impairment since they do not like to be primarily defined by their lack of (or poor) hearing (Geers, 2003). While people who identify themselves as Deaf recognise sign language as their primary language and identify with the Deaf culture, there are some deaf and hard-of-hearing people who prefer using speech or other non-signing communication and identify more with the ‘hearing world’ who Tucker (1998) claims are referred to with a small ‘d’.

While in Kenya the pride of Deaf identity exists among people with hearing loss, the use of a capital ‘D’ is not common since it is assumed that every deaf person is an automatic member of the Deaf community (Okombo & Akach, 1997). Some deaf people have chosen to use ‘deaf’ when referring to themselves and prefer not to be referred to as ‘hearing impaired’ since according to KSLRP (2004) it ‘is felt to have negative connotations’, as if hearing people only recognise and focus on the defect – the impairment. In spite of this, within the Kenyan education context, the term ‘deaf’ is no longer used in policy documents, adapted textbooks, adapted examinations, and

recently, when referring to the special schools and units, and learners. All children with whatever type or degree of hearing loss are referred to as either 'hearing impaired' or 'learners with hearing impairment' (MoE, 2009a; MoEST, 2004a). It is not clear whether it is a policy requirement because in the schools teachers commonly use 'deaf' as they speak about the learners may be as a way of respecting the wishes of their learners. In this study they are referred to as 'deaf learners', a term which focuses on the individual rather than the impairment and one which most Kenyan deaf people are comfortable with.

This study therefore by using the term 'deaf' e.g. 'deaf learners' or 'deaf children', it recognises that what these learners have is a limitation caused by a lack of proper functioning of their hearing sense. As the study focuses on the learning of deaf learners, it investigates any possible barriers within the education system, the school, and the classrooms that may result in placing the learners in a disabling situation by not being able to access education in the same way as their hearing peers due to their impairment.

4.3 Language and cognitive growth

Communication has been the biggest barrier that deaf children in Kenya and everywhere in the world have been experiencing over the years. Their inability to hear at all or to hear well results in delayed, limited or no acquisition of speech, the mode of communication used by the majority hearing people. Most of these children, some of whom learn sign language, miss out on a lot of general information that hearing people acquire automatically from the general public and the family (Kiyanga & Moores, 2003). When they enrol in school, studies conducted in developed countries (Traxler, 2000) have shown that the majority lag behind their hearing peers in reading and in writing. This phenomenon has been attributed in part, to their language ability, and partly to their cognitive processing. It is therefore imperative to understand the relationship between language and cognitive growth.

Research on the cognitive abilities of deaf children has yielded varied findings. While Gregory (2005) writing about whether or not deaf learners need special pedagogy, claims that there is no difference in the range of cognitive abilities between these children and their hearing peers. Marschark (2006) writing about the literacy levels of deaf children states that the existing differences noted in the non-verbal abilities

between hearing and deaf children can be attributed to the heterogeneity of deaf children as well as the functions of the administered tests. Marschark adds that the differences have usually been associated with delayed cognitive development caused by poor exposure to early and stimulating language environments. Since deafness is known to be caused by many factors including diseases such as meningitis and malaria among others, as is relatively common in Kenya, there is a possibility that the same may have affected other functions of the brain as well. Solarsh et al. (2006) note that some of the diseases that cause hearing impairment are the cause of other related conditions. For example, they note that rubella can cause hearing impairment as well as blindness and intellectual disability. They add that malaria, which is a common disease in Kenya, when it is cerebral, causes other neurological conditions in survivors including deafness. Such conditions are likely to have an effect on the cognitive functioning of the brain of a child who already has a hearing impairment which can exhibit itself in their learning. In a situation where brain scans are not as routinely available as in richer countries, it is however more likely to be associated with the hearing impairment which is evident rather than with the other condition which may not be known.

Mayer (2007) states that deaf children seem to follow the same course as their hearing peers with regard to early childhood literacy and consequently it is expected that most deaf learners would continue to develop literacy abilities proportionate with their hearing counterparts. The Kenyan education system and probably those of some countries in the same region, have the expectation that if teachers can communicate with deaf learners they should generally learn at the same pace and perform equally with hearing children. Conversely, their academic achievement does not seem to reflect this hence raising the question: Does hearing loss have anything to do with the way cognitive processes are structured and utilised in an individual? The only known attendant of severe hearing loss is the lack of the development of an oral language which leads to the question, does the pace at which a child learns new things link to this lack of an oral language and does a relationship between language and thought exist?

Research on the development of the brain has emphasised the importance of the first six years of life arguing that the environmental experiences during this period are significant in influencing the child's life. All the "*critical windows of opportunity*" are open during this period (Wasserman, 2007). This is the period when children are able to learn and acquire certain knowledge, skills and attitudes very quickly with minimal

effort. In order to maximise children's holistic development and their potential in life, parents, other caregivers and teachers need to make maximum use of this period.

Language development and communication is one of the major difficulties deaf children experience yet language enables children to think, to plan, to understand the world around them, and to be a part of a community (Niemann et al. 2004) thus playing a significant role in mental development. When children cannot hear, and do not get help learning a language to communicate, they face problems in developing their mental capacities. Vygotsky's (1978) theory of social learning which emphasises that children learn through their interaction with the social environment, perceives the child as an apprentice who learns through interacting with others rather than one who acts alone in solitude.

Vygotsky (1962) focused on the connections between people and the cultural context in which they act and interact in shared experiences. According to Vygotsky, human beings use tools that develop from a culture, such as speech and writing, to mediate their social environments, known as culturally specific mediators. Initially children develop these tools to serve exclusively as social functions, as a means of communicating their needs. He believed that the internalization of these tools leads to higher thinking skills. According to Vygotsky, language is an important mediator, although below the age of two it is used only to communicate with others. However, after this time speech is used to solve problems, or in other words to transform elementary mental functions (communication) into higher mental functions, such as to form, shape, and regulate thoughts. He views the egocentric speech in children as a transition from social speech to internalized thoughts with the child employing language as a tool for thinking. Wertsch & Stone (1985), following Vygotsky's perspective, claim that children are capable of saying more than they are aware of and that it is through understanding what is meant by what is said that their cognitive skills develop. Vygotsky believed that language is important for the internalisation of concepts where he viewed concepts used in mental processes as provided by the speech community in which one has developed. In addition, he argued that patterns of thinking and cognitive skills are the products of the activities that take place in the social institutions of the culture in which the child grows up rather than largely determined by intrinsic factors. In general, he proposed that 'cognitive development takes place as a result of mutual interaction between the child and those people with whom he has regular social contact'

(Sutherland, 1992) thus arguing that knowledge is constructed socially rather than individually.

Vygotsky (1962) described how language plays a big part in his notion of ‘internalisation of concepts’.

Children solve practical tasks with the help of their speech, as well as with their eyes and hands. This unity of perception, speech and action, which ultimately produces internalisation of the visual field, constitutes the central subject matter for any analysis of origin of uniquely human forms of behaviour (pp. 26).

He seemed to recognise that language is not only expressed through speaking but also through facial expressions, gestures and signs such as the hand-shapes used by deaf people. Bruner (1985: 23) translates Vygotsky’s notion to mean that ‘language is a way of sorting out one’s thought about things’ where thought is seen as a ‘mode of organising perception and action’.

Many education systems in sub-Saharan African countries have been influenced by Piaget’s ideology of intellectual development in children, which differs to some extent from Vygotsky’s theory. Whereas according to Vygotsky, the child constructs knowledge through interacting with others around him, Piaget focused on the child as an individual and how his/her mind works. His perception of cognitive development in stages stresses the role of maturation in children’s increasing capacity to understand their world (Atherton, 2011). It implies that a child cannot undertake certain tasks until he or she is psychologically and physically mature enough to do so. As a result, most schools in sub-Saharan Africa, despite the large numbers in the classrooms, have for a long time embraced an education system that leaves the child to learn as an individual, being assigned tasks to perform on his/her own and his/her cognitive ability judged by the way the task is performed. Vygotsky’s idea of social learning not only allows for recognition of whatever little a learner accomplishes individually but also his/her input when he/she completes the task with assistance from someone else.

Furthermore, Vygotsky (1962) argued that language and thought have different roots; thought is non-verbal whereas language is non-intellectual during the early stages and up to the age of two years. He, however, notes that although initially they develop separately, and that at the age of two their developmental curves meet and join making thought verbal and language logical, the ‘fusion’ is not total, implying that some aspects

of language and thought continue being independent (Child, 2004). This is when, as mentioned earlier, language becomes the structure of the child's thinking. Vygotsky (1962) claims that there exists a fundamental correspondence between thought and language where one provides resource to the other and thought finds its expression, reality and form in language. This is significant for deaf children for it implies that if they are exposed to simple words/signs at the initial stages of their lives, at the age of two they would start using the oral and/or sign language to structure their thinking and this would aid their intellectual development, and learning when they later enrol in school.

Vygotsky's believed that development is a lifelong process that is dependent on social interaction which promotes social learning leading to cognitive development. This is expressed in his idea of the Zone of Proximal Development (ZPD) which he describes as *'the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers'* (Vygotsky, 1978: 86). This means that a learner can perform a task under the guidance of an adult or in collaboration with peers that could not be achieved alone. The ZPD bridges the gap between what *is* known and what *can be* known. Vygotsky claimed that learning occurred in this zone and suggested that *'various forms of demonstration and hints could be used by the adult or more capable peers'* (Wertsch, 1985: 12). Since much of what children learn is through interaction, Vygotsky believed isolation was inappropriate and that guidance by another is usually most beneficial. Woods et al. (1976) used the term *'scaffolding'* to describe the influence of the child's cultural and social context on his or her learning through interactions with others, such as teachers, parents, siblings and peers. So language, thought, and cognition are supported not only by direct learning but also by the social and cultural experiences of the learner.

While Vygotsky focused on the role played by the teacher in a school setting together with other children who happen to be more *'knowledgeable'* than the others – peer teaching/learning, Piaget perceives the child as one who learns individually. Vygotsky regarded activity by children as critical to education while the teacher controlled the activity and stressed intellectual development. Piaget advocated for procedural learning which takes place in specific stages in a child's life. Piaget's theory is associated with the discovery methods of teaching where teachers provide the learners with

opportunities to experiment and investigate for themselves while that of Vygotsky is perceived to lay more emphasis on the amount of learning a child can achieve with some guidance, the child-centred approach which gives the child room to construct his or her own knowledge with guidance from others (Stuart et al., 2009).

Deaf children whose parents are hearing have been reported to experience less responsive and fewer supportive scaffolding behaviours from their mothers during interactions than hearing children (Spencer & Marschark, 2010). They however note that the hearing parents find it easier to structure play and other cognitive skills when the levels of receptive language of children is higher. Indeed, this is likely to be caused by their lack of fluency in sign language which could possibly hinder them from communicating effectively with their young children. Further, the parents may not be sure of the best approach to use and may not be in a position to gauge the level of understanding when the children are younger. The situation is worse in most African countries where some cultures have not yet embraced the presence of a deaf child in the family.

Problems of communication between a deaf child and hearing parents and siblings impede or prevent acquisition of the family language, thus closing off much enculturation and the benefits of incidental learning frequently enjoyed by hearing children (Moores & Kiyanga, 2003). Language is used as a tool to teach the values, morals and traditions of a particular group of people. In the African context, local languages are very rich in oral transmission of cultural values and some children traditionally learn a lot through stories, proverbs, riddles, songs and poems which are mainly delivered by older siblings, peers or adults within the home environment (Croft, 2006; Finnegan, 2007). In this way, some hearing children are exposed to this informal education before they reach the age of enrolling to school. Conversely, pre-lingually deaf children tend to miss the opportunity to benefit from this kind of informal acquisition of cultural knowledge as they grow up since in most African contexts, little effort is made to include them in social gatherings. The post-lingually deaf children who rely on lip-reading and those with some residual hearing are likely to gain some knowledge though at a significantly limited level.

Writing about how the concept of cognitive development is understood and expressed in many African languages, Serpell (1993) described how it is viewed more from a social

dimension rather than from an individual dimension. This corresponds with Vygotsky's notion of social construction of knowledge among children which takes place through running errands. Using adults as his respondents, he expressed their idea that social responsibility and cooperativeness together with a level of cognitive ability are expected to be exhibited by children as they grow up. Quoting examples from many African languages, Serpell (1993) explained the Abaluhya's (one of Kenya's ethnic communities) way of expressing cognitive abilities in children:

Mothers use evidence that a child has the ability to give and receive social support, and assist others, as markers of a child's more general developmental level, much as an American parent might use literacy skills such as knowing the alphabet, or verbal facility, to show how grown-up or precocious his or her child is (pp.58).

Serpell concluded that from an African point of view, in addition to using mental abilities as one of the criteria used to measure cognitive abilities, the social and the practical aspects are considered to be more crucial. With this in mind, deaf children are likely to be wrongly judged if they do not display these traits at the same time as their hearing peers. This could offer an explanation as to some of the reasons behind the choice of terms used to refer to deaf people in most African communities that tend to generally mean that they are 'stupid'. When peers, siblings and adults are not able to communicate with a child due to lack of a shared language, the child tends to miss the opportunity of incidental informal learning. On the other hand, if a child is well socialised within the home through the use of a family sign language, he/she is likely to display the attributes mentioned above.

There is a likelihood that deaf learners who communicate either orally or through sign language may find it difficult to acquire knowledge gained through overhearing, listening to the radio, watching TV programs, and participating in group conversations.. The delay in acquiring language can negatively affect the development of their social skills and abilities limiting their access to information and opportunities to learn from and about others (Spencer & Marschark, 2010). Deaf children need support, right from birth, to acquire a language to be able to understand the world around them. They require help to learn a gestural language, some simple sign language skills, such as simple vocabulary and simple sentences that will facilitate simple communication within the home, and easier learning once they enrol in pre-school centres and later in

school. The earlier they develop this language, the faster they are likely to understand the world around them.

Usually, many deaf children reach age six, the age required to enrol in school, with noteworthy language delays (Marschark & Wauters, 2008) which generally lead to poor academic success and difficulties in classroom communication. A study conducted in China by Callaway (1999) noted that due to very limited access to pre-school facilities outside the deaf school system, the majority of children received no educational provision before they started school at the age of seven or older. Although deaf learners start formal education from pre-school once they enrol in special schools in Kenya, the age at which they enrol ranges between 5-9 years. Many of them start learning sign language after the most critical years for language learning and environmental learning have expired. This results in difficulties in acquiring any language skills learned.

Spencer & Marschark (2010) note that the majority of deaf children are from hearing parents and only a small percentage have fluently signing deaf parents from whom they learn how to combine signs in multi-unit expressions by about 15-18 months of age just like their hearing counterparts learning a spoken language. Nonetheless, progress has been made in developed countries, such as UK, where hearing parents of deaf children are involved in programmes that equip them with skills on how to help their deaf children to acquire language as early as possible. Community-Based Rehabilitation (CBR) programmes whose guidelines recognise the development and human rights aspects of disability by identifying the need for inclusive development for people with disabilities in the mainstream education and the need to promote their empowerment as well as that of their families have the potential to aid deaf learners in developing countries acquire language. Miles (n.d.(a)) argues that CBR can act as a link between deaf children who spend most of their time in residential special schools with their families and communities through developing appropriate and sustainable approaches to education. This, as Miles notes, would be a challenging endeavour since it requires the development of sign languages and change of societal attitudes amongst the community members.

Through a community-based support programme in Mozambique, deaf adults are employed by the Ministry of Social Action to support groups of deaf people, to develop sign language, and teach sign language in small classes of deaf children in an informal

setting in the outskirts of the capital city (Miles, 1995). A community-based programme in Bushenyi, Uganda has resulted in the formation of Silent Voices, an organisation of parents with deaf children. Through this organisation, the parents have established a social forum where they learn more about deafness, the development of their children, and sign language (Miles et al., 2011). Deaf Child Worldwide (DCW), a UK based international development agency has been working with partner organisations in Kenya to help families, parents and siblings learn KSL so that they can play a direct role in supporting their deaf children to realise their educational, social and cultural rights (DCW website). Their goal is to ensure that deaf children and their families are not left out in all aspects of community life.

4.4 Language and early literacy development

The most common understanding of literacy is that it is a set of tangible skills particularly the cognitive skills of reading and writing (UNESCO, 2006:149). However, the influence of academic research, national contexts, cultural values, institutional agendas and personal experience has resulted in varied definitions of literacy (UNESCO, 2006). The international policy community no longer views literacy only as a simple process of acquiring basic cognitive skills but also considers the use of these skills to contribute to socio-economic development that results in personal and social change. Although literacy has therefore been defined in many different ways, UNESCO (2006: 30), in its report on the achievement of EFA goals, states that it ‘refers to a context-bound continuum of reading, writing and numeracy skills, acquired and developed through processes of learning and application, in schools and in other settings appropriate to youth and adults’.

Indeed, many studies that have focused on the literacy development of deaf learners have afforded more attention to reading than to writing (Mayer, 2010). However, the few studies done have demonstrated that deaf writers do not write as well as their hearing age peers. To illustrate this, Mayer claims that it has been reported that the average 17-18 year old deaf student writes at a level that can only be compared to that of an average 8-10 year old hearing child. Whereas deaf writers are reported to successfully convey content as well as their hearing peers in a narrative discourse, Mayer notes that the same may not be said about conveying content in an expository text – such as that required in a school setting – pointing out spelling as one of their

weak writing skills. Considering the quality of the text produced by deaf learners, it appears that the exhibited difficulty with writing process is lacking which can be interpreted as resulting from constraints either inherent in deafness or brought by the context in which writing has been taught (Mayer, 2010). In fact, the situation in Kenya illustrates this and the latter could even be worsened by the fact that learners have been learning to speak/sign and to write more than one language concurrently (KSL, English and Kiswahili).

This implies that there exist some aspects of development that are different between deaf learners and hearing learners that could be crucial to the success of learning to read and write. The level and the time of onset of hearing loss affect and delay the development and acquisition of oral language. In order for texts to be produced, every writer needs to coordinate a set of cognitive and linguistic processes (Mayer, 2010). Mayer argues that the processes involved in planning, organising and revising what has been written are seen as not to have been accomplished in the written texts of deaf writers. It would be interesting to understand why the situation is like this and what could be behind it. There are three major difficulties which may be experienced by deaf learners and that are likely to be contributing to this.

4.4.1 Limited language that results in slow acquisition of cognitive growth

Vygotsky's basic belief that social transaction is the fundamental vehicle of education and not solo performance implies that passing on knowledge is like passing on language (Bruner, 1985). Echoing Vygotsky's view that language cannot be acquired in isolation, Marschark et al. (2009: 358) point out that 'language-rich early environments appear to be necessary for age-appropriate literacy skills'. However, these environments may not be sufficient since even deaf children of deaf parents, who provide a rich sign language environment, do not reach the same levels of accomplishment as those of their hearing peers (Marschark & Wauters, 2008). Bruner (1985), building on Vygotsky's theory, describes the transactional nature of learning which involves entry into a culture through induction by more skilled members. He asserts that, 'the input of speech to the language-acquiring child is highly tailored by adults to match the child's level of speech development and that it is altered systematically to stay matched with the child's progress' (pp. 26). This gives an implication that language is not only taught rather it is mainly learned informally.

As argued by Vygotsky (1962), cognition is influenced by the nature of the language that the child has already acquired and it is assumed that children think in the language that they speak and/or sign. Following on Vygotsky's association of language and cognitive growth Bruner asserts that to be able to understand the world which 'consists of conceptually organised, rule-bound belief systems about what exists and what is valued' one has to have the ability to use a 'natural language' as an instrument of thought and eventually other languages, especially written languages (1985: 32). Early and extensive communication in oral or sign language may facilitate cognitive growth among deaf children before they join school. This is not likely to happen smoothly for deaf children in Kenya since for the majority and especially those who are born deaf, the development of a first language is not as spontaneous as it might seem to be among hearing children.

Children who are born with severe and profound hearing loss and without parents who are able to sign, are not in a position to benefit from meaningful interactions with others where they play an active role and therefore the process of naturally assimilating the language used within the environment in which he/she grows does not take place. These children end up learning how to use signs instead of words to express themselves in an environment where the majority of people around them use a speech-based language. On the other hand, some of the deaf children and whose hearing loss is mild or moderate have some residual hearing and are likely to learn some oral language from the people they interact with. However, they are likely not to assimilate the oral language fully due to the impairment, necessitating the use of assistive devices, lip reading, or learning a sign language. Many deaf children in Kenya and other developing countries are likely not to have assistive devices (Miles et al, 2011). In situations where the hearing loss is not identified early enough, as is often the case in developing countries, the prime period in life for language learning is not utilised and the children are faced with difficulties in learning the oral and/or sign language. In addition, Vygotsky's argument that the speech structures that the child master become the basic structures of his/her thinking can be translated to mean that the thought processes of children with severe and profound hearing loss are determined by the structure of the sign language which is their first language. If the language is not well developed, and learning of the language (oral or signed) is delayed till after six years of age, then the thought processes may not be well formed and cognitive growth might be slowed down.

There is likelihood that learning new concepts in school will be slow until the child acquires good mastery of the language in question.

The language used within the environment in which the child grows is significant with regard to the language development. Is the language predominantly used within that environment the language that the child is learning to speak/sign? The acquisition of a language means being proficient in its use (Krashen, 1988) and for a deaf child to be proficient in the oral/signed language he is learning, the people he interacts with need to be proficient as well. In addition to being born to hearing parents who in most cases neither have knowledge of sign language, the siblings and peers of most children with hearing loss either around the home or in school may not be in a position to facilitate interactions that can help the child learn a signed/oral language. Sometimes their teachers also lack the fluency or the skills to provide effective learning and assimilation of the oral or sign language. Delays and deficits in the language of children with hearing loss limit communication with their parents, peers and other adults, negatively affecting the development of their social skills and other cognitive abilities (Spencer & Marschark, 2010).

Nonetheless, Marschark (1997) asserts that deaf children have superior language production skills in sign language as compared to their skills in written English and he therefore cautions that it would be wrong to judge deaf children's cognitive abilities based on their ability to read and write. While most studies have struggled to measure the literacy levels of deaf learners by comparing their achievements with hearing learners, it is important to note that levels of learning would be better assessed by identifying any progress that a learner makes or has made from a certain point to the next one. It is presupposed that almost all children, hearing and deaf, are capable of learning and with support they can move from their current level of achievement to the next. This is what is seen to take place in Vygotsky's ZPD where during the instructional process the adult adjusts the amount and type of support offered so that it is best suited to the child's level of development. In a bid to understand how the teaching and learning of deaf learners in Kenya takes place, this study aims to understand the extent to which the instructional support offered to the learners is adjusted according to the level of development of the deaf child. Does the education system allow for such adjustment and/or are the teachers reflective in planning their

teaching in order to allow themselves to go beyond or away from the set ‘rules’ or procedures to achieve effective teaching?

4.4.2 Learning to read and write in a new language

Vygotsky wrote about ‘props’ and ‘instruments’ that facilitate the child to progress from his current ‘level of development’ so as to achieve higher ground and ultimately new consciousness. He also mentioned some specifications of the kind of processes that would make the child receptive to transactional learning and finally the procedure used by the more skilful partner (adult or more capable peers) to make the way easy for the learner. The props, processes and procedures can be translated to refer to the educational curriculum, learning and teaching (Bruner, 1985).

Reading and writing are secondary forms of expression and they depend highly on a primary language system, speech or sign, as a base for development (Luckner, 2010). As mentioned earlier, children who begin schooling with strong oral language abilities tend to find it easy to move to text-based literacy thus indicating a relatively close relationship between language acquisition and literacy development among hearing children. Learners with better sign language skills are known to have better reading skills. The delays in acquiring language (spoken, signed or a combination of both) among majority of deaf children impact negatively on their learning since learning a written language before acquiring fluency in a first (sign) or a second (spoken) language is fully developed is likely to be a difficult task (Spencer & Marschark, 2010). Apart from the fact that they could be learning their first language in school, which is mostly the case in Kenya, there could be learners who have limited speech learned through their residual hearing which in most cases in Kenya will be a local language or a *lingua franca* which is often not the language of instruction. In such a case, they might be learning sign language for the first time and at the same time learning in a new language which in most cases is English (Mayer, 2007).

Lack of knowledge of the language used to read and write is likely to pose a difficulty in the acquisition of literacy. Drawing on Vygotsky’s theory, Mayer asserts that how well one communicates in a given language determines his or her ability to think in it and later use it to read and write. Whereas this may be true about spoken languages, which in most cases can be written, it seems to point at one of the possible causes of the hardships learners who use sign language face while reading and writing. Although sign

language facilitates effective communication, it is not a written language like the one they use in their formal learning in school.

4.4.3 Learning to read and write in a speech-based language

The low literacy level displayed by deaf learners is also likely to be partly a result of the demands of reading a speech-based system whereas they do not use a spoken language system (Geers, 2006). For young hearing learners to be able to make sense out of any type of text, Mayer (2007) notes that they must be able to comfortably use a language which will facilitate reflection on what they see or read. In the case of deaf learners, the language of print bears little or no relationship with their face-to-face (signed) language since when one language uses written words that correspond to sounds, the other uses manual gestures and facial expressions that correspond to concepts. Any young learner, hearing or deaf, learning to read is faced by a task that requires him or her to understand the relationship between the language he or she already knows and the language used in print. For hearing learners, this relationship is found in the sounds (used in speech) of the letters used in the words in written texts and so they use that knowledge as ‘they talk their way into text’ (Mayer, 2007: 414). Mayer stresses the importance of the commonalities between speech (sign) and print in literacy-learning since the learners use them to ‘encode and decode’ print, i.e. to read and understand what is written.

Mayer (2007) conducted a study in America aimed to understand how learners, both hearing and deaf, sort out the relationship between their face-to-face language and print and how they are able to talk or sign their way into text. While hearing learners exploited the sound-symbol correspondences and invented spellings of words by making connections between spoken and written language (e.g. ‘ons abon atim’ for ‘once upon a time’), deaf learners also invented spellings based on the relationship between hand-shape and the manual alphabet (e.g. ‘gouse’ for ‘green’). It is easier to associate what the hearing learner has written with the correct meaning of the original text despite the use of wrong spelling than what has been written by the deaf learner although both spellings are invented with the use of the knowledge of their face-to-face languages. While the former used their point of articulation to make a sound-symbol connection, the latter mapped a hand-shape onto the word ‘green’ (‘green’ is signed with a ‘g’ hand-shape – the ASL manual alphabet for ‘g’). Mayer’s study showed that as well as mapping hand-shapes onto words, deaf learners learning how to write a written language link finger spelling to text and use lip patterns as hints to the beginning

sounds of words followed by randomly selected letters , such as ‘o-u-s-e’ in the word for ‘green’. This is an indication that in learning a new language, skills learnt in a previously acquired language play a big role and it also illustrates the argument that cognitive potential of deaf children should not be solely judged based on their ability to read and write.

Reading difficulties that deaf pupils face have been associated with issues regarding processing of text and the use of knowledge to understand and interpret the text in sentences, phrases and paragraphs (Paul, 2003). Paul notes that there exists a breakdown in this reciprocal relation between processing and knowledge amongst most readers with hearing impairment. This has been linked to their poor phonological awareness (Spencer & Marschark, 2010) since the reciprocal relation between spoken and written language is activated by the association between phonology and orthography. The reading proficiency in hearing readers is a result of the reading process being driven by phonology. The fact that they are not able to associate a word with the sounds of the letters used in it is likely to make it difficult for them to read those words and understand their meanings. While many hearing learners in Kenya are likely to encounter similar difficulties while learning English, there are some who can read or write a word that is spoken to them without major difficulties even if they are encountering it for the first time. This hardship is likely to slow down and complicate decoding and comprehension of what is read (Spencer & Marschark, 2010).

Since written languages follow a spoken language system, deaf learners, whose first language is a gestural language, encounter difficulties in learning to read and to write in them. Mayer summarises:

As has been argued via the examples presented, deaf children have a sense of the task and attempt to make relationships between language and text, but it appears that they often lack the necessary knowledge and strategies to do so effectively. The challenge for educators and researchers is to acknowledge and identify what is lacking and then to think about ways in which these gaps can be addressed (2007: 422).

Mayer (2010) concludes that deaf learners face difficulties in the process of generating texts and have ultimately over time produced texts that are well below the level of their hearing age peers. This appears to be the case among deaf learners in Kenya that has resulted in their being labelled as ‘slow learners’ and as a group that is hard to offer effective intervention. Is it really a case of being slow, and if it is, how can the slow

pace be addressed? Could we be demanding too much by expecting them to produce grammatically correct English texts yet their language seems to have little or no relationship with the written language?

Studies of both hearing learners and deaf learners have indicated that ‘vocabulary development is a critical foundational element in the growth of language comprehension and, in turn, in the development of literacy skills’ (Spencer & Marschark, 2010: 70). A study conducted in the Netherlands by Hermans et al. (2008) observed that sign vocabulary size predicted knowledge of vocabulary in written form. Deaf learners encounter delays in acquisition of vocabulary due to the fact that they lack sufficient exposure to the words of the written language or to the signs for particular concepts in sign language. This is likely to be caused by the nature of sign language which uses signs rather than words and some signs which are sometimes represented by more than one word or idea in a sentence. For example, a single sign is likely to encompass about three or more ideas that are represented by three or more words in English, a feature that is common in some African languages, such as Kiswahili. They are also likely to have limited signed vocabulary if they do not have the opportunity to interact with fluent users of sign language. This poor vocabulary development in the written language can be linked to the fact that these learners think and communicate to a larger extent in a sign-based language rather than in a speech-based language that entails the use of words/vocabulary. Mastery of many words through conversation prior to a learner confronting them in text facilitates the development of reading and writing skills (Spencer & Marschark, 2010). Written English uses articles such as ‘the’, ‘a’ and ‘an’ which do not exist in sign languages and therefore they are not used in signed communication. This could be linked to deaf learners’ tendency to write simpler and shorter sentences that used fewer adjectives, adverbs, prepositions and conjunctions as noted by Spencer and Marschark. Limited vocabulary and the encounter with words whose concepts they are not familiar with hinder the understanding and use of words that they read and write thus becoming a contributing factor to poor literacy skills.

Learning in a language that is structurally different from their first language, English in the case of Kenya, seems to have a negative impact on the learning of deaf learners. What are the implications of this with regard to teaching and learning in the classrooms? How can this phenomenon be dealt with to achieve effective teaching and learning?

4.5 Language systems, language development and education

Although in the developed world a lot has been achieved in terms of early identification and more advanced interventions, the development of language skills in children with hearing loss is still a problem (Spencer & Marschark, 2010). Despite these achievements different academic researchers have held different opinions regarding the best approach in supporting the language development of deaf learners.

4.5.1 Sign languages and manually coded sign systems

Different approaches have been employed worldwide in a bid to develop the language of deaf learners. There has been the use of manually coded sign systems which are representations of spoken languages in a gestural-visual form, i.e. signs produced in the same order as spoken words that follow the grammar of the spoken language. These signs are a combination of signs from ‘natural’ sign languages and invented signs to represent grammatical aspects of the spoken language (Stredler-brown, 2010).

These systems are attributed to Charles Michel Abbé de l’Épée who in the 1790s developed hand signs to teach a form of the French language to deaf children with the belief that the ‘language of signs’ was the natural language of deaf people (Borgia, 1990; Spencer & Marschark, 2010). They are commonly referred to as Total Communication which originally aimed at the use of varied communication patterns and different strategies in order to meet the needs of individual learners in particular contexts (Moore, 2001; Stredler-brown, 2010). This is the combined use of the child’s own gestures, sign language, speech, finger spelling, manually coded sign systems, drawing, imitating, and lip reading (Werner, 1987). In a Kenyan school setting, teachers are free to use any or all of these to achieve effective communication. The system that combines the use of signs and spoken words is described as Simultaneous Communication (Moore, 2001) and elsewhere is referred to as Sign Supported Speech (Johnson et al., 1989). Whereas hearing teachers in Kenya tend to use simultaneous communication, the use of the system has been controversial in some countries with some people arguing that sign language should not be accompanied with speech and others arguing that speech would benefit those with residual hearing.

The manually coded sign systems are not considered as ‘natural’ sign languages rather they were originally developed for use in the education of deaf children and were the dominant form of communication used by hearing teachers and interpreters in

classrooms with deaf students in most parts of the world from the 1970s (Spencer & Marschark, 2010). This has resulted in the various systems being referred to as ‘Signed English’, ‘Sign Supported English’ or ‘manually coded English’ in countries such as United States, United Kingdom and Australia. In Kenya, it is referred to as ‘Signed Exact English’ commonly known as SEE. This is a sign language that hearing Kenyans have developed to use when communicating with deaf learners and when it is used in school, sometimes learners are expected to use it although it is not their language. Hearing people seem to have assigned themselves the power to design a language, that is closely related to their own (speech), to facilitate communication with deaf people rather than appreciating and learning how to use sign language, the language of deaf people. On the other hand, deaf people seem to have been overshadowed by the hearing majority and have been deprived a voice in deciding the language which is most suitable for them. The coded English is not only used by hearing people in Kenya but deaf people are also obliged to use it when communicating with those who do not know sign language. Through recent lobbying by deaf people through their organisations, KSL has now been legally recognised as an official language and it is hoped that this might result in more hearing people learning it leading to less use of SEE.

Several studies have been conducted on the use of manually coded English and yielded varied results. Whereas some Australian (Power et al., 2008) and American (Schick & Moeller, 1992) studies have shown that manually coded English provided a useful base for acquisition of English – some aspects of language and its word order – its use by adults, such as teachers and parents, has resulted in inconsistent and incorrect use of signing systems due to difficulties experienced in adjusting to the timing and visual attention needs of the learners (Spencer & Marschark, 2010). Although the use of signs simultaneously with speech has its basis in the lexicon of sign language, the signs lose their original syntactic and semantic property contrary to original sign languages making it difficult for message equivalence (Wilbur, 1987). A study conducted in America by Swisher (2000) revealed that when hearing parents and teachers use simultaneous communication they fail to represent spoken language accurately due to the modality difference – vocal versus gestural. Johnson et al. (1989) amplify the same thought when they state that this mode of communication suffers from distortion and omission of obligatory words, inaccurate productions by parents and teachers resulting in capturing neither the grammatical forms of the original sign language nor the spoken

language (Spencer & Marschark, 2010). Deaf people in the developed world protested against this and lobbied for the recognition of sign languages and in the UK for example, it resulted in the support of parents and caregivers to develop sign language skills to allow for effective communication with their children. While deaf Kenyans do not support the use of this system, they support the use of mouthing some words especially when a sign has more than one meaning or when signing to someone who may not be proficient in sign language.

Additionally, Slobin (2007) asserts that languages do not differ from one another in all possible ways. Acknowledging that all Sign languages are 'real languages', he focused on the revolutions in sign language linguistics and challenged the presupposition that there are no essential structural differences between signed and spoken languages. Referring to recent linguistic research he claims that signed languages are treated in their own right rather than as a priori reflections of spoken languages. Slobin argues that the modulations of face, posture, and rate of intensity of motion that are characteristic of sign language are expressed on a continuum that cannot be broken up into discrete categories such as verbs, pronouns, subject, object, etc. In sign language there are no such categories or elements rather there are hand-shapes, eye gaze, facial expressions, role shift, etc. all linked into each other. He reasons that ideas are conveyed in a visual (sign) language by uses of location and motion that are not available to an auditory (spoken) language. This explains the challenges that those attempting to have sign language in written form, as is the case in Kenya, are facing. Slobin advises that in an attempt to compare sign language with other spoken languages it is important to understand their special characteristics. Signs are known to convey meanings that are difficult to capture in English words due to the fact that sign languages do not have direct sign-for-word correspondence or meaning (Paterson & Konza, 1997) and that they depend heavily on body language and facial expressions for the communication of meaning. They argue that translating the nuances of the curled lip or the raised eyebrow into one spoken word equivalents and representing meanings of words that have complex ideas in signs would be difficult tasks.

Findings from studies on the advanced development of sign language among children who learn from fluent signing parents (mostly deaf parents) were reported by Spencer & Marschark (2010). They note that educational approaches that recognise sign language as the first language and medium of communication in the classroom, would be based

on the linguistic interdependence theory (Cummins, 1989) which conceives that all languages share core competencies and that skills developed in a first language are likely to transfer to skills in a second language (Vygotsky, 1978). In consideration of Vygotsky's notion of language, thought and cognitive development, age appropriate development of a natural sign language would therefore be crucial in order to allow children with hearing loss access to information through interactions with adults and other children in the classroom and at home (family and peers) hence providing an opportunity for supporting cognitive development and facilitating the learning of a second language. As noted earlier, deaf children would only benefit from such interactions if they are in close contact with fluent signing adults or older children. The involvement of deaf adults in the child's learning and initiatives such as the community-based program in Bushenyi, Uganda that aids hearing parents to understand deafness and learn sign language are expected to enhance the children's sign language and ultimately the learning of a second language once they enter school. Power & Leigh's (2003) work argues that acquisition of sign language skills is expected to facilitate access to curriculum content and that it forms a basis for acquisition of English as a second language through reading and writing.

Due to the poor performance in KCPE, it appears as if this has not been achieved despite the Kenyan learners having acquired skills in KSL. It is not clear whether this is due to poor English language skills or the quality of sign language used during instruction, or both. Spencer & Marschark (2010) noted that in general, sufficient evidence from empirical studies is lacking to allow evaluation on the language outcomes due to more focus on the program implementation rather than the actual children's language accomplishments.

4.5.2 Views on sign bilingualism and Simultaneous Communication

Having looked at the different modes used to communicate with deaf learners, we now focus on the implications of how they are used. Studies have yielded varied findings with regard to the most effective educational programme to be adopted for the education of deaf learners. While the findings of studies such as those conducted by Akamatsu & Stewart (1998) and Mayer & Akamatsu (1999) reported that the use of total communication provided effective bases for English language development, a study conducted by Wilbur & Petersen (1998) found out that the demand of two languages, spoken and signed, reduced the teacher's oral output and linguistic complexity. The

latter cautioned that despite the fact that teachers' use of simultaneous communication may improve students' comprehension, it may also hamper the acquisition of a richer and more complex spoken language as well as limit the content of the sign language in use. An in-depth analysis of lexicon and vocabulary learning processes of about 100 deaf children in US, aged between 3-6, half in oral programs and half in manually coded English conducted by Lederberg & Spencer (2009) showed that the vocabulary development of both groups was about half of that expected from hearing children. Further analyses showed that these children achieved the cognitive skills and processes for acquiring new words albeit the age of acquisition was noticeably later than that observed among hearing children. While the vocabulary delays in deaf children were found to have resulted from lack of adequate exposure to the words/signs, the study did not consider children who were in programmes that used sign language. The results would have been comparable if it took into consideration learners who used sign language since signing is their natural way of communicating whereas speech and manually coded systems are modes imposed on them by hearing people. Spencer & Marschark give a general summary:

‘The lack of vocabulary contributes to difficulties for deaf children in comprehending texts to the degree that it slows and complicates decoding and comprehension. Vocabulary development requires both exposure to a rich language environment and, especially in the case of children with hearing loss, direct instruction in order to build word knowledge (2010.117).

Cummins's (1989) theory of linguistic interdependence, mentioned earlier, provides support for sign bilingual programs for deaf children that focus on development of a sign language and later the acquisition of a second language which is a spoken language of the surrounding hearing community. Studies on the bilingual approach have focused on the relationships between children's skills in a sign language and their reading and writing skills. Mayer and Wells (1996) claimed that this theory cannot be applied to the education of deaf learners arguing that the structural differences of the languages cannot facilitate transfer from one language to the other. Using ASL as an example, they argue that since ASL has no written form, transfer to another written language is not possible. While it is true that sign languages differ from written languages in their structures, it is also true, as stated earlier, that languages are not completely different and are somewhat related in their vocabulary and grammar. Conversely, other studies conflict with Mayer and Wells's study, such as that of Hoffmeister (2000), in which he argues that deaf

pupils can and do transfer skills from one language to another. Gregory (2005) argues that a strong first language can facilitate writing skills and literacy in general in a second language. A key feature of KSL and one that is viewed differently by different people is that the signs are accompanied by mouthing of words in English. It is likely to be construed that proficiency in KSL would probably give the learners a good basis to learn English vocabulary and later aid them to develop reading and writing skills in English but this does not seem to be the case. Power et al. (2008) pointed out that it is important for teachers using any form of signed communication to teach English ‘to pay attention to the more difficult structures (such as grammatical morphemes) devising special lessons along the lines of those used by teachers of English as a second language’ (2008: 45).

Determining the best mode of communication and language of teaching and learning of deaf learners has been a big challenge to most countries and especially in sub-Saharan Africa. Works by Akach (1991) and Okombo (1994) have shown that KSL has all the qualities of a language. Adoyo (2002), in his paper on sign bilingualism in deaf education in Kenya states that deaf learners have consistently trailed behind their hearing counterparts in academic performance and considers teachers’ lack of competence in the language of instruction as the greatest impediment. He cites a study conducted in Kenya by Okombo (1994) that has blamed the poor performance on the use of Simultaneous Communication or Sign Supported English which he says is an ‘inappropriate language of instruction’ used by teachers in Kenyan schools who claim to be using KSL. He argues that what they refer to as KSL is a signed form of English which is a spoken language. He defines KSL as ‘the visual gestural language that serves as the primary means of communication for deaf people in Kenya’ (p. 86). Adoyo (2002) advocates for sign bilingualism which he says, for deaf learners, is the use of two languages in different modalities, i.e. signed and spoken languages. He argues that since most of these children enter school with limited linguistic knowledge the school should be structured in such a way that it prepares the children for acquisition of a sign language which will form the basis for acquiring a second language, in the Kenyan context, English. He advocated for KSL, which serves as the mother tongue for deaf children, to be the medium of instruction in pre-school and in the first three years of school in line with the current language policy for all Kenyan children. His proposal is currently in place since 2009 with KSL and English sharing the role of being the

languages of education at primary and secondary levels of education. However, there are concerns regarding the teachers' level of competence in KSL especially when they are the ones charged with the duty of teaching the language to the learners.

The rich language environments provided by sign bilingual programs are expected to develop the children's language skills through interactions with fluent signers with the written representations of the surrounding culture's spoken language becoming their second language (Spencer & Marschark, 2010). Since sign bilingual programmes have been put in place in Kenya, it is likely that attempts to enhance the development of KSL skills among deaf learners through more interactions with more fluent signers, such as deaf teachers would probably be transferred to skills in English that would possibly improve their learning.

4.6 Special education, Integration, and Inclusive education

Three major concepts are used when describing the kind of education learners with disabilities receive – special, integration and inclusion. These concepts describe the historical development of inclusive education in the developed world although they are still in use worldwide. Common positive concepts held by these approaches are: the right to education for all children and a commitment to help them learn in different ways, promoting the child's potential holistically, and supporting different methods of communication for those with a range of impairments (Stubbs, 2008).

Whereas the concept of special education assumes that all learners with disabilities have problems with learning that require 'special teaching methods' by 'special teachers' in 'special environments', it fails to recognise that the challenges that they face, such as, lack of easy access to buildings and communication barriers can be encountered by any other child. Their learning needs are therefore not special but ordinary needs that require support in a favourable environment (Stubbs, 2008). The concept of integration, on the other hand, refers to moving and placing the child in the regular school where the child is expected to adapt and fit within the system. Although it is used interchangeably with mainstreaming and sometimes inclusion, it does not necessarily focus on whether the child is learning or whether he/she is fully included in the learning environment. These two concepts focus on the individual learner, for example, a deaf learner using a hearing aid will be expected to fit in an integrated classroom, to listen, speak, and participate equally with the hearing learners in that classroom.

Inclusive education has for a long time been associated with children who are considered in need of ‘special educational needs’ or in more specifically, people with disabilities due to its specific focus on those who are more vulnerable to exclusion and marginalisation. On the contrary, inclusion in education is a process of addressing and responding to the diverse needs of learners through increasing effective participation in their learning within mainstream school systems (Rieser, 2008). Inclusive education is a concept that emerged from the efforts of disability groups that demanded equal treatment and opportunities for disabled people to participate equally in their communities. They rejected the medical model approach which focused on the impairment and attempted to correct that which was seen as ‘abnormal’. There has been a shift from viewing the problem in the person to examining the attitudinal, environmental and organisational barriers that people with disabilities encounter within the society in which they live (Ibid). As a result, ‘disability groups lobbied to ensure that all human rights instruments specifically mention people with disabilities and emphasise their right to education, whatever the extent or nature of their impairments’ (Stubbs, 2008: 20).

Article 2 of the Salamanca Framework for Action on Special Needs Education (UNESCO, 1994) states:

“Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.”

There have been different definitions of inclusive education and as Stubbs (2008: 38) notes, more definitions ‘keep evolving as practice expands in more contexts and cultures, and reflection on this practice deepens’. Different definitions seem to emphasise different areas. UNESCO’s (2005:13) definition for example, states in part, ‘... it involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children’. Whereas this definition is seen to lay more emphasis on the actual learning rather than learners of all ages, other definitions refer specifically to the school. The understanding of this concept differs from context to context. In Kenya, for example, the concept is defined as follows:

This is an approach in which learners with disabilities and special needs, regardless of age and disability, are provided with appropriate education within regular schools (MoE, 2009a: 5).

This understanding has resulted in the focus being on placing learners with disabilities in regular schools and aiming at doing away with special schools. Referring to Rieser (2008), the definition of inclusion in education goes beyond the child and beyond the classroom:

a process of enabling all children to learn and participate effectively within mainstream school systems, without segregation. It is about shifting the focus from altering disabled people to fit into society, to transforming society, and the world, by changing attitudes, removing barriers and providing the right support (Reiser, 2008 – The Commonwealth website).

Inclusive education therefore, focuses on the system – the teachers' skills and attitudes, and the whole classroom environment (Rieser, 2008; Stubbs, 2008). Indeed, some of the definitions imply that for education to be fully inclusive the focus should be on the system – to identify and strive to overcome any barriers encountered during learning, and on the learners – to provide any form of necessary support at home, within the community and in their learning environments. For example, a deaf child learning in an inclusive education system may not necessarily wear a hearing aid since the teachers and the hearing learners will be using sign language or any other form of communication in order to interact with and accommodate him or her in the classroom. Inclusive education is viewed as opening up opportunities for the development of better pedagogy and greater teaching and learning competence which challenges teacher-centred teaching strategies (Miles & Singal, 2010).

A key feature in many definitions is the emphasis on inclusion for all rather than just a specific group of people. Although it can be argued that people with disabilities are the most universally excluded from education (Stubbs, 2008), Giffard-Lindsay (2007) notes that teachers who recognise that using teaching methods which make curriculum accessible to children with disabilities also makes learning accessible to all learners, contribute to the improvement of the overall quality of their school thus making inclusive education an educational quality issue rather than a disability-only issue. Recognising the need to focus on 'all', Miles & Singal (2010) argue that there is still need for a particular focus on disability issues. DFID's disability in education policy has adopted a 'twin-track' approach which includes mainstreaming disability issues in all

education programmes and implementing interventions intended to break down specific barriers to disabled children's access to education. The approach 'ensures that while the interests and needs of people with disabilities are progressively integrated into mainstream planning, specific issues that prevent people with disabilities from accessing current education systems are actively tackled' (DFID, 2010: 13).

Stubbs (2008) has a broader notion of inclusive education in her definition that encompasses all stages of life and expands beyond the school.

It refers to a wide range of strategies, activities and processes that seek to make a reality of the universal right to quality, relevant and appropriate education. It acknowledges that learning begins at birth and continues throughout life, and includes learning in the home, the community, and in formal, informal and non-formal situations. It seeks to enable communities, systems and structures in all cultures and contexts to combat discrimination, celebrate diversity, promote participation and overcome barriers to learning and participation for all people. It is part of a wider strategy promoting inclusive development, with the goal of creating a world where there is peace, tolerance, sustainable use of resources, social justice, and where the basic needs and rights of all are met (pp. 40).

While Article 24 of the UNCRPD recommends that all learners with disabilities should be able to access an inclusive, quality and free primary and secondary education in the communities in which they live without being excluded from the general education system, its recommendation for delivery of education in environments which maximise academic and social development for deaf, deafblind and blind learners has been interpreted as allowing for segregated education (Stubbs, 2008). It is evident that despite the acknowledgement of the equal right to education for all, the type and location of education remains an issue of debate where there are options of segregated special schools, full inclusion in mainstream schools, or some sort of combination (Ibid).

The concept of inclusion cannot be discussed in isolation without the considering exclusion. Thomas & Vaughan (2004) referred to a report on inclusive education in the UK which rejected the notion of 'inclusive special schools' and the existence of segregated schools on the grounds that they violated children's rights to inclusive education and therefore excluded them. Quoting the report, Thomas & Vaughan (2004) state:

'Inclusion' has come to mean almost everything but the elimination of exclusion. It has become commonly accepted that there are limits as to who can be included in the

mainstream – the exceptions usually being those with high level support needs and others currently in special schools ... social inclusion is seen to be achievable through education which practises segregation.... the continuing exclusion of some children and young people from mainstream to special schools and pupil referral units needs to be recognised as a form of institutionalised discrimination and a denial of human rights...' (p. 25).

Some people have taken positions basing their arguments on the human rights perspective and strongly condemning placing learners in 'special' schools and units as a violation of their human right while others have focused on the level of the learners' participation in their learning and the learning outcomes within the different learning environments. In Kenya for example, a study by Mundi (2009) revealed that most of the parents of children with hearing impairment prefer taking their children to special schools where they believe the children receive specialised care, attention and education and above all, they are able to interact with other children who have a similar impairment and use the same language. Parents with such a standpoint would consider their children not excluded by being in those schools since they offer them opportunities that they lack in regular schools in Kenya. However, the same study noted that some overprotective parents take their children to the school nearest home, a mainstream school or a specialised unit within a regular school. The large class sizes in regular schools in Kenya are likely to be perceived as depriving the deaf learners the opportunity to participate in their learning thus achieving minimal learning outcomes. This illustrates that the concept of inclusion seem to be one that needs to be defined within a particular context since it can be understood differently in different contexts.

In Kenya special units, mainly attached to mainstream schools, are perceived as integrated and at the same time as segregated learning environments. Although units are within the mainstream schools, learners of mixed ages are taught by a 'special teacher' in a separate classroom where they spend all their learning time or are integrated into the regular classrooms at certain times (Save the Children, 2002). Whereas Stubbs (2008) recommends a complete avoidance of units due to the likelihood that they encourage segregation and exclusion, Save the Children (2002) identifies some advantages of special units as well as the likelihood of possible learning limitations that could result from mixing learners with a wide range of learning needs, ages and impairments.

The advantage of a school system which has special units is that services can be provided closer to a child's home, and in various locations. Children are, therefore, more likely to be able to attend school with their friends and be part of the community (pg. 11).

Attending the same school with their neighbours and peers and being part of a larger school with other learners is likely to be considered as integration and a move towards inclusion. Indeed, a flexible school system and the involvement of the community, parents, all the teachers and learners in the mainstream school, can result into a special unit attached to it transforming the whole school into an inclusive learning environment. Save the Children (2002) has highlighted a case in Zambia where learners in a unit attached a village school ended up being integrated into the mainstream classrooms where the 'specialist' teachers served as support teachers in the same school.

Since many deaf learners in Kenya and in many developing countries receive their education in 'special' schools, 'special' units or integrated classrooms, the question to ask is: Does it really matter where a deaf child receives education? Does the location of education contribute to learning achievement? A debate that tends to shift from the location of education to power, participation and achievement in learning has evolved (Stubbs, 2008) where learners are being perceived as having power embedded in their right to education and therefore recognised as rights holders. However, Stubbs notes:

Although there is a clear shift away from focusing on characteristics, the debates in relation to learners with disabilities still tend to get polarised over issues of location, rather than looking at inclusive education in a broader, rights-based context. This misses a fundamental distinction between: – segregation based on the characteristics of the child, often perceived as negative characteristics or deficits (e.g. children with physical impairments, racial segregation), and – learners who have a common educational aim being taught separately for part of their education in peer groups (e.g. women's literacy groups, sign language groups for deaf people) (pg. 46).

Stubbs illustrates that there are instances when grouping learners who have common learning needs in order to achieve a particular learning outcome is necessary. With regard to participation, the focus is now on the extent to which learners play active roles in their own learning and how much they achieve through their learning rather than on whether they are learning together or in segregated environments. This has stemmed from the realisation that placing them together does not always guarantee equal participation and equal levels of achievement where achievement may be seen to encompass the quality of what is learned. These debates seem to recognise the need to place learners in an environment that offers full participation and effective learning.

Deaf learners can be considered as an example to illustrate this point due to the nature of their language and its structural difference from other (spoken) languages. For the learners to develop sign language, they require interactions with those who are fluent in the same language whether they are in school or within the community. Placing them together in order to achieve this learning goal can therefore be perceived as a step towards the fulfilment of their rights rather than a violation.

Inclusive education has some common features with traditional African education, such as community ownership and involvement, and functional learning methods and content. Consequently, for CBR programmes to be successful in Africa, they should involve the whole community and embrace collective consciousness (Miles, n.d.(b)) rather than individual children. CBR, as a strategy that partly focuses on the social inclusion of people with disabilities, plays a significant role in the achievement of inclusive education through tapping the existing local knowledge, resources and skills within the community. It has the potential to promote collaboration between community leaders, all its members and families. Handicap International (2006:23) notes that ‘the fundamental needs of an estimated 80% of people with disabilities could be satisfied at the community level’. CBR and inclusive education value diversity and are guided by a conviction that every child can learn and every child needs support to achieve their learning needs. CBR plays a crucial role in establishing links and partnerships between family, community members, health workers, organisations for/of people with disabilities, the school, and other social services (Thibeault et al., 2009). It offers the learners a great opportunity to learn through participating in everyday activities that take place within the communities. Through CBR, interactions between deaf adults and deaf learners can be organised to help them develop sign language and learn about Deaf culture early enough. Miles (1995) argues that CBR can act as a link between deaf children who spend most of their time in residential special schools with their families and communities through developing appropriate and sustainable approaches to education. This, as Miles notes, would be a challenging endeavour since it requires the development of sign languages and change of societal attitudes amongst the community members.

While Chavuta et al. (n.d.) have demonstrated how CBR has contributed towards the achievement of inclusive education in particular projects in Uganda, Kenya and Malawi,

Ogot et al. (2009), in a study involving South Africa, Kenya, and Sierra Leone, state that achievement of a complete inclusive education system is hampered by a number of challenges in developing countries. Some of the barriers highlighted are high levels of poverty, retrogressive cultural beliefs, large class sizes, rigid school curriculums, and insufficient and inadequately skilled teachers.

4.7 Language and pedagogy for deaf learners

There is limited research that has evaluated the effectiveness of the interventions of teachers of deaf pupils or examined the pedagogical basis of deaf education (Lewis & Norwich, 2005). Challenges in language development, problems in accessing other forms of environmental information, and possibly a lack of understanding about how to teach deaf learners to read and write, could be contributing factors to the barriers to standard acquisition of literary skills (Spencer & Marschark, 2010). Spencer & Marschark also note that the reported differences in the use of various cognitive processes associated with variations in language abilities and early interactive experiences may be early indicators of specialised processing styles related to primary dependence on visual instead of auditory processing. This implies that pedagogical strategies that would consider more use of visual learning materials for visual input would be more effective than reading text or explanations in sign language.

Pedagogy, according to Lewis & Norwich (2005: 7) is ‘the broad cluster of decisions and actions taken in classroom settings that aim to promote school learning’. Alexander (2000: 540), on the other hand, distinguishes teaching from pedagogy:

... teaching is an *act* and pedagogy as both an act and *discourse*. Pedagogy encompasses the performance of teaching together with the theories, beliefs, policies and controversies that inform and shape it. Pedagogy connects the apparently self-contained act of teaching with culture, structure and mechanisms of social control’ (original emphasis).

Pedagogy as practice is further viewed as comprising of three features:

the teaching act itself (comprising task, activity, interaction, judgement), the form that teaching typically takes (lesson), and the contextual and policy frame (space and resources, student organisation, time, curriculum, routine, rule and ritual) within which the act of teaching is set (Alexander 2008: 41).

There seems to be an agreement that pedagogy is not just about the act of teaching and this has led to discussions surrounding the need to understand the learners for whose benefit the pedagogic decisions are made. Although the pedagogic approaches teachers

find themselves using are determined by several aspects, such as, his or her own knowledge, the learners knowledge, the available resources, the curriculum, and the teaching and learning environment, pedagogic decisions are influenced to a larger extent by the teacher's theories of teaching and learning and the general understanding of the purpose of education (Croft, 2010).

Lewis & Norwich (2005) discussed the 'unique differences position' and 'general differences position' as possible teaching and learning approaches for learners with disabilities. They noted that in the latter position, pedagogic decisions and strategies are not only informed by 'needs that are common to all learners and needs that are unique to individuals', but they are also informed by 'needs that are specific or distinctive to a group that shares common characteristics' (pp. 3). They elaborate:

... the specific needs of a sub-group of those with disabilities and difficulties are in the foreground; needs that are common to all and unique to individuals, though important, are more in the background. It is a view favoured by those who recognise general categories as relevant to pedagogic decisions and strategies...this is not to argue for categories but to highlight the possibility that categorisation of learners may be pedagogically helpful even though the delimiting of the categories may yet be unclear (pp. 4).

Deaf learners are likely to be considered as having common needs that are specific to all of them. An example is the argument for the use of sign language by all deaf learners in Kenya yet there are such learners who do not require using sign language but would benefit from a different kind of strategy, such as, making the rest of the class aware of the effect of unnecessary noise. The use of sign language in class can be a pedagogic decision aimed for a group of learners who prefer sign language. Nevertheless, as Lewis & Norwich state, these learners are likely to have individual differences which would require to be addressed differently for every child.

In contrast, the pedagogic decisions and strategies in the unique differences position are informed only by common and individual needs where particular pedagogic strategies are viewed as effective for all pupils and differences between individuals are accommodated or an individual teaching strategy is adopted. This leads to the question, in order for pupils with special educational needs to learn the same content as those without special educational needs, do they require distinct curriculum objectives or different kinds of teaching?

Gregory (2005) wrote a chapter on deafness together with other educators in other special education fields about the pedagogy they thought appropriate for their specific fields which were put together in one volume and edited by Lewis and Norwich. Commenting on Gregory's chapter, Lewis & Norwich (2005) noted that the general differences position was adopted with a commitment to signing as the form of communication through the use of a 'natural' sign language. However, they noted the recognition of other difficulties that in some cases co-occurred together with hearing loss that are likely to hinder the sustenance of 'pure' group-specific pedagogical practices. They noted that 'group-related pedagogic strategies would need to be applied differentially' and therefore concluded that 'even this position places individual needs at the centre of pedagogic decision-making' (p.207). Understanding the needs of an individual child is critical in deciding the specific group-related pedagogic strategy to adopt and determine which aspects of teaching and learning require more emphasis in order to offer more intense and focused pedagogy instead of a completely different one (Croft, 2010). For example, where deaf learners are learning the sign vocabulary for parts of a human face, a learner who has a learning disability and has not learnt how to sign but is able to draw or colour can be engaged in an activity that involves drawing or colouring a human face.

The term 'intensification' of pedagogy is used by Lewis and Norwich to refer to the emphasis of certain aspects of teaching and learning for particular groups instead of a 'different' pedagogy. Identifying the areas of intensification for particular groups of pupils would be a useful starting point in planning teaching and learning rather than perceiving all learners as one homogenous group (Croft, 2010). In the case of deaf learners as a group for example, more use of visual learning materials and field trips where learners can see for themselves would facilitate faster processing of information than when the same is described directly through sign language or by an interpreter. Deaf learners are generally known to depend more on visual information and to have a greater inclination to be more visually distracted than hearing learners. While hearing learners would also benefit from the use of visual learning materials and field trips, when used more intensely among deaf learners it is expected that it would enhance their level of understanding and improve their learning outcomes.

Deaf learners make up a heterogeneous group due to their varied needs and experiences. They are a diverse group with regard to general factors such as ethnicity, socio-

economic status and family structure, cognition, personality, and other abilities. Differences also exhibit themselves in the level and the type of hearing loss, the onset which can be at birth or later in their lives (Gregory, 2005). Even minimal hearing loss is likely to affect academic achievement resulting in the likelihood that there are learners who might need some additional teaching services or some degree of ‘special’ pedagogy, such as a learner who can lip read sitting in a position where he/she can view the teacher and the other learners as they speak. As a result, the degree of diversity that is accepted and catered for varies. An example is cited by Croft (2010) of how it can be helpful pedagogically for a teacher to understand and respond to a particular child’s interest in animals than know that the same child has been diagnosed with a particular medical condition. That knowledge can be utilised by the teacher to aid the child to learn a particular concept. In addition to deficits in the language of deaf learners, Spencer & Marschark (2010) argue that deficits in the language used in the classrooms, such as sign language that lacks fluency, also contribute to additional limitations in the academic experiences of these learners. They therefore argue that no one system or approach will be most favourable for all the deaf learners and as Lewis & Norwich argue above, a distinctive pedagogy identified for one deaf learner may not be relevant to another learner in that diverse group.

Different teaching methods can be translated to mean ‘specialised pedagogy’ and this raises the question, do children with disabilities require ‘special’ pedagogy in order to access quality education? Do they require teaching that is different in kind or additional teaching of the same kind (Croft, 2010)? Whether or not specific pedagogical interventions should be designed for specific groups of children with disabilities is an issue that has been widely debated. The discussion by Lewis & Norwich (2005) on the unique differences position and the general differences position is an example. Those who perceive all learners as having common needs as well as unique individual needs are likely to favour an inclusive pedagogy. They argue that all learners need confidence, interest, and a warm and patient teacher, among other things, in order to learn. While ‘specialised’ pedagogy advocate for ‘special’ procedures, ‘special’ teacher qualifications, ‘special’ techniques, etc, Davis & Florian (2004: 34) noted that ‘the teaching approaches and strategies themselves were not sufficiently differentiated from those which are used to teach all children to justify the term SEN [Special Educational Needs] pedagogy’.

An area of concern that emerges out of this is whether teachers really require special knowledge for inclusive education and if so what do they require? While some knowledge in special education may seem necessary to teach children with disabilities learning in mainstream schools, intervention in such settings might only require a rational decision by the teacher depending on the specific condition of the learner in a given circumstance. Whereas some knowledge of sign language and the use of equipment that would enhance communication are some of the skills needed by teachers of deaf learners, how to use this knowledge while teaching in order to achieve effective learning is more crucial (Croft, 2010). In some instances, the interventions needed may not require any special training, so any teacher would be able to offer them. For example, a learner who has a mild hearing loss might be in a position to benefit from sitting closest to the teacher. In a situation like this, the teacher may not require any sign language skills since the learner can make use of his/her residual hearing.

The Kenyan special education policy framework has listed twenty two different categories of learners with special needs (MoE, 2009a) and it is expected that they will all be considered while planning educational programmes. This is likely to create a limitation in the efforts to accommodate all the areas identified in the teacher training programmes for inclusive education by the framework. This raises questions such as: should the training programmes be provided once within a particular period of time or should it be an on-going process depending on the need? In Kenya, 'special' education training for primary school teachers takes place throughout with no follow-up in-service courses. Training for both secondary and primary school teachers is currently aimed at preparing them for inclusive education. Since the provision of inclusive education is yet to be fully achieved in Kenya, there seems to be lack of certainty in what is the best approach. Some argue that every student teacher for every level of education should learn some skills to teach learners with disabilities and so all teacher training colleges should have a special education component in their training rather than have one college which specifically offers special education training to a few teachers who are interested. Practising teachers in the field also need to be equipped with these skills as well in form of professional development in order for them to fit within the emerging trends. The question here is how else can these teachers develop professionally other than through formal training? Apart from the use of Braille and sign language skills, what other 'special' skills and knowledge is required in order to offer quality education to all

learners with disabilities? What is the role of teachers in ensuring that they offer deaf learners the best opportunity to learn?

Inclusive pedagogy requires inclusive teacher practices that allow pupils to participate in decision making, link new knowledge to what the learners already know, initiate activities that are meaningful to learners and make them perceive learning as socially constructed through interactions with the teachers and other learners, and the use of a combination of varied teaching strategies (Croft, 2010). Teaching that responds not only to individual pupils' needs but also to common needs to all can be regarded as children-centred (ibid). Where the general differences position is taken, needs that are specific to a sub-group as well as needs of individual children within that group need to be considered when making pedagogical decisions.

The intensification of general pedagogical approaches, recommended by Lewis & Norwich (2005) where certain aspects of teaching and learning are emphasised for certain groups, may be perceived by some as pedagogy that differs in kind rather than in degree or intensity. What may be intended to be the same for all but intensified for some groups may be seen as completely different by others and therefore considered to be 'specialised' pedagogy. Lewis & Norwich referred to things that a teacher needs to consider together with any other knowledge about a child that is useful within the education context as 'orienting concepts'. A teacher might require some specialised pedagogical knowledge that would guide him to identify any possible learning barriers that a child might be facing and to consider ways of helping that child. A certain degree of special pedagogy is likely to exist for some sub-groups, such as, deaf learners where the 'orienting concepts' can lead the teacher while planning and devising the best teaching approach to use (Croft, 2010). For example, a teacher can design teaching and learning activities and materials that will make learners construct knowledge through maximum use of their visual perception, such as organised field trips.

An inclusive pedagogy that aims to respond to the diversity of all children is likely to accommodate the needs of learners with disabilities as well. For example, textbooks designed with short precise sentences and numerous illustrations would support the understanding of the curriculum amongst deaf learners in Kenya as well as help other learners who are encountering problems in accessing the same curriculum. Inclusive pedagogy has the potential to result in the achievement of inclusive education which

prepares children and young people to live in a more inclusive society later in their lives.

4.8 Curriculum considerations and teaching approaches

Deaf learners are likely to exhibit learning needs that are different in degree and type from those of hearing learners. This is due to their over-reliance on visual input which would require, for example, the use of visual learning materials with more intensity than when they are used with hearing learners. Their hearing loss may require different teaching strategies for particular individuals who may also have other difficulties that are likely to co-occur with deafness.

Gregory (2005) noted that globally deaf learners tended to have been placed in different educational programmes due to the differences brought about by either the degree, the type, or the onset of the hearing impairment. Where the learning of deaf learners is viewed as the same as that of hearing learners, they all tend to follow the same curriculum with the same goals through a spoken language sometimes with or without classroom adaptations and audiological support. Deaf learners in such programs mostly have some residual hearing and can therefore benefit with or without hearing aids, had acquired speech before the impairment and are able to speak, as well as benefit from lip reading, or in the developed countries, they have cochlear implants that make it possible for them to hear sounds to some degree. Where sign language is used, the need for a different classroom procedure is recognised as well as the use of different approaches to achieve the same goal. Learners who follow this program are mainly those who have severe or profound hearing loss or/and those who are born deaf or became deaf before acquiring a spoken language. However, the situation in Kenya, and probably in other developing countries, is one where all learners with hearing impairment are treated as a homogeneous group regardless of the type, the degree and the onset of the impairment. The criteria used while placing the learners in any of the different educational programmes is not based on any of these characteristics rather it is mostly determined by the parents and sometimes the teachers.

While phonological knowledge and skills appear to support reading skills among proficient hearing learners, deaf learners have been observed to experience difficulties in the use of prepositions, pronouns, and grammatical morphemes (Spencer & Marschark, 2010). These are sometimes hard to hear especially for those who are on

oral programmes and those who rely on some residual hearing. They are also frequently left out in simultaneous communication and are sometimes represented by different mechanisms in sign language. The question to ask is: how can educators – curriculum developers and teachers – address this barrier to learning? Sign print (a graphic representation of a sign or a sign language picture) and interactive storybook reading (teacher signs a storybook and discusses it with the learners focusing on target words in the story) are considered to support the development of early reading skills among deaf children (Schirmer & Williams, 2003). They however, say that there is need for studies to identify instructional interventions that aim to enhance the learners' capability to identify printed words through different codes such as finger spelling codes and orthographic codes and also to address approaches that will improve comprehension. Paul (2003) recommends that studies should aim at improving both the processing and understanding of printed text among learners with hearing loss so that they can construct meaning from the information they access in texts.

With regard to learning to write, Mayer (2010) writes that written language for most users requires the awareness of the components of the language and the ability to use them together appropriately. She points out the importance of intentional instruction for all learners learning how to write so as to gain skills in decoding and encoding print and suggests more focus on the individual writer to identify possible constraints which deaf learners encounter that could later be studied and addressed.

While scores of hearing learners on tests on nonverbal cognitive functioning do not differ significantly with those of deaf learners, those with multiple disabilities excluded, it cannot be claimed that deaf people necessarily think, learn or behave exactly the same as their hearing peers. This is expressed by Paul & Moore (2010: 426) when they argue that 'there are Deaf ways of knowing that are different from other ways of knowing and this affects learning'. Spencer & Marschark (2010: 120) envisage that 'their different environments and experiences might lead to different approaches to learning, to knowledge organised in different ways, and to different levels of skill in various domains'. In order to provide the most favourable support for learning and to apply any 'intensification' as suggested by Lewis & Norwich, identification of such possible differences is necessary. Knoors & Hermans (2010) concur with Lewis & Norwich (2005) in stating that deaf students may require differences in curriculum approaches reflecting the choice of the mode of communication due to the heterogeneity of the

whole group. Knoors & Hermans assert that their teachers need to ‘adapt instruction to the highly diverse individual characteristics of deaf students in their classes’ (pg. 61). They note that the differences in skills and learning styles among deaf learners may call for a more ‘individualised’ approach to teaching which leaves the teachers with the challenge of how to effectively organise their lessons, or alternatively the use of strategies meant for all learners but allow for differentiated responses from them (Lewis & Norwich, 2005). Individualised teaching has however been criticised for personalising education in a whole class teaching, a strategy that has been used in special schools and one that does not allow for effective teaching in a diverse mainstream class (Croft, 2010).

Studies have shown that hearing learners were more likely to remember and express complete units of ideas, cause and effects and conceptual relationships than their deaf counterparts (Marschark et al., 2006; Ottem, 1980). While recognising that associating new information with previously acquired knowledge is an important component of proficient reading, problem solving and learning, Marschark & Spencer (2010) note that deaf learners’ failure to apply prior knowledge can have a negative impact on their academic performance. Instructional techniques and learning activities that address the differences in visual processing, long term memory and short term memory inherent in deaf learners are likely to enhance the learners’ acquisition of knowledge (Knoor & Hermans, 2010). In order to meet the academic needs of students with hearing loss, there is need to consider these differences when designing specialised teacher training, curriculum, approaches to instruction, and teaching and learning materials and activities rather than just focusing on communication barriers (Spencer & Marschark, 2010).

Gregory noted that sign bilingualism approaches encounter difficulties brought about by the limited sign vocabulary in almost all the curriculum areas. Sign languages, when used as languages of instruction, are faced with the challenge of expressing concepts written in another language. The Norwegian deaf teachers in Roald’s (2002) study expressed the hardships they faced when they were learning Physics as students until they had created signs for concepts (originally expressed in Norwegian) together with their teacher (the researcher). The learners in this study played a big role in creating the signs while their teacher, who was not deaf, assisted in determining the best sign to consider for the different concepts. Participating in Roald’s study as deaf Science teachers they, however, confessed how the activity resulted in making their teaching

easier since they were using the same signs in their teaching. Local languages in Kenya can also be developed in the same way so that they can serve as effective languages of instruction for the lower primary classes as stated by the language policy. KSL is faced with the same challenges in almost all the subjects since text in the teaching and learning materials is in English. Just as illustrated in Roald's study and as suggested by Okombo & Akach (1997), new KSL signs for concepts in all the subject areas can gradually be created by deaf learners together with their teachers thus developing and elevating the status of KSL as an effective language of instruction. On the other hand, a possibility of incorporating the existing signs for concepts within the discipline in other sign languages into KSL can be considered although it is likely that the learners would fail to associate the signs with their local experiences.

Deaf Studies is the study of the language, community and culture of deaf people. The incorporation of Deaf studies in the curriculum content for deaf learners is recommended by Power & Leigh (2003) and Lewis & Norwich (2005) as a form of differentiation for deaf learners. This would facilitate the hiring of deaf staff members as consultants in early intervention programmes and/or as classroom assistants to facilitate communication in the classrooms. Callaway (1999), in a study conducted in China supported the use of deaf adults when she stated that they can be used as role models in the schools for deaf learners and suggested that more deaf people, who are proficient sign language users should be trained as teachers to teach content and serve as qualified teachers of sign language classes. This would create an environment that would provide the kind of social interaction recommended by Vygotsky for language development and cognitive growth through the use of sign language in signed bilingual communication approaches. Callaway stated that the involvement of deaf people is required for the successful implementation of a policy on sign bilingualism. Issues surrounding Deaf culture and the use of sign language would inculcate a sense of identity among the learners. Citing an example of a Social Studies curriculum that aims at giving all learners, hearing and deaf, an understanding of their role as citizens and individuals, Power & Leigh assert that a specialised Deaf Studies curriculum would give deaf pupils an additional understanding about their role as deaf individuals in both deaf and hearing communities.

In her study on multilingualism and discourse in primary school Mathematics in Kenya, Bunyi (1997) emphasised the importance of the teacher's role in setting up

opportunities for learners to engage in using language as a tool for learning. She proposed the inclusion of teacher training programmes that would help teachers make informed decisions in their teaching and develop skills in creating opportunities for pupils to deconstruct the given knowledge and construct personal knowledge. While Bunyi was generally referring to the training of all Mathematics teachers, Power & Leigh (2003) seemed to amplify the same argument when they recommended that teachers of deaf pupils should provide activities that allow the learners to add information and extract new understandings from their own experiences through discovery and classroom conversations. They considered highly interactive activities in real situations, such as, field trips and theme-based activities as examples of such activities in Social Studies which they described as ‘extremely effective’ and would compensate for the lack of exposure to adult-mediated social experiences which often place deaf learners at a disadvantage. Ackers & Hardman (2001) in a study on classroom interactions in Kenyan primary schools, drew on the same notion when they pointed out that in addition to the need for teachers’ professional development, there is also need for more teaching aids and classroom resources to promote active forms of learning and create opportunities for learners to take more responsibility for their own learning. Although their study was conducted in regular classrooms, deaf learners in Kenya would benefit significantly from such an opportunity to construct their own knowledge (with guidance) through the use of suitable learning resources rather than relying on storing and retrieving information handed down to them. Spencer & Marschark (2010) noted the importance of recognising the needs for training in problem solving and cognitively oriented learning strategies that may be brought by deaf learners to the educational setting.

A higher level of teacher control in interaction reduces the contribution of deaf learners to the dialogue during classroom interactions but less controlling teachers allow more active responses from the pupils (Gregory, 2005). However, it is important to recognise the diversity of teaching and learning cultures and that in some of these cultures, especially in most sub-Saharan African schools, teaching is directed to the whole class. In such learning environments, some level of guidance would still be required either in form of starting up a task and leaving it to the learners to complete or giving them tips and then leaving them to do the task on their own as in Vygotsky’s idea of ZPD. Knorr & Hermans (2010) seem to suggest frontal teaching for deaf learners who learn through

sign language in order attend to the teacher's instruction. They observe that learners sometimes get distracted by each other or occasionally look at the teaching and learning materials or the chalkboard rather than focus on and look at the signing teacher. They therefore suggested that:

...if teachers want to instruct their students, student-to-student communication should be limited and the tendency to sign to a particular student, as opposed to visually scanning to include all students, should be resisted (p. 64).

This does not however, mean that they cannot be engaged in group activities where they can construct their own knowledge rather it seems to caution against teacher practices that could exclude some learners.

Good communication skills, being up-to-date in teaching, supporting learners to be independent, and to have a passion for teaching are some of the teachers' characteristics that Knoor & Hermans recommended for effective teaching for deaf learners. This is generally good practice for all teachers but as Lewis & Norwich assert, all of these practices may require some higher level of intensity to be effective for deaf learners. For example, the use of communication skills that recognise their communication needs and bearing in mind that they miss a lot of general information due to limited incidental learning. This entails furnishing them with information that teachers of hearing learners may not have to give to their learners since they are expected to know.

Teachers in Bosker's (2005) study, on the other hand, claim that the huge differences in learner characteristics deter them from providing a 'typical group instruction'. This relates to Lewis & Norwich's 'unique differences position' that argue for accommodation of differences between individuals in terms of uniqueness of individual needs rather than in distinct groups or sub-groups. Teachers in this study may have faced hardships in accommodating wide individual variations while addressing the common pedagogic needs of their learners. The mention of challenges in instructing mixed-ability groups is an illustration of one form of diversity likely to be found in a group of learners who are perceived as having common needs. This is the situation in most Kenyan schools coupled with wide age ranges and cases of multiple disabilities. In order for some of the learners not to be left behind, their individual needs could be addressed either through responsive teaching where their common needs are responded to at the same time (Croft, 2010).

4.9 Teacher characteristics for effective teaching and learning

While deaf learners and staff considered enhanced student learning and achievement as the criterion for judging teacher effectiveness, they regarded competency in sign language, mastery of subject matter, establishment of clear expectations, and understanding deafness as an education condition, as important teacher characteristics (Lang et al., 1993). Looking back at their days in school, deaf teachers in Roald's (2002) study attributed the first three teacher characteristics mentioned in Lang et al.'s study to the academic success of deaf learners. This is how one of them expressed the need for a teacher to have good mastery of the subject content in addition to fluency in sign language:

But to know a [school] subject well is a great plus... if one feels confident in the subject content, because of good knowledge, and have good personal qualities, then this person can be a good teacher (pp. 66).

The deaf participants in both studies seemed to emphasise effective communication as a crucial component of effective teaching. The importance of good mastery of sign language among teachers of deaf learners is expressed by deaf participants in Roald's (2002) study where one of them stated:

When the teacher knows sign language, then the interchange between teacher and student can flow without interruption...when I tell my students something in sign language, then they understand...but if one of my students does not understand, I try to explain it another way, because I know that the most important thing is language and communication (pp. 66-67).

In a classroom context, the deaf teachers expressed that communication is more than just having signs for particular concepts since it entails explaining the meaning of those concepts for effective teaching and learning to take place.

Always when a [hearing] teacher comes to a Deaf [teacher], they ask: "What is the sign for –" but we cannot always answer, it is difficult. But to explain and explain the concept, that is important. When the concept is understood, then – Some teachers think that if they use the right sign, then the students will automatically understand. An explanation is necessary (Ibid: 68).

The recommendation of Heugh (2006) of a high level academic proficiency in the language of instruction among teachers goes beyond an acquisition of signs alone for

teachers of deaf learners. For a language to be used effectively as a language of instruction, both teachers and learners need to be proficient in it.

Knoor and Hermans (2010) interpret the good teacher-student relationships considered to enhance effective teaching by deaf learners in Lang et al.'s study as giving more preference to deaf teachers as compared to hearing teachers. Deaf teachers would be expected to be more sensitive to their learners and more flexible in adapting their teaching to suit the learners' diverse needs and strengths (Marschark et al., 2008). They would be expected to enhance motivation in deaf learners because learners can identify with them more than hearing teachers also due to the fact that their instruction would be made more effective by their fluency in sign language. Knoor and Hermans noted that while primary and secondary school deaf students perceived instruction by deaf teachers as more effective (Roberson and Serwatka, 2000) and deaf signing students preferred being taught by deaf teachers (Lang et al., 1993), the hearing status of the teacher in Marschark, et al.'s (2008) study was not associated with differences of achievement among the pupils. In their summary, however, Marschark et al. acknowledge that hearing teachers can learn a lot from their deaf colleagues who are considered to be more proficient in skills such as handling group discussions among deaf learners as well as attracting and maintaining visual attention.

4.10 Assessment and Learning

Assessment has always been a fundamental element of the schooling process rendering the role of assessment instruments, methods, administration, and results increasingly important to the educational stakeholders and the general public who want to verify that the students are meeting the expected academic standards (Luckner & Bowen, 2006). Assessment results play a crucial role among government officials, curriculum developers, and school boards in verifying that learners access academic standards that will empower them to earn a living and contribute towards their own development and that of the society as a whole.

According to Harlen (2006a), assessment has two main purposes, to help learning and to summarise what has been learned. In view of this, terms such as 'formative assessment' and 'summative assessment' have been in use in the context of education. Since formative assessment is perceived as one that aids learning and that takes place during

the learning process, it is also referred to as ‘assessment for learning’ whereas summative assessment that takes place at the end of a certain stage or level of learning and assesses what has been learned within a period of time, is referred to as ‘assessment of learning’.

The word ‘formative’ was used to identify assessment that promotes learning by using evidence about where students have reached, in relation to the goals of their learning, to plan the next steps in their learning and know how to take them.... is concerned with difficulties and positive achievements.... ‘summative assessment’ provides a summary of achievements at a particular point... it provides information to those with an interest in students’ achievements, e.g. parents or employers... (ibid: 104)

Harlen however notes that formative and summative assessments do not use different methods of gathering evidence rather the difference is on how the information gathered is used hence the preferred use of ‘assessment for learning’ and ‘assessment of learning’. Gardner (2006) refers to the process of ‘assessment for learning’ as it is defined by ARG (2002):

the process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go and how best to get there (p. 2)

This definition therefore indicates that assessment is an integral part of the teaching and learning process. It determines, to some extent, the lesson activities and the pedagogic strategies to be employed. Although formative assessment was perceived as contributing to significant learning gains, through a review of literature, it was observed to be weakened by the teachers’ questions and tests that encourage rote and superficial learning as well as emphasizing competition instead of personal improvement (Black & William, 2006). The notion that formative assessment is concerned with understanding the current achievement of learners against some expected level of achievement with the intention of assisting them to move to the next level links with Vygotsky’s notion of ZPD. This indicates that assessment makes learning more meaningful.

Recognising Vygotsky’s notion of socio-cultural theory of learning, James (2006) recommends the development of approaches to assessment that are in line with a socio-cultural perspective on learning where learning takes place through an interaction between the individual and the social environment. Pryor & Crossouard (2008) in their

study in UK schools observed a divergent form of assessment which had tasks designed with the aim of helping learners rather than only testing them, had room for self and peer assessment, and involved the learners in initiating questions. This form of assessment was viewed as operating within a constructivist framework and as tackling the sociological problems of learning. Assessment which focuses on establishing what the learner knows, understands and can do with the intention of helping him/her move to the next level, links with Vygotsky's ZPD where assessment takes place in form of a collaboration between the learner and the teacher. This understanding of assessment would be flexible and would employ any form of strategy to understand what the learner knows as stated by James (2006: 58), that 'learning outcomes can be captured and reported through various forms of recording, including audio and visual media'. Deaf learners who learn and communicate through sign language such as those in Kenyan schools would be better assessed through the use of visual media than through reading text and writing in English. Assessments conducted in sign language are likely to give deaf learners a better opportunity to express themselves and display what they know without limitations that may be brought about by the use of a written language.

Harlen (2006b) states that preparing learners for exams does not entail practising past test items, but rather explaining the purpose and nature of the test and spending time developing understanding and test taking skills. As Lewin & Dunne (2000: 380) note, 'selection examinations are critical to life chances and access to employment' in most African countries. The Kenyan education system attaches high stakes in examination results and as a result the majority of learners tend to focus on achieving good grades that will facilitate them to move to the next level of education. In most cases learners are encouraged by their teachers and their parents to use this approach which makes them adopt passive rather than active learning strategies (Harlen, 2006b) that do not allow for creativity.

Making teachers accountable for test scores but not for effective teaching, encourages the administration of practice tests. Many teachers also go further and actively coach students in passing tests rather than spending time in helping them to understand what is being tested. Thus scope and depth of learning are seriously undermined (Harlen, 2006b).

Teachers' feedback on how learners perform on tasks designated to them in form of assessment play a key role in determining their feelings towards their learning capabilities. However, Harlen notes that feedback which is critical may make low

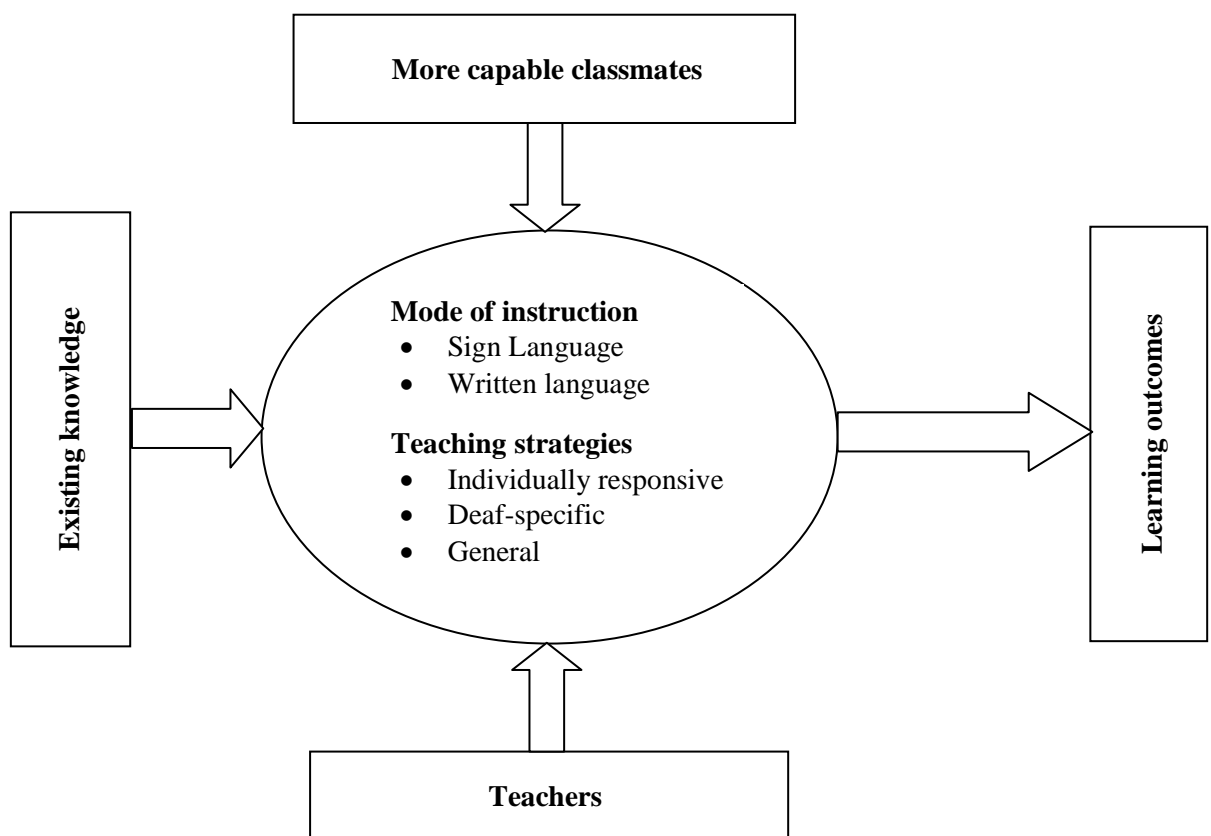
achieving learners have more interest in performance rather than in learning. Pryor & Crossouard (2008: 5) noted that in divergent formative assessment ‘exploratory, provisional or provocative descriptive feedback aimed at prompting further engagement from learners’ involves them in constructing understanding of new knowledge. This kind of collaboration is likely to motivate learners to want to gain more knowledge rather than just to pass examinations.

The education system in Kenya is described as examination-oriented where the role of summative assessment has traditionally been to limit access to higher levels of the education system due to larger numbers of pupils who complete an initial phase.

4.11 Conclusion: The Conceptual Framework

This section summarises the literature on the process of teaching and learning for deaf learners which has demonstrated that they are highly likely to experience delayed language development and in some cases lack of an oral language. This phenomenon tends to also be associated with a low literacy level when compared with that of hearing learners. Figure 4:1 illustrates how deaf learners learn through consolidating the review of literature in previous sections of this chapter.

Figure 4:1 The process of teaching and learning of deaf learners



The central oval shape represents the process of teaching and learning with two major elements: the languages used and the teaching strategies employed during the process. The literature shows that language plays a significant role in the cognitive development of any child since it facilitates social interactions. Sign language is mostly the first language of deaf children and the language used during instruction in school while texts are in a written language. This implies that deaf learners and their teachers need to have acquired significant levels of skills in these two languages for effective learning to take place. In addition, the literature shows that teachers tend to use different teaching approaches that either consider deaf learners as requiring individually responsive teaching strategies, deaf-specific strategies, or strategies that are generally used to teach all learners. The choice of the teaching strategies adopted to teach deaf learners seems to contribute to the amount of learning achieved during this process.

The box at the top and the one at the bottom with the arrows pointing towards the central area represent the teachers and classmates with whom the learner interacts and learns from through the activities taking place in the classroom. The box on the left represents the learner's state before the start of the lesson with knowledge that has been acquired previously, through school and out of school experiences. The arrow from the box points towards the centre, the teaching and learning activities that take place in class and continue towards the box on the right indicating the learning outcomes achieved at the end of the lesson. The space between the box on the left and the one on the right (the oval shape) represents what Vygotsky refers to as the Zone of Proximal Development, the period when scaffolding takes place.

While it appears that many deaf learners acquire language at a slower pace than hearing learners and that the nature of their language differs in mode and in structure from spoken languages, the literature indicates that to some extent the nature of sign language impacts negatively on their learning achievements. The literature initiated an urge to verify how the teaching strategies adopted by teachers contribute to the learning achievements of deaf learners. I therefore embarked on an exploration to understand how deaf learners acquire knowledge in upper primary classrooms in specialised units in Kenya using Social Studies as a case study.

Chapter 5 Methodology and Methods

5.1 Introduction

This chapter presents the methodological approach to the study. It evaluates the ontological and epistemological foundations of qualitative and quantitative research, and explains the justification behind the use of a qualitative approach. In addition, it reflects on issues relating to positionality and describes the methods used in data collection and analysis of findings.

5.2 Methodological considerations – Ontology and epistemology

Social science research raises issues concerning empirical inquiry with researchers seeking for strategies that make it possible for them to link lived experiences with our understanding of socio-cultural structures (Denzin & Lincoln, 1998). In an attempt to discover what regulates, explains and describes individual and social behaviour, different views of what social reality is and how knowledge is acquired have been held. The social researcher's understanding of the world and how knowledge is constructed determines his or her methodological orientation. Methodology encompasses ontology, epistemology and the nature of the researcher 'since it involves the consideration of and reflection on what is at stake in the processes of research, including the orientation of the researcher towards the research and all that is implicated by that' (Dunne et al., 2005:163-164).

Ontology concerns itself with the nature of reality, whether it is 'out there' in the world or it is socially constructed (Cohen et al., 2007; Bryman, 2008). Epistemology is concerned with the nature of knowledge as well as the relationship between the knower/inquirer and the known/knowledge. Positivism is 'an epistemological position which advocates for the application of the methods of the natural sciences to the study of social reality and beyond' (Bryman, 2008:13). This worldview holds that knowledge is based on sense experience and can be advanced only by means of observation and experiment where the researcher observes social reality and the end-product of the study is formulated in terms parallel to those of natural science and findings expressed in law-like generalisations (Cohen et al., 2007). Another principle of positivism is that science must, and can be conducted in a way that is value free, therefore considering reality as

objective (Bryman, 2008). Here the researcher is separated from his objects of study in that research is considered as ‘the discovery and assembly of what actually is’ (Dunne et al. 2005: 17). The role of the researcher is to obtain information about the pre-existing social world.

Positivism generally relies on quantitative research which uses standardized tools based on quantifiable data to test hypotheses. Experimentation, control of variables, mathematical equations, tables and graphs, validity and reliability are features associated with quantitative research and indicators of the scientific endeavour of social research. The quantification aims at allowing for inferences that create room for generalizations and causation beyond the experiment as well as the discovery of laws about the social world (Dunne et al. 2005; Bryman, 2008). It disregards the influence the researcher is likely to have on the phenomena being researched which are considered as objects or as producers of data (Robson, 2002).

Interpretivism, on the other hand, is similarly informed by a concern to understand the world as it is but sees this as to ‘understand the fundamental nature of the social world at the level of the subjective experience’ (Burrell & Morgan, 1982: 28). Social research takes place in ‘natural’ settings where the researcher, using an element of empirical enquiry, goes to find out rather than use controlled experiments. Contrary to positivism, the researcher who is guided by interpretivism understands knowledge as socially constructed, jointly negotiated between him or her and the people being researched (Dunne et al., 2005). While positivism seeks to give an explanation, and therefore allowing for prediction of human behaviour, interpretivism seeks to understand human actions without laying emphasis on the external forces that have no meaning for the people involved in the actions.

Interpretivist researchers assert that social reality is socially constructed through human interaction, and that one can only understand how the reality is represented internally, that is, symbolically. They argue that individuals’ behaviour can only be understood by the researcher seeking to understand individuals’ interpretations of the world from the inside and not from the outside. To them individuals seek to understand the world by developing subjective meanings of their experiences. These meanings are applied to certain objects and are negotiated socially, through interaction with others, and

historically, through historical and cultural norms that operate in individuals' lives (Creswell & Plano Clark, 2007).

The task of the interpretivist researcher is to understand the different sets of social constructions of meaning and knowledge which different people attach to the world (Robson, 2002). People, the subject matter of social sciences, are conscious and purposive actors who have ideas about their world and what is happening around them (Robson, 2002). In view of this, the interpretivist researcher views social science as a subjective task that deals with the direct experience of the people in specific contexts so as to understand and explain social reality through the eyes of the different participants as far as possible (Cohen et al., 2007).

The interpretivist strives to address the process of interaction among individuals focusing on the specific contexts in which people live and work in order to understand their historical and cultural settings (Creswell & Plano Clark, 2007). He or she considers the research participants as helping to construct the reality with him or her. As Wang (2010: 429) puts it: 'There is no separation between the knower/inquirer and the knowing because the knowing is socially and politically constructed by the knower. The term *knowing* is preferred over *known* or *knowledge* because of its fluidity'. Interpretivism is however criticised as not taking into account features of wider social structures (such as power, inequality and oppression) that shape behaviour and events (Cohen et al., 2007).

Critical theory has a deliberate political intention which focuses on the emancipation of individuals and groups in a democratic society. It aims at realising a society that is based on equality and democracy for all its members through not only understanding situations and phenomena but also bringing about change to them (Cohen et al., 2007). It seeks to emancipate the oppressed and it deals with the legitimacy and equality in issues regarding voice, power, participation, representation and inclusion. Bryman (2008: 15) building on Bhaskar (1989) echoes the same view when he claims that critical reality is made *critical* by the identification of generative mechanisms/structures which offer the prospect of introducing changes that can transform the status quo. Citing Habermas (1979), Cohen et al. (2007) notes that critical theory focuses on the emancipatory interest which intends to expose the operation of power and bring about social justice where domination and repression prevent the full realisation of individual

and social freedoms. Critical educational research aims at examining and questioning the relationship between school and society, for example, how schools propagate or reduce inequality (ibid). With regard to critical pedagogy, it argues, for example, that 'educators must work with and on the lived experiences that students bring to the pedagogical encounter rather than impose a dominatory curriculum that reproduces social inequalities... Raising awareness of any inequalities is a crucial step to overcoming them' (ibid: 32). The effectiveness of critical theory, however, requires to be examined or to be empirically tested in order to show the extent to which it has realised the equality, freedom, emancipation and empowerment that it claims (Morrison, 1995). It is criticised as running the risk of becoming merely contemplative although it strives to improve practical living.

Research that is focusing on vulnerable groups of people within the society can be conducted using the emancipatory approach. This approach to research is about facilitating the political encounter of social oppression at all the levels in which it manifests itself (Oliver, 1992). It grapples with the social reality that triggers oppression and has the idea that knowledge is structured by existing sets of social relations (Humphries et al., 2000). One of the applications of an emancipatory approach is to address issues facing people with disabilities holistically through discrediting the structures and processes which create disability and establishing a feasible dialogue between the research community and the people with disabilities (Oliver, 1983; Barnes, 1992; Humphries et al., 2000). Mercer (2002) outlines four features of emancipatory disability research: that the researcher must be committed to a social model approach to disability, should focus on a partisan research approach so as to facilitate the political struggles of people with disabilities, lay emphasis on social relations of research production and do away with the researcher-researched hierarchy, and employ pluralism in choice of methods and methodologies. Collective or individualised experiences of people with disabilities should be given room in emancipatory research but care must be taken to avoid creating negative images which this approach to research should constantly challenge (Stone & Priestly, 1996).

A researcher guided by the emancipatory approach should then focus on the fact that human beings attach meaning to social reality making human action meaningful and aims to bring about social justice. He or she is driven by the increased interest in politically motivated research which aims at attempting to end inequalities and

supporting oppressed groups (Humphries et al., 2000). Nevertheless, a researcher may not be in full control of the extent of change that his or her research might initiate. Neither should emancipatory research be considered successful only when it has rid all social barriers and liberated people with impairments from a disabling society. This is likely not to happen as Stone & Priestly (1996: 706) note, ‘none of the advocates of the paradigm have yet laid claim to the achievement of truly emancipatory research *within the context of a field study*’ (original emphasis). Emancipation and empowerment should be taken to mean ‘revealing social barriers, changing perceptions of disability, and generating political action’ (Mercer, 2002: 237). Oliver (1992) observes that emancipatory research is not out to empower people rather to facilitate the process of empowerment to a group of people who have decided to empower themselves through participation in research (Stone & Priestly, 1996). Since, as mentioned earlier, one of the features of emancipatory research is plurality of methods and methodology, either a qualitative or quantitative approach can be employed.

Any qualitative inquiry recognises that all research starts with some prior knowledge on a particular phenomenon which should be approached with openness to data (Meinefeld, 2004), a preparedness to amend one’s initial presuppositions, and a declaration of the amount of influence the researcher’s prior knowledge could have on the research (Cohen et al., 2007). Enquiry is a major feature of a qualitative study which starts with a single focus on an issue with relationships expected to emerge later rather than the supposition of a causal relationship of variables (Creswell, 2003). Theory is expected to emerge from the data inductively contrary to the predetermined hypotheses in deductive quantitative studies (Meinefeld, 2004). However, Bryman (2008: 373) argues that ‘pre-specified theories *can be* and sometimes *are* tested with qualitative data but the generation of theory tends to be the preferred approach’ (original emphasis). Qualitative research emphasises words rather than quantification in the collection and analysis of data. It often produces findings from observable face-to-face interactions that give the researcher room to be able to attend carefully to the overt behaviours, speech, and particular conditions of behaviour settings in which interaction takes place (Schwandt, 2001). The qualitative researcher seeks in-depth investigations of the phenomena aiming at identifying patterns, trends and relationships between variables through methods such as observations, interviews and documentary analysis. The researcher however, starts with a broad outline of an idea which may be revised or narrowed down

during the process of data collection. The same concept can be taken up by subsequent researchers and revised in relation to different research questions or studied in a different social context (Bryman 2008: 374).

5.3 Research Strategy

This study aimed at exploring the teaching and learning of Social Studies amongst deaf learners in upper primary schools in Kenya. It focused on the various aspects of the teaching and learning process, the preparation for teaching and learning Social Studies, sign language as language of instruction and the use of teaching and learning materials during instruction, and the style of assessment in relation to the purpose of assessment. To be able to understand this phenomenon, the use of a qualitative approach was selected. Qualitative research was considered suitable for the nature of this study because it facilitated exploration focusing on multiple interpretations of individual experiences as well as socially and historically constructed points of view, which are in turn intended to develop political and/or collaborative perspectives (Creswell, 2003). This study did not test any pre-specified theory from the researcher's perspective, rather theory was expected to emerge as far as possible from the experiences gathered from the participants in the study (Creswell, 2007).

This approach enabled me to recognise my participants as free individuals, capable of making choices and with valuable life experiences. The personal experiences of disablement from the participants (adults and children) offered rich information that was very relevant to the study. I tried to understand the participants from within their settings (the classroom) viewing the condition of deaf learners as a dimension of human difference and not as a defect (Barnes, 2001; Mertens, 2003) and endeavouring to understand how society responds to their learning needs. An exploration aimed at understanding possible conditions that could lead to disadvantaging deaf learners was made possible by the qualitative, inductive nature of my study (Creswell & Plano Clark, 2007). This was achieved through close interaction with the learners themselves through the observations made in the classrooms. Watching them learn and respond to teachers, having the opportunity to see their learning materials and how they used them in their learning, speaking and listening to them and their teachers (hearing and deaf) as they shared their experiences, are activities that would not have been possible with the use of a quantitative and deductive approach. There is a likelihood of the use of a

broader, wider pre-determined (closed) quantitative technique not being able to identify important issues if they are not on the initial lists that respondents are supposed to choose from or impose on issues that are included on the list yet they may not be of great importance to them. Being there gave me the opportunity to note things that I had not thought about before the start of this study. One important aspect about my study that illustrates this is the issue of deaf teachers teaching deaf learners. It was only after I encountered one deaf teacher that I decided to include more in my study. This would not have been possible if my study was of a pre-determined nature.

Consequently, the researcher had to actively enter 'the setting or situation of the people being studied to see their particular definition of the situation, what they take into account, and how they interpret information' (Schwandt, 2001: 245). Face-to-face interaction was employed so as to facilitate my participation as a researcher with an outlook of the participants in the study and to construct shared understandings. The project therefore took the form of micro-ethnographic research (Wolcott, 1990) since I did not spend a long period of time to collect the kind of data I required in my study compared to the expected period for a detailed ethnography. Ethnography is today considered as a research method in which the researcher is immersed in a social setting for an extended period of time, making regular observations of the behaviour of members of that setting, listening and engaging in conversations and interviewing informants on issues that are not observable (Bryman, 2008). Luttrell (2000) in her paper on her experience as an ethnographer states that ethnographic research is about making meaningful connections with others who may or may not be like us where the researcher should develop trust and empathy so as to get a deep understanding of the people being researched. Koistinen (2006) used two young research assistants, one of them with learning disabilities, while studying vocational training and employment for young people with learning disabilities. Similarly, in this study, I was able to employ a deaf adult research assistant who, despite the fact that my study involved children, played a very crucial role since he was considered as a role model and as one who was like them, a member of their Deaf community. This is in a small way in line with the emancipatory disability research which encourages the participation of and working in collaboration with people with disabilities in research activities that concern them. One limitation of this study is that I could not use a research assistant who fitted in the age category of those being researched since they were young school children who would

not have been suitable as research assistants. He did however have experience of the same school system as a deaf learner. Although I was seen as different since I am not deaf, I strived to make meaningful connections with the participants in order to develop trust and shared understanding. This was made possible by the knowledge of sign language that I had acquired which facilitated interactions with the participants and a deeper understanding of their behaviour.

The experience and exposure that participating in this research granted my research assistant has impacted positively in his life. For example, he was selected to attend a course organised by a local NGO on HIV/AIDS that targeted deaf people who had a secondary school academic certificate. A reference letter that I wrote for him was considered at the selection since he went through primary and secondary school education at the time when deaf learners were not allowed to sit for national examinations and so he did not have any certificate. The NGO interviewed me as one of his referees. He was a year later recruited by the same organisation as one of the facilitators in a similar course. He also registered and sat for the primary national examination in 2010 and he has expressed his wish to acquire a secondary school certificate although the change of curriculum poses a challenge to his dream.

Ethnography is creative, inventive, emotionally charged, and uneasy (Luttrell, 2000: 517). Luttrell considers reflexivity as playing a key role in ethnographic research of 'keeping alive contradictory ways of theorizing the world and seeking compatibility and not necessarily consensus' (p.516). For example, in my letter of introduction the mention of 'hearing impaired learners' was not taken positively by the deaf adults that I encountered during my preliminary visits to their organisations and some of them pointed it out to me. They expressed that 'deaf learners' would have been a better term to use since that is 'what they are'¹⁵. According to them, referring to the children as 'those with a hearing impairment' implied that I was focusing on their impairment, on what was lacking in them rather than as complete individuals. Conversely, I thought that by not referring to them as 'deaf' I was being more positive and polite. The issue of identity and the need to recognise the children as members of the Deaf community was communicated to me through their sentiments. I had to clarify my position to them until we finally reached an agreement of some sort in order to avoid conflict. Since I realised

¹⁵Informal conversation with a member of staff in one of the deaf organisations in Kenya

that in my discussions with the teachers and the learners the term ‘deaf’ was constantly used, during my interactions with them I also referred to the learners as ‘deaf’. At that stage, I still was not sure which term I would use in my report.

A Masters study on a similar topic was conducted in Kenya by Mukangu (2008) which focused on resource and pedagogic constraints in teaching Social Studies. He observed the teaching and learning activities involving deaf learners. Besides the use of a questionnaire, the study gathered information from the teachers’ experiences through interviews but did not focus on the voices of the learners themselves through expressing their experiences in learning Social Studies nor the experiences of deaf teachers. In addition, the study used a case study design focusing on a single case (a special school) and it also used a qualitative approach. My study aimed at building on Mukangu’s work by including deaf teachers and learners as participants with the aim to understand their perspectives on teaching and learning Social Studies and by exploring in a greater number of schools mainly focusing on units in the urban and rural remote areas.

The present study focused on the teaching and learning of Social Studies in upper primary classes in six schools – 2 units, 3 public special schools, and 1 special private school, thus making it a holistic nested multiple-case study (Yin, 2003; Punch, 2005). Yin (2003: 46) states that one advantage of using multiple cases is that ‘the evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust’. A multiple case study ‘tries to bring into prominence what is common to a group of phenomena’ (Ghesquière et al, 2004). The approach used in conducting this study was twofold – qualitative and emancipatory.

5.4 Positionality

My identity, background and experience were key aspects in the process of planning my research. My identity as a hearing researcher studying the teaching and learning of deaf learners influenced the nature of the effect of my presence within the research setting (Dunne et al., 2005) to some extent. It is important for every researcher and his or her participants to understand who he or she is within the research context. I strived to monitor my identity throughout the research process registering its impact on the social interactions all along. Stephens (1990) notes that to some extent we are all ‘outsiders’ in our research context, whether we are native scholars examining a new educational project in a familiar environment or expatriates researching familiar practices in a

foreign setting. Positionalities constantly change at different stages of the field research. Srivastava (2006: 214) argues:

Identities are multiple and continually mediated constructs in response to the anticipated or experienced perceptions of how participants receive, accept, or reject the researcher's positionalities vis-à-vis their own over the course of a research study or during single field events.

Identity issues are generally seen as problematic and affecting the research hence the need for any researcher to consider reflexivity as an important aspect of his or her study. Reflexivity allowed me to question my own interpretations of what I experienced, observed and felt (Dunne et al., 2005).

With this in mind, I tried as much as I could to address this issue before the start of my research and as I proceeded on with the study where I had to adjust and portray myself differently depending on the circumstance or the participant.

5.4.1 My identity – Insider and Outsider

My study focused on the learning process among deaf learners and so I knew I would spend most of my field work time in schools with these learners. The dominant language among learners and other deaf people in Kenya is KSL. Language is a key component in any qualitative research since it is a communication tool and it facilitates interaction. This was the first barrier I had to consider ways of dealing with since teaching and learning among these learners take place in sign language. Although I could have used the expertise of a sign language interpreter, I opted to learn sign language instead in order to be able to interact directly with the people for whom the study was intended – deaf learners. As Srivastava (2006: 213) puts it 'the choice and use of a specific language is not merely a technical consideration but one deeply embedded in the social processes of engagement in the field, and affects researchers' positionalities with participants'. I therefore enrolled for a Basic KSL course with KSLRP based in the University of Nairobi before the start of my fieldwork. The course normally takes three months in two hour sessions per day but due to the time constraints, I requested to have an intensive one month training with full day sessions and this was granted. After the first week, I and my tutor would go to a certain area on one of the streets in Nairobi where deaf adults often converge and we would spend about an hour each day conversing with them. During the introduction by my tutor, who was deaf, they would always ask whether I was deaf and when they heard I was not

deaf, they would want to know more about who I was. When I told them why I was learning their language, they always seemed to appreciate the fact that I was planning to do a study that would be helpful to children who are like them.

Although equipped with some basic sign language, I still had to address the need for a research assistant. The nature of my study necessitated employing a research assistant due to the fact that teaching and learning takes place in sign language in Kenya so there was need to video record the classroom observations. I decided to employ a deaf research assistant for three main reasons: firstly, to help me enhance my knowledge of KSL; secondly, to help me understand any signs that I was not familiar with during the transcription of the video recordings especially when American signs were used; and thirdly, to serve as a role model for the deaf learners. The first two aims would have been achieved through the use of any hearing person who was familiar with KSL and ASL but due to the emancipatory approach that I had decided to use to a degree in this study, I considered that working in collaboration with a deaf adult who have gone through the same education system and as a KSL instructor for hearing adults at the time, would make the study more meaningful. This was quite significant to the study.

It is only after I started my fieldwork that I understood the power of language. When I went to the classrooms and I introduced myself in sign language to the learners, the reception was very positive. It was the same with my research assistant. After the introductions, they would always want to know our sign names and whether we were deaf or hearing. It was only then that I learnt I had to have a sign name and since I did not have one, I asked the learners of the first school I visited to get a name for me which they did. From then on, every time I met a new group of learners, I would tell them my name and my new sign name since I then understood the usefulness of a sign name. The deaf teachers who participated in this study were all receptive partly because of my knowledge of some basic sign language and also because of the context of my research. My not being deaf did not seem to matter to them as long as they were able to communicate and share with me their experiences and viewpoints. The situation was the same when I visited organisations for/of deaf people where I encountered deaf adults. In two of the organisations where the receptionists were deaf, after I introduced myself to them and explained to them the purpose of my visit, they both sought to know whether I was deaf and immediately got interested in my study and engaged me in conversation. One of them, a male, quickly offered me a cup of tea and talked to me about issues

related to my research interest and about his experiences in school until my participant arrived. When I met the second receptionist, a young woman, I was with my deaf research assistant whom she knew. She sought more information on my research interest but she engaged my research assistant more than me maybe due to the fact that I was not very fluent in sign language. She then turned and told me, 'I am sure my boss will be very happy to hear about your research interest and will offer you whatever help you require.' This gave me the impression that I was not so much viewed as an outsider. My association with my research assistant made me more of an 'insider'. This resonates with Goffman's (1968) description of 'the Own' and 'the Wise' where I was the 'wise' and was 'accorded a measure of acceptance, a measure of courtesy membership in the clan' (p. 41) which my research assistant identified as 'his own'.

Being Kenyan and a teacher I was received well in most of the schools especially at the management level. Most of the teachers of deaf learners are hearing so the fact that I was hearing did not bother them especially after I mentioned to them that I have been a teacher and that I knew some sign language. However, not all of them were comfortable with the idea of my research and so they thought that I was there to play a supervisory role with the intention of identifying their weaknesses. Mostly this happened when a school administrator introduced me to the teachers and made it sound as if it was mandatory for them to let me observe their lessons. Bryman (2008: 408) cautions researchers trying to secure access in closed contexts when he states, 'people will be suspicious about you, perhaps seeing you as instruments of top management'. Nonetheless, after clarifying the objectives of my research, some felt at ease and welcomed me while others chose not to participate.

Overall, I would say, I was considered an outsider in some contexts and an insider in others. To my surprise, it appeared I was considered more as an insider by deaf adults and deaf learners than by some hearing teachers.

5.5 Case study Research Design

Another key element of the research design was the use of a case study approach which Yin (2003) refers to as 'a comprehensive research strategy'. He defines a case study thus:

Case studies are the preferred strategy when “*how*” or “*why*” questions are being posed, when the investigator *has little control over events*, and when the focus is on a contemporary phenomenon *within some real-life context*. ...the case study method allows investigators to retain the holistic and meaningful characteristics of *real-life events...*’ (Ibid: 1, emphasis added).

One of the aims of this study was to understand *how* things are done and *why* they are done that way. Stake (1998: 86) states that ‘case study is not a methodological choice but a choice of objects to be studied’ and is not necessarily a qualitative technique (Stake, 1998; Cohen et al., 2002; Punch, 2005; Bryman, 2008). A case study researcher considers himself or herself as part of the research project thus requiring a strong self-reflection which subsequently must not interfere with any necessary spontaneity (Ghesquière et al., 2004). This approach suited this study since it gave me room to position myself in the setting and observe events taking place within the schools without seeking to control them.

In order for any qualitative researcher to be able to understand, discover, and gain insight into a given phenomenon, he or she will need to select a sample that will facilitate maximum learning which can be achieved through purposive sampling (Ghesquière et al., 2004). The main goal of purposive sampling is to have cases that are relevant to the research questions and those that will provide the researcher with variety among the members in the sample (Bryman, 2008). Although case study research has been criticised as difficult to generalise to other settings due to the small number of cases selected, it is argued that moderate generalisations are possible. Multiple cases that are purposively selected facilitate thick descriptions that can later allow for at least partial transferability of findings to other settings (Bryman, 2008). Cases for this study were purposively selected and this was done in three levels: the locality, the type of schools, and the participants thus becoming a nested case study.

5.5.1 Selection of cases

Originally, this study aimed at focusing on the barriers that deaf learners encounter in learning. The settings where data was to be collected were selected within rural and urban locations and the cases selected included units for deaf learners located in mainstream pre-school and primary schools, special primary schools, government institutions, and organisations for/of deaf people. The participants included head teachers of the selected schools, teachers, parents, government officers and NGO staff.

Two rural special schools, two units (in a pre-school and in a primary school), four government organisations and four NGOs for/of deaf people were selected.

After piloting and two months of data collection, I discovered that the research focus was too broad and a need to narrow down the focus was inevitable. After consultation with my supervisors, I narrowed down to the teaching and learning of Social Studies in upper primary schools focusing on special units. The reason behind the selection of Social Studies was the general poor performance of deaf learners in KCPE. Nevertheless, it turned out that some units did not have learners in upper primary, others had pupils only in some upper primary classes, and some integrated their learners in upper primary with their hearing learners in the mainstream, while others taught all their learners together in one class regardless of their level.

During the first round of data collection, I discovered that the schools which I had categorised as rural due to the fact that they were not located in the major city were semi-urban because of either being close to the capital city or within a smaller city. I ultimately, decided to retain 'urban' and 'rural' as the criteria for selection of the locality where 'urban' referred to the area within the capital city and any other smaller cities and 'rural' represented areas outside the city and characteristic of the countryside. I therefore selected two districts: one which is approximately five hundred kilometres from the capital city and which had been found to have the highest number of deaf by a national survey conducted by Kenya Medical Research Institute (KEMRI) in conjunction with KSDC in 1998, and the second district hosts the capital city. However, when I visited the schools in the rural district, a major discrepancy in the schools evolved which necessitated the use of a different categorisation of the schools. One school was in an area that was completely detached from the city that lacked amenities, such as health services, piped water, electricity, a reliable communication network, and a good road network. I therefore categorised this area as 'remote'.

In the rural district, almost all special units generally enrol learners only in lower primary classes. The learners are later moved to the special school in the district once they reach the upper primary level of education. The unit which was selected was the only one with learners in Standard four and Standard five. Consequently, the special school in the area was selected as a case. Although both institutions are off the tarmac road, the special school is about fifteen minutes away from the nearby town on a

motorbike, while the unit is about an hour away by public means of transport on a dusty road and a further forty minutes' walk to the school and when one is lucky, about twenty minutes' drive on a truck collecting ballast past the school. One out of three possible units attached to public mainstream schools in the urban area was selected as research did not seem possible in the others for the following reasons.

One of the units had only one upper class learning with others in one classroom but in separate groups with different teachers. This was Standard four with seven pupils. All the other learners in upper primary were integrated with hearing learners. During my first round of data collection, before I narrowed down to the learning of Social Studies, I managed to observe a few lessons in the school. Standard five had seventy pupils, two (one boy and one girl) of whom had hearing impairment. The lesson observed was Mathematics and the teacher teaching this lesson was trained as a special education teacher so occasionally she would use sign language when addressing the two deaf learners. However, most of the teaching and learning was oral. Nevertheless, I observed that the teacher seemed to concentrate more on the two deaf learners bearing in mind that the class had other sixty eight pupils. This gave me the impression that it probably happened because I was there specifically to observe how the two learners were involved in their learning. Standard six had a total of sixty pupils where only one girl had a hearing impairment. The girl was said to have some residual hearing and so during the Mathematics lesson that I observed, the hearing teacher, who did not know sign language, used speech throughout the lesson. The pupil sat somewhere in the middle of an overcrowded class although she had no hearing aids. Despite efforts by the teacher to explain to the pupil (verbally) how to work out the problem on a one-on-one basis after she realised that she did not understand the explanation given to the whole class, the pupil still could not work out the sum correctly on her own. The concept being taught was converting litres into millilitres and millilitres into litres. While placing her in this class was meant to assist her to 'regain her speech'¹⁶, she seemed to be lagging behind her hearing peers.

In Standard eight, there were three deaf pupils (one girl and two boys) learning together with forty three hearing pupils. I observed the teaching of Kiswahili where they were learning vocabulary related to shapes. The hearing teacher did not know any sign

¹⁶ Informal conversation with the special education teacher, 13th October 2009

language and so his lesson progressed in Kiswahili. One of the pupils had become deaf two years before my visit so he knew Kiswahili and could lip-read but the other two were pre-lingually deaf. The three pupils just drew the shapes and copied down the notes from the chalkboard without any other form of participation. The boys sat in a group of eight pupils and they strived to look at one textbook which was shared within the group as they did an exercise while the girl sat in another group of eight pupils sharing a textbook. In a discussion with the teacher after the lesson, he told me that he simply did not know what to do since he was not trained in special education and he was not consulted when the three learners were placed in his class. He argued that it was the responsibility of the special education teachers in the school to assist the deaf learners. Having made this observation, I decided not to select the unit after narrowing down my focus since there were chances that the situation would have been the same in terms of the learning of Social Studies where teaching and learning activities seemed to be intended for the hearing learners without any consideration of the deaf learners present in the classroom.

Conversely, the other unit, attached to a middle class regular school, had deaf learners learning separately in their own large and spacious classrooms, although one large room was shared by deaf learners in two different grades and were taught separately. Nevertheless, it had been noted to have issues concerning my access to some classrooms as discussed later in this chapter under negotiating access. This led to dropping it as a possible case for this study. Although the selected school is in the capital city, most of the learners are slum dwellers from four slum areas in the capital city and some walk long distances to school. The urban area does not have a special school but it has more units with learners learning separately at their respective grade levels rather than together in the same classrooms as is the case in some units in the rural areas. Table 5:1 summarises the characteristics of the selected cases which are schools or units within regular schools for deaf learners.

The selection of teachers was simplified by the context of the study since they had to be teachers of Social Studies in upper primary classes. Another criterion which was used in selecting teachers was whether they were deaf. As an interpretivist researcher I considered this study as a subjective task that aimed at dealing with the direct experience of people in specific contexts so as to understand and explain social reality through the perspectives of those involved.

Table 5:1 Characteristics of the selected Schools

	School	Location	Type	Classes with learners with HI	Learning environment
Public special units	A Tumaini**	Urban (10 minutes' drive from the city centre)	Day	<ul style="list-style-type: none"> Nursery, Pre-unit, Standard 1, 3, 4, 6 and 7 8 teachers 	<ul style="list-style-type: none"> Lower primary pupils learning in one room but in small groups in their separate grades Upper primary pupils learning in one room but in small groups in their separate grades
	B Huruma**	Remote (approx. one hour and a half drive from the nearest town, off the tarmac road)	Day	<ul style="list-style-type: none"> Pre-school, Standard 2, 4 and 5 2 teachers 	<ul style="list-style-type: none"> All the pupils learn together in one large room taught at the same time by the same teacher despite being in different grades (multi-grade)
Public special schools	C Wema**	Rural (off the tarmac road but 15 minutes' drive from the nearest town)	Residential	<ul style="list-style-type: none"> Full school with classes from pre-school to Standard eight 16 teachers (15 hearing & 1 deaf) 	<ul style="list-style-type: none"> Upper primary classes with approximately 13 pupils each
	D* Upendo**	Rural (With electricity and piped water – 40 minutes' drive from the nearest town)	Residential	<ul style="list-style-type: none"> Full school with classes from pre-school to Standard 8 3 deaf teachers 	<ul style="list-style-type: none"> Standard 8 with 14 pupils No other data for the rest of the classes
	E* Umoja**	Urban (5 minutes' drive to the city centre)	Residential	<ul style="list-style-type: none"> Full school with classes from pre-school to Standard eight 2 deaf teachers 	<ul style="list-style-type: none"> No data
Private Special School	F* Imani**	Urban (20 minutes' drive from city centre)	Residential	<ul style="list-style-type: none"> 2 pre-school classes, Standard 1, 2, 4, 5 & 7 Form 1 4 teachers (3 hearing & 1 deaf) 	<ul style="list-style-type: none"> Enrolment is low with some classes with only one – three pupils One pupil in Standard 7
<p>* Schools visited while interviewing deaf teachers</p> <p>** School names are pseudonyms</p>					

Deaf teachers' experiences as pupils and as teachers were significant to this study. As discussed earlier, emancipatory disability research advocates for collaboration between the researcher and disabled people in research activities. Having deaf teachers as participants in this study facilitated disabled people to have a voice in and through the research process as they shared their experiences in classrooms as learners, and as teachers of deaf learners. All the deaf teachers in this study, except Bruno, are post-lingually deaf. Currently some of these teachers, despite having rich experiences and having had training as teachers, are not employed by the government to assist in the teaching of deaf learners. Some of the ones found in schools were employed on temporary basis by the Boards of Governors that manage those schools with poor remuneration and terms of service. These deaf teachers were therefore sampled using snowball sampling. Out of the three schools identified, I encountered one deaf teacher who gave me the contacts of two others and through this snowball method I managed to reach four others. It was through my attempts to reach these teachers that I ended up visiting three extra schools. In total 22 teachers were interviewed, 14 of whom are hearing and 8 are deaf. Of the 14 hearing teachers, 4 are heads of units and 2 are head teachers of two of the sampled schools. The head teacher of one unit had been in the school for only one week and so he was not in a position to offer concrete information regarding the school. He, nonetheless, directed me to the head of the unit for any information related to the unit.

Four government institutions had been purposively selected due to their relevance to the research focus but only three were accessed. One of the organisations is in charge of developing the curriculum and teaching and learning materials for schools and colleges, the other one is mandated to train teachers for special educational needs, while the third one is the body that administers national examinations. One of the key components of the 'emancipatory' research model is accountability to the disabled community (Barnes & Sheldon, 2007). Although the main idea is to facilitate full control of the research, four organisations for/of deaf people whose objectives and activities are related to the objectives of this study, were selected to be part of the study. Three of these organisations are run by deaf people themselves while one of them has two deaf employees. The need to hear from deaf people and to understand the role they play in ensuring that deaf children access quality education was imperative since the study aimed at taking an emancipatory approach. One is the national organisation for deaf

people, another one deals with the teaching and developing materials for KSL, the other deals with the welfare of deaf children, and another one supports the training of deaf teachers. The national organisation turned out not to be very active since most of its activities have been taken up by the other three. Table 5:2 and 5:3 give a clear illustration of the participants in the study.

Table 5:2 Research participants in schools

Participants	Pseudonyms	Description
Head teachers 2 male	<ul style="list-style-type: none"> • Tumaini school • Wema school 	<ul style="list-style-type: none"> – Diploma in Special Education holder and at the time doing a Degree course. Taught deaf learners for 6 months. Head of the school for 13 months. – Diploma and B.Ed. in Special Education holder, taught hearing learners for 10 years and deaf learners for 11 years. Head of the school for 10 years.
Heads of units 1 male 3 female	<ul style="list-style-type: none"> • Hassan • Mercy • Zainabu • Purity 	<ul style="list-style-type: none"> – Hearing teacher who had taught hearing learners for about 10 years. After a 2 weeks' informal induction course from teachers in Wema special school, started Huruma unit. After 7 years, attained a Diploma in Special Education at KISE. Had 12 years' experience teaching deaf learners. – Hearing teacher and head of Tumaini unit, trained and learned ASL at KISE. Taught deaf learners for 15 years. – Hearing teacher and head of the unit used for the pilot study in the urban area, – Hearing teacher and head of unit in the urban area with upper primary learners who are integrated in the regular classrooms.
Hearing teachers 5 male 3 female	<ul style="list-style-type: none"> • Juma • Said • Ali • Yusuf • Charity • Rose • Hamadi • Joy 	<ul style="list-style-type: none"> – Taught hearing learners for 12 years and deaf learners for 3 years. Had just completed the Distance Learning Special Education course run by KISE – Taught hearing learners for 10 years and deaf learners for 4 years. Had completed the Distance Learning course run by KISE. – Taught hearing learners for 14 years and deaf learners for 11 years. Had completed the Distance Learning course run by KISE. – Trained at KISE after teaching hearing learners for 13 years,, taught deaf learners for 2 years. – Standard 4 teacher in Tumaini school. Taught hearing learners for 15 years and was at the time registered for a 'school-based' degree course on Special Education. Had taught deaf learners for only a month. – Taught hearing learners for 5 years and after training at KISE, taught deaf learners for 20 years. At the time teaching Standard 6. – Trained at KISE and had taught deaf learners for 6 years. Had previously taught hearing learners – Taught hearing learners for 7 years, trained at KISE and had taught deaf learners for 3 years
Deaf teachers	<ul style="list-style-type: none"> • Asha 	<ul style="list-style-type: none"> – A beneficiary of GDC funding teaching Standard 8 at Umoja school. Employed by the School board for 2 years and was later

4 male 4 female	<ul style="list-style-type: none"> • Bruno • Faith • Fatuma • Hope • Innocent • Mark • Salim 	<p>employed by the government. Taught deaf learners for 10 years.</p> <ul style="list-style-type: none"> – An American peace corps volunteer with an MA degree in Special Education. Had taught Standard 7 and 8 classes at Upendo school for 1 year. – Standard 5 teacher at Upendo school, trained as a regular teacher then studied for a Diploma at KISE. She is not a beneficiary of the GDC funding and was employed by the government. – A beneficiary of GDC funding teaching Standard 6 at Wema school. Taught deaf learners as a student teacher for 9 weeks and 3 months as a trained teacher. She was employed by the School board. – A beneficiary of GDC funding teaching Standard 5 & 7 at Imani school. She was employed by the School board. – A beneficiary of GDC funding teaching Standard 4 at Upendo school. He was employed by the School board. – A student teacher at Tumaini school on teaching practice and a beneficiary of GDC funding. – A beneficiary of GDC funding teaching Standard 8 at Umoja school. He was employed by the School board. Had taught deaf learners for 3 years.
Pupils 4 male 4 female	<ul style="list-style-type: none"> • Jackie • James • Jayne • Jemima • Jim • John • Josh • Joyce • Joseph • Jude 	<ul style="list-style-type: none"> – 21 year old Standard 5 pupil at Huruma Unit – 11 year old Standard 4 pupil at Tumaini School – 16 year old Standard 7 pupil at Upendo school – 17 year old Standard 7 pupil at Upendo School – 17 year old Standard 8 pupil at Upendo School – 18 year old Standard 8 pupil at Wema School – 15 year old Standard 8 pupil at Upendo School – 15 year old Standard 7 pupil at Wema School – 15 year old Standard 4 pupil at Tumaini School – 22 year old Standard 5 pupil at Huruma Unit

Table 5:3 Other participants

Government Institutions		
Name	Number/Gender	Position
Kenya Institute of Education	1 male	In charge of curriculum adaptation for deaf learners
Kenya National Examinations Council	1 female	In charge of the adaptation of examination papers for deaf learners
Kenya Institute of Special Education	2 male	Head of KSL Department and the Academic Registrar
Organisations for/of deaf people		
Name	Number/Gender	Position
Kenya National Association of the Deaf	1 deaf male	National Chairman
Kenya Sign Language Research Project	1 deaf male	Researcher
Kenya Society for Deaf Children	1 hearing male	Programmes Coordinator
Global Deaf Connection (Kenya)	1 deaf male	Director

5.6 Negotiating Access

The settings in which this study focused on are the kind that Bryman (2008) refers to as closed or non-public and as a researcher playing an overt role, access to these social settings had to be officially sought. 'Gaining access to most organisations is not a matter to be taken lightly but one that involves some combination of strategic planning, hard work and dumb luck' (Bryman, 2008). The nature of my study required that I get authorisation from the Ministry of Education where I did not anticipate encountering major problems. I also assumed that once I got authorisation from the government, I did not need to seek any other form of authorisation to gain access to any setting. I was wrong.

When I went to the Ministry's headquarters, I was referred to another building which houses the National Council for Science and Technology which is under the Ministry of Higher Education, Science and Technology. There I was referred to their website where I was to download the application form. The form had three sections that posed a lot of difficulties for me. The most challenging one was that it required me to state the location of fieldwork which I had not identified at the time. I then decided to get approval by the schools before I handed in the application form but no head of any school would listen to me without the official authorisation from the Ministry. So I selected the locations without prior consultation with the schools I had in mind. After approximately one month and a lot of persistence, I managed to get the authorisation letter which was accompanied by a permit with my identification on it.

The letter of authorisation that I received from the Ministry stated that I had to report to the District Education Officers (DEOs) of the respective districts where I was going to conduct my research. In the two rural districts that I had selected, I got another letter of local research authorisation on the same day which I was to take to the schools but the case was different at the Education Office at the City Council. I had to write an application letter seeking authorisation and pay another fee to be allowed to visit any school within the jurisdiction of the Council. This took another two weeks to be processed. Armed with four different copies of authorisation letters, I was able to access the schools without having to seek any further formal permission from the head teachers although I discussed the nature of my research with them. The education system in

Kenya is hierarchical where authority follows a top-down system giving head teachers less autonomy than that exercised by head teachers in other countries such as the UK (Alexander, 2008).

However, after being in the field for two months, the need to narrow down my focus arose which necessitated me to include special units in the rural areas as cases for my study. The two rural districts previously selected only had special schools but had no special units. This brought about the need to move to another location warranting me to seek approval to access the schools there. I had to start from the National Council again but this time it took only a few days.

My efforts to reach deaf teachers required me to visit some schools that were not within the areas stated in my research authorisation. In one of the schools, the head teacher insisted that I had to get authorisation from the Municipal Education Officer in charge of the area in order to interview one of his deaf teachers. At first I did not think it was possible to get the letter but one of the hearing teachers in the school, whom I knew since college days, encouraged me 'to try my luck'. To my surprise, the letter from the National Council which I thought would have a negative impact since it did not mention the particular district, made it easy for me to get the authority to access the school. When I went back to the school the following day, I was allowed to interview the two deaf teachers working there.

Since I had learned my lesson, I applied one of the 'tactics' suggested by Bryman (2008: 407): 'Use friends, contacts, colleagues, academics to help you gain access: provided the organisation is relevant to your research question, the route should not matter'. Through one of the teachers with whom I had made acquaintance, I got to know that there were three deaf teachers at Upendo school. Due to the cordial relationship between her and the deputy Head teacher, it turned out that this was the school where we got the best reception. Since there was more than one deaf teacher, we visited the school on two occasions and we were even allowed to observe a lesson taught by one of the deaf teachers. At Imani school, the deaf teacher herself had informed the head teacher about our planned visit and she made sure that she took us to his office for introductions before the interview. We also observed her teach a Standard 8 Social Studies lesson.

As Bryman (2008: 408) states, 'securing access is in many ways an on-going activity'. Having gained access to the setting leads one to seek access to the people involved in the study. In my case, I had to reach the teachers and the learners. Some teachers would deny me access into their classrooms even after gaining access into the schools. This happened once when I was introduced by a school administrator to the teachers where two of them seemed to have viewed me as acting on behalf of the administrator to check up on them and would not allow me to observe their lessons. After explaining my objective, they consented but not without informing me that I needed not to go through the school administration but rather go straight to their classes and request them directly.

Adults tend to play the role of 'experts' who know what is best for children and therefore make decisions about their lives without consulting them (Barnes & Sheldon, 2007). The pupils' opinion on whether I should stay in the classrooms or not was not sought due to hierarchical power relations. Since the teachers gave their approval, they did not see the need to ask the pupils for the same. Every time after a teacher allowed me to sit in his or her class, I would inform him or her that the pupils needed to know who I was and why I was there. Some would explain to them while others would ask me to do it (which I preferred to do). The situation was the same when it came to conducting interviews with the learners.

Examination related issues are treated with a certain level of confidentiality and so accessing the KNEC with the purpose of doing research required authorisation from the Council Secretary/Chief Executive Officer. I therefore had to write, explaining exactly what my research was all about and request to be allowed to speak to an employee. Depending on the focus of the study, he decides the most appropriate officer and then communicates the researcher's intentions to him or her. After a week, I was given the go ahead and was directed where to find the participant who turned out to be quite interested in the study. With the authorisation, I managed to get an appointment for an interview immediately.

The main lesson I learnt in this whole process of seeking and negotiating access is the level of confidence, openness and transparency that it creates for both the researcher and the participants once one has official authorisation to conduct research.

5.7 Ethical considerations

Ethical principles are very important in any form of research. In social science research, these include seeking informed consent, safeguarding the confidentiality and safety of participants, respect for participants' privacy, among others.

5.7.1 *Informed Consent*

In addition to the authorisation letters from the national council and the local district education offices, I sought informed consent from the participants with full knowledge that informed consent should be freely given and voluntary. With regard to participants signing a consent form, this never happened although it had not been overlooked. During my pilot study, I had asked teachers to sign a consent form which I had prepared in advance together with my research tools but they declined arguing that they did not want to use their signatures on a form that I would take away from them in case it was used against them. Morrow (2009: 5) points this out in relation to qualitative research in various international settings, 'Some teams have found that signing a paper consent form is not acceptable for various reasons, mostly because people are wary of putting their signature on forms'. So I decided not to ask my participants to sign any form but in order for them to build trust in me, after my oral introduction, I gave them and asked them to read and keep my letter of introduction which had all the information that was in the consent form as well as my contact details. The letter assured them of confidentiality and mentioned that one was free to withdraw from the study if the need arose.

For classroom observations, I asked the teachers if they were comfortable if I video-taped them as they taught and explained to them why I wanted to record the lessons. I also promised them that they would only be used for the purposes of the research and if they wanted to have them once I was through with the transcriptions, I would do so. Most of them had no issue with the recording while some only allowed me to do it after verifying that they would not be used anywhere else apart from for the intended purpose. Only one teacher refused to be video-taped and it was obvious that she was not very happy with my presence in her class although she later consented to the observation but not to the video-recording. She mentioned that she was only allowing me into her class because the school administrator had said that I could do it. Heath et al. (2010) commenting on the issue of gaining access and being allowed to record note

that there should always be a distinction between ‘getting in’ and ‘getting on’ with the participants. They caution that most of the times, the people that researchers negotiate access to the setting with are most likely not the people who will be filmed. With the understanding that both parties need to agree for the research to progress, I eventually decided not to observe her class and explained to her the reason behind it. The same procedure was followed for the audio recording and all the participants who were requested agreed to it. Roald (2002) while interviewing deaf teachers had to video record the interview sessions so that he would capture the whole conversation. All the interviews with deaf participants were video-recorded since they took place mostly in sign language and it was also important so as to capture the non-verbal communication expressed in body language through the use of facial expressions, and other gestures. All of them gave their consent to the video-recording.

It would be good to note here that although the concept of individual consent is considered crucial in the developed world, in some of the developing countries, the concept of elders, family and community tends to pose difficulties in following up individual consent (Morrow, 2009). The ESRC Research Ethic Framework (2005) also recognises that different cultures have different views on the approaches to informed consent:

Emphasis on the individual can seem inappropriate or meaningless in some cultural contexts, where the individual may take less precedence than broader notions of kin or community (p. 24).

Younger individuals are likely to find it hard to refuse to participate if their elders have given their assent for the research to take place. Since the children involved in this study were only encountered while in the school environment, consent to interview deaf learners was sought from the schools administration, the heads of units and the subject teachers who decided which pupils would participate and explained to them in advance why I wanted to speak to them. Their parents were not consulted since the study was specifically concerned with their learning in school and in the Kenyan context, generally parents would not object to anything that is supported by the school. Consent is understood to be an on-going process (Morrow, 2009) so I would then introduce myself and ask them if they were willing to answer some questions for me and I informed them that they were free to ask me any questions if they wanted to know

something from me. I also sought their consent to record the interviews. All of them assented and the interviews were conducted.

I assured all the participants of confidentiality and anonymity and promised to share the findings of the study with them through the institution.

5.8 Methods of data collection

The data required to answer my research questions was qualitative in nature and it was collected in micro-ethnographic studies of the different cases selected. The data was collected through the use of classroom observations, in-depth or semi-structured interviews and collection of documents.

5.8.1 Preparation of research instruments

Prior to the start of my fieldwork, I prepared my research instruments guided by the methods I intended to use to collect my data. These were: classroom observation guidelines, semi-structured interview guides, a questionnaire for parents and/or caregivers and a list of documents that I expected to collect. The construction of the observation schedule was guided by research questions as the main areas with sub-sections under them. These were first tested in a mainstream school in the UK which has a unit for deaf learners who learn together with hearing pupils. This testing was of great help because I learnt that the schedule was only a guide and so any details needed to be kept in the lesson observation notes. I also learnt that observation of the actual teaching and learning and noting down all the relevant activities that took place was crucial. The semi-structured interview guides were for teachers, head teachers, participants in the government offices and participants in the organisations for/of deaf people. A questionnaire for the parents and a guide for a focus group interview with parents were also prepared.

After the initial data collection took off, as mentioned earlier, the focus of the study had to be narrowed down. This prompted restructuring of the research questions and the research instruments. An interview guide for deaf teachers and one for the pupils were prepared while the questionnaire and the focus group interview guide for parents and/or caregivers was done away with.

Before embarking on any activity in the schools, I would first meet the head teacher who in most cases delegated the duty of facilitating my research among the teachers

either to the deputy head teacher or the head of the unit depending on the nature of the settings. I would then explain to the teachers why I was conducting my study and that we would work on a schedule with them depending on their availability on the school time table. I tried as much as I could not to disrupt the normal school routine by availing myself on the specific day and time they were scheduled to teach. We would then agree on when to have the interview although I preferred to have it soon after the lesson ended. Table 5:4 and 5:5 show the summary of the number of observations and interviews conducted during the data collection period.

Table 5:4 Number of observations conducted

Location	Date	Teacher	Description	Duration
Huruma Unit	20/01/2010	Hearing	Standard 5 – Physical environment	55 mins
Wema school	25/01/2010	Hearing	Standard 4 – Rivers, oceans and lakes	35 mins
Wema school	26/01/2010	Hearing	Standard 5 – Physical Features	35 mins
Wema school	27/01/2010	Hearing	Standard 7 – Calculation of time	35 mins
Wema school	27/01/2010	Deaf	Standard 6 – Formation of physical features – Rift Valley	35 mins
Tumaini unit	08/02/2010	Hearing	Standard 4 – Vegetation in our Province	35 mins
Tumaini unit	08/02/2010	Hearing	Standard 5 – Main physical features of Kenya	35 mins
Tumaini unit	12/02/2010	Deaf - student	Standard 7 – Climatic Regions of Africa	35 mins
Imani private school	10/02/2010	Deaf	Standard 7 – Map interpretation	35 mins
Upendo school	17/02/2010	Deaf	Standard 8 – Map reading	45 mins

5.8.2 Observations

Since my inquiry aimed at a deep understanding of how deaf learners learn Social Studies, I had to observe them as the activities were taking place in their classrooms. I did this by playing the role of an ‘observer-as-participant’ who according to Bryman (2008) plays the role of a participant observer while making observations with very minimal participation mostly due to the nature of the setting. This would be the same as what Gans (1968) in Bryman (2008) refers to as ‘researcher-participant’ role where the researcher is only ‘semi-involved’ to allow him or her to function as a researcher in a given situation. My observations mainly took place in the classrooms observing the teaching of Social Studies so although I was physically there watching, listening, writing and recording, it was not possible for me to participate fully in the lessons either as a teacher or as a pupil. However, I was not completely detached from the setting

because after the lesson ended, I would interact with the teacher in relation to the lesson and the pupils too as I looked at their exercise books while they were engaged in an activity and as I gathered information on the teaching and learning materials present in the classroom. As Bryman (2008) argues, this should not be considered as a shortfall that would deem the method less ethnographic because ‘certain situations are unlikely to be amenable to the immersion that is a key ingredient of the method’ (p.411).

Before the start of the classroom observation, the learners would be aware of the intentions of my presence in their classroom although as Dunne et al. (2005) suggest, all I told them was what my research was focusing on. I did not tell them how I was going to interpret the data or what I would do with the information collected largely because I assumed that they would not understand. In such an instance, seeking informed consent proves to be problematic.

Using the observation schedule (see Appendix 3), I observed how the lesson was introduced, how it progressed and how it was concluded. While focusing on the activities that took place throughout the lesson, I particularly paid most attention to how the learners were involved in apparently constructing their own knowledge. All the observations were video recorded because learning mainly took place in sign language. Although most hearing teachers combined signs with speech, learners solely used sign language so in order not to miss out on anything, the research assistant recorded all the lessons as I took notes. I tried my best to keep my field notes as objective as possible, striving to create an open story that can be given further interpretation later (Dunne et al., 2005).

The availability of teaching and learning resources and how they were put to use during the lesson was also an area of concern. I observed how learners used the available learning resources and the extent to which teachers used teaching materials to complement their teaching using sign language. In addition, I noted the teaching and learning materials that teachers themselves prepared and also the use of simple readily available and improvised learning materials. The language used for instruction was crucial to note and how it influenced effective communication between the teacher and the learners. While sign language was the preferred language of instruction, it was important to note which sign language was used between KSL, a mixture of KSL signs and ASL signs, and SEE.

Dunne et al. (2005) argue that it is not possible to maintain objectivity in research observations. They are critical of structured observations arguing that the observer notes down only specific features of the situation. They claim that an observation schedule is likely to lead to ignoring important details since it is a way of deciding in advance what is significant and ignores everything else that does not appear under its headings making subjectivity appear like an integral part of the design of the schedule. The use of video recording during my observation sessions outweighed this argument since video 'provides a unique access to details of social action... fine details of conduct and interaction that are unavailable to more traditional social science methods' (Heath et al. 2010:1-2). Although such recordings are seen to be subject to detailed and systematic inspection, they provide the researcher with the opportunity to watch them again after the observation or show them to participants in case the need for any follow up arises. During the interpretation of data, the recordings allowed me to look at the observations again with a revised framework that emerged from my new understandings of the data. Since every researcher formulates planned research questions which are meant to guide the study and shape the kind of data the researcher gets, an observation schedule therefore was used in this study to help maintain the focus of the study. This schedule was at the same time open to other emerging aspects that were relevant to the study. To cite just one example here, while focusing on the use of teaching and learning materials, I considered the chalkboard as a resource which is mainly used by the teacher to write information for the learners and it was not until I sat in these classrooms that I learnt the amount of positive impact it had on the learning of deaf pupils when they wrote on the same chalkboard themselves.

Being an overt observer, my participants (deaf learners) knew that they were being observed and I kept battling with the question, will my study worsen or improve the lives of a group of learners who are already vulnerable? I was also concerned about any possible influence my presence may have had on the participants' behaviour due to their knowledge that they were being observed. While I considered myself as a non-interventionist observer, one who did not seek to manipulate the situation or the participants and deliberately create new provocations (Adler & Adler, 1994), I was not sure whether I achieved this fully. However, Dunne et al., (2005) point out that in qualitative research, it is difficult to do away with the effect of the researcher's presence whose nature is influenced by the researcher's identity. I would therefore not claim that

I was totally unbiased in looking out for the data I required in my observation. I however tried to be as reflexive as I could with regard to my identity in relation to my presence in the classrooms. For example, I realised in some instances that pupils got distracted by the presence of the video camera where some spent time just watching the research assistant who did the recording and ended up not paying full attention to the lesson. In relation to this, Heath et al. (2010) do concur that the camera has an impact on the participants, and they admit that there are moments when glances and jokes are made towards the camera but this does not mean that participants become preoccupied by the presence of it throughout the recording session. In other occasions, some pupils seemed to get over-involved in the lesson giving me the impression that they did it because they knew they were being observed and I got the impression that they may have been asked to do so since the teacher knew in advance that I would be there. On the other hand, I may have made a wrong judgement since there are chances that the pupils behave like that every day and as time went by, the learners and teachers became familiar with us and the lessons continued naturally. With regard to the teachers, I only noted that our presence in the classroom made one of the deaf teachers a bit nervous at the beginning of the lesson and she got concerned when she asked the pupils a question and they seemed not to offer an answer. As time progressed, she however seemed more relaxed and the lesson progressed more naturally. She also confessed this during an informal discussion before the interview.

Croft (2002) used classroom observations as one of her methods of data collection while conducting her PhD research in Southern Malawi. She observed teaching in lower primary classrooms where she would discuss the lesson she observed on the same day so as not to give room to the possibility of the teacher forgetting why he or she made a certain decision during the lesson. She would also seek clarifications of some specific areas that she had queries on soon after the lesson. Although my study observed the teaching of a specific subject and in upper primary classrooms, I employed a similar tactic. Soon after observing a lesson, I would engage in an informal discussion with the teacher regarding the lesson and would seek clarifications on issues that were not clear during the lesson. I occasionally gathered valuable information through these informal discussions. I would then request the teacher to suggest a suitable place where we would have our formal interview which would also use some of the things observed in the lesson as illustrations of some of the aspects included in the interview guides.

Overall, observation as a research tool was useful in my study because it made it possible for me to observe the behaviour of the teachers and the learners in the classrooms rather than just rely on what would have been reported in an interview. Issues that participants may have thought were insignificant and may have gone unreported were captured during the observations. For example, I believe not all the teachers of deaf learners are aware of the positive impact the learners' use of the chalkboard have in their learning as compared to just finger-spelling and signing. It was only after observing them that I noted the extent to which it contributed to their involvement in the construction of knowledge and how it created a sense of fulfilment when others in the class saw what they were capable of doing.

In Kenya, the only visitors that are likely to be allowed to sit in classrooms when teaching and learning is taking place are inspectors and college tutors when they are assessing student-teachers as they do their teaching practice. Even parents never get the chance to sit and watch their children learning inside the classrooms unless on very rare and special occasions. Observations facilitated my access into the classrooms and I was able to observe the participants' behaviour within the classroom setting. In one unit, the children became so accustomed to our presence to an extent that if they happened to be outside their room and saw us walking into the compound, they would run to receive us and walk with us to the unit while others would go to notify the head of the unit that we were on the way. Being within the usual settings of the participants and watching the normal flow of events was quite useful since it facilitated research that reports on typical situations.

5.8.3 Interviews

'Interviews allow participants, interviewers, and interviewees to discuss their interpretation of the world in which they live and to express how they regard situations from their point of view' (Cohen et al., 2007: 349). Interviews are considered as part of life rather than just simple tools of collecting data about life (ibid) since they involve interviewees located within specific social groups (Dunne et al., 2005).

One criticism towards interviews is that they are open to interviewer bias. Although all kinds of bias are likely to develop gradually, they can largely be eliminated with skill (Cohen et al., 2007). It is important for the researcher to aim at maintaining neutrality and use the interview as a means to access the mind of the researched without

Table 5:5 Number of interviews conducted

Type of Institution		Participants	Name of Institution/ Organisation	Date	Duration
Schools	Teachers	Purity	Urban unit	07/09/2009	1 hr 15 mins
		Hamadi	Pilot unit	26/10/2009	1 hr 20 mins
		Zainabu	Pilot unit	27/10/2009	2 hrs
		Juma	Huruma	20/01/2010	1 hr 30 mins
		Hassan	Huruma	22/01/2010	2 hrs 25 mins
		Said	Wema	25/01/2010	2hrs 10 mins
		Yusufu	Wema	26/01/2010	55 mins
		Ali	Wema	27/01/2010	1 hr 45 mins
		Fatuma	Wema	27/01/2010	2hrs 30 mins
		Headteacher	Wema	29/01/2010	1 hr 5 mins
		Salim	Upendo	02/02/2010	2 hrs 15 mins
		Asha	Upendo	03/02/2010	1 hr 30 mins
		Mercy	Tumaini	04/02/2010	3 hrs 10 mins
		Charity	Tumaini	08/02/2010	1 hr 5 mins
		Rose	Tumaini	09/02/2010	1 hr
		Hope	Imani	10/02/2010	2hrs 30 mins
		Joy	Tumaini	11/02/2010	1 hr
		Headteacher	Tumaini	12/02/2010	1 hr 15 mins
		Mark	Tumaini	12/02/2010	45 mins
		Bruno	Upendo	17/02/2010	3 hrs 15 mins
		Faith	Upendo	17/02/2010	2 hrs
	Pupils	Innocent	Upendo	17/02/2010	1hr 45 mins
		Jackie	Huruma	20/01/2010	35 mins
		Jude	Huruma	20/01/2010	45 mins
		John	Wema	01/02/2010	1 hr 30 mins
		Joyce	Wema	01/02/2010	1 hr 45 mins
		Joseph	Tumaini	09/02/2010	20 mins
		James	Tumaini	09/02/2010	25 mins
		Jayne	Upendo	02/03/2010	1 hr 30 mins
		Jemima	Upendo	02/03/2010	1 hr 55 mins
		Jim	Upendo	03/03/2010	2 hrs 15 mins
		Josh	Upendo	03/03/2010	2 hrs
Government Officers		Assistant Director	Kenya Institute of Education	08/01/2010	1 hr
		In charge of exams for HI	Kenya National Examinations Council	18/02/2010	1 hr 50mins
		Head of KSL	Kenya Institute of Special Education	09/04/2010	1 hr 45 mins
		Academic Registrar	Kenya Institute of Special Education	09/04/2010	1 hr
Deaf Organisations		Programme Coordinator	Global Deaf Connection	11/01/2010	2 hrs
		National Chairman	Kenya National Association of the Deaf	16/02/2010	1 hr
		Programme Coordinator	Kenya Society for Deaf Children	04/03/2010	2 hrs
		Researcher	Kenya Sign Language Research Project	23/02/2010	1 hr 15 mins

influencing their responses as much as possible. The power relations of the process of interviewing can be dealt with to an extent that a relationship is developed between the researcher and the respondents rather than create distance. More conversational and open interview format undertakes to produce greater trust and more upfront responses. Empathy and sensitivity are two researcher characteristics that are extremely important to the outcomes (Dunne et al., 2005). It is crucial for the researcher to be perceptive of his or her own power position and its influence on the interview.

Due to the emphasis of generality in the formulation of the research ideas and the great interest in interviewee's point of view in qualitative research, semi-structured interview guides were used in this study (See Appendix 4). These guides were important because this was a multi-case study and so they facilitated some form of consistency and 'cross-case comparability' (Bryman, 2008, pp. 440). They however, allowed for departure from the schedule and gave room to the interviewer to ask new questions in order to follow up responses from the interviewees and even change the wordings of the questions. They recognised that interviews in qualitative research should be flexible, allowing room for the direction of the interview to move towards any noteworthy issues that surface during the interview to enable the researcher to acquire rich and detailed responses.

All the interviews were recorded apart from two. A small voice recorder was used with hearing participants, a video recorder was used when sign language only was used in the interviews, and both the voice recorder and the video recorder were used when a participant used both sign language and speech. Recording was necessary so as to capture all the responses of the interviewees and also it facilitated the detailed analysis that is characteristic of qualitative research (Bryman, 2008). I had originally planned to write down the responses so as not to miss out on anything in the event that the technological devices failed. I, however, realised on my first interview that I needed to maintain eye contact during the interview; writing detached me from the interviewee and although I could listen and write at the same time, I missed the non-verbal cues such as facial expressions when I interviewed hearing participants. In the case of an interview with a deaf adult or a deaf learner and sign language was used, it was not possible for me to take notes. I then decided to rely on the recording and only noted down short important points and mostly figures. This meant that I always had to make sure that the voice and video recorders had enough space and were well charged at the

start of every day. The majority of the participants had no problem with being recorded, for example, when I told one of the head teachers that I would exercise confidentiality and anonymity, he told me that he had no problem and that he wanted the public to know the contribution he had made towards the research.

While conducting a study on teachers' attitudes to inclusion in Ghana, Gyimah (2006) used questionnaires and interviews as his methods of data collection. He recorded all his interviews so as not to miss out on any information that was included in the interviewees' responses. Although he had considered the use of research assistants, he chose to conduct the study alone to avoid detaching himself from the participants and to facilitate any clarifications that were required during the study. Similarly, while I sought the help of a deaf research assistant, I conducted all the interviews and his main role was to video-record and assist with sign language use offering clarifications where they were necessary.

Interviews with learners were conducted in sign language. Initially I thought that I would get better responses from the learners if they were conducted by the research assistant, since he was fluent in KSL and ASL (I only knew some KSL), as I did the video recording. My first two interviews did not bear good fruits because of two reasons. One, on that particular day, when we got to the school, all the deaf learners except two Standard four pupils had gone to the national hospital to be fitted with hearing aids. So with the teachers' consensus, we agreed to interview the two in the classroom and in the presence of their two teachers. The learners' age, their level of education, the presence of their teachers, and lack of confidence may have contributed to their passivity that made them respond with either a 'yes' or 'no' answer, 'I cannot remember' or just a nod. The other reason was although the research assistant tried to rephrase the questions in sign language, he did not probe for further information in relation to the closed answers that the pupils gave and so the interviews did not provide meaningful information relating to the study. I then decided to conduct all the subsequent interviews and sought help from my research assistant in instances where there was communication breakdown between me and the pupils mostly brought about by the pupils tendency to mix KSL signs with ASL signs. After a few interviews and after he clearly understood the context of the study, he was in a position to step in and clarify for me and the learners anything that seemed not to be clear to either party. By the time the field research was coming to an end, he appeared to have gained some

skills in conducting interviews. While conducting the interviews gave me room to gain a sense of involvement and an opportunity to experience the invaluable interaction with the participants at first hand, conducting them in collaboration with the deaf research assistant elicited responses that enriched the data.

With regard to interviews with the teachers, I asked them to suggest an appropriate setting for the interview and mostly due to limited facilities, most interviews were not conducted in quiet places. In one of the schools, we used a shed which I thought was quite appropriate because it was a distance away from the classrooms and other facilities and it had half open walls in an area which is generally very hot and windy. It never occurred to me that the wind, whose breeze we really enjoyed, had spoilt the quality of the recordings until I listened to them. Others took place in classrooms with children who sometimes dragged chairs, while some distracted the teacher by seeking attention from him or her and others were simply fascinated by our video camera and would interfere with the recording. In some schools, we were lucky to conduct the interviews in quiet offices, while in other schools we did it in the staff room despite the other activities that went on in there. The situation was the same with regard to interviews with pupils but different when it came to interviewing the head teachers and one head of a unit. This took place in their quiet offices. However, an interview with one head teacher was distracted by a team of officers from the District Education Office who made an impromptu visit to the school and could not wait until the interview was over despite the head teacher having requested them to do so. This illustrated the lack of autonomy among head teachers that was mentioned earlier in this chapter. Bryman (2008) cautions researchers that such eventualities are likely to take place and sometimes researchers may not know how to deal with them. However, interviews with participants working in the government organisations and organisations for/of deaf people were conducted in their offices where there were minimum or no distractions at all.

Interviewing, as a research method in this study, was quite useful since it gave me room to ask my participants questions regarding issues that I was not able to observe in the classrooms yet they were relevant to the study. For example, although I could see whether there were teaching and learning materials in use during the lesson, whether they were responsive to the needs of the learners is an aspect that only the learners and maybe the teachers were in a position to tell. This information was provided through the

interviews and sometimes even more was provided through the use of probes that cannot be used in observations. The experiences of deaf teachers as they grew up, while in school as learners, in teacher training colleges, and as teachers, and how all these have impacted in their style of teaching deaf children, all offered weighty information that would not have been acquired through the observations.

While interviews are considered time-consuming, they are however seen as interfering less with the normal lives of the participants than observations. Most teachers felt more relaxed during the interviews than during the lesson observations maybe due to the feeling that I was looking out for perfection and that I would note anything that was not 'right' as they taught. The presence of the video camera may have caused some anxiety as well. They seemed to be glad and more relaxed as they offered information regarding their experiences, opinions, and suggestions than when they were being observed while teaching. Some of the interviews elicited new ideas that had not been considered in the interview schedule and which enriched the data collected.

5.8.4 Collection of documents

Documents were considered an important source of data for this study. Creswell (2009) considers documents as a crucial source of information in qualitative studies. These can be used to verify data that emerge from interviews and behaviours noted during the observations. Documents that were collected include: the special needs education policy framework, both the old and new Social Studies syllabi, the 'Orange Book' with the lists of all approved teaching and learning materials for schools, teachers' schemes of work and lesson plans, pupils' progress records and the national examination past examination papers, and copies of textbooks that were in use in the schools. These were analysed in order to ascertain some of the responses and issues that emerged from the interviews and also some aspects of learning that were noted during the observations.

5.8.5 Transcriptions

The transcription of the recorded 40 interviews and 10 observations started after the end of the first day in the field. Transcribing the video recordings was very slow and tiresome. These included the classroom observations and interviews with deaf teachers and deaf learners. I started with these ones because I needed the help of my research assistant to understand the meanings of some signs that were used by some of the teachers and learners. Since I did not want to lose touch with the contents of the

recordings, it entailed sitting together after a day in the field to work on the transcriptions. Although, it seemed helpful since the activities of the lesson were still very vivid in our minds, we were not able to achieve a lot due to the logistics of watching and keying in at the same time on the same computer. We also realised that we would get home relatively tired and we were not very productive so instead we worked on weekends and on any other day that we were not in the field. We also took a week after schools closed at the end of first term and finalised the transcriptions of all the interviews conducted in sign language and some of the classroom observations. I transcribed the remaining observations after I returned to the UK after field work.

Transcribing sign language into English text was a challenging task since sign language is not a written language and its structure is quite different from the structure of English language. Another challenging task was to adequately capture and maintain the essence of participants' views, expressed in a language that I do not think in (KSL), in English – the language that I think in (Srivastava, 2006). At the start of the transcription of the recorded material, I would write using the sign language structure, writing down words as they were signed. Even before I completed the first transcription, I realised that it would be very difficult for the reader to understand the text without watching the video and I became conscious that I would have problems when time came for me to do the analysis. I therefore decided to write the sign language directly into English and this was not easy. One advantage of working on the transcriptions together with my research assistant was that he would elaborate and explain some of the areas that I had trouble understanding.

Whereas I was able to see the kind of communication and interactions that were taking place during the lessons, sometimes I would have difficulties understanding the sign language used by the deaf teachers mainly because they did not combine their signing with speech. As we watched the video recordings, I transcribed the observations into English with the assistance of the research assistant. I was keen on using simple language while I transcribed since he would read the text to verify whether what I was typing corresponded with what was being signed. Although his understanding of written English was average due to sign language influence, he would occasionally point out instances when I did not get his explanation right and he would correct me. Since by that time he had understood that I valued his role in the research and his expertise in

sign language, he felt obliged to do so and I, on the other hand, took his corrections positively and we would discuss before coming to a mutual agreement.

Having been with the research assistant in the field and bearing in mind that he was the one who did the recording, I considered that his interpretation relied on not just what was in the video but also the context which he too was familiar with. However, there were instances when we did not agree. Sometimes his identity and background influenced his interpretation of particular conversations and the same would happen to me as well. Working with him helped me to exercise reflexivity because sometimes my interpretation of some behaviour in the classroom was influenced by my identity as a hearing researcher and in such instances, he was of great help. The limited knowledge of sign language that I had gained before the start of my field work and which had greatly improved through the interactions I had with deaf people, and most of all, my research assistant, played a very crucial role because I was also able to discuss with him and we would eventually reach a consensus after considering his views and maintaining the focus of my research. This experience made me understand the importance of 'being there' and the value of having a deaf research assistant. On one hand, the discussions we engaged in when we had conflicting interpretations were very enriching to me and on the other hand, I realised that if I did the observations alone or I had relied on him to do the observations on his own, I would not have ended up with the data I eventually got.

Swanwick (2000) in conducting her PhD study on the development of sign bilingualism among deaf children in the UK had to video record the contrastive analysis tasks and interviews with deaf learners since they involved the use of sign language together with spoken language. While transcribing these recordings into English, she had to devise a way to differentiate between signed, spoken, finger-spelt and unvoiced speech in her written text. This was necessary due to the nature of her study since she needed to capture incidences when language mixing and language switching was used. In my study, most hearing teachers combined speech, signs, finger-spelling and gestures whereas deaf teachers mostly signed and also used unvoiced speech or voiced speech depending on whether they became deaf after they already had acquired speech or before. For those who combined speech with signs, it was easy for me to follow and understand their signing even if their speech was not perfect. For example, Faith, one of the deaf teachers in my study, started losing her hearing when she was seventeen years old and in her final year of secondary school. She started using a hearing aid, but five

years later she completely lost her hearing and stopped using the hearing aid. She had to learn sign language but she could still use her voice/speech. Faith's case is an illustration of what happens to many deaf people in Kenya (Read her story in Appendix 5). When I was interviewing her, she started off by using sign language only but listening to her story, I asked her if she could respond using her speech. She agreed although she confessed that she did not like using her voice because she thought that her voice was deep and she was not able to control it since she was not able to hear herself. She however, combined sign language and speech as we progressed with the interview and she was able to lip read since I also combined speech with sign language.

While some of the adult deaf participants combined speech with signing during the interviews, all the deaf learners who participated in my study used sign language with minimal unvoiced speech. This, as mentioned earlier, is due to the fact that every learner who enrolls in a special school or a special unit for the deaf has to learn sign language since it is the language of instruction and the language mostly used by the other pupils. Although the majority of hearing teachers mainly used sign language combined with speech, pupils with residual hearing could be heard responding to teachers' speech during the classroom observations although their pronunciation was not perfect. This then meant that in an interview it would only have been fair to use sign language which they were conversant with. Eventually, during the transcription, the video recordings were translated into written English laying emphasis on the content of the responses and not the specific language use as in Swanwick's (2000) study.

Towards the end of my field work period, only a very small percentage of the audio interview recordings had been transcribed. Realising the bulk of the work that was ahead of me, I hired the services of a secretary trained in audio typing to type the audio recordings. I then had to listen to them again to verify what was typed and made corrections where necessary for accuracy, making references to my field notes. Kvale (1996) argues that it is always difficult for two transcribers to reach full agreement on what was said due to poor recording, quality, and mishearing which can be corrected through listening again to the recorded material. Most of what I noted as mistakes was as a result of mishearing which was caused by the fact that the transcriber did not understand the context in which the recordings took place except in cases where the

recording was affected by noise. Having conducted the interviews, it was easy for me to make the corrections.

Interviews with hearing participants were conducted in English since all the participants understood English. However, there was constant use of Kiswahili which I welcomed when participants switched to it. Kiswahili is the national language in Kenya and being a local language which is commonly used in conversations, some Kenyans find it easy to use it to express themselves. So there was a lot of code-mixing and code-switching in my interviews. This was not a big problem both during the interviews and during the transcriptions because I am fluent in Kiswahili. Kiswahili is rich in vocabulary and having been a Kiswahili teacher in Kenya, it was easy for me to translate the sections recorded in Kiswahili into English. Where only one word was used and the word carried a deep meaning which was significant to the study, I retained the word in the transcriptions and gave its meaning in English in brackets.

The use of my surname in my introduction made it easy for any Kenyan to associate me with a particular ethnic community coupled with the assumption that I knew the local language spoken by that community. On two occasions, Kikuyu (my mother tongue) was used to express a particular phenomenon and while quoting someone verbatim. The use of the language elicited the precise meaning of what the interviewees aimed to communicate, something that would not have been achieved if it was expressed in English.

One lesson I learnt was how transcribing the video-recorded sign language as it was used in the classrooms and in the interviews was a time-consuming, tedious and problematic activity mainly because I was not able to slow down the video recordings and had to keep on stopping and replaying in order to capture everything that was signed as I typed. I later learnt that there is software that assists one to overcome these hurdles which I did not have access to at the time.

When I make the claim that interviews were generally conducted in English, the question, ‘Which English?’ comes to my mind and the answer I would give to this question is: Kenyan English. For most Kenyans within my generation, English is either their second or third language. It is my third language. As a result, the English spoken in Kenya is bound to have some elements of influence of the local languages whether in the pronunciation or in the structure. In what English then did I write my transcriptions?

However much I tried to use Standard English, I strived to maintain the verbatim versions of my respondents in my transcriptions in order not to lose the authenticity of their responses. The responses that had minor grammatical errors were edited but some of the responses that had sections which were significant to the study even with the errors, were used as they were as quotes in the report.

5.9 Analysis of data

One of the difficulties associated with qualitative research is the amount of data that the researcher accumulates during the fieldwork period. There is no one single or correct way of analysing qualitative data (Robson, 2002; Cohen et al., 2007). Dunne et al. (2005) note that data interpretation is normally continual and that sometimes it starts unconsciously while the researcher is still in the field, most likely after the first interview. I started interpreting my data soon after my first observation and my first interview which followed soon after. I was amazed by the amount and quality of information that I gathered and as Dunne et al. put it, the interpretation was taking place more or less unconsciously in my mind.

It is important for any researcher to understand the purpose of his or her data analysis so that he or she employs the right kind of analysis (Cohen et al., 2007). The purpose of my data analysis was to generate emerging and relevant themes hence the adoption of a thematic approach. In spite of this, Bryman (2008) says that this is not an approach but rather it is an activity that is used in most approaches to qualitative data analysis. Some of the eight items recommended by Ryan & Bernard (2003) that I found useful in categorising the data for my study into themes were: repetitions, similarities and differences, and linguistic connectors.

As I looked out for themes and patterns that ran through the data I had, I was guided by my research questions. Sections of data were identified and categorised together as themes then they were further grouped together within the three research questions that they aimed to answer and compiled in three different chapters. The themes were decided upon by the intensity in which they appeared in the data, the number of times they were raised by different participants or they appeared in different lessons. Patterns that were similar and also different between participants, mostly between deaf teachers and hearing teachers, teachers and pupils, were put together in one theme. Linguistic connectors that were useful as I analysed the data were words such as 'because', 'due

to' and 'since'. Deaf participants, especially the teachers tended to use the word, 'why?' followed by the answer to it. These words tended to be followed by information that alluded to causal associations in the minds of the participants and were useful in determining the themes.

Initially I had planned to use computer-aided software – NVIVO – to analyse my data but this did not happen as I found it somehow complicated to use. The quality of data analysis depends largely on the skills of the researcher to see and understand concepts, to find relationships between them and to compile them together in form of text. I decided to use these skills since I felt more confident that no important data had been left out.

5.10 Limitations of the study

The emancipatory disability research model advocates for accountability to the disabled community in order 'to make disability research more relevant to the lives of disabled people' (Oliver 1992: 109) through the researcher working in collaboration with them in the research activities. This involves the researcher collaborating with disabled people in making decisions on issues that directly concern or affect them. While I would claim that deaf people participated in my research, deaf adults as well as deaf children did not have full control of the research agenda as proposed by the model. As Barnes & Sheldon (2007) observe, it is unlikely that children with disabilities would ever be in a position to have control over research funding and the research agenda. As a PhD student, I had to identify and frame the research problem as well as formulate the research questions depending on the areas that I thought had gaps. One limitation of this study is that although my study aimed at using an emancipatory approach, I did not involve the deaf learners, for whom this study is intended, in designing the nature of the research. There are several challenges in making research accountable to children and more so to children with disabilities and there is a limit to the extent that a researcher can involve children in research. Adults frequently make decisions about the lives of children without seeking their opinions and this happens even more in Kenya with regard to children with disabilities who are considered as lacking agency and as being dependent. Morris (2003) reports how she managed to fully involve children and young people with disabilities in four projects conducted in the UK by having them operate within a reference group. Although my study tried to understand the views and

experiences of deaf learners, it was not able to be fully accountable to them due to the societal barriers encountered.

Where the language used in the data collection phase of the research was not the same as the language used in the transcriptions and data analysis, I, as the researcher, had to be cautious and conscious sometimes while I was transcribing and recording the participants' perspectives. The use of sign language in data collection turned transcriptions and data analysis in English into a complex task due to the fact that the two languages are structurally different and I was not fluent in sign language. On the other hand, although my research assistant was fluent in sign language, the level of his English comprehension was average. Due to time constraints and difficulty in identifying someone who was fluent both in English and KSL, the English translations were not verified through re-translating them back into KSL. This is a weakness in the thesis.

With regard to selecting cases, my original plan was to base my study in special units rather than in special schools mainly because almost all the studies done on deaf education in Kenya focus on special schools yet the learning environments in special schools and special units are to some extent different. Special units offer deaf learners an opportunity to learn in the same institution with hearing learners, thus offering a possibility of social inclusion. Another limitation of this study is that in order to reach learners in upper primary classes in the remote area, a special school had to be included in the study since that is where most of the learners in the area enrolled for upper primary education. The head of Huruma explained how the learners end up in the special school.

In fact we don't refer but we convince them [the parents of the deaf children] that at this level your [sic] child can benefit well when they are at the other side [in the special school]. So willingly, they take them there...In fact, we had some children who were donor funded so they moved.

Whereas I intended to conduct my observations with an open mind, I realised that the lesson observation guide that I had prepared was limiting. It did not focus on reading comprehension yet it emerged that deaf learners in Kenya faced difficulties in understanding what they read. The schedule also failed to be specific on what was being looked for under the section 'teaching and learning activities'. Although teacher and pupil communication was one of the key aspects that the study focused on, the guide

was not elaborate on the actual areas that needed to be noted, such as, teachers' high quality explanations and learners' extended responses and explanations to teachers' questions. Although some of these behaviours were observed, a more detailed observation guide would have produced more quality data.

While the top-down system of authority in the Kenyan education system facilitated access into the classrooms without giving the classroom teacher a lot of power to refuse me entry, I was not able to make follow up visits to verify the data collected from all the interviews conducted. I had initially noted that the interviews resulted in some of the teachers missing classes and this may have led to some indicating that they would not be ready for a second visit when I suggested one. Nonetheless, I still feel that I needed to return to the interviewees to follow up and verify data from the previous interviews but I also recognised that I would be using their valuable time that would have been otherwise spent either teaching or preparing lessons. As Stephens (1990) noted when he was conducting his PhD study in Nigeria, maybe a better approach would have been to have planned two visits with the teachers right from the beginning in order to facilitate the follow up without making them feel as if I was disrupting their normal routine. Although this kind of data verification is crucial in any research, some researchers have reported that even when they get back to participants with transcribed interviews for verifications, no or only minor corrections are made (Pryor, 1993; Croft, 2002).

5.11 Conclusion

In this chapter I discussed issues related to the methodological approach that guided my study, the research design as well as my position in the study. One of the lessons learnt is that one cannot claim one static position while conducting qualitative research – of either an insider or outsider, as self or other, at certain stages of the research. My position among deaf people while I was hearing was taken positively by the fact that I could communicate with them through sign language, an indication of the power of language with regard to social interaction. Nevertheless, I was still perceived as one with a higher social position, not only by the learners but also by some of the teachers who perceived me as one who was conducting research for a PhD degree, abroad – in the UK. I learnt that my positionality changed with different participants where I was perceived as a supervisor, a confidant, a colleague (by fellow teachers) and a teacher (by

some learners) and the challenge was to always be conscious that my positionality was not stable but rather it kept changing.

Ethics and negotiating access are key components of research that were highlighted in this chapter. Through this process I learnt that although in Kenya the education system is top-down, authorisation letters are not always enough while negotiating access to research settings. Sometimes unexpected eventualities, such as existing tensions between the school administration and the teachers can be detrimental to efforts made to gain access and therefore one needs to be prepared for anything.

Although this research was intended to have taken an emancipatory approach, it can only be seen to have made some reasonable effort in involving deaf teachers and deaf learners as they narrated their experiences. Whereas I can confess that the participation of my deaf research assistant had a significant contribution to this study, I am still not sure to what extent his involvement was emancipatory. I can only hope that the findings of this study will contribute towards improving the learning outcomes among deaf learners in Kenya and improve their chances of living a better life in future.

Chapter 6 Preparation for Teaching and Learning Social Studies

6.1 Introduction

This chapter responds to the first research question: What factors are considered when preparing for teaching Social Studies to deaf learners in Kenya? It presents the key findings on the physical facilities available in units for deaf learners as well as the teaching and learning materials for Social Studies used in upper primary classes in Kenyan schools. The chapter provides a detailed description of the type of materials used and how they contribute to effective learning. It starts with a general overview of the environment in which learning takes place and it highlights the views of teachers and learners regarding the teaching and learning materials. The materials that were generally used are: textbooks, chalkboards, wall maps, atlases, wall charts, and natural resources.

6.2 Learning environments in the units

A key finding of the research was that the physical facilities in the units attached to mainstream schools were inadequate. In all the units I visited during the fieldwork, learners in different grades shared a room and these learning environments brought about other problems related to learning. Purity, a head of one unit, clearly described the environment in which teaching and learning took place in one of the urban schools that serves one of the largest slum dwellings in Africa. The school was visited during the initial preliminary visits to determine the selection of cases.

You can just see for yourself the environment in which we work. Our biggest problem is lighting; we have no electricity here. You can see how dark it is for some classes. These are five classes all squeezed in this one small room and all we have are these temporary partitions. There is a big room over there [she points to the direction towards the administration block] which has a few computers but used only on very rare occasions. We have tried to ask the management to be allowed to move in there but we have not been successful. We have now given up. Learners in the upper classes are learning together with hearing pupils in the main school.

The room, which served as the unit, was partitioned and divided into five different sections to accommodate five different grades. The partitioning made the room even darker, making the lighting very poor for the pupils in the sections that were blocked from the window – the only source of light. Although there was electricity connection to

the school, power was not supplied to the classroom block. This was an evident barrier to the deaf learners who are known to rely a lot on their visual capacity. Two of the groups shared the chalkboard which was divided into two parts while the other three groups used small portable ones with little space to write on. There was a lot of distraction especially when one group happened not to have a teacher with them. They sometimes moved from their space to the other spaces and it was hard to contain the sounds caused by the movements of the learners and the teachers as they taught.

The partitioned room in Photograph 6:1 accommodated five classes – Nursery to Standard 4 while the other upper primary deaf learners were integrated in the mainstream classrooms.



Photograph 6:1 A room serving as the special unit in a primary school in an urban area

Mercy, the head of the unit in Tumaini school experienced almost similar problems although the unit had been assigned two rooms which were not partitioned. She expressed her sentiments.

The room where we have the upper primary pupils has no electricity connection; no lighting, no sockets. It would be good to have electricity so that we can show videos or use any other visual materials. These two rooms we are using would be better off divided into smaller rooms so that the distractions are minimised.

One of the larger rooms which hosts pre-school and lower primary classes with a total of five classes learning in small groups is shown on photograph 6: 2.



Photograph 6:2 A room for deaf learners in Tumaini school

The room above is quite large and as Mercy puts it, dividing it into smaller rooms would provide the learners with a better learning environment than they had at the time.

With regard to the distractions, she was explicit while expressing the barriers encountered in providing quality teaching and learning.

I feel that if the classrooms for HI learners are acoustically treated and the pupils are given hearing aids, they will be able to work better because they should hear just what they are supposed to hear. Yes and acoustically treated because of the environmental noise...you know... we are in an integrated programme and we do not have enough classrooms as you can see how we are sitting. We cannot teach comfortably... because there is a lot of distraction... from one class to another.

Huruma, one of the units, had at the time of this study, all the learners at four different grade levels learning in a multi-grade setting since there were only two teachers allocated to it. Photograph 6:3 shows the learners in the classroom.



Photograph 6:3 A room serving as the unit for deaf learners

Hassan, the head of the unit said that the shortage of teachers had made them resort to teaching the learners together. While talking about the difficulties encountered in teaching the learners, he expressed that there were special education trained teachers who are sent to the school to teach in the unit but they end up teaching in the regular school. He stated that this happened as a result of either the feeling by the head teacher that teachers in the unit have few pupils who do not require ‘too many teachers’ or the teachers themselves choose to teach in the regular school arguing that they faced difficulties in teaching deaf learners. He lamented:

You see, somebody can undergo training but at the same time have problems in delivering. We have some colleagues here who have gone. They have done a diploma in special education but they fear coming to the centre [deaf unit]. They teach in the regular school here. They’ve been posted here so that they can at least assist in the unit. So somebody comes for two days, three days, and then says, “I can’t continue”, then he goes away. Another problem we face is, sometimes you’re forced to teach in the regular school. I was once asked to do so and when I refused I was threatened with a transfer. They’re looking at these [points at the pupils] in terms of numbers but they’re not looking at them in line with their disability.

Hassan expressed his concern regarding the head teachers’ focus on the small number of learners without considering the extra effort and time required due to their special learning needs. The data suggest that these teachers are seen as if they would be more productive if they taught in the regular classrooms which have more learners and learners who are perceived as likely to learn and benefit more than the deaf learners.

Apart from the learning space, other relevant facilities for the learning of these learners were mentioned by Mercy, head of Tumaini unit.

We also don't have equipment. We lack a lot of equipment that is related to HI. We don't have a speech training kit, we are limited when it comes to training them to use speech, we don't have auditory training equipment.... We also need things like audiometers so that we can take our own audiogram from time to time and see whether there are any changes in our children, we need things like autoscope, a the torch-like device so that we can assess the ears and see whether there is wax or any foreign objects from time to time. We also need stethoclips for assessing whether the hearing aids are working properly. I have one here which I got from the 'Eardrops' people. But every teacher should have one.

Testing the level of hearing loss is mainly followed by any possible interventions such as speech training and the use of hearing aids. For learners who develop hearing loss early in life, hearing aids would only be useful if they get them very early in life and if the residual hearing can be meaningful once amplified by the hearing aids. Almost all of the learners who had hearing aids that I spoke to confessed that they only heard incomprehensible sounds but not any meaningful conversation. As Gregory (2005) notes, teachers of deaf learners need to have the skills to understand and manage the acoustic learning environment for maximum learning and teaching, to assess the hearing loss of their pupils, and be able to use, understand and explain audiograms and interpretations of hearing loss. However, rather than focus on interventions geared to 'correct' the deaf learner by making him or her hear and/or speak, devising teaching strategies that would help the learner acquire knowledge would be more meaningful.

While lack of equipment and skills among some of the teachers were cited as impediments facing teachers, a lecturer at KISE raised the issue of lack of commitment among some of the trained teachers. Speaking about the need for 'refresher courses' for practising teachers in the field mainly because of the introduction of KSL as the language of instruction, he expressed the need to also focus on the teaching approaches that need to be used while teaching deaf learners.

... having refresher courses for KSL only may not be enough but also having refresher courses on teaching methods for HI. For instance, you are given such a topic, how do you teach it? What is the best mode of communication in relation to Signed English, Signed Exact English, Sign language, use of total communication... etc? There is a problem because once they go to the field, they just don't care. They do not practise what they have been taught here. Among the students who attend our courses here ... you may get wonderful students... but when you meet the

same student after a year, the same student goes to class without even a teaching aid... just teaching abstract things without showing illustrations...

Generally, poor physical facilities were noted in almost all the units except one which was attached to a middle class regular urban school where learners in each grade in upper primary had their own spacious classrooms and only two lower primary classes shared a large room where they learned separately. In all the other units, learners have had to either learn together in one room in multi-grade settings, in single grades or in the same classes with hearing learners in integrated settings without any interventions that address their learning needs. Lack of adequate, well-skilled, and committed teachers coupled with school managements that treated the units as secondary to the main school served as barriers to the learning of deaf learners in units.

6.2.1 Learning in a multi-grade setting

The unit in Huruma school had fifteen deaf children who all sat and learned in one classroom. The distribution was as follows: 5 in Nursery, 3 in Standard 2, 5 in Standard 4, and 2 in Standard 5. On the days I visited the school, only twelve were in attendance, five boys and seven girls. The three absentees belonged to the Nursery class. It was hard to tell who was at what level. There were two hearing teachers, Juma and Hassan, attached to the unit and Juma taught Social Studies. During my observation visit, I asked Juma which Standard he was planning to teach between Standard 4 and Standard 5 which were the only upper classes represented in the class. He chose to teach the two pupils (a boy and a girl) in Standard 5 but cautioned me that he was not very conversant with sign language.

Out of all the lessons I observed, this was the only one that was taught in a multi-grade setting which was quite unusual especially with regard to the wide range in age and grade levels. The approach used to teach the two pupils sitting in a classroom with ten other pupils at different levels of learning, as well as the subject content intended for the Standard five pupils, were the main reasons behind the choice of this lesson. When the lesson started, it was not clear whether the other learners were meant to sit silently and watch as the lesson went on or whether they were meant to participate. The teacher taught from the front while the other pupils were not engaged in any activity. At the beginning, they just watched but as the lesson progressed, they started raising their hands up to answer questions and the teacher involved them fully in the lesson. Hassan,

the head of the unit, sat outside the classroom while Juma taught. (See an illustration of the lesson observation in Appendix 6).

I realised that the content covered in this lesson appeared elementary for the level of the pupils to whom it was targeted and when I referred to the syllabus to confirm I found out that the content was meant for Standard 2. The overall theme for Standard 5 was: *Living together in our country Kenya* while the first topic was on 'The Physical Environment' with the following subtopics: definition of a map, elements of a map and their uses, 16 points of the compass, position of Kenya in relation to her neighbours, size and shape of Kenya (MoE, 2009b: 21). This meant that although the two pupils were said to be in Standard 5, they were being taught at Standard 2 level. Whereas there could have been other factors that contributed to the situation, it is likely that the multi-grade setting in which the two pupils were learning and the teaching approach the teacher adopted could have played a part. In order to involve all the other learners in the class at the same time, the content had to be simple and straightforward. It was evident that a different choice of the teaching approach for learners in such a setting would have resulted in better learning outcomes.

As mentioned earlier, and according to the head of the unit, this resulted from a lack of sufficient number of teachers to handle learners in the separate grades. Some teachers posted to teach in the unit opted to teach in the regular school and due to limited physical facilities, the unit was allocated only one room. In my opinion, it would have been easier if the class was divided into two groups, one for learners in lower primary and the other for those in upper primary. With two teachers and a large room which could be used by both groups, this would have been possible and it would have allowed room for learners in the higher grades to learn content that was within their syllabus.

Huruma was the only unit I visited in the remote areas while the others were in urban settings. During a discussion aimed at locating the units for deaf learners within the district with a teacher deployed at the Assessment centre serving the district, she maintained that there were no learners in upper primary classes in any unit. She claimed that units only enrolled learners in lower primary classes where they all learnt together. This gave me the impression that other units in the remote areas may have been operating in the same way as Huruma although this was not verified. Despite other

learning challenges, my study noted that the syllabus content that learners in Tumaini and Wema were learning was within their grade level.

6.3 Textbook publishing and distribution

Kenya Institute of Education (KIE) has approved a list of textbooks for use both in primary and secondary schools. The Pupils' Books together with their accompanying Teachers' Guide books are published by various publishers following guidelines from the Ministry and are later vetted and evaluated by KIE. Those that meet all the requirements are listed in a book popularly known as the 'Orange Book'.

When the course books for the current curriculum were being published, between the year 2002 and 2005, there were about fifteen major publishing companies who submitted books for all categories (from Early Childhood Development Education to Primary Teacher Education) for evaluation by KIE. Two of the fifteen, Jomo Kenyatta Foundation and Kenya Literature Bureau are parastatals. The rule has been only a maximum of six publishers, per subject, per Standard should have their books approved. Often less than six are approved depending on the quality and the number of the titles submitted. Schools are only allowed to use the approved books for instruction in the classrooms. Table 6:1 shows the number of books approved for Social Studies in Upper primary classes at the time of this study.

Table 6:1 Number of Social Studies textbooks approved for upper primary

Standard 4	Standard 5	Standard 6	Standard 7	Standard 8
4	6	4	6	6

Source: Ministry of Education (2010)

Before the introduction of FPE in 2003, at the end of every year, schools would give parents a list of titles of textbooks to be bought for their children for use the following year. Most parents were not able to buy all the books and so most of the pupils would end up in school without textbooks. With the introduction of FPE, the government took over the funding of all teaching materials used in schools and currently, head teachers are guided on which books to buy by the 'Orange Book'. However, due to the current high enrolment rate, pupils have had to share textbooks. 'While the Ministry's long term policy is one book per pupil, it is recommended that in the short term, a ratio of 1 book

per 3 pupils in the lower primary (1-4) and 1 book per 2 pupils in the upper primary (5-8) be used' (MoE, 2010: 5).

Schools that have registered learners with special needs receive more funds for teaching and learning materials (MoEST, 2005a; MoE, 2009a) in order to cater for any special materials that they may require but the Ministry admits that it is inadequate:

Apart from the funds allocated to every learner in primary schools/units, those with special needs and disabilities get a top up capitation to cater for specialised teaching/learning materials and other assistive devices...the capitation is inadequate for purchase of teaching/learning materials in these institutions (MoE, 2009a: 25).

The amount is determined by the number of pupils with special needs that are enrolled in the particular school. Nevertheless, apart from one school, in all the other schools that I visited, deaf learners either had no Social Studies textbooks at all during the lesson or they were sharing. In Upendo school, each Standard eight pupil had more than one course book from two or three different publishers. In Wema school, although textbooks were shared between two pupils, different classes would be using books from different publishers, for example, Standard four would be using a Kenya Literature Bureau course book while Standard five would be using a book by Oxford University Press. Despite the fact that all publishing companies follow the same guidelines when producing their books, each has its own particular style of doing it that renders some textbooks more user-friendly than others. A class could be using a certain book at a certain level but when it graduates to the next level, the textbook in use turns out to be of a lower quality or less responsive to the needs of deaf learners, or vice versa. This scenario is likely to be the same even in regular schools with hearing learners and could jeopardise the learning of all learners due to lack of consistency in the learning materials they use. (See a brief analysis of Social Studies textbooks for upper primary schools in Appendix 7).

6.4 Learners' use of textbooks

Juma, a hearing teacher, had a textbook in front of him which he referred to twice during the lesson but throughout the lesson, none of the pupils had a textbook. One of the reasons behind this appears to be the teachers' perception that they do not like reading on their own because they have difficulty understanding and therefore there

would be no point of issuing them the books. After the lesson and during an interview with him, this is how he explained their difficulty in reading.

You know in an English sentence, the way it has been written, might not be the same when you're going to sign them... right? So there are some other words that they may not understand in a sentence... because there is Signed Exact English... right? If you go by Signed Exact English, for example, in a sentence, 'That is my father'... so you have to sign it 'That-is-my-father' [He signs every word – SEE] but in Kenyan Sign Language, you say 'Father-that-mine' [He signs]. So there are those small, small words which they may not understand if you go by Signed Exact English. So there is a big difference because they will be reading things that the teachers do not teach them.

What Juma seemed to acknowledge here is that since the structure of English and that of Sign language are different, deaf learners encounter problems when they read English and as a result they are not motivated to read. The head of the same deaf unit, Mr. Hassan, explained it further raising the issue of comprehension of what is read.

Yeah, I think you understand. They have a problem with reading and for that matter they cannot get the information straight from the book as compared to other regular children. So every bit of it, they require an explanation... even the explanation is not enough... they require it again and again.... You'll have to read with them... signing. You see, also we use Signed Exact English and use sign language for them to get the concept. From there everything goes on as slow as that...

Hassan also highlighted 'lack of concentration' as one of the reasons why these learners were believed to not like reading. The other was the use of sign language during instruction and SEE while reading. Sign language uses prepositions and conjunctions sparingly yet these are likely to be in English sentences and could be what Juma referred to as 'things that the teachers do not teach them'. He could also have been referring to concepts in Social Studies that are not represented in KSL which pupils may not be familiar with. Any encounter with unfamiliar words during their reading is likely to pose a difficulty in comprehending what they read.

On the other hand, Said, a Standard 4 hearing Social Studies teacher in Wema school, attributed the problem of reading and comprehension to a weak foundation. Talking about the reasons why deaf learners prefer Mathematics to Social Studies, he said, '... all they do (in Mathematics) is learn numbers but here we are talking about reading. If they got a very poor foundation, they will not be able to read and understand.' He argued that if deaf learners were exposed to reading early enough once they enrol in

school, then they would not be faced with hardships in reading and understanding in higher levels of schooling.

A general observation was that learners were rarely seen using textbooks in the classrooms, both in the units and in the special schools. Since the education system in Kenya lays a lot of emphasis on the use of textbooks, teaching and learning that does not make use of them is perceived to be somehow ineffective since the learners miss out on the subject content in the books. Maybe engaging learners more in activities that require them to use the textbooks during the lesson would make them develop interest and want to read them even when they are on their own.

6.5 Accessibility

The availability of textbooks for deaf learners was not identified as a major drawback. However, the issue of access was a concern in some of the schools. While some schools had more than enough textbooks that had been put to good use both by the teachers and pupils, the situation was different in other schools. An example is the school where the lesson described above took place (Huruma) where there were textbooks that had been bought by the school for the learners in the unit, but the pupils did not have full access to them. Here is an extract from my field notes:

After the interview and in a casual discussion with the teacher, I refer to piles of textbooks placed on both sides of the teacher's table and he tells me that the books are placed there so that the pupils can come over during their free time and pick any of them if they wanted to. Among them are two KSL dictionaries, one published by KIE for use in schools and the other by the Kenya National Association of the Deaf (KNAD). He informs me that a new copy of the KIE dictionary is in the store (20th January 2010).

In an interview with the Head of the unit, a day later, he confirmed that there were textbooks in the school store that were intended to be used by the deaf learners.

We've never had a problem as such... Materials is (sic) not a problem, especially the regular textbooks are not a problem, maybe he has not accessed them from the store... they can get a copy each. Like I have... my children for Mathematics Standard two, everybody has a textbook. So I teach them, I finish, I tell them open page this, do this one.... And everybody copies from his own textbook.

In other schools visited, learners had access and kept their own books even if they were sharing and in some instances, during the teaching and learning process the teacher would refer them to a particular page in the textbook. The situation seemed to have been

quite different in the unit in Huruma school where some books were in the store and others on the teacher's desk while the learners did not have any copies.

A revised Social Studies syllabus, published in 2009 and textbooks for the same were expected to be in use in all schools by the beginning of 2010. The revised syllabus addresses 'the issue of overload and unclear objectives' (MoE, 2009b: iii). However, the teachers in Huruma and Wema schools confessed that they were not aware that the syllabus had been revised while those in Tumaini knew about the revision but did not have a copy of the syllabus. Since it was at the beginning of the academic year, they borrowed my copy to prepare their Schemes of Work. Teachers in the rural schools were still using the textbooks for the previous syllabus while those in Tumaini had one new (revised) Pupils' book per class which was used by the teacher. The books had been published and evaluated, and the ones that had been recommended for use (MoE: 2010) were already in the bookstores. According to the head teacher of Tumaini, funds had not reached the school to facilitate the purchase of the textbooks, an implication that even the hearing learners in the school were using the old ones.

6.6 Textbooks design and deaf learners

6.6.1 *A lot of text*

With regard to whether the available teaching-learning resources for Social Studies met the needs of deaf learners or not, the general feeling of both the pupils and their teachers was that they did not. An interview with Juma, one of the hearing teachers, implied that the textbooks did not meet the special learning needs of deaf learners, although his response was not direct. When asked specifically if he thought the textbooks were suitable for deaf learners, Juma answered:

...the wording, is too much... yeah... they don't like to read a lot of writing when maybe they don't understand what they're reading.

His use of 'a lot of writing' in a bid to elaborate the word 'wording' could be translated to mean 'too many words' or 'use of complex words'. The idea of comprehension is evident in the phrase 'don't understand what they're reading'. Failure to understand is blamed on 'a lot of writing' which can be translated to mean 'too much text'.

After observing her teach one Standard 7 pupil, Hope, a deaf teacher in Imani, a small private school for deaf children, had this to say in response to whether the textbooks addressed the needs of deaf learners:

No, not at all. They are just the same as those used by hearing children. There is a book there I would like you to see. Let me bring it [she leaves the seat and goes to pick it up from the teacher's table]. [Turning the pages of the book for me to see] You see this book, how it has short sentences [still turning pages], these are the best for deaf learners. [Then turning the pages of the book that the Standard eight pupil was using during the lesson] This one has very long sentences and long paragraphs. For deaf learners, books should have short sentences and a picture to show what is in the text. That way... they understand easily. When deaf children read themselves, without a teacher, they understand.

(Interview conducted in KSL by Researcher and Research Assistant)¹⁷

In Umoja school, Asha, another deaf teacher had this to say in relation to textbooks used to teach deaf learners:

Some of the information in the books is not necessary. For me, it would be better if we have textbooks for deaf pupils that have summarised the important points only. For example, when I am teaching about the four points of a compass, I stand there (she points) myself... with my hands like this [she demonstrates and spreads them out] and explain to them the meaning of the four sides. If I go by all what is written in the textbook... it is too much.... it takes too long to finish. So the books for these children must have only summarised information on the important points only (here she signs 'bullets').

Salim, another deaf teacher in Umoja, stated:

The KIE recommended books for Social Studies have too much text yet deaf children like... desire books that have more pictures than stories [text]. These books are hard to understand for deaf children. The sentences should be short and not too long. The important points should be listed in point form rather than in long sentences. Short sentences and listed points are easy to remember while long ones are difficult to understand.

The deaf teachers seemed to understand the problems facing deaf learners better. They gave a more specific description of the problem as compared to the hearing teachers. The problems they identified: 'long sentences', 'long paragraphs', 'unnecessary information', and 'a lot of text without illustrations', are issues that can be stumbling blocks to not only deaf learners but also hearing learners. The suggestion given by one of them of having separate textbooks for deaf pupils with summarised information could be related to what was mentioned by another teacher regarding English

¹⁷ This applies to all interviews with deaf participants – teachers and learners

words/concepts used in the textbooks that are not used in sign language. What they seem to be suggesting is that if information is given in summary and in point form, reading and comprehending concepts that are not represented in sign language would be simplified thus enhancing learning.

On the other hand, having different books targeted for deaf learners only may not be an easy task and would generate other implications. Producing such books may not be viewed as cost effective due to the fact that, comparatively, the target population might be viewed as too small hence making them expensive to the consumer. Further, there are possibilities of the books being used as a basis to perceive deaf pupils as different from hearing pupils thus generating segregation. There is also a likelihood of being considered as receiving lower quality education as compared to hearing learners. In inclusive settings, the use of different textbooks for deaf learners from those used by hearing learners is likely to cause some difficulty during instruction in the mainstream classes.

Almost all the learners in Kenya learn English as an additional language which implies that they all encounter the challenges of learning an extra language which is structurally different from the already acquired one(s). Maybe instead of engaging in publishing textbooks specifically meant for deaf learners, an improvement of the existing ones, with the features suggested by the deaf teachers in mind, would be better since they would address the needs of other learners who encounter problems in reading and comprehension.

Some learners also expressed their views regarding the Social Studies textbooks. John, a Standard 8 pupil in Wema school who was pre-lingually deaf, had this to say after stating that he had two textbooks which he used alone:

Some words are very hard... others are easy and I understand them.... I am able to understand... word, word, word [each word alone]... in the sentence but... it is impossible to understand the meaning of the full sentence. If the sentence is too long.... it is hard to understand and I forget easily... but if the sentence is short, it is easy to understand. If there are many sentences and no pictures, it is hard. Pictures help me to understand.

Joyce, a Standard 7 pupil in the same school as John shared the same sentiments regarding the use of the available textbooks and whether they responded to their needs or not.

- Joyce: When I read alone I don't understand but I ask the teacher to help me. I don't understand some words, for example when reading about Uganda, but I ask the teacher to explain.
- R: (I open a page of the book at random and I ask her to read a sentence but she tells me she cannot read some words because she doesn't know the meanings. We flip through the pages and we come across pages that have a lot of text without pictures and I ask). Do you like reading a page like this?
- Joyce: No. It is better and easier to understand if there are pictures together with the text. Short sentences are easier to understand.

The responses of John and Joyce seem to verify what the teachers had observed with regards to reading and identified as barriers to effective use of textbooks by deaf learners. All these respondents seemed to echo one another in saying that the textbooks for deaf learners should have short summarised sentences as opposed to long ones which were considered to be loaded with a lot of information. According to John and Joyce this would enhance understanding as well as memory.

6.6.2 Illustrations

Hope, the deaf teacher, raised the issue of the use of illustrations against text to clarify what is in the text. Where books were said not to be addressing the needs of these learners due to having too much text, enough illustrations were seen to be lacking. The majority of those interviewed shared the same sentiment. Hope had this to say in relation to illustrations in the textbooks.

The books are written to suit every learner, so they have no special things for deaf children such as many drawings, diagrams for them to see... because all these writings (turning pages), I think.... they're for them to {???}... (I miss the word here). I think they learn better by watching the diagrams, the drawings, the pictures.... So more pictures and less text, if possible.

Hope seemed to imply that the design of the textbooks was suitable for other learners but not for deaf learners. However, the example given by Mr. Salim, also a deaf teacher was very explicit and it illustrated that the lack of illustrations was not a barrier to deaf learners only but hearing learners too.

A book with many pictures helps pupils to understand easily. For example, if the teacher is teaching about cocoa growing and children in Mombasa, Kenya have never seen a cocoa plant, it is difficult for them to understand but if there is a picture in the book, they would have a rough idea of how a cocoa plant looks like. I myself as the teacher fail because I cannot show the pupils how it looks like.

As Salim stated, no child in Mombasa or any other part of Kenya is likely to have seen a cocoa plant growing and although this is only an example, there are so many other

content areas in Social Studies that would be better understood by all learners if relevant illustrations were included in the textbooks.

Bruno, the deaf volunteer teacher rated the textbooks as:

BAD! (Right thumb facing down). The old one is bad and there isn't a big difference between the new one and the old one... Too much of pages of text and children have to read, read, read. (He gets copies of books to show the amount of text in them). For the deaf? Bad! ... Books should incorporate learning of vocabulary and maybe make the pupils exercise their brain rather than just read, read, read throughout. Maybe have something that can prove that they have learnt and understood, maybe initiate a project, encourage working together [as a group], draw, dance, etc.

Bruno's understanding of pedagogy seems to be influenced by being educated and having worked as a teacher in the US. His perspective was very different from that of other teachers, deaf and hearing. He raised issues that focused more on teaching approaches rather than just limiting himself with the design of the textbooks. He recognised that learners can learn and express themselves through other activities such as dance and art and not just through reading.

The idea of Charity, a hearing teacher in Tumaini, resonated with that of most of the other teachers with regard to the use of illustrations but cautioned on inappropriate use since it would result in relaying the wrong information.

Where I don't have a sign and there is an illustration, it becomes very easy to teach. For example (she refers to a particular page in one of the newly published textbooks for the revised syllabus), in here there are illustrations which are wrongly placed, e.g. these vegetations [sic] are not found in Nairobi province yet they are placed under Nairobi province. This can give a very wrong picture to deaf pupils who rely so much on their visual capacity in learning. This is only one book out of others which are recommended by KIE and maybe the others are better than this.

The general feeling amongst all the teachers, hearing and deaf is that the text in the books was too much for the learners but the deaf teachers particularly emphasised and illustrated the benefits of having illustrations alongside text for all learners. What would be the implications of this? It would, of course, increase the size and the cost of the books. These are the elements that are likely to be included in the guidelines used by publishers and that are later taken into consideration during the vetting and evaluation of textbooks that will be discussed later in this chapter.

6.6.3 Vocabulary

Deaf learners have been noted to lag behind their hearing counterparts in terms of vocabulary. Some teachers noted that even KSL has limited vocabulary especially for terminologies encountered in school during teaching and learning.

As a result, Bruno raised the idea of incorporating the learning of vocabulary in the textbooks in order to facilitate and enhance reading and understanding. According to him, developing their vocabulary skills would contribute towards easy comprehension and effective learning. This is something that he gave priority to while he taught his lesson. As he read the notes that he had written on the chalkboard at the beginning of the lesson with the pupils, he underlined some hard words, listed them on the side of the chalkboard as vocabulary and explained the meanings to the pupils, using related words that the pupils were familiar with. Responding to whether he was able to complete his lesson plan within the given period for a lesson, he responded:

Sometimes I get stressed when I realise I do not have a lot of time to teach what I have planned. I keep telling myself, “Be careful, you have very little time left”, but there is nothing I can do, because they [deaf learners] do not have the ability to read alone. I read the text, look at the most useful points, and take the important points, put them on the chalkboard, we read together and the vocabulary, I....oh, they had *no* vocabulary. This school should have more dictionaries than they have Bibles... Dictionaries are not given priority when books are being bought for the school. The biggest challenge with deaf pupils is vocabulary. At home, children who hear and talk listen to the radio, watch and listen to TV and learn vocabulary while the deaf children have no access to vocabulary. So my opinion is: give support to the children to be able to acquire vocabulary. (*Emphasis original – from the respondents tone, sign & facial expression*)

The idea of vocabulary and use of hard words in the textbooks was expressed by Faith, another deaf teacher when she said:

... the words used there are hard for children to understand. It would be better if simple language was used so that the deaf children can understand or adapt the book to the level of the deaf children.... the language used should also be simple...

Both teachers expressed the need for the learners to have vocabulary so that they can comprehend what they read but they recommended varied approaches to deal with the issue. Although Bruno was of the feeling that deaf learners should be supported to learn English vocabulary, Faith suggested the use of simplified language that would facilitate understanding of the important concepts. Both approaches would be helpful since the former would make them gain vocabulary skills in English which is the language used

in the texts whereas the latter would make understanding of concepts easy resulting in faster learning. Deaf Science teachers in Roald's (2002) study in Norway noted that an adapted curriculum and simplified language in texts helped them understand and learn a lot while they were in school. They also needed to understand new concepts and develop the signs for these. Just as it is with hearing children learning a second language, a strong foundation in sign language, right from early childhood would help in learning English vocabulary but in a situation where even their first language is not well developed, there are chances that simplified English would be more beneficial to them.

Whereas Bruno was concerned about the low level of English vocabulary that deaf learners had, Charity was concerned about the low level of KSL vocabulary that the same children had acquired yet KSL was the language of instruction. She had this to say about the KSL dictionary:

R: Do you have any other resources that you use to aid you with sign language apart from the KIE dictionary that I saw here?

Charity: No other resource. In fact there is a problem because these children were taught American Sign Language [ASL] when they entered this school and so most of them even now use ASL. Now KSL is the official language of instruction and it is also taught as a subject. The children are now confused. The dictionary does not even have all the words. The words themselves are explained in form of drawings without explaining the movement of the hands. It is difficult to tell how to move the hands so as to reach the final form/shape shown in the drawing.

Charity's concern about what was displayed in the KSL dictionary in use seemed sensible. The hand-shape, location and movement of the hand, and the palm orientation are elements of sign language that are crucial while producing any sign. If this is not explained in the dictionary it would be difficult for a learner to master the correct sign. She seemed to suggest that the diagram in the dictionary should be accompanied by an explanation of the elements that constitute the sign. KSLRP has produced an interactive video on KSL which would be of tremendous benefit to the teachers and learners if it was used as a teaching and learning resource.

On the contrary, one teacher was of the feeling that the textbooks were responsive to the needs of deaf learners. Said, a Standard 4 hearing teacher was happy with the textbook he was using because it had combined text with illustrations. Talking about textbooks, he said:

...they are friendly....they do address the needs of deaf learners and in fact the best part of it is that they combine pictures, graphs, drawings, so at least that part can assist them because they can see.

Interestingly, teachers in the same school did not share the same opinion and so I sought to follow this up and learnt that his class was the only one using the textbook published by Oxford University Press which was quite different from the ones the other classes were using as their course books. As the teacher stated, the book was more colourful, it had shorter sentences and more illustrations. The approved textbooks for use in schools will be discussed in more details in the next section.

6.7 Ministry of Education approved school textbooks

As stated earlier, a maximum of six textbooks published by different publishing companies are usually approved for every Standard. The school has the responsibility of choosing from the list in the ‘Orange Book’ the books that are suitable for them. The cost of these books varies and although the price is one of the elements that are considered during the evaluation by the Ministry, it appeared as if it is not regulated since some of the prices seemed to differ by a big margin. Each school management has its own criteria when it comes to choosing which books to buy. Regrettably, according to all the teachers I interviewed, the subject teachers do not seem to play any role in deciding which textbooks suit their learners. Table 6:2 shows the prices of all the approved Social Studies books for upper primary grouped according to the publishers. It also shows the difference between the lowest price and the highest price.

Table 6:2 Prices of Social Studies textbooks for Upper primary

Prices in KES (Kenya shillings)					
Publishers	Std 4	Std 5	Std 6	Std 7	Std 8
Oxford University Press	510	370	395	400	430
Kenya Literature Bureau					374
Macmillan Publishers	520	345	380	395	
Longhorn Publishers		300			390
Longman Kenya Publishers	495	320	360	395	380
East African Educational Publishers				415	
Jomo Kenyatta Foundation		320		360	349
Dhillon Publishers	540	300	350	400	550
Difference in price between most and least expensive	45	70	45	55	201

Source: Ministry of Education (2010)

On the whole, from the teachers' comments above, it appeared as if the teaching style that individual teachers adopted, with regard to the use of the content in the textbooks, determined how well the textbooks were utilised. From the interviews and observations, deaf teachers were explicit in describing how they focused on the important information in the different topics rather than follow the textbook to the letter. While some teachers felt that there was too much to be covered, a statement from one of the deaf teachers expressed a different standpoint:

'The syllabus for class 7 is big but I don't find it a problem. When I am preparing the lesson, I read and summarise the information then I only choose the most important points and that is what I teach.' Hope.

Where teachers followed the textbook strictly, most of the content was not covered and this was raised by the learners as an issue of concern. The following interview excerpt followed after John, a Standard 8 pupil, stated that one of the problems he faced in learning Social Studies was in comprehending what he read.

When learning History, we do not get detailed explanation of issues. The teacher only explains very little. For example, we have not had explanation about what happened after independence in Kenya. We try reading from the textbook. We just learnt half the book and now we have kept it aside and we are now learning Standard 8 stuff, using the Standard 8 textbook. The same happened with the Standard 6, we never completed the textbook.

Whereas Hope stated above that she was able to deal with the subject content, John in his finalist year expressed concern regarding a situation where every year part of the subject content was not covered. After Joyce, John's schoolmate, stated that she had difficulty in understanding the long sentences used in the textbooks, I decided to test her capability by asking her to read a few sentences since she was, according to test results, the best pupil in her class. She could not read the first sentence (which I randomly selected from the Standard 7 course book – *Our Lives Today Social Studies 7, OUP p. 15*) because according to her, she did not know the meaning of some words. I selected another sentence and this is what followed:

Joyce: We have not learnt this section. We have only reached here (She showed me. I then chose another sentence within the section she had shown me and asked her to read). We didn't learn this. The teacher jumped this section.

R: Last year, did you cover the whole textbook?

Joyce: No. We reached halfway and left.

R: Did you continue this year?

Joyce: No. This year we started the Standard 7 syllabus.

I was not sure whether Joyce made any attempt to read any of the sentences I had selected and got stuck along the way because I only saw her looking at the text and I did not see her attempting to sign any word. On the other hand, I was aware that she could have tried to read silently (without signing). According to her, she was not able to read any of them because coincidentally, all the ones I chose were in sections that had not been covered in class. Whereas it was evident that it was difficult for her to comprehend what was selected since it had not been covered in class, it was surprising that at Standard 7 she was not able to read on her own. Since covering content in class probably entails reading together with the teachers through signing every word and most likely the meanings expressed in KSL, when this does not happen, it seems as if Joyce was not able to encode (express the words in sign language) and decode (understand the meaning of the words). This implied that the learners were not in a position to make use of the content in the textbooks without the intervention of their teachers.

The amount of content that was not covered by the time the pupils completed the primary level of education was an area of concern. Apart from focusing on the learners' performance in the national examination, it would be important to also consider the amount of knowledge that the learner gains by the time he or she completes school. Although the majority of teachers referred to the learners as 'slow' and the subject content as 'too much', some of the deaf teachers' reflectivity made them take up the responsibility of dealing with the situation, such as summarising the information given in the textbooks and teaching only what was most important. The width of the syllabus turned out not to be a stumbling block to their teaching.

6.8 The use of wall maps, wall charts and atlases

'I really loved this subject when I was in school but the teacher never used maps. We never travelled to see the province, valleys, rivers... never. She would just write, write only. But me I know if you show deaf learners something and explain they understand well. Charts and drawings were never used.' Hope, one of the deaf teachers

Just as Hope lamented above when she recalled her days in school as a deaf learner, the importance of the use of wall maps, charts and atlases as teaching and learning materials for deaf learners cannot be over-emphasised. They are key resource materials in the learning and teaching of Social Studies not only for deaf learners but also for hearing learners due to the Geography aspect within the subject content. The use of maps would

be crucial in upper primary where the Standard 4 syllabus covers Provinces in Kenya, Standard 5, Kenya as a whole, Standard 6, East Africa, Standard 7, Africa, and Standard 8 covers the World. These are resource materials that would boost the learning of deaf pupils due to the fact that they rely more on their visual perception. However, some of these learners in Kenya do not have access to these materials. In an interview with a hearing Standard 4 teacher in one of the schools, it was evident that maps were not commonly used in the school. Responding to whether there were wall maps in the school and whether he used them to teach, Salim responded:

I think there is one for Kenya. I don't know about ... about the others... but we ordered for some, am not very sure because in this department, I'm not very conversant. I would need to use a map when teaching Standard five onwards.

Standard four is all about the different provinces in Kenya and so different provincial maps are found in the textbooks under every section (the textbook is divided into different sections based on the provinces). The map of Kenya probably would be essential so that learners would be able to locate their province and also understand the position of the other provinces in Kenya. Yusuf, the Standard 5 hearing teacher in the same school confirmed that his class had three atlases which the pupils shared one between five. Since the syllabus is all on Kenya, he had to improvise in place of a wall map.

Well, I can't talk much on that because just the other day I was given the... the class but in fact it is just the other day we were... I gave them manila papers and they were drawing from their textbooks and that's okay. Then they put it on the wall as a chart.

Having all the pupils focusing on one teaching/learning aid, rather than each looking at the maps in their textbooks, would simplify instruction in sign language on the part of the teacher and it also captures the attention of all the pupils in the class. However, it was not clear how many maps were drawn and how many pupils were involved in doing it. Neither was it clear whether the map(s) was used during instruction or it was only stuck to the wall for further reference after the lesson. Used as a teaching and learning aid, it would be helpful as a central reference by the whole class during instruction and all the learners would be able to see the teacher's signed explanation of the chart.

Faith also mentioned the issue of the involvement of learners in looking for and preparing learning resources. Responding to whether they used other teaching and learning resources and how they acquired them, she said:

We have charts and wall maps. We also use other things from within the school area, e.g. we have a hill there (pointing to the direction of the hill), trees and many other things there. We also use other local materials. Some are bought by the school e.g. maps. Others, such as charts, teachers make and sometimes pupils are involved in looking for possible learning materials from within the school compound. Mostly teachers try to improvise and also to decide how to represent the concept in a drawing.

The involvement of pupils in looking for learning materials and making use of what is easily and readily available are issues that demonstrated the efforts made in facilitating learning. This was also evident in the teachers' determination to improvise teaching and learning materials and representing concepts in form of illustrations. The question here would be, is this a common practice among the teachers? How many of them are willing to spend some extra time thinking of how to improvise materials and/or to prepare charts and illustrations?

In schools with units for deaf learners, there was a general feeling from the teachers assigned to teach them that there was unequal distribution of resources. They felt that there were resources in schools which were made accessible to the hearing pupils but not to the deaf pupils. In Tumaini where learners in Standard 5, 7, and 8 shared a room but sat and learned separately, Charity, a hearing teacher, had this to say in response to whether they had other teaching and learning materials apart from textbooks:

Charity: No other, just the textbook. We don't even have the Teacher's Guide for the new revised book.

R: What about maps? Do you have any that you use here?

Charity: Yes, we have that map of Kenya on the wall (she points at an old map hanging on the wall next to where the Standard 8 pupils were positioned) but no other. We do not have the map of the world. In Standard 4, it is all about the provinces in Kenya but later they will learn more about Kenya, East Africa, Africa and the World. It would be good if there were maps for these areas too... somewhere on the wall since the other upper classes are now learning about them. Maybe... the rest of the school has maps... and we might have to borrow from there.

Zainabu, a hearing teacher and a head of the unit that was selected for the pilot study, had this to say regarding teaching and learning materials for the children in the unit

which resonates with Charity's feeling that the hearing children in the larger school are given priority over deaf children:

We lack support from the school management. Our children are sharing rooms while there are free classrooms. A room that we had requested to be allowed to use for a long time was assigned to a class with hearing children when their roof once leaked. We feel that hearing learners here are favoured. There was a time when I was not informed of a Heads of Department meeting for making orders for textbooks and when I asked, I was told that I missed the meeting, didn't make my order, and so I had to wait for the next delivery. The learners in the unit were meant to stay without books till the following year when more funds were to be released for textbooks.

Purity, also hearing and heading a unit in one of the schools visited in Nairobi, echoed Zainabu's sentiments when she made this comment:

We lack teaching and learning materials and so we ask parents to buy, especially writing materials for their children. When textbooks are bought for the school, sometimes they never reach us. You can see what we use as chalkboards. We are aware that apart from the financial support that is sent here from the government, Handicap International also supports the unit but the support never reaches the children here.

This school, as mentioned earlier in the chapter, serves children from very poor backgrounds where parents struggle to provide their families with basic needs such as food. The likelihood of not being able to buy learning materials for their deaf children is high. The attitude of the Heads of schools that have units attached to them seemed to determine how the units were handled. The training on special educational needs that the headmaster of Tumaini school had acquired might have been the reason why the learners in the unit were treated almost in the same way, in terms of the availability of learning materials, as the hearing learners in the school. Mercy, the Head of the unit, noted this when she was talking about the history of the unit and recalled how it almost closed down since learners would be turned away by a previous head teacher. She acknowledged the support that the unit was receiving from the headmaster at the time of this study.

Whereas Purity and Zainabu seemed to face the same kind of problems in their schools, they dealt with the issues differently. Zainabu recognised that she had been assigned a responsibility of overseeing issues surrounding the unit and so she expressed her determination to play that role to the end. She therefore used all means to make sure that the deaf children in her unit had textbooks despite the fact that it meant clashing with

the school management and also some teachers in the mainstream school. On the contrary, Purity admitted that she was very demotivated and was planning to resign as the head of the unit. She actually denounced the position in my presence when she told the other teachers to stop referring to her as their head.

In these schools, the use of ‘the rest of the school’, ‘the main school’, ‘the school’, in reference to classrooms with hearing pupils was common implying that the teachers for deaf learners felt as if the unit was given secondary consideration. According to them, hearing pupils seemed to be benefiting more from the use of the resources available in the school. However, it is good to note that some teachers made the best of what was readily available and also improvised as much as they could rather than being reliant only on what the school provided. It would be good for education managers to realise that sometimes resources specifically meant for learners perceived to have special educational needs are likely to end up benefiting even those without those needs and that having the resources in the school would be for the benefit of all the learners.

Bruno had four wall maps stuck on the walls of the classroom during the lesson – two maps of Kenya, one for North America, and one for the World. He referred to the one for the World once and the one for Kenya about four times during the lesson. He had this to say about the use of other resources during an interview after the lesson:

I write on the wall [chalkboard] and use maps. When I explain the text, I refer to the maps on the wall so that they can make the connection. I then explain... narrate... making references to text and the map.

This is how Salim, a deaf teacher, responded with regard to the use of maps and atlases:

Yes, we have wall maps and pupils have atlases. I also draw maps on the chalkboard myself as I teach.

Two other deaf teachers, Asha and Hope, added that apart from preparing charts, they also improvised teaching aids. Hope explained:

We do not even have the map of Kenya. I always tell the head teacher that we need maps and he tells me to wait. For a long time now. Even the globe we do not have. When I am teaching the earth's rotation, I have to move my body. I use a torch in place of the sun pointing at my outer part of my arm to demonstrate how we have day and night. When teaching longitudes and latitudes, I use a ball and draw the lines there. I also draw on the chalkboard.

Asha, like Faith, brought up the idea of using charts to explain some abstract concepts. It appeared from their responses that charts not only simplified the work of the teacher with regard to having to keep on explaining the same thing many times but also made the learners understand the concept more easily and faster.

The above responses demonstrate how deaf teachers appeared to be keen on using visual teaching and learning resources whether present in the school or not. Their efforts in coming up with these resources are apparent, making it clear how they try to get concepts across even with limited resources. This is not evident in the interviews with hearing teachers, rather they are seen to rely more on what the school provides in terms of visual resources, such as maps and atlases. On the contrary, there are many wall charts fixed on the walls in almost all the classroom but hearing teachers rarely spoke about preparing them. It was evident that the deaf teachers understood better the needs of deaf learners than hearing teachers due to their own experiences as deaf learners. Though useful for effective learning, wall maps and charts did not appear to be used widely as teaching and learning materials.

6.9 Use of the chalkboard

The chalkboard is a useful resource for all learners but it is particularly useful to deaf learners due to their reliance on visual information. All the teachers observed teaching used the chalkboard although some made better use of it than others. While all the schools had blackboards, they differed in size and quality and this tended to determine their usage to some extent as well as their effectiveness in the process of teaching and learning. There were different types of chalkboards in the different schools studied: spacious wall to wall chalkboards, smaller ones that did not occupy the whole width of the wall, small portable one-sided, and small portable double-sided boards. While special schools generally appeared to have spacious and good quality chalkboards, the units either had small ones or large poor quality ones that were shared by more than one class or grade. More details on the use of chalkboards in the lessons observed will be included in the following chapter.

6.10 Other visual teaching and learning materials

Bruno, a deaf teacher, summarised the importance of visual materials thus:

...writing on the chalkboard, use of drama, anything that they can see... deaf learners appreciate anything visual, it is very important... for the deaf it has to be visual.

6.10.1 Videos and CDs

Upendo school seemed to be well resourced and with good facilities but Innocent, one of the deaf teachers, expressed his concern over a lack of maintenance of the available facilities and a failure to put them into good use.

There is a video deck here but it is broken. We are using the laptops we have here. In Shujaa school [a pseudonym for a secondary school where Innocent studied and previously assisted deaf learners], they have DVDs for Science. Here we do not have DVDs. If we had, we would be bringing the laptops to class and the pupils would watch from there.

There were four laptops that belonged to the school and a few DVDs with Bible stories which Faith, also a deaf teacher, said the learners enjoyed watching. These resources, as well as numerous storybooks, are likely to have been donated through the church to which the school was affiliated. There is a possibility that learners in this school and Umoja school which had a video player but no DVDs, would have benefited a lot from the facilities if there had been coordination between the teachers and the school managements.

The tendency of deaf learners to enjoy watching Bible stories was expressed by Hope, a deaf teacher in Imani school as she responded to whether she used any other visual teaching and learning materials:

No. The school had a TV but it broke down a while ago and now it has been taken for repair. The children have been asking for it but they are always told to wait. There is no video player in the school but I have a video with Bible stories in KSL and every Saturday the children come to my house to watch.

Video players, TVs and DVDs are unlikely to be found in the units since some of them do not even have electricity. Funding for units attached to public schools and for special schools comes from the government and although the learners receive a top up capitation to take care of any extra teaching and learning materials that they may require, it appeared as if in most units these materials were not provided. The situation is different in special schools because all the funds are targeted towards the learning of deaf learners. These schools also happen to attract funding from NGOs and other donors who either support the schools through provision of physical facilities, volunteer

teachers, or sponsorship for individual children. This kind of support is not very common in units and where it takes place, the facilities in some cases, do not directly benefit the targeted learners¹⁸. Deaf learners are mostly discriminated against as was evident in some of the schools with units.

6.10.2 Field trips

Field trips are a form of teaching and learning aids which facilitate seeing and experiencing for oneself. However, this did not seem to be taking place too often in schools and units for deaf learners although it is perceived as a suitable strategy for these learners to learn on their own. According to Hope, field trips could help deal with the subject's heavy content. She commented:

...the content can be too much if you teach everything as it is in the textbook. That is why for me, I choose only the important points. For me, it is better to use charts, pictures and field trips e.g. visit factories, such as a milk factory. I don't even know where there is one.

Although it sounded as if Hope had not visited a milk processing plant herself, and was not aware that there was one operating from very close to her school, she seemed to understand that her deaf learners would learn a lot from visiting one. A few other teachers made the following comments regarding the issue. Salim, one of the deaf teachers had this to say:

We are planning to take the class eight pupils to see Fort Jesus [a Historic site within a walking distance from the school] this month. They have already learnt about it. This will help them understand what they have learnt and will also make them not to forget.

Ali, a hearing Standard 7 teacher in Wema school made his point during an interview.

We got some donors who donated a bus. But then here it's only class eights who were able to visit some of these places of interest, like there is a day they went to the cement manufacturing company just within the province...I cannot really say why because most of the students here have sponsors, in fact, some even have more than one sponsor. We really have not exposed them to these kinds of trips.

Fatuma, a deaf Standard six teacher in the same school as Ali made a brief comment.

¹⁸ An example is a classroom block funded by an INGO with unit for deaf learners in mind but they were only assigned one room which was shared by all the grades. The other four classrooms were used by hearing learners.

Field trips are very good for deaf learners but here in this school we do not go. We have never gone ... even to visit nearby places. I do agree... they would help a great deal.

It is evident that more emphasis is placed on the examination class so that they can get good grades in their leavers' examination. Although Fatuma and Ali teach upper primary classes, the learners do not get to for field trips until they get to Standard 8. Their school has a bus but the trips are still limited to 'nearby places' which Fatuma implies could be of help to the learners as well.

Bruno, who is not Kenyan, on the other hand, attributed the absence of field excursions as a teaching and learning resource to lack of funds when he stated, 'Kenyans are poor so going for trips can be hard.' On the contrary, field trips do not have to be long and expensive ones. There is a lot that they can learn even from getting to know their local area well and without incurring extra or huge expenses, e.g. the local court, geographical features such as rivers, valleys and hills, vegetation, etc.

6.10.3 Artefacts

Although these were not directly mentioned during the interviews, the phrases Bruno used above, 'anything that they can see', 'deaf learners appreciate anything visual', and 'for the deaf it has to be visual' can be construed to include artefacts.

In the example of the lesson observation in Huruma at the beginning of this chapter Juma wanted the pupils to give examples of non-living things. He used verbal communication with a few signs, "I want you to think of things which do not live, living... I mean ... zero living things. I mean, things that ... living (signs a plant growing and childbirth) nothing." After he signed 'hills' and 'mountains' as examples, the girl signed 'road' as an example whereas the boy finger-spelt 'lung' as his answer. It appeared as if the boy may have confused the sign for 'lung' with that of 'living' indicating that he may not have understood what the teacher meant when he used the sign. When the teacher walked to the back of the class, picked up an empty tin and showed it to the pupils as an example of a non-living thing all the pupils, except one newcomer who could not use sign language, had examples that they all wanted to share with the rest of the class. The use of a concrete object facilitated communication between the teacher and his students. They understood the concept and the lesson progressed smoothly.

6.11 Conclusion

This chapter focused on the availability, access and the use of resources in teaching and learning in the selected schools. It emerged that some learning environments may have contributed, to some extent, to the deaf learners' underachieving. Not all learners had access to teaching and learning materials especially in some units where the hearing pupils got their share while the deaf pupils had to wait. In other instances, the textbooks were in the store but the teachers had failed to give them to the learners. In the special schools, learners had access to textbooks where they either shared one between two or they had more than one copy each. Visual materials such as wall maps, wall charts, atlases and globes were not readily available but some teachers, mostly deaf, prepared charts for their lessons.

A key finding in this chapter was that despite the efforts made by the government to provide textbooks to all learners, they have not been of maximum benefit to the majority of deaf learners due to the way they are designed. Learners as well as deaf teachers identified areas that needed to be addressed in order to make the books responsive to the needs of the learners. In addition, deaf teachers expressed that if the learners were assisted to learn English vocabulary, then they would manage to read the textbooks on their own and comprehend what they read.

It also emerged that although special schools and units were funded by the government for any extra facilities that the deaf learners required for their learning, some learners in the units seemed not to benefit fully from that funding. Schools that benefitted from donor funding seemed to have more and varied facilities and materials that, if fully utilised, would support deaf learners to gain high level learning achievement.

Chapter 7 Pedagogical Strategies: Use of sign language and classroom talk

7.1 Introduction

This chapter responds to the second research question: What pedagogical strategies are adopted while teaching deaf learners Social Studies? It describes different teaching strategies used by teachers in the classrooms. It illustrates the different views held by teachers and pupils on the use of sign language during instruction, specifically the use of ASL, KSL and SEE, and the use of a combination of sign language and speech. The chapter also gives a description and an analysis of the different teaching strategies and learning activities that take place in the classrooms in relation to different forms of interactions and the use of resources. In so doing, it compares the teaching strategies utilised by hearing and deaf teachers. Finally, the learners express what they consider as barriers to their learning and how they can be addressed.

7.2 The use of sign language during instruction: KSL, ASL or SEE?

As Vygotsky (1962) asserts, the close relationship between language and thought makes children's cognitive development largely dependent upon the contexts and forms of language which they encounter and use as they grow up. In order for deaf learners to achieve effective learning they need to be able to participate in any form of dialogue or classroom talk which can be achieved through interactions with their teachers and their peers. The intimate connection between talking (in this case signing), thinking and knowing need to be recognised through carefully structured interventions in the classrooms to facilitate acquisition of new knowledge in order to bridge the gap between the existing knowledge and the learning outcomes as shown on Figure 4:1 on page 77. For this to take place in Kenyan classrooms for deaf learners, both teachers and learners need to have acquired sign language to facilitate interactive classroom 'talk'. How is dialogue in teaching (Alexander, 2008) facilitated in these classrooms?

During my visits to schools, it was evident that some teachers teaching deaf learners either knew very little sign language or lacked fluency in it, a state which resulted in communication barriers. However, I encountered a number of teachers who were skilled

in ASL but had minimal KSL and who were of the feeling that KSL is limiting to the learners. One such teacher in an informal discussion told me:

I don't know KSL and I will never learn it. Our government is limiting our deaf learners by replacing Kiswahili with KSL as a subject and making it their language of instruction. How do they expect our learners to fit internationally with only KSL?

Some of the hearing teachers were of the feeling that KSL is too 'local' to be used in schools as the language of instruction and instead they preferred ASL which they perceived as 'international'. Some learners, on their part, especially those who were introduced to the ASL when they joined school, also preferred to stick to it as language of instruction. In a conversation with Josh, one of the deaf pupils, he pointed out that there existed two versions of sign language: the one used at home and the one used at school. Some pupils referred to the version learnt and used in school as ASL and as a result, it was perceived as the language of those who have been to school. Consequently, there seemed to be a conception among the learners that ASL is superior to KSL and they therefore prefer to identify with it. This was articulated by Bruno, one of the deaf teachers and a Peace Corps¹⁹, as he expressed his frustration when learners responded to him using ASL signs when he communicated to them in KSL. He expressed the need to sensitise the learners and the teachers on the importance of embracing and valuing KSL.

When I raised the issue that some people thought it was important for deaf learners to have a local sign language which they would identify with and use as their mother tongue, another teacher's comment was:

That language is already very biased. Most of the signs relate to activities that take place only in one region in Kenya. How are the other learners from other regions expected to identify with them?

Considering the examples she gave, I somehow understood the basis of her concern which was related to the fact that Kenya is a multi-lingual country with more than forty different ethnic groups with different cultures. Her concern was that most of the signs are related to activities that only a few cultures can identify with rendering the language as 'foreign' to some cultures as ASL. She gave the example of the KSL sign for

¹⁹ In Kenya, Peace Corps volunteers work in the areas of deaf education, girls' education, youth development, among others. They do not work together with GDC with regard to the training of deaf teachers.

Monday, which indicates somebody carrying something on the head to or from the market. She noted that not all communities carry weights on the head and that market days differ among communities making every day a possible market day to different people. So she claimed that the sign may not have any meaning to many deaf people in Kenya. Her argument supported the use of a foreign sign language, such as ASL, which is uniform than one which is supposed to be local but is discriminative.

Teachers who are guided by this belief usually introduce ASL to the learners as their first language once they join school. This seems to parallel the argument over the use of spoken local languages versus English as the language of instruction. Although instruction in mother tongue during the early years of school is considered beneficial to the child since it is perceived to be offering a more rewarding environment (Iyamu et al., 2007), some parents and teachers prefer the use of a foreign language due to the belief that mother tongues are inferior and should only be used at home. In Kenya, some schools are known to use English as the language of instruction right from the lowest grade and the learners never get to learn through their mother tongue. With regard to KSL being biased in taking up signs from only one region, the discussion in chapter 3 about the emergence and development of KSL attempts to give an explanation. The existence of regional sign language variations typified by different regional features has been acknowledged. These have been compared to dialects in spoken languages and synonyms in written languages. The different signs must have originated from a particular region and all of these signs, some with several variations, make up the vocabulary of the 'standard' (national) KSL which is now a language taught as a subject to all the deaf learners and is expected to be taught to more interpreters now that KSL is legally recognised as an official language.

Teachers who may have been trained to use and have used ASL for a long time may find it hard to switch to a new signing system and allowing them time to adapt and pick up the new signs gradually rather than expect an abrupt shift would be beneficial to them. Since teachers are key implementers of education policies, Okombo and Akach (1997) view them as major agents of language standardisation and suggest that 'they must be trained to accommodate rather than to suppress innovation at the centres where they work' (p. 143). They recommend that KSL should be the sign language taught at training institutions to those willing to teach in schools with deaf children. KSL is the language that is most suitable for Kenyan deaf learners to participate in meaningful

classroom ‘talk’ amongst themselves and it should therefore be the language that hearing teachers should learn in order for teacher ‘talk’ to be beneficial to the learners. Figure 4:1 indicates the importance of language in order for meaningful interactions to take place during the teaching and learning process in the classroom. The scaffolding that is facilitated by teachers and more knowledgeable learners within the Vygotsky’s ZPD can only be achieved through the use of a language which all parties understand.

Mercy, the head of Tumaini unit and one who learned ASL during her training, made this comment regarding the teachers’ attitude:

Yes, there is a lot of negative....they [teachers] are adamant to change and especially the older brand from KISE. They want to stick to the old habits, maybe they do not want to learn KSL themselves because for them to use it, they have to learn it first.

Mercy is one of those she refers to as the ‘older brand’ and she too has had to learn KSL. Although she was more fluent in ASL, the language she had been using for many years, she was keen to learn KSL signs. She however raised the issue of the demands of learning KSL which could have been one of the factors contributing to the teachers’ attitude. For someone to acquire a certificate, one would have to pay for a certificate course at KISE. Mercy and Said could be used as evidence that teachers do not require a full-time course to learn KSL skills since there are other informal ways through which teachers can acquire them. They do not need a certificate for professional development.

Bruno, a deaf teacher, expressed his frustrations as he tried to make the people in positions of authority in the education system aware of language issues that needed to be checked and rectified so that the learners could benefit.

Sometimes I get frustrated by KIE and the government through different, different Ministries. One time we had a meeting at KISE with KIE and I asked different questions. One of them was how the government monitors teachers who learn sign language for three months then they go to schools to teach deaf children. How do they follow up the teaching of KSL? They couldn’t give me an answer. I also asked why teachers training at KISE for the two year course learn ASL and SEE whereas the pupils are learning KSL which will be examined at the end of this year. They go and learn ASL, in schools when they teach English they use SEE but them, they have no KSL. They still couldn’t explain why they are doing that. There is a big problem.

After my interview with Bruno, I managed to speak with the head of Sign Language department at KISE about a month later and according to him, teachers learn and are

trained to use KSL with emphasis on total communication. He claimed that ‘there is no documentation on the use of ASL in Kenya’. This seemed a contradiction since teachers in the field talked about using ASL while some expressed the need to learn KSL to be able to teach it and use it for instruction. In addition, Bruno, whose first language is ASL, acknowledged that hearing teachers learn ASL during their training, teach it to the learners and use it for instruction. It is not clear whether most of these teachers in the field were those who got training before KSL was declared the language of instruction in 2004 and whether new teachers were at that time learning KSL. Bruno also raised the issue of the quality of what is learnt in three months and the monitoring of the actual practice in the field. All these matters demonstrate Bruno’s concern that points to a possible lack of coordination between key institutions within the ministry – the policy makers, KIE which develops curriculum, and KISE which trains teachers for special education. KSLRP, a deaf organisation that offers KSL training courses, could also be used as a resource in teaching KSL skills.

KISE is currently offering a three month course on KSL but some teachers felt that they should not be the ones to meet the cost for the training and recommended in-service sessions to be organised by the Ministry. These are Mercy’s sentiments with regard to the situation:

It is very unfortunate. Some of us who went through training many years ago, trained on ASL and we have no KSL apart from what we have picked here and there. We have tried going to KIE to ask for in-service but we were told that we had not applied for it as a school – state that we want to be included in the in-servicing [programme]. You know what they did? They took a few teachers and in-serviced them hoping that they will come back and in-service the other teachers. Not even one per school, but one per region, I think in the Division or maybe in the District. And where are they? We don’t even know who they are.... The work they do at KIE... is not the best.

Mercy and others felt strongly that the older teachers who trained in ASL required professional development courses to be able to acquire the necessary skills to teach using KSL. The Programmes Coordinator at KSDC gave his views on this.

The Ministry of Education through maybe KISE, should have in-serviced the teachers on this new curriculum. Now, you have heard some teachers saying, they don’t know KSL and will not learn it. Do you know if you’re used to speak Kikuyu [my mother tongue] the way you do then I tell you to stop speaking it the way you do and instead speak the Kiambu dialect of Kikuyu, it will not be easy? It is actually very hard. It is not like telling you to stop speaking Kikuyu and speak Kijaluo [a completely different Kenyan language]. Now, the influence of the one

you know will always reign heavily for quite some years to come... and again, the teacher should not be the one to pay Ksh. 10,000[approx. £100] to learn this new sign language that has been introduced by the government.

Although the Programme Coordinator supported the need for an in-service course for the practising teachers who were trained in ASL, he also expressed the hardships they are likely to face when learning a different sign language. With regard to ASL and KSL, there are marked similarities which are noted right from the alphabet (signing system) to a reasonable number of signs. The use of a similar alphabet is key in sign language because if one is not sure of a sign, then finger-spelling is used. This would be different from BSL which uses a different alphabet. In addition, KSL has incorporated some ASL signs, especially some of those that are not associated with any cultural practices or are abstract concepts such as psychology. While some people would view them as dialects of the same language, others would consider them as two different languages that belong to the same language group. While he implied that training should be the responsibility of the government, perhaps teachers should be seen to take the initiative by using easier and cheaper means of learning the language. For example, what would it entail if they organised lunch-time or after-school sessions with teachers who already have KSL skills to learn a few signs every day? Reflective actions in teachers, as described by Stuart et al. (2009), allow for a willingness to evaluate one's teaching in order to become a better teacher and are seen as a move away from the normal routine that relies on institutional definitions and expectations. For instance, does the system expect that every teacher should produce a certificate as evidence that they have learnt KSL? KSLRP has recorded an interactive DVD with information on KSL, and mostly its vocabulary. How can teachers, with assistance from the schools' management, organise the logistics of using this DVD as their resource and enhance their KSL skills within the school without having to plan and/or budget for a course? Teachers' flexibility would allow them to look for ways through which they can improve their teaching through making use of any available resources.

Charity, a hearing Standard 4 teacher who was at the time taking a degree course in Special Education in one of the local universities, admitted that she was not very good in sign language and also pointed out the dilemma the pupils were faced with.

... I am not very good in sign language. Sometimes I try to explain something and they don't understand. If one of them has understood, I ask him or her to explain to the others and they do it with a lot of ease and they understand one another easily....

But there is a problem because these children were taught ASL when they entered this school and so most of them even now use ASL. Now KSL is the official language of instruction and it is also taught as a subject. The children are now confused. The [KSL] dictionary does not even have all the words.

Charity recognised and seemed to appreciate that learners can learn from each other and subsequently, due to lack of fluency in sign language, she had been using those learners who understood what she taught to explain to the others in sign language. This corresponds with Vygotsky's notion of the scaffolding that takes place within the ZPD when the child learns from adults and other more knowledgeable peers but it did not seem to have been positively utilised. Charity was not in a position to give guidance to the learners as is expected to happen in ZPD neither could she verify the explanations offered by the classmates since she did not understand what was conveyed to the other learners. Lack of a mutual language undermined dialogue between the teacher and the learners making her not able to support the learning process of her pupils (Alexander, 2008). In addition, the learners, though involved in classroom 'talk', only helped to convey the information to the others (in sign language) as it was delivered by the teacher without exploring it further or giving their opinions. This did not give the learners room to construct their own knowledge or construct it with the help of the teacher and as a result they were not in a position to make use of their existing language in order to understand new knowledge as illustrated on Figure 4:1.

Inadvertently, according to Charity, the introduction of KSL has impacted negatively on the pupils' learning due to their dependence on ASL, the lack of quality resource materials to aid them in the learning of KSL, and the fact that the teachers themselves are not fluent in KSL. Her reference to the KIE KSL dictionary as the only resource material implies that most of the teaching emphasises vocabulary learning. She was also critical of the quality of the only resource for learning and teaching KSL when she referred to the way the signs are displayed in their final shape without describing the handshape, the location of the hand, the movement of hands, and the palm orientation during signing every sign (KSLRP, 2004). An explanation would be important so that it also covers the meanings of certain facial expressions, such as a raised eyebrow or a twisted lip, which are significant elements of sign languages.

Conversely, deaf teachers appeared to have a different position. Faith, a post-lingually deaf teacher, had a different opinion about the use of KSL and ASL as she expressed her knowledge and use of sign language.

For me, I didn't focus on KSL alone because I was taught sign language by people who used both. So I use both. However, I prefer using KSL, not ASL though sometimes both are used here. Sometimes when you go to class you find that children do not know some KSL signs, e. g. when you sign the word 'name' in KSL they don't understand because they know the sign in ASL. So, one cannot help using both ASL and KSL.

Bruno, the American pre-lingually deaf volunteer teacher, was in agreement with Faith when he expressed his feelings on this.

I am having a problem with that. My Peace Corps training emphasises that I had to learn KSL, since it is the local language of the deaf here. Sometimes I sign KSL and the pupils sign ASL. For example when I sign 'Good morning' in KSL they respond in ASL thinking that they are using KSL. When I tell them it is American they tell me that my way of signing is wrong because it is 'Kenyan'. I realised that most of them criticise KSL and praise ASL. Me, a deaf *Mzungu* [Kiswahili term for 'White person'], am defending KSL when the Kenyans support ASL against KSL. This is a bad thing to do. It appears as if they do not understand what it means and it is never made clear during the training of teachers.

Bruno's observation can be linked to the implementation of the language policy in relation to education as discussed earlier. Although Kenya and some other African countries have language policies that recognise the need to use local languages as the medium of instruction at the primary level of education, some teachers do not use these languages (Muthwii, 2004; Iyamu et al., 2007). Teachers were heard lamenting the lack of KSL signs to express some concepts and have had to either just fingerspell the words or use many signs to express the particular concepts. While teachers for hearing learners switch to English or other international languages in such circumstances, it is not clear whether teachers for deaf learners switch to the foreign sign language (in this case ASL) or whether the foreign sign language also encounters the same challenges as KSL.

7.3 KSL and SEE as modes of communication in teaching and learning

Social Studies was considered by most teachers as an 'abstract subject'; one that has abstract ideas that pose a difficulty in signing. As mentioned earlier, many deaf learners are placed and taught together through sign language regardless of the nature and extent of their impairment. Many hearing teachers combine signing with speech for the sake of the few who have some residual hearing. They also perceive Social Studies as a subject with 'abstract ideas' that sign language is likely to have difficulties to express. This is what Said, a hearing Standard 4 teacher, had to say while responding to what the issues related to the poor performance were:

You see... mostly we are talking about the abstract. So, it becomes very difficult to get that concept to talk about Africa... you draw... you see, a pupil in a school like this one, does not know the relationship between Kenya and Africa, Kenya and East Africa. So these are abstract ideas. I don't know... I don't want to say... but what I can say is that the nature of the subject itself ... brings about all these problems. It is the subject itself. It is difficult to sign...

The illustration provided as an example of 'abstractness' in this case does not appear to be a problem that would be encountered by deaf pupils only. A pupil does not need to hear to understand the relationship between Africa, Kenya and East Africa so the approach used to teach hearing learners could be adopted to teach deaf learners the same concept. Said appeared not able to identify the actual problem although it is understood that the problem, according to him, is the difficulty encountered in signing concepts within the subject. This difficulty in signing is likely to create a situation where teacher 'talk' is hampered resulting in teaching strategies that do not allow room for meaningful interactions where the teacher can involve the learners in constructing their own knowledge as expected to happen in what is illustrated on figure 4:1.

The 'abstractness' of Social Studies tended to be quoted by a number of teachers. Hassan, the Head of Huruma unit, confessed that he did not complete his lesson plan within the given time and seemed to attribute this to the 'abstractness' of the subject and he too gives examples.

... some of these things are abstract, they need a lot of drawing, you either have to do a lot of drawing for these children to understand or a lot of explanation. So you explain, you reach somewhere you feel they have not understood, you come back again, and again, and again. So... in such a way, you're not able to... cover whatever you would have covered in the specified time.... for example, if you're teaching about the weather... let's say it is 'wind', okay, a regular child could understand 'wind' as 'wind' but to an HI child, even if it is 'wind' you tell him or her that the leaves are moving or they are swaying or the branches are swaying because of the wind, now you see, he or she does not see what is making them... sway... [In History and Civics]When we are talking about people in the past ... for Kenyatta we have a sign, but we don't have signs for maybe people like Lord Delamere, Dr. Ludwig Krapf, ... One would have to give a story.... you tell them that these were Europeans who came to the seashore, they came to Rabai and then moved like that.... now that brings a long story and it consumes time.

Wind is not anything anybody can see, deaf or hearing, but the movement of things such as tree branches or hanging clothes and sometimes, a feeling on our bodies as the wind blows on it are some of the ways through which the concept of wind can be explained to all learners – hearing, deaf or blind. The example of personalities that is explained

through giving a 'story' would apply for hearing learners as well and finger-spelling or writing their names on the chalkboard would be used for them to master the spelling. What Hassan refers to as a time-consuming 'story' that explains personalities would be expected to contribute to learning more than the use of a single sign that is attached to a personality in form of a name. It is through telling the 'story' that a dialogue can be initiated where pupils can be involved in interactions among themselves and between them and the teacher. This can be achieved through classroom 'talk', for example, through asking questions, speculating and visualising what is being said/signed in the 'story' and sharing with the others, and/or through answering questions from previously acquired knowledge (Figure 4:1). The question that arises is: Is the issue here deafness, the use of sign language, and 'abstractness' of content or is it the learners' limited vocabulary? It appears as if the teaching and learning approaches adopted and possibly the teachers' limited KSL skills are likely to have been the barrier to effective teaching and learning rather than the 'abstractness' that is referred to in the excerpts above.

One thing that is evident in the teachers' comments is that having to explain concepts at length that do not have signs takes up a lot of the time allocated to a particular lesson. Bearing in mind that signs are equivalents of words in spoken language, it would be expected that teaching and learning would entail explaining new concepts that learners, hearing or deaf, encounter for the first time. Even if there were signs for concepts, teachers would still have to explain their meanings. What is it about the 'explain, explain, explain'? Is it about the hardships teachers face in explaining probably due to their limited sign language skills or is it about the learners' level of comprehending what is being explained? Although KSL as a language of instruction is considered as insufficient, there seems to be more surrounding the 'abstractness' than just the vocabulary, which needs further exploration.

While the examples quoted above seem not to be appropriate illustrations of 'abstractness' that would affect the teaching and learning of deaf learners, the idea of abstract concepts was also raised by Asha, one of the deaf teachers.

I don't complete my lesson within the 30 minutes set aside for the lesson because the content to be taught is too much, there are too many words used whose meanings I have to explain. Most of the things are also too abstract and so it takes time to explain. The pupils take too long to understand so I have to explain again and again and by the time I finish, it is past the time.... I use maps and charts to help me explain abstract concepts.

Although Asha did not give an example of an abstract concept, her comment about explaining again and again implies that, the issue is not lack of sign language skills alone since she is fluent in sign language. Due to her understanding that deaf learners are faced with difficulties in comprehending abstract concepts, she made use of visual teaching and learning materials when teaching them. Whereas the materials supported Asha in her teaching, it is likely that they also encouraged the learners to think about what they saw, explore and evaluate ideas derived from the visual learning materials which they related with knowledge previously acquired in school or outside school. Asha's teaching strategy would be expected to result in better learning outcomes as shown on figure 4:1. While it appears as if many teachers thought that the use of sign language takes more time to express ideas than the use of speech, teachers need to be more reflective and flexible to be able to adjust their teaching approaches when the need to do so arises.

The need to gather from the teachers about what they thought was the most appropriate and effective mode of communication during teaching and learning Social Studies arose. Faith's response was very explicit. Being a deaf teacher who lost her hearing gradually as a teenager, attended her teacher training with hearing students and could occasionally use her voice, Faith seemed to understand better the heterogeneity of her learners:

The best thing is to start with both sign language and speech because there might be children who will be able to understand your speech and 'catch up' better and faster than the others. Others understand better from the teacher's facial expressions. Some children who have residual hearing benefit from the use of hearing aids while others do not use them at all. Others are able to read the lips and understand. So it is good for the teacher to sign and also use speech at the same time. SEE is difficult to understand and so it should not be used.

Faith's comment showed recognition that the classrooms had pupils with mixed and varied levels of hearing loss thus the need to use different approaches that would accommodate all if possible. Although this is a view that was shared by most of the teachers, it did not seem to be working effectively due to a number of reasons. As mentioned by Faith, some of the learners who had hearing aids confessed that they did not improve their hearing at all²⁰. As for SEE being difficult for learners to understand

²⁰The hearing aids had been given as donations and learners had been fitted with them the week before the interview at the National hospital's Ear Nose and Throat (ENT) Dept.

and therefore not suitable for instruction, it is not clear whether Faith meant that it should not be used at all. The lack of fluency in sign language among most hearing teachers was likely to hinder them from encouraging dialogue in their teaching and also from using communicative facial expressions, such as those used by deaf teachers, which play an important role in sign communication.

Most of the teachers in this study admitted that they used SEE when they read written text whether in the books or on the chalkboard while deaf teachers were firm in stating that they used it only when teaching English. This, according to them, was aimed at giving the learners writing and reading skills in English which would in turn aid comprehension.

The use of speech together with sign language is controversial. Those arguing against it claim that since the structure of the spoken language, in this case English, is different from the structure of sign language, the signs either do not correspond with what is being said or the signed information ends up having gaps due to missing signs for some uttered words or concepts. From my observations, where speech accompanied signs, minimal signing took place with some concepts being spoken but not signed. Bruno was strongly against it and when he taught, just like the other deaf teachers, he strictly used sign language only without speaking a word although he could speak. Although Said was hearing, he did not utter a word during his lesson and like the deaf teachers, he used facial expressions extensively and mouthed his signs. Those teachers who did not support the use of sign language together with speech argued that it is likely to confuse both the learner and the teacher because while the speech is in the English structure, the signing is in sign language structure. It is also likely to result in communication breakdown which impedes learning through interaction (Vygotsky, 1978, Figure 4:1) and dialogue (Alexander, 2008).

Asha gave a very general suggestion when she said, 'KSL should be used in explaining and SEE when reading sentences'. The question here is: what signs are used in SEE? Or does she refer to the word order in the construction of sentences? She, however, built more on the use of SEE which Faith felt should not be used at all. Asha did not support the use of SEE for communication purposes since it is English in form of signs which Okombo and Akach (1997) refer to as 'artificial sign language' (p.144). What she recommended was the use of KSL while elaborating on ideas and concepts whereas

SEE is used when reading sentences in English which entails signing each and every word used as they appear in the English sentence, including grammatical concepts such as plurals and tenses.

However, although teachers argue for the use of KSL more than SEE, this is not what I saw happening in the classrooms. As the majority of them claimed, SEE was used when reading text in the textbooks or on the chalkboards but some of the teachers used SEE during instruction. One of the lessons I observed to have achieved minimum learning was conducted in SEE. The signing, which was a mixture of ASL and KSL signs, was accompanied by speech. It is not clear whether the outcome of the lesson was as a result of the use of SEE or of the frequent finger-spelling of words which took most of the time allocated to the lesson. One thing that was evident is that the use of SEE all through this particular lesson during instruction took longer than using ASL or KSL. SEE can be used to achieve a certain purpose which was not clear in this particular lesson where the teacher admitted that he was not fluent in KSL. It is likely that his lack of fluency in KSL was probably behind his choice of SEE where he translated English words directly into signs as they were spoken. The lesson progressed slowly and did not have corresponding signs for some of the words he voiced. He also fingerspelt most of the words that he did not have corresponding signs for without explaining their meaning. Although Schick and Moeller (1992:69) noted that ‘the use of SEE system provided a useful base for English acquisition’, for effective learning to be achieved, the teacher would need to be able to use the corresponding signs for every concept used so as not to lose the intended information. It appeared as if the use of SEE during instruction affected the comprehension of the content taught maybe due to possible gaps created by concepts that were not signed and also the structure which is different from that of KSL.

Bearing in mind that English is the language used in texts and the language that learners use to write their ideas, the use of signed English would be perceived as the best approach to acquire reading and writing skills in English as well as aid them in English comprehension. Teachers therefore, in addition to creating room for the use of sign language during classroom interactions (teacher and pupil ‘talk’) as shown on Figure 4:1, they need to adopt teaching strategies that would enhance the learners’ reading and writing skills to make it possible for them to access more information through reading texts and to write what they know in examinations.

7.4 Pupils' views on the use of sign language as the mode of instruction

Most of the learners appreciated the use of sign language and they seemed not to have difficulties themselves using sign language. However, there were issues that they raised in their responses as expressed by John, a Standard 8 post-lingually deaf pupil in response to whether he experienced any problems learning through sign language.

Sometimes the teacher signs differently from what he is saying so when one lip-reads it becomes difficult to tell what he means – the sign or the word he speaks.... When communicating in sign language, I have no problem but some of the Social Studies words are hard to sign.

Joyce simply put it:

The sign language used by the hearing teacher during explanation is hard. She uses signs together with speech and also writes on the blackboard but it is difficult for me to lip-read. I would understand better if she uses signs only without speech.

The problem of the combined use of signs and speech was expressed by most pupils. It was not clear from Joyce's comment whether the problem was the use of wrong signs for particular ideas, the use of signs that did not match the words, or the different structures of the two languages. This seems to explain Bruno's and Said's sentiments above. Whereas mouthing words is something that is sometimes encouraged in the use of sign languages due to some signs having more than one meaning, it should correspond with the sign used in order to aid understanding and to avoid misinterpretation of information.

Almost all the learners interviewed concurred with John with regard to their own use of sign language. They all expressed having no problems communicating in sign language but added that they faced difficulties getting appropriate signs for particular concepts in Social Studies. This is an indication that new signs for particular concepts encountered in this subject need to be developed so that learners are able to grasp the concepts being taught without being left with gaps that can lead to misinterpretation of information.

Others, such as Jemima, expressed a feeling of desperation as she participated in a conversation with me during an interview.

...the hearing teacher mostly uses speech and very little sign language. I, together with other pupils just sit and watch without understanding what the teacher is teaching.... Sometimes when I ask the hearing teacher to explain the meaning of a

word, e.g. management [she finger-spells], he is not able to explain and so it becomes hard to understand the lesson.

Jemima's comment illustrates a learning environment that lacks meaningful interactions between the learners and the teacher due to the inadequacy of a common language. There is more teacher talk than pupil 'talk' and due to communication breakdown, as Jemima put it, little or no learning is achieved. The kind of classroom interactions illustrated on Figure 4:1, linking with what learners already know, result in acquisition of new knowledge in form of positive learning outcomes.

Learners should be able to take charge of their own learning but when they seem to be out of control, it is likely for them to accept the status quo especially when power relations are in play. The scenario created by Jemima demonstrates a classroom with learners who only sit and take in information from the teachers without taking part in building their own language. She however, underscored the importance of explaining the meaning of concepts represented by particular signs and seems to understand that knowing how to sign a particular concept does not guarantee that one understands the meaning of that sign. This corresponds to what the deaf teachers in Roald's (2002) study said in chapter 4 regarding hearing teachers learning and using sign language that knowing the sign for a concept is not enough but rather understanding and explaining the concept to the learners is more important.

Hearing adults learning sign language may only require to know corresponding signs attached to particular concepts and to accompany the signs with facial expressions since they already know the meanings of the concepts. The situation is different for all learners, hearing and deaf, who as well as learning the sign/word and how to spell it, they also require to know the meaning of the sign/word to be able to comprehend what they read or hear from others. Jemima expressed her frustration in trying to get the meaning of concepts represented by a particular sign. Responding to whether he experienced communication breakdown, Jude expressed how he felt abandoned when their teacher, during his teaching, would simply tell them that he did not know a particular sign and would not explain the meanings of some of the complex words they encountered in the subject. It seems as if generally hearing teachers, as illustrated by Roald's study, tend to assume that once they are able to express a concept using a specific sign, learners understand what they communicate to them. The learners in this study demonstrated that for them to benefit in learning, an explanation is necessary.

This can be achieved by building on knowledge previously acquired by learners (Figure 4:1) and by involving learners more in constructing their own knowledge.

One thing that was evident among deaf teachers, and this could be one reason why pupils seemed to like them, is that in addition to the fluent use of sign language, they were keen in explaining the meanings of concepts as previously illustrated by Fatuma and Asha. They would use signs that learners were familiar with to explain the new concepts giving examples that learners were able to identify with as shown on Figure 4:1 and allowing space for learners to think and express their own ideas. Hearing teachers may be faced with the problem of using sign language as a second language and therefore have difficulties explaining the meanings of concepts using sign language as is stated by the learners. Although all the deaf teachers in my study, except Bruno, were post-lingually deaf, they had all embraced the use of sign language as their main language and were fluent in their signing.

7.5 Sign language and existing knowledge

Social Studies was considered by many teachers as a subject with abstract ideas and so there was need to try and understand how teachers and pupils coped with the situation. There were hearing teachers who owned up and said that they were not good in sign language even before the start of the lesson and in most cases, it was evident in their lesson presentation. I sought to know from Said, one of the hearing teachers who had only four years' experience of teaching deaf learners, how he was able to use fluent sign language accompanying it with facial expressions. As stated earlier, he taught his lesson using sign language only without combining it with speech. He responded:

It all depends on the interest and how close you are to deaf people. Like that American lady has really assisted me because there are some teachers who have been here for well over ten years and I am better than they are in sign language.

Said confessed that due to his interest, he deliberately spent time with an American volunteer who was also teaching in Wema school so that he could learn from her. As expected, the sign language he used was subsequently a mixture of ASL and KSL. However, Said was one of the hearing teachers who seemed to recognise the existing knowledge the learners had as he introduced new concepts. He tended to first verify what the learners knew and could still remember from previous lessons and then used that knowledge to explain the new subject content. For example, as he taught the topic

‘Rivers, Lakes and Oceans’ he sought to know their uses and benefits from his learners and then built on that knowledge as he introduced new concepts related to the topic. As well as using the sign for ‘irrigation’ for example, he sought from the learners the meaning and the benefits of ‘irrigation’. One learner signed the name of an irrigation scheme within the area around their school which was an indication that he understood the concept of ‘irrigation’.

Fatuma, a Standard 6 deaf teacher, who felt that only sign language should be used as mode of communication, gave a vivid explanation of how she dealt with it when I asked her whether she encountered any problems in expressing Social Studies concepts in sign language.

For example today during my lesson, I was trying to explain the meaning of ‘valley’ and wrote the word ‘depression’ on the board then I explained the meaning by signing. I am not sure whether they understood the word ‘depression’ which is used in the textbook.

Fatuma illustrated that equivalent signs for particular concepts alone do not contribute to learning a new concept and that what is more important is for the learners to understand the meaning of those concepts. She stated in an interview that she uses the strategy of progressing from the familiar concepts to the unfamiliar ones using examples of what the learners already know.

- R: So what happens in the event that you are not able to sign a certain concept?
- Fatuma: I just explain.... if there is no sign, there is no sign for that concept then I explain the meaning, moving around, giving examples.... using all the words I know and they know to explain that concept, moving from the known to the unknown.

The strategy used by Said and the explanation given by Fatuma on how she explained concepts that she had no signs for, are good illustrations of the kind of scaffolding that is expected to take place in Vygotsky’s zone of proximal development. These teaching and learning strategies link with the illustration on Figure 4:1 where the teacher acknowledges the learners’ existing knowledge and builds on it in order to achieve positive learning outcomes.

7.6 Pedagogical strategies used during instruction

Instruction in most Kenyan classrooms takes place through what is referred to as whole class teaching where the teachers talk to the class as a whole. This is what has traditionally been referred to as teacher-centred teaching, or ‘transmission’ teaching which implies that the teacher plays the role of transmitting or transferring knowledge from themselves to the learners (Stuart et al., 2009). As a result, the teacher is seen as one who dominates and controls the teaching and learning process and laying more emphasis on teaching rather than on the learning outcomes. Stuart et al. (2009) use the term ‘mug-and-jug’ method which implies that the learner is perceived as one who is empty and the teacher’s role is to fill him up with knowledge. Learner-centred teaching is a phrase that is currently used quite frequently. It, on the other hand, focuses on how the learners are learning rather than on how the teacher is teaching and emphasises the involvement of learners in constructing their own knowledge.

On the contrary, learner-centred teaching has, in some contexts, been (mis)understood to mean that learners should learn in groups. This has resulted in learners being put in different groups and left to perform tasks on their own. While this creates room for the learners to exchange ideas and to work collaboratively, younger learners such as those in primary schools in Kenya may not achieve a lot without guidance. Since learners may not be able to discover everything on their own, the teacher plays the role of presenting ideas, guiding and ‘scaffolding’ learning (Stuart et al., 2009). Mercer & Littleton (2007) argue that social interactions not only provide room for people to work together while solving problems but also they allow them to think together. As Vygotsky (1978) states, through the use of language, which facilitates dialogue, learners can establish shared understanding of a particular phenomenon amongst themselves. Learners therefore should not be passive recipients of the knowledge that is packaged in different subjects but rather they need to be actively involved in building their own understanding of that knowledge from their own life experiences and from the already acquired knowledge that is referred to on Figure 4:1. In so doing, learners and teachers (as co-learners) will together be ‘building the future on the foundations of the past’ (Alexander, 2008: 15).

While it is undeniable that children construct meaning from the relationship between the new knowledge they encounter and what they already know, interaction with other members of their community (Vygotsky, 1978) plays a significant role in understanding

concepts taught in school and in developing their identities within the wider culture. In recognition of this fact, Alexander (2008) recommends teaching that allows room for dialogue between the teacher and the learners, and between the learner and other learners which he refers to as ‘dialogic’ teaching. This teaching approach challenges teaching models that encourage activity on one side of the teacher-pupil relationship and passivity on the other (active learners and passive teachers in the learner-centred model and vice versa). It ‘demands both pupil engagement *and* teacher intervention. And the principal means by which pupils actively engage and teachers constructively intervene is through talk’ (Alexander, 2008: 12 - *author’s emphasis*). Building on Vygotsky’s notion of the relationship between language and thought, Alexander argues that teaching should provide learners with linguistic opportunities and encounters which will enable learners to think for themselves before they fully understand newly introduced knowledge. Teaching therefore should aim at exploiting the collective and interactive environment which is inherent in classrooms. This kind of teaching utilises the power of talk which engages, stimulates and extends the learners’ thinking resulting in developing their understanding and learning. Classroom activities that provide teachers and learners with the opportunity to construct knowledge and understanding together can be easy to plan if dialogue exists between teachers and their learners (Mercer & Littleton, 2007). Dialogue in the classroom is facilitated by language, the most important cultural tool which Vygotsky (1978) claims, serves as a sense-making resource of society. For deaf learners in Kenya to benefit from effective dialogue in the classroom, fluency in sign language is crucial among teachers and learners. Fluency in signing is expected to facilitate exploratory classroom talk which according to Mercer & Littleton (2007) would in return improve the quality of the learners’ thinking and educational attainment. This section intends to analyse the teaching strategies that were used in the classrooms focusing on the extent to which learners were involved in constructing their own knowledge through classroom interactions.

7.6.1 Classroom talk in teaching and learning activities

The organisation of the classrooms where teaching and learning activities were observed can, at first glance, be considered as one that promoted whole class teaching since the teachers were mostly seen standing at the front of the class talking to the class as a whole. While a number of teachers generally made some efforts to allow room for the learners to participate in class, some of the activities they were involved in may not

be considered as having contributed towards quality learning. This was mainly because dialogue, ‘the reciprocal process in which ideas are bounced back and forth with a bid to take forward the learners’ line of thinking’ (Alexander, 2008: 24), was lacking.

The activities that learners were mainly involved in during the lessons were responding to questions by signing the answers – fingerspelling or writing the answers on the chalkboard, and copying notes. The teaching strategies used by different teachers varied. For example, in a lesson meant for Standard 5 pupils in Huruma school, with the topic ‘Physical Environment’, learners were only involved in giving examples of living things and non-living things that they knew. They signed their answers while Juma, their teacher, wrote the words on the chalkboard and fingerspelt them as the learners watched. These were words such as ‘goat’ and ‘chicken’ for living things and ‘hills’ and ‘stones’ for non-living things. When ‘incorrect’ answers were given, the teacher would declare them wrong and pick another learner to give a ‘right answer’. Whereas the interaction between the teacher and the learners can be perceived as constituting dialogue and the strategy used perceived as learner-centred, it did not result in what Alexander (2008) refers to as dialogic teaching since it failed to create room for discussion and collaboration. There was no scaffolding of the analysis needed to decide whether something was living or non-living. Since the learners were actively involved in building their own knowledge although in a limited way, some might have been able to learn from the correct responses. Despite the fact that it recognised the knowledge previously acquired by the learners, it failed to progress beyond that knowledge towards new learning outcomes as shown on Figure 4:1. Instead of the many examples learners gave, some learning would have been achieved if the teacher concentrated on a few of them and introduced new content in collaboration with the learners. Fingerspelling and writing the words on the chalkboard which may have been intended to help the learners master the spellings of the words, seemed to have been hindered by the teacher’s failure to involve the learners in fingerspelling the words.



Photograph 7:1

A chalkboard in Huruma school

Writing the words on the chalkboard may have been of little or no benefit since they were illegible due to the poor status of the chalkboard and had to be rubbed off to create room on the small section which was in use, as seen on photograph 7:1. Fingerspelling words without assessing whether the learners had learnt how to fingerspell them may have failed to result in meaningful learning outcomes. While Ali, a Standard 7 teacher, encountered difficulties while teaching how to calculate time in a particular zone in relation to its direction and distance from the Prime Meridian without a globe, his teaching strategy seemed to hamper meaningful learning. Despite the topic being somehow abstract, he drew an illustration of the globe with longitudes on the chalkboard to mark the Prime Meridian. With limited sign language which was combined with speech, he explained how time is calculated, writing and working out the time on the chalkboard as the learners watched. Ali, however, tried to transfer the knowledge the learners had acquired in their Maths lessons to the Social Studies lesson by occasionally involving them in simple multiplications and additions as he worked out the time. Dialogue in this lesson was hampered by the fact that Ali was not fluent in sign language and as he used speech to explain the concept to the learners he tended to do it as he faced the chalkboard. It was evident that there was communication breakdown in the delivery of this lesson and most of the learners seemed not to have grasped the concept except for one pupil whom I could hear, though not clearly,

responding to the teacher. Regrettably, the teacher seemed to respond and progress at the pace of this one learner who seemed to be hearing and following what he was saying and doing.

In spite of the abstractness of this topic, the teacher tried to balance his delivery of information and his explanations with the previous knowledge that the learners had gained especially from their Mathematics lessons, such as, the number of seconds in one minute, and arithmetic skills. Although they participated in working out the time, the use of an improvised globe, such as a ball, would have helped the learners to understand the idea of the earth's rotation and the concept of different times in different parts of the world. Although some learners took part in working out the time for a particular zone on the chalkboard, it was evident that they did not understand the formula that was used to get the figures which they worked with and so it appeared as if they were only working out a mathematical problem which they still encountered difficulties doing.

This lesson exhibited more teacher 'talk' than learners' 'talk' since the learners, apart from listening to the teacher, only responded to the teachers' instructions as they attempted to work out the task they had been given. They lacked the opportunity to express themselves through contributing towards or asking questions regarding the concept that they were intended to learn. The teacher's failure to understand that learning depends more on the learners' readiness to express and discuss their own understanding rather than on their being able to elicit the right answers (Alexander, 2008) resulted in poor learning outcomes. The kind of teaching that Ali used in this lesson corresponds to what Alexander (2008) refers to as exposition or instruction which involves the teacher telling the pupils what to do and explaining facts and procedures. His teaching failed to be dialogic since it did not elicit discussions that would have allowed the exchange of ideas which would have simplified the understanding of the concept in question.

Speaking and listening skills of teachers and learners, and classroom climate are factors that determine the quality of classroom talk, among others (Alexander, 2008). Effective communication seemed to contribute towards some meaningful classroom talk during some of the lessons I observed. Fatuma, a deaf Standard 6 teacher in Wema school, started her lesson by asking questions from previous lessons which were related to what she intended to teach. Her questions aimed at building on previously acquired

knowledge as she introduced her new topic on how the Rift Valley was formed. When learners signed their answers, she would ask them to fingerspell the English words for the signs while she wrote the word on the chalkboard. As she explained her subject content to the whole class, Fatuma involved the learners by verifying that they understood some of the signs she used. She would stop and ask the learners whether they knew the meaning of certain concepts that she used in her explanations and where they seemed not to be sure she would use other signs that the learners were familiar with to explain. An example was the concept 'fault' which was used in the course book. As well as involving the learners in constructing knowledge, she built on the knowledge they had to explain the meaning of this concept using the signs for 'weak' and 'crack'. Fatuma understood the need for visual illustrations for her learners and as she explained every stage she would draw an illustration on the chalkboard that would aid their understanding of the process.

Fatuma's sign language which was rich with facial expressions, gestures and general body language seemed to facilitate quality teacher 'talk'. Although her teaching may not have displayed the reciprocal component of dialogic teaching where learners give alternative viewpoints, it exhibited the collective, supportive, cumulative and purposeful components (Alexander, 2008). The teacher and the learners participated in the teaching and learning process together, learners expressed their answers freely without fear that they could be 'wrong' answers, and some of them would help their classmates in fingerspelling correctly or understanding certain ideas. As well as building on the knowledge previously acquired by the learners as she taught her topic, she facilitated and guided classroom 'talk', and gave the learners the opportunity to ask questions after her explanation.

Said's Standard 4 class seemed to benefit a great deal from dialogic teaching. Although he was hearing, and had taught deaf learners for only four years, he communicated well in sign language throughout his teaching without combining it with speech. Despite the fact that he addressed the whole class, learning tasks were addressed collectively, by the teacher together with the learners. He started the lesson by asking questions from previous lessons to provoke the learners' thought and to verify the level of knowledge already acquired before introducing his new topic. As well as signing their answers, Said would ask them to write the words on the chalkboard, a task that contributed to learning English vocabulary above the subject content. Almost all of them volunteered

to provide the answers. The atmosphere in the classroom was an indication that the learners had the confidence to provide answers without being ashamed of making mistakes. Where mistakes were made, Said would verify with the learners and would probe them to correct the error. I particularly noted that Said would not dismiss an answer as 'wrong' but rather he would get the views of the learners and invite a discussion as to why it was not suitable. This would challenge the learners' thinking in order for them to explore further and build upon those answers.

Said's teaching was purposeful since he guided classroom talk with the intention of achieving specific learning goals. As well as supporting the learners to express their ideas freely, he also incorporated the reciprocal component of dialogic teaching in his lesson. Being a hearing teacher for deaf learners, Said understood that the learners were more knowledgeable than he was in terms of sign language skills so he was open and willing to learn from his pupils. For example, in an attempt to explain the concept of 'foreign exchange' as one of the benefits of waterfalls in Kenya, Said experienced difficulties since he did not have a sign for 'tourist' and so he wrote the word on the board and asked the learners for the sign. When they signed the sign for 'tortoise' as the equivalent sign, rather than dismiss it as a 'wrong' sign, Said sought to understand the relationship between 'tourist' and 'tortoise'. He realised that it was a local sign used only within that region when the learners referred to a park within the area which has many tortoises and which tourists frequently visited. Said confessed that it was his first time to see the sign used to refer to 'tourist' and acknowledged that he, to a larger extent, attributed his sign language skills to his interactions with his learners. Throughout his lesson, Said recognised that learners are not just receivers of knowledge, but they too possess some knowledge which others, including teachers, can learn from.

Although learning was not taking place in small organised groups, classroom talk was facilitated in some of the classes by the interactions between the learners and the teachers and also between learners themselves. Hope, a deaf teacher who had only one learner in her Standard 7 class, maintained dialogue between her and her student throughout the lesson. Apart from involving the learner through answering questions and fingerspelling her answers, she kept encouraging her pupil to think and remember what she had learned earlier in previous lessons in order to understand better what she was learning. In addition to the use of fluent sign language, Hope extensively used the

chalkboard for writing words as the learner fingerspelt them, writing important points and drawing an illustration of a map which she and the learner interpreted together. It is likely that the teacher-pupil dialogue during this lesson was facilitated and maintained from beginning to end by the 'inevitable' individual teaching. Whereas it can be construed as dialogic teaching it could still have been transmission but in a one-on-one setting.

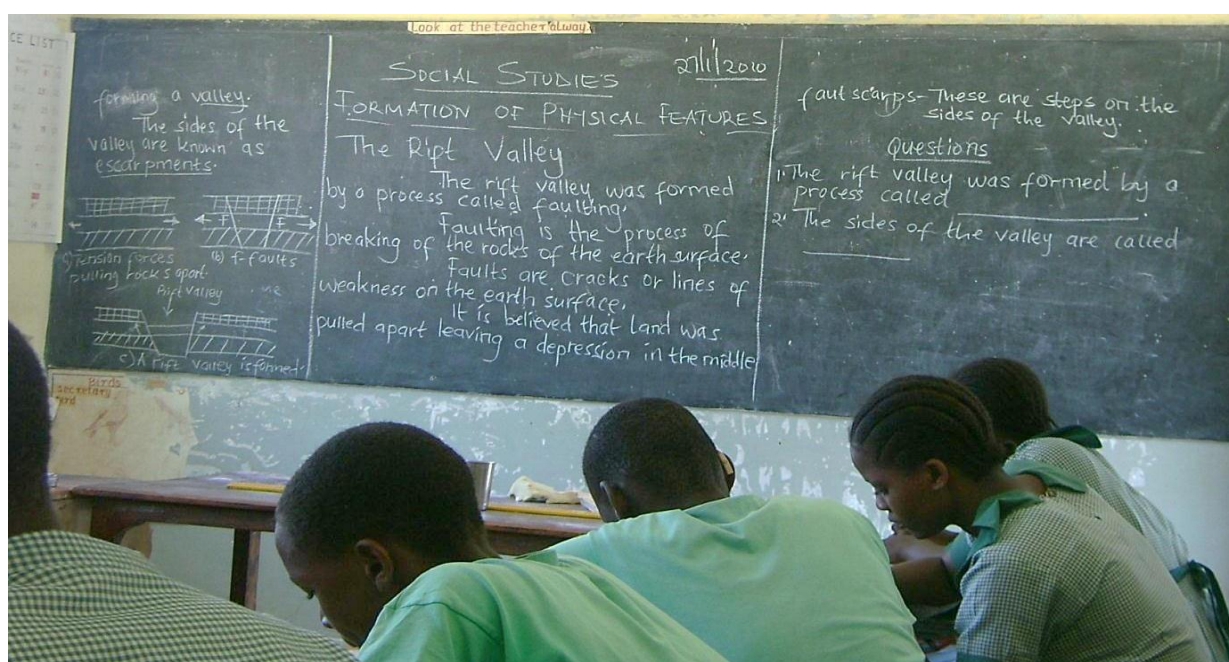
However, in some of the classrooms, teaching was mostly in form of instruction where the teachers took up the role of imparting information and spent time explaining facts and procedures and telling the learners what to do and not what to do. In most cases, learners' participation was in form of answering questions through signing or writing, and/or copying notes in their exercise books. Due to the power and status accorded to teachers in Kenya, learners have the inclination to take up what teachers say without questioning or giving their views about it (Mercer & Littleton, 2007). Teachers have full control of the classroom activities and the direction that the lesson takes. For example, although Bruno's lesson was the only one which had maps as teaching and learning resources, there was more time spent on teacher 'talk' (teacher signing and instructing) rather than pupil 'talk' (learners signing). Although they seemed to be following, the learners spent more time attending to the teacher's signing than actively participating in the lesson. Though the teacher gave examples that the learners were familiar with, and built a lot on the knowledge previously acquired by the learners, learning might have been more enhanced if the examples were provided by the learners themselves.

7.6.2 Assessing learning

Teaching and assessing are closely connected. It is through assessment that the teacher and the pupil get to know how learning is progressing and what needs to be done to achieve satisfactory learning outcomes. It is important to have some form of assessment in every lesson which can be done through question-answer exchanges. Alexander (2008) stresses the importance of teachers asking authentic, carefully-focused questions, giving the learners time to think about them, preferably aloud, and allowing space for speculation and reasoning without expecting 'right' answers only. Authentic questions allow the learners to express their thoughts and the knowledge they have already acquired rather than limit them to just report what they have heard from someone else. 'Wrong' answers, rather than being dismissed, should be used as a means to facilitate

understanding. The perceived ‘wrong’ answers are likely to be related to the learner’s life experiences and they can only be understood if the learner is given a chance to explain them further. Teachers should therefore consider that ‘thematic continuity and the constant interplay between the familiar and the new are prerequisites for development and growth in thought as well as language’ (Alexander, 2008:26). This is in line with the concept on Figure 4:1 which indicates that the recognition of the learners’ previously acquired knowledge while teaching new concepts contributes to the achievement of better learning outcomes.

Generally, it was observed that assessment of what had been learned during the lesson was in form of short sentences, mostly picked from the notes, with blank spaces that learners were supposed to fill with a one-word answer. This was a task that learners were supposed to perform individually, the kind that Alexander (2008) refers to as ‘solitary written and text-based tasks’. An example of such questions was used during a Standard 6 lesson as seen on the chalkboard in photograph 7:2. The two questions did not require the learners to think, reason, or speculate for they could easily find the answers from the notes. They only had to look through the notes and rewrite the sentences without building on any previous knowledge. Providing correct answers for these two questions is not an indication that the learners had understood what was intended to be learned.



Photograph 7:2

An example of an assessment task

However, it would be important to note here that during the same Standard 6 lesson, a different form of assessment had been adopted before the teacher wrote down the notes and the two questions on the chalkboard. After Fatuma, a deaf teacher, had completed introducing new knowledge about the formation of the Rift Valley she invited questions from the learners. As a way of assessing their understanding, she invited volunteers to go to the front of the class and explain the process that they had just learned. After the first volunteer explained the process in sign language, it was evident that he had not understood it clearly and so Fatuma, using her illustrations on the chalkboard, explained further what had not been understood. Two more learners volunteered to explain to the rest of the class while the teacher guided and probed them so that they could fill missing gaps. She would probe them to explain the meaning of some of the signs they used to verify that they understood. This kind of ‘oral’ assessment offered the learners the opportunity to express themselves deeper and more clearly than they would have if they were writing their answers in their exercise books. The kind of guidance they got from their teacher that provoked their thinking would not have been possible in written tasks that would have been performed individually. Given that learners are likely to experience difficulties in expressing themselves through writing due to limited space and writing skills, teachers need to employ and be able to assess learners’ understanding based on what they say or sign against what they write. In view of the fact that written languages are structurally different from signed languages, deaf learners, in particular, would benefit more if they are given the opportunity to express themselves through signing. On the other hand, since deaf learners still need to learn to read and write acquisition of fluent signing could be considered as a stage that precedes and supports later written work.

Feedback is a key component of assessment. There is need for teachers to engage with the answers that are provided by learners in order to understand the kind of understanding or misunderstanding that they reveal. Diagnostic and informative feedback provides the learners with information that they can build on for better understanding (Alexander, 2008) and this can be achieved through classroom talk. If learners understand that learning depends more on their capability to articulate and discuss their understanding of a certain concept and not just on their ability to produce ‘correct’ answers, active participation in lessons would be enhanced. Feedback therefore should not be in form of simple positive or negative judgements and/or

restating children's answers. On the contrary, it should be structured in such a way that it encourages learners to express their ideas openly and assertively with praise such as 'very good', 'good girl', etc used sparingly and appropriately. This kind of feedback was observed taking place during Fatuma's, Said's, and Hope's lessons. Said invited applause selectively to some contributions from the learners as a form of praise.

The use of questions such as the two displayed on the chalkboard above was common in the lessons that were observed. These questions always came at the end of the lesson and sometimes it was considered as homework. The teacher would then mark the exercise with a tick or a cross then ask the learners to go back and do the corrections. Charity, a hearing Standard 4 teacher in Tumaini school commonly used this style and using the exercise book of her best learner, she demonstrated to me how the learner was able to refer back to her notes and pick the right words to fill in the blank spaces. According to her, this was an indication that the learner had achieved some level of learning although all the learner did was replicate what was in the notes. This kind of assessment tends to encourage recitation where the learner is expected to recall what has been said or written down. Teaching that only encourages storing this kind of information without understanding only to retrieve it when it is required does not offer the learners any cognitive challenge.

Although Hope engaged her Standard 7 learner throughout the lesson in a question-answer interaction, building on previously acquired knowledge, at the end of the lesson she referred her pupil to questions included in the textbook at the end of the lesson's topic and asked her to write the answers in her exercise book. This form of assessment provided the teacher with the opportunity to check understanding based on the scaffolding that took place in signed communication during the lesson. The questions in this exercise did not involve filling in blank spaces in a sentence, and although they would have provided immediate feedback if they were answered during the lesson, they provided the deaf learner with the opportunity to engage with reading and writing in her learning. Deaf learners need to learn to read and understand information independently given the structure of the national examinations.

As mentioned earlier, dialogue in assessing learning provokes the learner's thinking, allowing the learner to make some progress that she or he would not have made while working out the problem on her or his own. This is in line with Vygotsky's argument of

what happens in the ‘zone of proximal development’ and also the argument on Figure 4:1 on the role played by teachers and more capable classmates in learning. When problem solving is done collaboratively amongst partners, in this case between teacher and learner and amongst learners, the dynamic exchange of ideas referred to as ‘thinking together’ by Mercer & Littleton (2007), contributes towards the establishment of shared understanding.

While it is easy to note a weakness on the part of the teachers in terms of the assessment strategies they adopted, a system that requires the teachers to follow a laid down procedure set out in the pupils’ course books (with exercises after every topic) and teachers’ guides can also be limiting to them. On the other hand, teachers can adopt their own strategies that can be used by the learners in doing the exercises, e.g. responding to the questions in pairs, in groups, or together as a class and encouraging the exchange of ideas. The strategy used by Fatuma implies that there was a set way of assessing which she had to fulfil despite having used a more effective form of assessment previously in the lesson. The two questions appeared to have been included as a mere formality given that she had already assessed the understanding of her learners.

7.7 Differences between deaf and hearing teachers

As illustrated in previous sections, teaching strategies adopted by teachers differed. While all the lessons were taught to the whole class, some teachers tended to involve learners in their learning more than others. Generally, deaf teachers maintained dialogue with their learners except Bruno who seemed to focus more on delivering knowledge with the use of maps and emphasising on English vocabulary. This may have been influenced by the conviction that Kenyan deaf learners were lagging behind academically due to their poor vocabulary skills. His approach was one that aimed at providing learners with as much information as possible in order to help them reach the same level with the hearing learners. His experience as a deaf learner and that of teaching deaf learners in America may have influenced his choice of approach since he perceived Kenyan deaf learners as having very little information comparatively. Hearing teachers, on the other hand, with the exception of Said, used strategies that did not allow room for engaging with the learners in a more interactive way.

With regard to the use of visual resources, deaf teachers made more effort of preparing wall charts and improvising teaching and learning materials more than hearing teachers. Whereas Hope, used a ball in place of a globe and light from a torch to represent sunlight while teaching the concept of time in different zones in the world, Ali, a hearing teacher drew an illustration to represent the globe on the chalkboard. The different approaches used to teach this concept by the two teachers determined how well the learners understood it. The concept of day and night and the earth's rotation would be better explained using the ball and the light from the torch.

The chalkboard was one resource that was available in every school although the quality and the size differed. It was therefore used by almost all the teachers especially for copying notes but some deaf teachers seemed to use the chalkboard for other purposes more than many hearing teachers did. Deaf teachers tended to write more on the chalkboard as the lesson progressed than hearing teachers. Hope for example, wrote every word that the pupil used as a response to her questions and probes. Where the pupil made a spelling mistake, Hope wrote the correct spelling on the board for the pupil to see and correct her mistake. The approaches used by Hope, Fatuma and Bruno were noticeably different from the ones other teachers used. Bruno's style of writing notes before the start of the lesson and reading through them with the learners explaining the difficult words, prepared the learners for the actual map interpretation. The key brief points that were written down on the chalkboard by Hope and Fatuma one by one as the lesson progressed and later copied as notes by the pupils seemed likely to be easier to grasp and to remember.

On the contrary, most hearing teachers had a tendency of relying a lot on signing and finger-spelling. Yusuf, a hearing Standard 5 teacher in Wema school, apart from the topic, he only wrote three other words on the chalkboard while the rest of the time was spent on learning to finger-spell. This took up a lot of the lesson's time since most of the pupils took a long time before they mastered the spellings maybe due to the fact that they had nothing to refer to on the chalkboard and had to rely on their memory. Most of them would have all the correct letters but they would have difficulty signing them in the right sequence. It is likely that the learners would have mastered them more easily and at a quicker pace if the correct spellings had been displayed on the chalkboard. However, Said also a hearing teacher, used the chalkboard quite extensively and even gave the pupils the opportunity to write their answers on the chalkboard. His use of the

board and the textbook to illustrate and explain important concepts was worth the effort. This is an indication that when it comes to the choice of teaching approaches it depended partly on the individual teachers and not so much on whether they were deaf or hearing.

The only lesson where wall maps were used was taught by a deaf teacher. None of the other deaf or hearing teachers used wall maps in their lesson presentations but this could be due to their unavailability or the topic did not require the use of a wall map. The presence of a North American map in the classroom was an indication that probably Bruno had made the effort of acquiring the maps himself or they had been acquired through the donors who supported the school through the church to which the school is affiliated.

From the interview excerpts in Chapter 5, most deaf teachers praised the use of charts in teaching deaf learners and they claimed that they used them often. Mark, the deaf student-teacher, used a clearly marked chart throughout his lesson. Whereas it served as an effective learning aid, he may have been obliged to prepare a teaching aid because he was on teaching practice and was performing as per the expectations of his training programme but his use of the chart appeared to facilitate effective learning.

Some learners expressed their views regarding the use of teaching materials by deaf teachers. Stating the reason why Social Studies was his favourite subject, Jim, a pupil at Wema school, said:

I like Social Studies because the deaf teacher teaches well and explains to us well. Before, even in class 7, we did not learn a lot because the teacher used speech and did not explain a lot. The deaf teacher explains a lot and gives us examples of many things and uses the map to show us many places.

Josh, Jim's classmate, also had Social Studies as his favourite subject:

Because I enjoy reading it and we are shown around the school. I also like map work, rivers, thermometer, weather – cold /hot ... because the deaf teacher makes me understand easily while the hearing teacher sometimes confuses the use of sign language and sometimes it is difficult to understand.

The learners' statements above indicate that it is not about the 'deaf teacher' but about the teaching approaches the deaf teachers used coupled with fluency in sign language. They also illustrate that the use of visual teaching and learning materials such as wall

maps and engaging with real things simplified their learning, a strategy that motivated them and contributed to a positive attitude towards the subject.

7.8 Barriers to learning as expressed by the learners

7.8.1 Texts, reading, and comprehension

One general issue that was raised by nearly all the learners who participated in the study was about difficulty in understanding what they read which discouraged them to read on their own. Jude and Jackie, both from Huruma school did not have much to say probably because of the presence of their teacher or because they had little experience regarding the use of textbooks.

John, who previously said that he had trouble understanding long sentences and text which is not accompanied by pictures, confessed that he did not read outside class and even when he is at home during holidays. Jemima, a Standard 7 pupil in Upendo school, reported experiencing problems understanding what she read and attributed the cause of her problems to hard English words, long sentences and lack of relevant illustrations.

I understand some words but not all. Some English words are hard... but when I read I try to understand... The sentences are long ... it would be better to have shorter sentences together with pictures. This would make understanding simple. If I have difficulty understanding, I ask the teacher for help... the teacher always asks us the following day what we have studied the previous day and that is when I ask him questions.

It was implied in Jemima's comment above that her Social Studies teacher, who was deaf, encouraged the pupils to read on their own and made time to explain anything that they did not understand. If textbooks used the right level of their comprehension of English, maybe John and other learners would feel motivated to read even in the absence of their teachers.

Although Jemima seemed to be happy with the way her teacher assisted her to understand what she read, Social Studies is a subject that she did not like. This happened to be the case among most students. She expressed that her best subject was Science and her reason was:

The English used [in the textbook] is easy to understand and also the book has pictures.... but this Social Studies book is hard. English and Social Studies are the same, they are hard for me.

On the contrary, some of the pupils I interviewed expressed that Social Studies was their best subject. Jim and Josh, pupils in the same school with Jayne, confessed that at Standard 8, it had become their best subject because their teacher was deaf. The design of the textbooks and the vocabulary used in them seemed to be a barrier to accessing the knowledge in the learning resource resulting to reliance on the teachers. The deaf teachers in this study have been portrayed by the learners as more helpful in learning than the hearing teachers.

7.8.2 Visual aids and field trips

The learners understood and articulated the importance of learning by seeing and field trips were identified as an effective learning resource. Jim stated:

Going out on field trips and watching videos would help in understanding. For example if we can go and see irrigation taking place, visit Mwea Irrigation Scheme, visit the court and parliament, we can understand better what we are taught in class.

However, some of the learners acknowledged that they never got the chance to go for field trips and expressed how they would be of help to them. Listing the problems he encountered when learning Social Studies, John stated:

John: Most of the things we learn in class, we never have the chance to see them. For example, we learn about Lake Nakuru and the flamingos but we have never seen them. It would be better to go there and see so that we understand well what the teacher teaches.

R: Have you ever gone for a field trip?

John: Never, we only read the book and look at the pictures there, *basi* [Kiswahili word for 'that's all']. Field trips would make me understand better and not forget quickly.

School managers tend to perceive field trips as expensive but fail to acknowledge their benefits especially in teaching and learning concepts encountered in a subject such as Social Studies. This perception makes them fail to recognise the amount of learning that can take place even by visiting places within the local area that do not require any expenses.

Wall maps and wall charts were among the visual aids whose benefits the learners highlighted. Jim, explaining why he preferred a deaf teacher to a hearing teacher added, 'He teaches using the map and shows parts of the map that make me understand well... Our teacher uses KSL to explain and he also uses the map and we use the atlas'. And this is how Josh, his classmate, responded to one of my questions in the interview:

We need more teachers to explain, for example, about Africa, and draw map with rivers. I will be able to learn and understand ... pass well and go to secondary school.

Josh and Jim are pupils in Upendo school where wall maps were used in one of the lessons I observed. Of all the pupils interviewed they were the only ones who seemed to be in a position to point out the importance of the use of maps and charts. They seemed to appreciate the way their deaf teacher used the maps to simplify their understanding.

Overall, the learners were able to identify areas where they encountered barriers with regard to teaching and learning materials and what was barring them from gaining knowledge. They also seemed to understand what was good for them and what would contribute to making their learning easier. However, the learners who had no exposure to any of these learning materials could not give their views.

Addressing and considering the challenges of using textbooks and the ‘deaf-friendly’ features identified by deaf teachers and learners in chapter 5, and development of vocabulary skills would help in removing the barrier of reading and comprehension. Learning concepts in theory was identified as a barrier to learning and the learners suggested the use of field trips, wall maps and wall charts as learning visual aids that would enhance their learning.

7.9 Conclusion

This chapter has illustrated the important role played by language in learning since it facilitates interactions through which learners exchange ideas and express their own views. Vygotsky’s (1962) assertion that there exists a close relationship between language, thinking, and learning was demonstrated by teachers and learners. The interview excerpts show how they perceived the use of KSL for instruction as opposed to ASL and SEE. Learners in particular seemed not to support the use of sign language together with speech and argued that it confused them. Although learners seemed to prefer the use of sign language for instruction instead of SEE, most hearing teachers seemed not to be proficient in it making it difficult for them to engage in effective communication with the learners.

The teaching and learning activities that take place during lesson time are significant to this study since they determine what level of learning is achieved at the end of the lesson. Though they are central, their quality depends upon the nature of the language

used and the strategies adopted by the teachers as illustrated on Figure 4:1. While teachers who lacked fluency in sign language struggled to acquire direct signs for concepts and were not able to explain the meanings of those concepts, some teachers in this study used the knowledge already acquired by the learners, as indicated on Figure 4:1, to explain the meanings of new concepts and to introduce new knowledge.

While deaf teachers seemed to have an advantage over hearing teachers due to their proficiency in sign language, Said illustrated that hearing teachers too can learn from deaf teachers and/or pupils that they interact with. Many teachers of deaf learners in Kenya have had to learn sign language as an additional language and as a result, most of them tend to combine KSL with SEE. While the use of SEE may be helpful in the teaching and learning of the structure of English, care should be taken so as not to confuse learners. Figure 4:1 shows that for positive learning outcomes to be achieved learners need to be able to read and understand, as well as write the written language used in their textbooks. Whereas encouraging classroom ‘talk’ provides learners with the opportunity to construct their own knowledge together with their peers, they should also be able to display the knowledge they have acquired through reading and writing. Subsequently, deaf learners need to be assisted to acquire reading (and comprehending) and writing skills which they will ultimately need while writing assessment tasks and examinations.

Although generally learners seemed not to be engaged as much as they should have in constructing their own knowledge, some teachers made efforts to involve the learners in building their own understanding through allowing room for classroom ‘talk’ and encouraging them to share their understanding with the others. As shown on Figure 4:1, learners not only learn from the teacher, but they also learn from one another. It was evident that this happened more in lessons that were guided by teachers who were fluent in sign language, an indication of the important role played by language in learning. However, it emerged that the choice of teaching approaches depended partly on the individual teachers and not so much on whether they were deaf or hearing as demonstrated by Said and Bruno.

Chapter 8 Assessing learning among deaf learners

8.1 Introduction

This chapter responds to the third research question: How is the learning of Social Studies by deaf learners assessed? It describes the purpose of academic assessment in Kenya linking it with the language commonly used by the learners being assessed and the language used in the assessment. It raises the argument that since the language of instruction for deaf learners in Kenya is KSL, assessment tools that are in English, a language that is significantly different from their manual language, may not give learners sufficient room to demonstrate their academic achievements. The chapter also discusses possible assessment accommodations that are likely to provide deaf learners with the opportunity to express their academic capability and the possible repercussions of such accommodations. It provides a general overview of the performance of deaf learners as compared to hearing learners in KCPE Social Studies and shows the teachers' and learners' perspectives on the assessment of Social Studies. It concludes that in order to achieve better learning outcomes more emphasis on formative assessment that aims to assess the amount of learning achieved everyday would consequently lead to fair and effective summative assessment of deaf learners in Kenya.

8.2 The purpose of assessment

The purpose of assessment in the Kenyan education system seems to be more social than pedagogic thus taking a summative form rather than a formative and continuous one which assesses the amount of learning that takes place every day. Formative assessment would guide the teachers to understand whatever amount of learning that has been achieved and what still needs to be learnt. With regard to the achievement of deaf learners, assessment for the purposes of learning would be helpful in determining when to introduce new knowledge with a likelihood of doing away with adaptations.

Generally, assessment in Kenya has been used as a means of ranking students where those who are ranked low either 'drop out' of school or after graduating at primary or

secondary school, they acquire vocational skills and look for low income jobs. Those who rank highly continue with their education by attending colleges or universities. Ultimately, assessment plays the role of reducing the number of learners who proceed to the next level of education and therefore it appears to aim at not including everyone in the education system (Croft, 2010). Many deaf learners in Kenya have found themselves missing the opportunity to join secondary schools due to the competitive nature of the education system.

An understanding of the pedagogic purpose of assessment is crucial with regard to issues surrounding the academic assessment for deaf learners. The purpose could either be to determine the pupils' understanding of information or the ability to infer or make conclusions based on particular information. It could also be aimed at measuring the level of the knowledge gained within a particular period of time. The language used in assessments, be it spoken, signed or written, plays a critical role in measuring the academic abilities of deaf learners. The participation of deaf learners in national testing and assessment is an issue of concern due to the possible negative effects of the differences in their language and mode of communication and the uncertainty of the capability of the tests to portray a true picture of their abilities.

Deaf learners sometimes face difficulties in demonstrating their academic performance due to the delays in the development of their language, communication, writing and reading skills (Luckner & Bowen, 2006). While some tests may not be assessing their reading skills, most of them sometimes require the use of their reading ability resulting in the test scores displaying their weaknesses in reading rather than a lack of the specific content knowledge (Power & Leigh, 2003). Most of the assessments aimed for hearing learners as well as deaf learners tend to test some academic abilities that can only be investigated through written language and they therefore require that the pupils demonstrate their linguistic proficiency in a language used by hearing people. Roald (2002: 59), in a study with deaf teachers whom she previously taught states: 'the goal of assessment should be to evaluate how well the student learned the subject content (knowledge gained) but not how well she or he can read the test items'. If deaf learners are assessed in the same way as hearing learners their ability to reflect their skills, abilities, potential, and achievements is weakened. In Kenya, deaf learners follow the same curriculum and do the same exams as hearing learners and all the learning materials and examinations are in English. Apart from some adaptations in the English

and Science curriculum and examinations, all the other subjects are exactly the same as those for hearing learners.

A study by Abedi (2002) that compared the academic performance of learners who are native speakers of English and those who have learnt English as a second or third language found out that the higher the level of English language complexity in an assessment tool, the greater the performance gap between the two groups. While the greatest performance differences in the two groups was noted in reading, the least performance difference was in Mathematics where language has less impact on the assessment. The same would be expected to be the case for deaf learners due to the additional linguistic challenges they face when they encounter tests through a language which is not their first. Arap-Maritim (2010) asserts that a test that is administered in a second or third language or in a language that the people being assessed have not had equivalent opportunity to learn would be unfair.

The first language for many deaf learners in Kenya is KSL, which is the language of instruction, while their second is English – the language used in texts. Following the argument above, it appears that the most suitable language that should be used in their assessment is KSL. A written form of KSL has been created using English words with the sign language sentence structure. While turning a manual language into a written language can be seen as unrealistic, it should be understood that it is done in an attempt to respond to the needs of learners whose first language is manual. The first written KSL exam was done in 2010 and it is hoped that after a few more years the general trend will determine whether changes need to be made or not. Questions that could be asked are: What options do the ‘assessors’ have so as to be ‘fair’ as suggested above? Should test items be signed to the learners and if so, how would the learners be expected to display their responses – in written form or in sign language? What would be the implications of using a scribe or an amanuensis to write down the learners’ responses as they sign them?

8.3 Assessment accommodations

Accommodations are changes in testing materials or procedures that enable students to participate in assessments in a manner that allows those with disabilities to show what they know without being impeded by their disability (Luckner & Bowen, 2006). They are meant to facilitate access to test content without changing the difficulty of the test

(Cawthon et al., 2011). Studies on accommodations have displayed varied results: that they are valid and beneficial, that they create an unfair advantage for students who use them, or that they have no effect at all (Ibid). For deaf learners these accommodations range from extra time for the test, use of a dictionary, provision of individual oral or sign language instruction, among others. Studies have shown that the use of some of these accommodations have resulted in the learners displaying worse performances than when they use normal assessments. The interview with the KNEC officer, referred to in chapter 6 revealed that the only form of accommodation that deaf learners in Kenya were officially entitled to was an extra 30 minutes for all subjects except KSL and English. It is likely that the learners are perceived as not requiring extra time in these two subjects because they may not be expected to have problems in KSL whereas the English exam paper is usually adapted. In contrast to official policy, an interview with one head teacher disclosed that KCPE candidates had been getting 20 minutes extra for the English composition paper only.

Extra time may not be the best strategy of responding to the needs of deaf learners in the Kenyan context because the majority of teachers interviewed in this study confessed that almost all the learners finish writing their exams before the time allocated to the papers was over. Consequently, those administering the exams did not see the need to give them extra time. Rather than continue offering the same accommodation which is not of any advantage to the learners, there is need to try and understand what other underlying conditions need to be put in place to allow the learners to be in a position to make good use of the allocated time as well as the extra time they are entitled to.

Concern has been raised over accommodations that involve translating a written language into sign language since it could result in omission of important information in a test item making a translated item become harder, easier, or end up measuring a different concept other than the original item (Luckner & Bowen, 2006; Cawthon et al., 2011). They argue that language translations are not always exact and in this case, it involves translating from a written language to a language that uses different grammatical structures and forms of representing information. Cawthon et al.'s study involving ASL translation in English and Mathematics tests did not yield any effect. She argues that this could have been as a result of the test material being presented differently from the way it is presented during classroom instruction and that the ASL translations did not follow the form of conversational ASL which the learners were

familiar with. Luckner & Bowen amplify this argument when they state that accommodations are likely to lead to poor performance on the assessment if they are not routinely used by the learners. Cawthon et al. (2011) suggest that in order to understand how language factors affect learners' performance, there should be more emphasis on the content of assessment rather than the form of assessment. In Kenya, there has been discussion surrounding the issue of considering KSL translations as a form of accommodation, which is based on the argument that blind people learn through Braille and are assessed through Braille. Deaf learners are seen not to be treated fairly since they learn through sign language but they are tested in English, a language that they do not have mastery in. Conversely, others, e.g. Bruno, argue that if they are assisted to gain skills in English, they would benefit more since they would access the contents of all the subjects and would have no problems during assessments. In other words, they would learn in the same way as hearing learners. Bruno's argument seems to support the need for focus on formative assessment that constantly assesses the knowledge gained as learning progresses and guides teachers on areas that require more attention.

Luckner & Bowen (2006) pointed out that assessments for the purpose of helping students learn – formative assessment, and state-wide assessments that inform all stakeholders about how students are performing annually – summative evaluation are important elements of any education system. Luckner & Bowen also stressed the importance of providing learners with continuous instruction in test taking in order to address the test-taking behaviours among deaf learners, such as, not reading the directions, answering questions without reading the passage, providing more than one answer, and misunderstanding questions. They underscore the need to target quality of instruction, access to the general education curriculum and how to better promote the educational success of deaf learners.

8.4 Summative assessment for deaf learners

As mentioned in chapter 2, since 1980, deaf learners have been writing the same examinations with hearing learners and it has been observed that on the whole, they have been performing relatively poorer than their hearing counterparts. Table 8:1 shows the Social Studies KCPE results for deaf candidates in a unit in Tumaini school since 1999 to 2010.

The years shown on table 8:1 are the years that had deaf candidates enrolled in the school. The enrolment of deaf candidates only accounts for about 1% of the overall enrolment of candidates throughout the four years. There are two possible reasons behind this trend which is common in units within mainstream schools in Kenya. While many parents who are able to pay for the boarding fee prefer enrolling their children in special schools due to the conviction that they benefit more in such settings both academically and in terms of competence in communication, other parents find it an opportunity to transfer the burden of caring for their deaf children. Another possible reason is particular with this specific school where a former head teacher would turn away deaf children when they came to seek admission to the unit arguing that they would bring down the mean score in the national examinations²¹. This also explains why there were no deaf candidates in some of the years.

Table 8:1 Social Studies KCPE results for Tumaini School

Year	Total no. of Candidates	No. of deaf candidates	Highest score in %	Lowest score in %	Mean score in %	Deaf candidates' score	Position in class
1999	107	1	90	12	no data	12	107
2001	126	1	74	04	54	04	126
2004	113	1	84	11	58	11	113
2008	110	2	78	18	no data	42 18	81 110

Source: Tumaini school records

For the two years that have the mean score, the scores for the deaf learners indicate that they are far below average. Apart from the one year, 2008, which had two candidates, all the other four deaf candidates had the lowest mark. In the same year, the score for one of the candidates was higher than that for 29 hearing learners. The head of unit reported that the deaf candidate had some residual hearing which made him benefit from the teachers' use of speech rather than rely exclusively on sign language.

Table 8:2 has data for a regular school which is adjacent to Wema special school for deaf learners, one of the cases for this study. It shows the total number of candidates, the lowest, highest and mean scores for six consecutive years from 2005 – 2010.

²¹ Interview with the head of unit

The two schools whose data are represented on the table 8:2 are both public schools which border each other in a rural area. While the special school is residential and the regular school is 65% day and 35% residential, they both serve pupils within the same locality.

Table 8:2 Social Studies KCPE results for a regular school and a special school

Year	Total no. of Candidates		Highest score in %		Lowest Score in %		Mean score in %	
	Regular	Special	Regular	Special	Regular	Special	Regular	Special
2005	54	13	75	31	19	16	49	19
2006	52	12	76	32	17	07	47	17
2007	41	13	78	23	26	09	55	15
2008	47	17	80	34	18	01	48	11
2009	62	14	67	20	09	03	42	12
2010	82	08	70	40	07	03	47	19

Source: Schools Records

Whereas in general there is a big margin between the highest scores for the two schools throughout the six years, the margin between the lowest scores is much smaller. However, although the enrolment in the special school is much lower than the one in the regular school, the mean score for the regular school in the six years is more than two times and for three years, three times that of the special school. This table is an illustration of the marked difference in the performance of Social Studies between hearing and deaf learners.

A general observation is that majority of deaf learners who completed primary school education in Kenya did not proceed to secondary school and the few who made it to secondary school only a very small percentage managed to get the minimum requirement to get admission to public universities. According to MoEST (2005b) one of the challenges that led to this poor performance was a curriculum and examinations that are not suitable for deaf learners. The report recommended ‘immediate adaptation’ of examinations for these learners as the adaptation of the curriculum was going on at the time. The same report noted that deaf learners performed best in Mathematics and English and worst in Kiswahili. In order to address the plight of these learners, the ministry has facilitated the adaptation of the English and Science curriculums at primary school level. This is the ministry’s statement on the English adapted syllabus:

The adapted English syllabus addresses aspects in teaching of English language that are concerned with speaking and hearing. Vocabulary development and the conceptual understanding of how different words relate to [one] another to express meaningful thought has been considered during the adaptation (MoEST 2004a: 1).

This means that language skills such as listening and speaking that require a learner to listen to a certain sound in a word and then pronounce it the same way have not been included in the adapted syllabus. With regard to Science, it states:

The scope and sequencing of the [adapted] syllabus has been determined by the student exposure and expression of the same in language development. Concept and its relation to language has been considered during sequence of content in the syllabus (MoEST 2004c: 1).

This statement seems to indicate that subject content areas that involve the use of spoken language skills have been removed from the syllabus. The examinations for these two subjects have also been adapted since 2006 after a recommendation by a report on an analysis of the 2005 KCPE results of deaf learners (MoEST, 2005b). The adaptation notwithstanding, the grades of deaf learners in national examinations have still remained low when compared to that of hearing learners. This has resulted in KSL being made the language of instruction for deaf learners and the introduction of KSL as an alternative examinable subject for deaf pupils.

In an interview with an officer in KNEC, her response to what is considered in adapting examinations for deaf learners was as follow:

For English.... the difference is not in the wording, the difference is in making the child comprehend. For example, if you read the passages, the way the sentences are phrased in the paper for regular pupils is different from the way they are phrased in the adapted paper for those with hearing impairment. Because what we're testing is comprehension and you want to test these learners' comprehension at the level of language competence, the linguistic competence that they have at that point.

Learning a language involves developing listening and speaking skills as well as reading and writing skills. Although deaf learners encounter challenges learning to read and write as shown in chapter 4, listening and speaking are skills that nobody would expect them to be proficient in. The mention of adaptations in the English syllabus for deaf learners made me think of these two skills with regards to deaf learners. It is now clear that the adaptations are aimed at giving the learners an opportunity to express what they have learned so that they can pass in the examinations and be able to join

secondary schools which is one of the aims of assessment in Kenya. As noted in chapter 6, deaf learners in Kenya have been encountering problems of comprehension while reading Social Studies texts especially when the level of the English language is complex and they appeared to rely a lot on their teachers. It is therefore not surprising that they would be faced with the same challenge during examinations which are in English.

Despite these difficulties, deaf learners need to learn English since it is an official language in Kenya in order not to be left behind. With some English skills, even if they would not be able to speak it they would be in a position to read information on their own and communicate through writing after they leave school. They therefore need help to learn these skills. However, making the level of language easier in an examination which is testing the same language (English) implies that the test items may not be testing the same things as those meant for hearing learners and it can be construed that deaf learners do a different and simpler examination. According to my interpretation of the KCPE 2009 English examination (KNEC, 2009a & 2009b), it appeared that the adaptations were mainly on the choice of vocabulary used in the short passages where a more familiar word was chosen for the deaf learners. For example, the word 'house' was used in place of 'castle', 'cry' in place of the expression 'burst into tears'. There are instances where the actual test items were different where a word was used in a sentence and they were supposed to select a word with the same meaning. In Q.20, the word 'acquitted' was used in the original paper while 'decorate' was used in the adapted paper. Q.22 had the expression 'called off' in the original and 'rarely' in the adapted paper.

If the language used in examinations is the basis used to justify adaptations for deaf learners, the implication is that in order to address the plight of deaf learners during summative assessment, there would be need to adapt the language used in all the other subjects in order to assess the knowledge gained in them as well. This would give the learners an opportunity to display what they know without being barred by the language used. According to the KNEC officer, only the subjects whose syllabuses were adapted had their examinations adapted. She added that KIE acts on feedback that is received from teachers as the implementers of the curriculum to determine when and whether to adapt curriculum for a particular subject.

Nevertheless, the Special Needs Education policy (2009a) which has guidelines on inclusive education for all recognises the need for adapted curriculum and examination so as to include all learners. However, care needs to be taken so that decisions that are made in the adaptations do not result in excluding them further. For example, one may ask: who decides what is simple and what is difficult vocabulary for deaf learners? Following the examples in the examination paper, the impression it creates is that all deaf learners do not know and cannot understand the meaning of ‘castle’ or the expression ‘burst into tears’. How is such a conclusion reached? When we decide that they cannot learn them, are we not excluding them by judging them and not giving them a chance? The argument here may be pegged on giving them a chance to pass the examination so that they can move to the next level but while making such decisions, the question to ask should be: how prepared are they to face the more complex English language used at the secondary school level?

If the purpose of education in Kenya focused more on the amount of learning a pupil acquires at the end of every level of education, rather than good performance in the leaver’s examination, there would be more emphasis on formative assessment that would guide the level and amount of new knowledge to deliver to learners. Vocabulary such as ‘castle’ and the idiomatic expression ‘burst into tears’ can be learned by deaf learners if they are introduced to them at the right time during the process of their learning. With continuous assessment during the learning process, these adaptations aimed only at making the deaf children pass the examination, may end up not being necessary.

8.5 Teachers’ views on assessment of deaf learners

In general, the responses of most teachers regarding the testing of deaf learners in Social Studies displayed some dissatisfaction. Some of them were related to the depth of the syllabus, some were in relation to the choice of vocabulary of the language used, while others focused on the fact that the language used in the testing was different from the language of instruction thus posing some difficulty in understanding the questions.

8.5.1 Heavy Syllabus content

When Hope, one of the deaf teachers was asked about her general feeling about the testing of deaf learners both locally and nationally, she responded:

My feeling is that it would be better to give deaf pupils a separate exam from that one done by hearing pupils. Because most deaf pupils never complete the syllabus by the time they sit for their national exam and so some questions are from topics that they never learnt. This is a disadvantage for them.

Faith shared the same sentiment in her response to the same question:

Because the syllabus is very wide, the area to be tested is too wide and does not focus on a particular area. The testing expects the children to have a sharp memory due to the width of the syllabus content. Deaf children do not have the capacity to remember many things. The information is very hard and it is possible for children to get confused.

Fatuma, a deaf teacher in a school quite far from the two schools where Faith and Hope teach, gave a slightly different response to the same question:

In KCPE maybe I can say it is friendly but between the term and end of term, they are not friendly to deaf children. Why? Because most questions come from topics that teachers have not yet taught deaf children. Questions come from topics that I may not have taught due to the slow pace of the pupils so the pupils never get to know the answers.

While Fatuma emphasised that deaf learners may have failed to complete the syllabus maybe due to the slow nature of their learning, Faith underscored the learners' poor memory which would hinder remembering all the content taught. Although these are characteristics associated with deaf learners, they are also likely to be found in a number of hearing learners. The heavily loaded syllabus would be a challenge to hearing learners as well. As it was mentioned in chapter 6, the teacher plays a big role in determining the best approach to use in order to complete the syllabus. The general feeling of many teachers was that the Social Studies syllabus was too wide implying that part of the content tested was likely not to have been covered during teaching and learning. If the separate exam suggested by Hope was to be offered, how different would it be and what criteria would be used to determine its suitability? Would reducing the syllabus for the deaf learners be an option and what would be the implications?

Responses on whether the style of testing provided deaf learners with the opportunity to display what they had learnt in the eight years elicited wide-ranging views. On the whole, they seemed to be of the opinion that the style used was not favourable to deaf learners.

8.5.2 *The use of negative questions*

Some teachers were critical of the style used in phrasing the questions and expressed that most of them were indirect. Some teachers did not find the style suitable for deaf learners because according to them, in most cases they got confused so they preferred more direct questions. Asha is one of the teachers who made such a comment.

Sometimes they ask indirect questions. Deaf pupils would do better with direct questions rather than questions that give some long explanations. For example, If pupils are asked, 'He led the country in 2002, he was elected again in 2007, he.... Who is he?' It would be better if they just asked, 'Who is the president of Kenya?' The children will know the answer easily. The use of negative questions is not friendly to deaf children. E.g. 'Which is NOT?' The deaf child is likely to give one of positive options given to choose from. So it is better to ask, 'Which one is...?'

Asha however added that if the word has to be used, it should be in capital letters and bolded to make the learners more conscious of its presence in the question. Said, a hearing teacher, echoed the same views as Asha.

Said: There is one thing that really makes pupils fail in Social Studies.

R: Deaf pupils?

Said: Even the hearing. The wording. Sometimes they read and they don't understand what that question requires... They [assessors] like using the word 'not' so the child may miss the 'not' and give the opposite.

R: Really?

Said: *Kabisa* (Swahili for 'exactly'). In most cases than not, they fail to understand. And it is like the way they frame the questions is just the same right from the beginning to the end.

An important thing to note here is that Said did not associate this trait with deaf learners only but rather he mentioned that it is found in hearing learners as well. Said had experience of teaching both hearing and deaf learners at different times and so he was in a position to comment on what he had observed while teaching both groups. On the other hand, Asha and Hope being deaf teachers, had not taught hearing pupils so their experience was limited to that of teaching deaf pupils.

Said's comment implies that the indirect phrasing of questions is deliberate and one that is meant to make the candidates miss the correct answers. When the pupil misses the answer due to being tricked by the way the question is phrased, should it be construed that the child did not know the correct answer? What would be the purpose of testing in such a situation?

All the KCPE exams have multiple choice questions except for the compositions in language subjects where learners have room for creative writing. While Innocent, Asha and Hope, all deaf teachers, thought that the use of 'not' did not favour deaf learners, Salim and Fatuma, also deaf teachers were of the feeling that the learners understood that the answer to a question with a '**not**' "should be negative". During my interview with Hope she explained to me that KSL does not have the vocabulary 'not' and in its place during conversations, mostly the words used are 'no', 'nothing' and 'zero' whose sign is the same. For example, when one wants to say, "I don't want water" he or she will sign and mouth, "Me want water nothing/zero". Following Said's argument above, it may be true that some hearing learners have problems understanding the 'not' but there is a higher probability of deaf learners missing the meaning of the word than hearing learners. As Salim and Fatuma stated, deaf learners may have learnt the meaning of the word as they learned English but in an exam situation, it may be confusing to them and so they end up choosing the wrong answer especially when the choices given are very similar. This suggests that there is a need for the pupils to be trained on what to look out for when the word 'not' is used in examination questions.

When this kind of testing is used in summative assessment, it serves its purpose of controlling the numbers of those who progress to the next level but it does not provide the evidence required to determine what amount of learning has taken place within a certain period of time. When it is used in formative assessment, it does not serve its role of supporting learning effectively rather it encourages rote and superficial learning.

With regard to formative assessment, some teachers mentioned giving a quiz at the end of the week or at the end of a topic to determine how much the learners knew. A number of the deaf teachers stated that they assessed their learners at the end of the lesson and before the start of the next lesson and before introducing anything new. This form of formative assessment is likely to contribute positively to the learning achievement of the learners since the teacher's intention would be to ensure that no one is left behind. The most common form of assessment which I witnessed was in the form of tasks that involved filling in gaps in a few sentences with information learned during the lesson. Most of the time learners would do this individually as the teacher walked around marking their answers. While this kind of assessment did not appear to measure or to enhance understanding of the concept taught, a more effective form of assessment was used by Fatuma, in her Standard 6 class. After explaining the process of the

formation of the Rift Valley, she asked the pupils to volunteer, go to the front of the class and explain the process to the others. Although it took some time before getting the first volunteer, three pupils made attempts and the teacher corrected them when they got it wrong. Fatuma could tell where the learners did not get it right and so she explained all over again. This kind of formative assessment seemed to contribute to better and more effective teaching and learning.

8.5.3 *Vocabulary used in questions*

The vocabulary used in the questions was raised as an issue that did not favour deaf learners. This was expressed as ‘poor wording’, ‘too much wording’, ‘difficult words’, etc. These are some excerpts from interviews with some of the teachers.

Faith: Some words are difficult to understand and they end up confusing the pupils.

Innocent: The word ‘best’ is a problem. Deaf children may not be able to pick the best from all good or correct answers. It is tricky for them because all of them are correct. ‘Best’ and ‘main’ are words that are confusing to deaf learners. To choose one **main** thing/item, it is hard for deaf children because some do not really understand the meaning of the word.

Hope: Some of the vocabularies used in the questions and in the choices are too hard for deaf children and so they need to be simplified. Simple language needs to be used.

The words ‘not’, ‘best’ and ‘main’ may look simple and not very difficult to understand when looked at as words but when used in a question with options, they might not only be confusing to deaf learners but also to hearing learners. It is likely that it gets even more difficult for deaf learners due to the fact that their language is not spoken or written and therefore their sign for ‘better’ might be relatively close to the one for ‘best’ or there could be only one sign for both concepts. In such a scenario, it may be easy for a deaf learner to choose one out of two choices but difficult to choose one out of four options. Luckner & Hanks (2003) acknowledge that deaf learners perform poorly in tests with multiple choice questions because some have ‘ambiguously written items’ that may be confusing to the learners. The use of these terms may create ambiguity that could lead to the selection of the wrong answer. In setting such questions, it would be important to consider the skill that is being tested and whether it would create any bias against learners who have hearing impairment. On the other hand, since one teacher mentioned that this is a style that is commonly used in exams, it is expected that the teachers would take time and help learners attain exam techniques. In this case, explaining to them the

meaning of the words and spending time with them as they practise with real questions would be one way of helping them understand what is expected when these terms are used in examination questions.

Hope raised the issue of vocabulary used both in the questions and in the choices of answers given as 'too hard' and expressed the need to have it simplified. According to her the use of difficult vocabulary in questions is a shortcoming to deaf learners bearing in mind that since their language is not oral, their vocabulary is limited. The same was expressed by Bruno when he was speaking of the importance of helping learners develop their vocabulary skills.

So my opinion is, give support to the children to be able to acquire vocabulary. The exams have too much vocabulary that the learners do not understand. No wonder, they just guess answers to the questions.

The KNEC officer mentioned about simplifying the language in the adapted examination so that the candidates can comprehend but she also raised the issue of substituting vocabulary to avoid any distortion of meaning. Her comment on 'deaf people read by signing' explains why chances of meaning getting distorted by deaf learners are very high. When I asked learners to give an answer to a certain question from the examination paper during my interview with them, I observed that they all signed every word in the question one by one. A recent study conducted by Banner & Wang (2010) reported that the same style of reading was used by some of the deaf student participants. This could easily lead to understanding the meaning of the words independently without considering the context in which they are used and as the KNEC officer pointed out, chances of 'likely' being signed as 'same' are high in the event that the learners will think of it as 'alike'.

The KNEC officer had been an English teacher of deaf learners but at the time of the interview she was in charge of examinations for deaf learners. Drawing from her experience, it can be assumed that some deaf learners confuse 'likely' with 'alike' yet these are two different concepts where the former gives the notion of 'probability' and the latter 'similarity'. There is a need therefore for learners to be able to distinguish between these two concepts through the use of different signs where 'alike' can be signed as 'same' and 'likely' signed differently, probably close to 'maybe' or 'perhaps'. In chapter 6, Bruno expressed the importance of helping deaf learners develop their vocabulary. He argued that if they understood the meaning and usage of 'likely' early

enough and had a sign for it, then they would be able to recognise that the concept is different from 'alike' and there would be no need to substitute it with another word in the examination. This backs the argument of the importance of formative assessment which would in turn support better achievement during summative assessment.

Sign languages have signs with varied meanings just like many other languages which have homonyms. In spoken language the context informs the meaning intended and it is the same when sign language is used for communication. When an oral language is in written form and is in turn translated into signs by deaf readers, the context may not be easily understood because sign language is not a written language. Signing word per word in a sentence is also likely to lose the context, the overall meaning of the whole sentence and instead it is likely to be fragmented into meanings of individual words. Where a word with more than one meaning is used, the intended meaning can easily be mistaken for another. It appears as if reading and vocabulary skills contribute a lot towards comprehension of what is read by deaf learners. How well these two skills are developed not only contribute to effective learning but also to better performance in assessments.

8.5.4 *Too many questions in the Social Studies examination*

Although Religious Education is taught separately from Social Studies, the Social Studies examination paper also includes questions on Religious Education. As a result, the pupils have the burden of tackling questions from four different disciplines all in one long examination paper with a lot of content being tested at one go. Asha stated her dissatisfaction in this style of testing.

The questions are too many. For example, from Standard 4 to Standard 8, they are given 60 questions from Social Studies alone. When it is combined with Religious Education, they have 90 questions. I feel that this is too much. It is very difficult to pass well. Science is easy because they only have 50 questions in the exam. Most of them perform very well... even here, the pupils are very good in Science.

Asha's experiences as a deaf learner make her understand the excessive demands of reading 90 questions, each accompanied with four possible choices and sometimes maps to be interpreted. As well as covering four different disciplines, she also raised the issue of the broad content area that is tested in that one paper which covers 5 years of learning. She believed that deaf learners perform better in Science due to the smaller number of questions they have to answer in the examination.

One of the hearing teachers attributed the poor performance to laziness. He seemed to believe that all pupils, hearing and deaf, were lazy and so they avoided reading the questions and struggling with trying to understand them. So they end up taking a shortcut by guessing the answers.

Sometimes they don't even read the questions at all. They put the paper aside and just shade the guessed answers. And that is what is making them fail. We have seen this happening during the local exams. When we give them the answer sheets, sometimes the questions are 50 and the answer sheet has spaces for up to 90 questions. There are some pupils who will fill everything up to number 90.

The behaviour observed above reveals many possible reasons that could be behind it. Although the teacher seems to generalise and attributes it to laziness, another possible cause could be that when they attempt to read and fail to understand the questions, they choose to guess the answers since the options are laid down for them. Another reason could be the large number of questions to be answered all in one session without a break as mentioned by Asha above while another one could be the subject matter of four different disciplines all in one and the heavy syllabus content taught over five years. Although these are all factors that can inhibit a deaf learner as well as a hearing learner, the intensity in which they affect the deaf learner might be higher due to some of the characteristics mentioned above. They are likely to experience some degree of difficulty in tackling the activity leading to tiredness resulting from translating every word into sign language. Teachers as well as learners have confessed that most of the subject content is not covered which means that they encounter questions on subject matter that they do not know. All these are likely to result in the learners guessing the answers even without reading the questions.

Another possibility considered could be the time allocated to the examination paper but when I sought information from Asha, one of the deaf teachers, her response was:

The deaf, some of them when they are given the paper, they just guess the answers even without reading the questions. Some have difficulties understanding the questions and so they don't even try to read them. Some even finish within 30 minutes to one hour.

The paper is allocated two hours and fifteen minutes, a duration which teachers expressed different feelings about. Some felt that the time was sufficient while others were of the feeling that given some extra time, they would be in a position to attempt all the questions and their slow pace in reading would be taken care of.

Salim was of the feeling that giving all the learners the extra time is crucial for the sake of those who read the questions and attempt to answer them all. It is likely that if their other learning needs are addressed, such as vocabulary and reading skills development, the 30 minutes accommodation appears to be fair and reasonable.

8.5.5 *Questions requiring general knowledge outside the syllabus*

While going through the 2009 Social Studies exam paper with the teachers during my interviews, some were quick to note questions whose answers were not covered in the syllabus but rather they required general knowledge to be answered. Innocent, a deaf teacher was quick to comment:

General knowledge questions do not favour deaf children since they do not always get to know what is happening around them. They miss out on information and are always out of date so a question like this one (pointing at question number 42 in the paper) on Census, they will likely not be able to answer it correctly.

A census exercise had just been completed two months before the start of the 2009 examination and it must have been assumed that all learners would have this information since it happened in every household in Kenya. One would assume that deaf learners would have the information but Innocent, a deaf teacher at Upendo school, elaborated that in most cases the family does not see the need to update the deaf child on what is going on around him/her in the home.

The ideas of Salim, also a deaf teacher, resonated with Innocent's comment:

Questions which require general knowledge are not the best for deaf pupils because they miss out on some of the information that hearing people get from the media and through normal interaction with people. Question number 30 relates to HIV, this is not in the Social Studies syllabus but it is more of a general knowledge question.

These two deaf teachers seemed to understand how deaf people lag behind in terms of general information due to the fact that they do not benefit as much from incidental learning through which hearing people often get information. Studies have shown that such learners lack information on HIV/AIDS due to language barriers (Peinkofer, 1994). Most of them only rely on information from family members and friends which is likely to have factual errors (Heuttel & Rothstein, 2001). Those living in the rural areas and not in a position to interact with deaf adults are likely to be less exposed to

information on HIV/AIDS than those living in urban areas which have larger deaf communities (Bat-Chava et al., 2005).

Assessment that focuses on general knowledge can be perceived as unfair to deaf learners. Some of the areas tested are important since they relate to contemporary issues but it should not be assumed that everyone knows about them. Everybody needs to be aware of HIV/AIDS and more so deaf people and one of the ways through which this information can be relayed to everyone especially children and young people is by including it in the school syllabus.

8.5.6 Questions with a 'Narration' or a 'story'

Questions that are preceded by an explanation appeared to be unpopular for deaf learners. The explanation was viewed as confusing to the pupils making direct questions more favoured. This is noted by two deaf teachers.

Asha: Questions that start with a 'story' ...a narration of some sort ... then the actual question comes at the bottom are also not friendly to deaf children. Questions should be direct so as not to confuse the deaf pupils.

Salim: Questions with a 'story' e.g. No. 30 are not very friendly for deaf pupils. They would rather be direct.

A question with a narration is the one that starts by explaining a certain scenario then the question is derived from that information. Question number 30 referred to in the comment above reads:

Aku, your classmate, has been performing poorly in class because she learnt that her parents are HIV positive. Which one of the following is the **best** action for you to take to help Aku?

- A. Advise her to seek counselling services
- B. Encourage her to work hard
- C. Advise her to drop out of school
- D. Encourage her to pray about the problem (*KNEC: 2009c*)

When I asked some pupils to answer this question, they would get stranded after reading the first word in the 'narration'. I observed this easily since, as mentioned earlier, they would sign every word as they read and almost all of those interviewed took time before they started signing. Some of them asked me the meaning of 'Aku' so that they could sign the word and proceed. They did not realise that 'Aku' was the name of a person since it is not a common name in Kenya and so they seemed not to be familiar with it. This communicated a lot about the reading style of these learners. For one, I expected

that the phrase ‘your classmate’ would explain that ‘Aku’ is somebody’s name and they would proceed reading from there but having missed the first word, they could not proceed with the reading.

The answer to the above question would be determined by the kind of knowledge one has about HIV and possibly one’s religious orientation but not by any previous knowledge gained through learning in school. Learners, hearing or deaf are likely to choose an answer which may not be the ‘best action’ due to either lack of information on this disease or information based on their social and cultural backgrounds. Cooper & Dunne (2000), in their study on assessing the mathematical knowledge of learners, examined how learners responded to mathematical questions with real life situations which they referred to as ‘realistic items’. They observed that, the ‘cultural knowledge’ of learners can sometimes interfere with the responses given to questions to a level that is likely to change the concept being tested. Learners are likely to look at the question ‘realistically’ as they try to get an answer and this can sometimes be an advantage or a disadvantage to them in terms of getting the ‘correct’²² answer.

All the answers to the question above can be considered the ‘best’ by different learners depending on their social background. Many deaf learners in Kenya are from poor backgrounds therefore the chances of selecting ‘A’ as the answer are very low whereas ‘C’ would be high. Counselling services are quite expensive in Kenya and only rich families would go for such an option. As mentioned earlier, the level of deaf learners’ knowledge on HIV is low compared to that of hearing people and so there is likelihood that HIV would be associated with death. In such a case, ‘C’ would be considered as best advice so that the learner would be at home taking care of her parents and siblings. This particular question was cited as one that did not test the subject content and as a result, it failed to test the learners’ actual competence in the subject area. This type of questions seemed not to promote equity and fairness (Cooper & Dunne, 2000) in assessment due to the possible bias that is likely to manifest itself in the diverse responses of the learners being assessed.

8.5.7 Testing rote memory

The whole style of testing is seen as one that does not promote critical thinking but instead promotes rote learning. Bruno is the only teacher who made this observation. He

²² ‘Correct’ here refers to the answer considered correct by the marking scheme.

did not think that this kind of assessment gives the true picture of the knowledge the child has acquired in eight years. Here is an interview excerpt:

- Bruno: The exams test memory only. It is not fair and it is biased against the deaf because the deaf are not attaining quality education. This is biased and it is wrong.
- R: Does the style of testing recognise the special needs of deaf learners?
- Bruno: It is better to talk about the quality of teaching and learning then we talk about the exams. If we talk about learning, the use of sign language, bilingual learning, then we can talk about this (points at the exam paper). If we give deaf children the same access to education, then the testing will be OK. If they are taught good sign language, given the same opportunities, their parents are helped, then the exam would not be a problem.

Having experienced a different education system in America, Bruno seemed to be well placed to make this kind of an observation since he had something to compare with. This may not have been experienced by the Kenyan teachers given that the Kenyan system was the only one they knew of. His argument about good and equal access to education for deaf learners as the remedy to the assessment was a positive one. Maybe what deaf learners need is not different kind of testing such as the one the other teachers have been advocating for. Having acquired reading skills, vocabulary, and literacy at the same level with their hearing counterparts, deaf learners would not require different or adapted examinations. Due to the constraints they encountered while reading, accommodation in form of extra time for the examinations appears to be the most appropriate at the time of the study.

8.6 Pupils' views on style of assessment

The pupils in this study expressed their views with regard to the style used in the Social Studies assessment papers. Some of the issues that were raised as the learners attempted to answer some questions included: the use of difficult vocabulary both in the questions and in the choices given as answers, questions derived from topics not covered, negative questions, and too many questions.

8.6.1 *Vocabulary used in questions*

Almost all the pupils interviewed cited encountering a problem in reading and understanding the test items and admitted that they only understood some words and not others. It appeared that they did not want to admit wholly that they had a problem understanding English although this was evident when they attempted to answer some

questions. This was felt in the words of a fourteen year old Standard 8 male pupil who was pre-lingually deaf.

R: Do you have any problems reading and understanding the questions in the exams?

Jim: Some yes and some no.

R: Is it the English used which is hard or what?

Jim: No, the English is simple.

(I gave him an exam paper, set 'locally', which the class had done the week before, chose one question randomly and asked him to tell me the correct answer).

Q: The main **factor** that **promoted** trade among the people of East Africa during the **Pre-colonial** period was the _____.

A. **Existence** of well-trained armies in the region

B. Use of a **common currency** in the region

C. **Availability** of water transport in the region

D. Availability of different **commodities** in the region

(After about 5 minutes)

Jim: The English is hard. It is not the same as the one used in Standard 7 exam.

R: Can you tell me the correct answer?

Jim: I don't know because I don't understand some words.

R: Which are the words that you do not understand?

(He points at all the words in bold and italics)

Although Jim had previously said that the language used in the exams was simple, he was not able to answer the question and he admitted that the vocabulary used was difficult for him to understand. He failed to understand the most important items in the question and the most important concepts in the options given as answers. He had just started his final year in primary school and having joined the special school from Infant class, his sign language was very good. His response above was an indication that his knowledge of English did not match the one used in the exam paper at least at the level of vocabulary skills. He, however, confessed that Social Studies was his best subject because he was at the time being taught by a deaf teacher who used sign language only and explained concepts clearly.

A sixteen year old female pupil in Standard 7, also pre-lingually deaf, shared the same sentiments with Jim with regard to the vocabulary used in Social Studies examination papers. When I asked her whether she faced any problems in reading and understanding the questions, she responded:

Jemima: Yes, sometimes I don't understand, the English used is sometimes hard for me.

(Using a question paper that her class had done the previous week, I chose one question at random and asked her to give me the answer.)

Q 1. The following are benefits of **interactions** among communities except:

- A. Cultural exchange
- B. Development of language
- C. Increased trade
- D. Language **barrier**

(She chose **B** while the correct answer was **D** and confessed that she guessed the answer.)

R: Did you understand the meaning of 'except'?

Jemima: Yes. It means 'not'

R: And the word 'barrier'?

Jemima: No. What is the meaning?

(I tried to explain the meaning in sign language and my deaf Research Assistant explained further)

R: Is that the only word that you did not understand?

Jemima: I also did not understand '**interactions**'.

(I then selected another question and asked her to give me the answer)

Q 2: The following are problems **related** to population growth in Africa. Which one is **not**?

- A. Growth of slums
- B. **Unemployment**
- C. Food shortages
- D. Improved health services

(She selected **D** which was the correct answer)

Jemima: Exams have hard English so mostly I guess the answers when I don't understand the question.

R: Did you guess the answer for this one?

Jemima: Yes. I did not understand the meaning of '**related**' and '**unemployment**'. I just choose one answer when I don't understand. When we get the answers wrong, the teacher does the corrections with us in class and makes sure that we get them right.

This pupil confirmed what one teacher had mentioned earlier about pupils guessing answers. Although the teacher thought that pupils engaged in this habit due to laziness, Jemima implied that she only guesses the answer after she attempts to read the question but fails to understand some of the words used. Her phrase, 'exams have hard English' can be understood to mean that when English is used elsewhere, apart from in examinations, it is not as hard and she is able to cope with it. Maybe the use of sign language during classroom teaching and learning has contributed to the low level of understanding English vocabulary. This supports Bruno's sentiments on the importance of helping learners to acquire vocabulary during teaching and learning so that at the end of the primary school education, the learners can read and understand on their own without relying on the assistance from the teacher.

A male Standard 8 pupil with some residual hearing and in a different school from the other two seemed to be aware of the specific words that he had difficulty with.

R: Do you have any problems reading and understanding the questions in the exams?

John: Sometimes I do the exam and think that I have passed but after the teacher marks the paper, I get some of the questions wrong.

(I turned to the first two pages of the KCPE 2009 paper with seven questions derived from a map of an area)

R: Do you have problems with these map reading questions?

John: Yes. I get some right and some wrong.

(Moving to other pages, I selected one 'negative' question)

R: What do you think is the answer to Q 28?

Q. Three of the following are problems experienced by farmers in Mwea-Tebere Irrigation Scheme. Which one is **not**?

A. Silting of canals

B. Water-borne diseases

C. Destruction of crops by birds

D. Shortage of rice seeds

(His first answer is C. I ask him to try again and he gets the answer right – D.)

R: Do you understand the use of '**not**' in this question?

John: Yes, I know the meaning of '**not**' but I was not sure of the answer to the question. The words used in exams that I have problems with are: '**except**', '**mainly**' & '**main**'. The word '**not**' is used a lot in Social Studies, Religion and English.

This pupil, as is the case with the other two, understood the meaning of the word '**not**' but he still did not get the answer at once. His response to my first question implies that he was not certain whether he had a problem reading and understanding the questions or not. His response to the above question and his confession that he was not sure of the answer is an indication that either he did not understand some of the terms used or he had not mastered the subject matter well. He was however aware of the terms used in examinations that cause him problems which were discussed earlier as simple terms that teachers could help learners understand even by substituting them with more familiar ones such as '**important**' for '**main**'. For example, one of the pupils quoted above explained the meaning of '**except**' as '**not**' since she was familiar with the meaning of '**not**'.

8.6.2 Questions derived from topics not covered

The system in Kenya is one that is controlled from the top and teachers, to some extent, are expected to follow the syllabus using uniform learners' course books and teachers' guide books. The slow learning pace of deaf learners, however, is not taken into account so chances of not completing the syllabus of a given year are very high. In a situation like this, teachers can decide what topics to lay more emphasis on than others with the aim of covering the syllabus up to the end. As mentioned in chapter 6, it is this dearth that led Bruno into 'breaking' a 'rule' that did not allow going back to topics that were meant to have been taught previously but rather concentrate on that of the current year. Bruno did not feel bound by the 'rule' because he was non-Kenyan and so he did it 'his

way' based on what he felt was best for the learners. Apart from preparing the learners for exams, Bruno's approach of selecting the important topics from the whole syllabus resulted in learners who were more knowledgeable than those who learnt only a few topics in unnecessary detail. He associated his style first with his background from a different culture, then to the fact that he was deaf and his training as a teacher. Bruno's position and reflectivity in his teaching is similar to Teresa's (Stuart et al., 2009) who had to teach lower grade work in order to achieve her teaching goals at the grade level which she was teaching.

8.6.3 Too many questions

As mentioned earlier, the Social Studies exam paper included questions on Religious Education and had a total of ninety questions. One pupil raised this as a problem which contributed to her failure to read all the questions thus guessing the answers even without making reference to the questions. Jayne, a sixteen year old female Standard 7 pupil, who became deaf at age three, confessed that Social Studies was the subject that she least 'liked'. Responding to Q 1 above, she said:

- Jayne: I don't know the meaning of the word '**barrier**' but because the other options were positive answers, I chose **D**.
 R: Do you know the meaning of the word '**except**'?
 Jayne: It means '**Not**'
(For the Q 2 above, she took more than 5 minutes to decide on the answer and finally the answer she gave was wrong.)
 R: Did you understand the question?
(No answer)
 R: Do you understand the meaning of '**population**'?
 Jayne: No.
(I explained the meaning of population and the meaning of the vocabulary used in the options given as answers but she still did not get the correct answer.)
 R: Why don't you like Social Studies?
 Jayne: Because there is too much to read and I don't understand when I read. The exam has many questions to read and I get tired before I finish so I just guess the answers.
 R: Without reading the question?
 Jayne: Yes.

Although this particular learner seemed to have problems with understanding what she read, the number and the nature of questions in the examination are likely to be other reasons why learners get discouraged and opt to guess answers from the choices given. This endorses Luckner & Bowen's (2006) concern over test-taking behaviours exhibited

by deaf learners, such as, answering questions before reading the passage. In this situation, maybe ninety questions are too many and having to read and sign every word in every test item in an examination paper can be a tiring task for a deaf learner. This is likely to be worsened by the hardship experienced in getting the meaning of the vocabulary used as it has been illustrated by the excerpts above.

8.7 Conclusion

It appears as if an understanding of the purposes of assessing learners would be necessary in setting examinations for deaf learners. If one of the purposes is to measure the level of the knowledge gained within a particular period of time in school, then the language used to make the learners elicit such information should be appropriate. Focus on summative assessment rather than formative assessment sabotages the essence of learning. More focus should be on the amount of knowledge that the learner gains rather than whether he has passed the examination or not. Passing the examination and progressing to secondary school without a strong foundation may be meaningless. There is need for more emphasis on formative assessment so that learning becomes more meaningful and learners leave primary school having gained reasonable amount of knowledge.

It is important to recognise that sign language is the first language for deaf learners, their language of instruction, and that it is likely to impact negatively on their understanding of written text in English. This may be a basis to be used in making decisions aimed at giving them a chance to show through assessments what they know and also it could be a step towards achieving equity in the assessment of a curriculum that is designed for hearing and deaf learners.

A different and reduced syllabus which was suggested by one of the deaf teachers as a solution of placing the learners at the same level with hearing learners in terms of assessment would favour the deaf learners, but it is likely to have negative implications. First, the education system might be seen to be offering the learners a lower quality education than the hearing learners and secondly there could be a danger of being viewed by the hearing community as less learned and therefore miss out on opportunities even after school. Maybe as Bruno suggested, the best option would be to use every possible means to help deaf learners to access the same type of education that hearing learners' access by addressing the barriers they encounter through any form of

positive intervention. Before this is achieved, there is need to identify a strategy through which these learners can effectively display the knowledge they have acquired through the years spent in school.

Most of the problems that deaf learners seem to encounter during assessments seem to emanate from the amount of knowledge and skills that they acquire throughout their schooling. If the purpose of assessment in Kenya was more pedagogic than social, and there was more emphasis on formative rather than summative assessment, deaf learners' level of English vocabulary would be higher, their reading and comprehension skills would be more developed, and probably many of the assessment problems that they currently face would not exist. On the other hand, education also needs to serve its social purposes which are significant in determining the learners' progress to the next level of education, in this case secondary school, and future employment. Consequently, summative assessment needs to be done fairly in order not to close out deserving individuals.

Chapter 9 Discussion and Conclusion

9.1 Introduction

This chapter discusses the issues that emerged from the research questions which focused on the teaching of deaf children in Kenyan classrooms. The questions were:

4. What factors are considered when preparing for teaching Social Studies to deaf learners in Kenya?
5. What pedagogical strategies are adopted while teaching deaf learners Social Studies?
6. How is the learning of Social Studies by deaf learners assessed?

It summarises the findings of the study highlighting the gap that exists between general assumptions regarding the teaching of deaf learners and the empirical findings of the present study. It has some reflection on the methodology I employed while conducting the research. As well as stating how the present study has contributed to new knowledge, it has also laid out some possible policy implications.

9.2 Summary of findings

Language development and communication are perceived as the main difficulties that deaf children encounter and as a result, it is assumed that if teachers and learners are able to communicate through sign language, deaf learners can learn in the same way hearing learners learn. Language enables children to think, to understand the world around them and to be part of the larger community. This is based on the work of Vygotsky (1962) who argued that thought develops from language. As Vygotsky claims, there exists a fundamental correspondence between thought and language where one provides resource to the other and thought finds its expression, reality and form in language. Vygotsky's social-cultural theory of learning implies that the child's social interactions with the teachers and the more knowledgeable classmates contribute significantly to the child's cognitive development. These interactions take place through language and the cultural activities within the environment that the child grows.

Consequently, the development of language among deaf children is crucial for better learning outcomes.

This thesis argues that although outstanding sign language skills among teachers are a necessary precondition for efficient instruction, they are not sufficient in offering quality education in this context. Literature has shown that how well one communicates in a given language determines his or her ability to think in it and later use it to read and write (Mayer, 2007). The first language of many deaf learners in Kenya is sign language yet they read and write in English. There is likelihood that the low literacy level displayed by deaf learners globally is partly as a result of the challenges encountered while reading a speech-based system whereas the language they are used to is manual (Geers, 2006).

Currently, the FPE programme in Kenya not only aims at providing tuition-free education, but it also provides learners with learning resources such as textbooks. The education system in Kenya puts considerable emphasis on textbooks, their quality and availability in schools. However, this study found out that whereas the textbooks were mostly available in the units and schools for deaf learners, they were rarely used by the learners due to their design which seemed not to respond to their learning needs. Long complex sentences, long paragraphs and pages of text without illustrations were among some of the features that were highlighted in this study as contributing to the learners' difficulties in comprehending what they read in the texts. The literature shows that the poor phonological awareness among deaf learners which facilitates a reciprocal relation between spoken and written languages makes them encounter difficulties in processing, understanding and interpreting the text in sentences (Paul, 2003). Deaf teachers and the learners in this study identified some textbook design features that would motivate learners to use them, such as short simplified sentences and more use of illustrations than textual information. However, it is worth noting that short simplified sentences can be limiting to the learners. They need to serve as support to learn to read and understand English sentences then written materials with more complex sentences can be introduced later.

In view of the above, generally, reading and writing in Kenyan schools have been given precedence, whereby the learners are expected to be able to read content in their textbooks and demonstrate what they have learned through writing. Despite Vygotsky's

claim of the importance of language in children's cognitive growth and in learning, deaf learners in Kenyan classrooms did not seem to have sufficient opportunities to learn through interacting with others. While Alexander (2008) advocates for teaching that gives dialogic talk considerable prominence during lessons, some teaching strategies adopted by some teachers did not allow for such 'talk' to take place. Even though some of the teachers engaged their learners in some form of interaction, others played the role of instructors and passed on information to the learners without providing room for the learners to think and express their ideas freely. Teacher 'talk' dominated more than learners' 'talk' during the lessons. This can be attributed to the Kenyan education system which has retained the bureaucratic and authoritarian characteristics that were inherent in the colonial education (Tabulawa, 1997). As a result, teachers are perceived as providers of knowledge and learners as receptors. In Kenya, education is viewed as a means to procure a certificate and a good job that guarantees a comfortable life, and as a result, it emphasises on passing of examinations. This perception, coupled with a high level competition for places in secondary schools and universities, seems to have influenced pedagogical practices where teachers focus on preparing learners for examinations. Teachers therefore tend to feed the learners with as much information as possible that will make them perform well in their examinations.

Different views regarding the use of sign language during instruction have been raised in the literature (Spencer & Marschark, 2010; Power et al., 2008; Paterson & Konza, 1997). The present study found that many hearing teachers lacked adequate proficiency in KSL, the language of instruction, and as a result some used speech, signed English, while many combined signs with speech. Learners reported having difficulties understanding their teachers' sign language due to the omissions and lack of coordination between the signs used and the spoken words. This is likely to have resulted in lack of effective communication to facilitate effective dialogue between the teachers and the learners. In one of the lessons where the learners were passive and seemed to have achieved minimum learning outcomes, the teacher mostly used speech combined with very few signs and he often faced the chalkboard as he spoke depriving the learners the opportunity to lip-read. Figure 4:1 illustrates the importance of language for effective communication and interactions that provide room for engagement with others for better learning outcomes.

Some of the teachers who did not encounter communication problems while teaching, engaged their learners in the lessons by seeking their opinions and allowing them to share their thoughts with the others. Some used prompts to encourage the learners to think and gave them the freedom to articulate their ideas without fearing that they might be wrong. Said, particularly was open to learn from the learners for, as stated by Vygotsky (1978) and as illustrated on Figure 4:1, he recognised that children bring with them previous knowledge acquired from their experiences which can help build understanding of a new concept and which others, including himself, can learn from. As shown on Figure 4:1, these teachers supported the learning process as they guided the learners to construct their own knowledge through engaging them and ensuring that they were more active in their learning.

What needs to be addressed is what teachers require in order to be able to engage learners in meaningful interactions in the classrooms. Is fluency in sign language enough or should dialogic teaching be included as a component of teacher training? More Kenyan teachers need to devise ways through which they can balance the use of knowledge packaged in textbooks and knowledge that emerges from the learners through classroom interactions. While teachers' guides may be considered as important resources, they need not restrict teachers from exercising flexibility but rather the flow of the lessons need to be guided by the contributions of the learners. If teachers encourage peer interactions such as those that take place in Vygotsky's ZPD, learners who are more competent provide help to those who are less competent and through their assistance learning is achieved. Following Brock-Utne's (2001) assertion that the language of instruction should not be a barrier to knowledge, and that local languages are the most suitable languages for learning, teachers and deaf learners need to be able to communicate effectively in KSL for meaningful interactions to take place in classrooms.

Any teaching and learning without assessment would be meaningless. Assessment for learning, commonly referred to as formative assessment, helps in determining the lesson activities as well as the pedagogic strategies to be employed to achieve a certain learning outcome (Harlen, 2006a). This study noted that some teachers gauged what the learners knew by asking them questions at the beginning of their lessons and then introduced the new topic or clarified what seemed not to have been understood from the previous lesson. However, many of the questions had specific pre-determined answers

which did not provide learners with opportunities to expound on them and to give reasons as to why they gave ‘incorrect’ answers. Questions that required one-word answers, commonly used at the end of almost all lessons observed, did not portray the level of understanding of what was taught. Whereas it appeared as if it was a common practice, one of the teachers assessed the understanding of her learners by asking them to explain to the rest of the class what they had learned. Some form of dialogue between the learners and the teachers ensued as they expressed their understanding. This kind of assessment seemed to be more favourable for deaf learners, for they got the chance to express themselves in the same language that they are fluent in and one that they use for learning. The teachers are able to provide the learners with feedback and the interaction that develops makes both parties understand the level of progress made in learning and what needs to be done so as to move to the next level.

This study examined assessment practices employed to assess the learning achievements of deaf learners in relation to the purposes of assessment. It emerged from the present study that the Kenyan education system lays more emphasis on summative assessment which is aimed at limiting access to higher levels of the education system, in this case secondary schools. The study also found that the practices seemed not to give the deaf learners the opportunity to express fully the knowledge they had gained within the years they were in school. Although teaching took place in KSL, the assessments required the learners to read and write in English. Whereas learning was supported by the interactions with their teachers and other learners in the classrooms in sign language, tests were written in solitude. Deaf primary school learners need to possess reading and writing skills to be able to progress with secondary school education and to perform in different jobs. They therefore need to be supported to learn how to read and write in English.

9.3 Reflections on the methodology employed

With the benefit of hindsight, there are a few things that I feel I should have done differently as I conducted this study. As stated in the limitations of this study on page 120, I did not involve the deaf participants as much as I should have to claim that this study was emancipatory. Although, as stated in chapter 5, there are challenges in making research accountable to children especially disabled children in Kenya where adults tend to make decisions on their behalf, making it difficult to involve them as

much as I should have, I now feel that I should have involved the deaf adults, especially the teachers more in controlling the research agenda. Before the start of this study, I was not aware of the existence of deaf teachers in the schools and when I finally did, listened to them, and watched them teach, I realised that if they had been involved in the initial planning and formulation of the research questions, maybe more issues regarding the learning of deaf children would have emerged.

Whereas the top-down system of authority in the Kenyan education system could be perceived as favourable to the researcher in gaining access into schools, I learnt that it can also have negative repercussions especially when teachers are left with no choice other than to give in to the demands of the school management. While negotiating access into the classrooms, direct negotiation with all individual teachers would have allowed room for follow up visits to verify the data collected from all the interviews. Where I negotiated with teachers directly, they did not feel as if they were wasting time when they were sharing information with me probably because they were doing it out of their own free will.

9.4 Interventions to promote deaf children's learning

Low levels of academic achievement among deaf children can be attributed to the delayed language development and the modality difference between their language and that used by the majority hearing people which has failed to facilitate meaningful social interactions. The vocabulary size among deaf learners, which has been found to be typically smaller than that of hearing learners, creates a barrier to acquiring reading and writing skills. Deaf learners in Kenya need to be exposed to English words, their meanings as well as their visual representations (signs) so that they are able to understand what they read and also use the words correctly in their writing. Since deaf learners are known to have problems comprehending multiple meanings for the same word, strategies to teach vocabulary should involve encounters with new words in multiple situations (Spencer & Marschark, 2010). With reading and writing skills, deaf learners will be able to access a language of power and wider communication.

As proposed by Vygotsky, the intellectual development of children is shaped by the acquisition of language. Language makes dialogue possible and in a classroom setting it serves as the fundamental tool for establishing interactions, shared understanding, and problem solving. Reporting their research findings, Mercer & Littleton (2007) illustrate

how giving children guidance on how to use language to reason together in the classroom has a positive impact on curriculum learning and problem-solving. Providing learners with opportunities to perform tasks and solve problems together makes them think together, sharing different ways of addressing the task ahead of them as they engage in dialogue. Learners make use of the already acquired knowledge and together they construct their own knowledge from listening and respecting one another's views. Once deaf children acquire sign language, they too are capable of constructing their own knowledge through interactions with their peers and their teachers as shown in Figure 4:1. Teachers of deaf learners in Kenya need to recognise that their learners, given the opportunity to interact through guided exploratory 'talk' during lessons, they can learn better and can improve their individual reasoning capacity as well as learn to participate in collaborative learning and problem-solving.

The 'twin-track' approach to including disabled people (DFID, 2010; Croft, 2010; Miles & Singal, 2010; Giffard-Lindsay, 2007) is guided by the understanding that general quality improvement in programmes and including disabled people in the mainstream would deal with any existing exclusion but at the same time, some disability-specific, in this case, deaf-specific teaching interventions, such as those that promote the development of sign language use, may be required for full inclusion to be achieved.

9.5 Contribution to knowledge

This study has provided a detailed description and analysis of the way that Social Studies is taught to deaf primary school pupils in Kenya. The high level academic proficiency in the language of instruction among teachers that Heugh (2006) recommends goes beyond an acquisition of signs alone for teachers of deaf learners. The analysis of the present study shows that whereas teachers' good communication skills together with high quality teaching practices constitute the most favourable learning environment for deaf learners, the way a particular language is used during classroom instruction would constitute more effective teaching and learning than the language itself (Knoors & Hermans, 2010). Within the limits of this small study, the deaf teachers appeared to have a better grasp of how to teach deaf learners than the hearing teachers, with the exception of Said who was fluent in sign language. Fatuma and Hope taught in a more interactive way, asking learners open questions and building on their responses as well as encouraging them to express their ideas freely. Fatuma,

specifically, as a way of assessing the level of learning achieved, encouraged learners to explain their understanding to their peers. This illustrates the kind of dialogic teaching that is proposed by Alexander (2008). Said's level of sign language skills allowed him to create an interactive learning atmosphere where he was ready to learn from his learners. He encouraged exploratory talk (Mercer & Littleton, 2007) when he sought to know why the sign for 'tourist' was the same as that of a 'tortoise'. It was obvious that not all learners had this information but they ended up learning from those who knew. This study consequently claims that the recognition of the expert knowledge of deaf teachers gained from their experiences as teachers and formerly as deaf learners, and their proficiency in sign language would contribute towards providing the learners with better opportunities to learn.

The present study argues that whereas some interventions aimed at promoting deaf children's learning can be common to all children, some deaf-specific interventions used in teaching deaf learners can contribute to better learning outcomes. Due to the emphasis on the use of textbooks in the Kenyan system of education, this study claims that teaching strategies that utilise the use of 'English as an additional language-friendly' textbooks, and other visual resources such as wall maps, graphics or illustrative cards and field trips, and nurturing of an environment for 'talk' in the classrooms, would support deaf learners to achieve more in their learning.

9.6 Implications of the study

Disability theory, based on the social model of disability, perceives disabled people as having expert knowledge about disability gained from their lived experiences (Mercer, 2002). Deaf teachers who participated in this study were able to easily identify the features in the design of textbooks that would benefit deaf learners. Their proficiency in sign language made it easy for them to elaborate and give richer explanations during their teaching building on the knowledge that the learners had previously acquired (Figure 4:1). These findings suggest that the training and employment of more deaf teachers need to be supported by the government so that they can teach deaf learners and help develop sign language skills among the learners and also the existing hearing teachers for the achievement of better learning outcomes.

The findings of this study imply that the type of 'monologic' teaching (Alexander, 2008) that was observed in some of the classrooms for deaf learners is also likely to be

taking place in classrooms for hearing learners. Whereas the practice is likely to be attributed to the lack of fluency in sign language among some hearing teachers, it was noted that some teachers who were fluent in sign language ‘transmitted’ knowledge to the learners without engaging them in constructing it. Deaf and hearing teachers were also observed asking closed questions (photograph 7:2) that did not encourage the learners to think through them but had to spot the ‘correct’ answers from their notes. This study suggests that rather than the current focus on a particular interpretation of ‘learner-centred’ teaching approach that is common in teacher training programmes in Kenya, the focus should be on learning. Croft (2002) has demonstrated that learner-centred education can be much broader than teaching children in pairs and in groups. As she argues, learner-centred education can also be achieved through oral and collective teaching and not just through visual and individual/group teaching. She stresses the usefulness of indicators since learner-centred education can be achieved through teachers developing different teaching styles that are related to local conditions. Learning is also likely to be better achieved through the use of a dialogic teaching approach as proposed by Alexander (2008) and illustrated by Mercer & Littleton (2007) in their research. An understanding of a learner-centred teaching approach that focuses more on learning outcomes needs to be considered while planning all initial teacher training programmes for primary and secondary school teachers in Kenya.

While designing textbooks that incorporate all the features identified by the deaf teachers for use by all learners would be a positive general approach for the many Kenyan learners learning in their second or third language, and the production of specific books for deaf learners an alternative group-specific approach, both approaches would not be cost-effective in Kenya. The present study suggests that in order to allow for participation of deaf adults in deciding what is best for deaf learners, a possible group-specific strategy would be to task the deaf teachers to analyse all the approved textbooks for use by all Kenyan children and recommend the most ‘deaf-friendly’ ones to be used by deaf learners. In so doing, deaf adults would be playing an active role in supporting deaf learners to enjoy their right to education.

Though units have the potential to offer an inclusive learning environment which is favourable for learners to develop their sign language, the current structure of units in Kenya offers them limited power to ensure that resources are disbursed equitably to deaf children. More often than not, resources are provided to hearing learners and more

so to upper classes with the intention of improving their performance in the national examinations. This practice is encouraged by the evaluation of school performance and grading of schools that use performance in national public examinations as the major criteria. The implication of the findings of the present is that if units are supported through provision of essential facilities, sufficient number of teachers, and teaching and learning resources, with all in the mainstream school supporting the presence of deaf learners, barriers that exclude them in participating in their learning are likely to be reduced.

The findings of the present study imply that other textbooks used by deaf learners in other subjects also need to be 'deaf-friendly' so that learners can benefit from them and also feel motivated to read on their own. The expert knowledge of deaf teachers displayed by the present study imply that countries that have not yet considered empowering deaf adults to teach deaf children could consider doing so to improve the learning of their deaf children.

9.7 Conclusion

This thesis addressed the teaching and learning of deaf primary-school learners in Kenya in order to explain their poor examination performance and to find ways of better supporting their learning. The present study has provided much detailed description and analysis of how deaf learners are taught Social Studies in Kenya. The study showed that whereas proficiency in sign language among teachers plays a great role in the education of deaf learners, it is not sufficient in offering quality education to deaf learners. What matters most is the use of language as a tool for reasoning through dialogue between teachers and learners and amongst the learners themselves. Children's learning is accelerated when language is utilised to facilitate meaningful interactions that provide learners with opportunities to think and reason together.

General teaching strategies for deaf learners have been in use in Kenya due to the assumption that they learn the same as hearing learners. The present study demonstrates that a combination of a general quality improvement of educational resources which would be relevant for all learners and some deaf-specific interventions for deaf learners is an approach that would support the learners to achieve more in their learning.

Deaf teachers' expert knowledge and proficiency in sign language seemed to contribute towards providing deaf learners with more opportunities for higher levels of learning achievements. The present study has shown that fluency in sign language is not enough in order for teachers to be able to engage learners in meaningful interactions in the classrooms. A dialogic teaching approach, which encourages learners to participate in their own learning, needs to be included as a component of teacher training. In addition to the use of pupils' course books and teachers' guides, teachers need to be more reflexive and develop teaching styles that are related to the local conditions and cultures that will enable learning to be learner-centred.

Bibliography

- Abedi J. (2002) Standardized Achievement Tests and English Language Learners: Psychometrics Issues in *Educational Assessment*, 8, 3, 231-257.
- Ackers, J. & Hardman, F. (2001) Classroom Interaction in Kenyan Primary Schools, *Compare: A Journal of Comparative and International Education*, 31, 2, 245-261.
- Action on Hearing Loss website: Accessed July 2011
<http://www.actiononhearingloss.org.uk/>
- Adler, P. A. & Adler, P. (1994) Observational Techniques, in: N. K. Denzin and Y. S. Lincoln (Eds.) *Handbook of Qualitative Research*, (London, Sage).
- Adoyo, P. O. (2002) Emergent Approaches towards Bilingualism in Deaf Education in Kenya, *Vienna Journal of African Studies*, 3, 83-96.
- Akach, P. O. A. (1991) Sentence Type in Kenyan Sign Language: A Structuralist Approach. Unpublished M.A. Thesis, University of Nairobi, Kenya.
- Akamatsu, C. T. & Stewart, D. (1998) Constructing Simultaneous Communication: The Contribution of Natural Sign Language, *Journal of Deaf Studies and Deaf Education* 3, pp. 302-319.
- Alexander, R. (2008) *Education for All, the Quality Imperative, and the Problem of Pedagogy*, (London/Sussex, Institute of Education /CREATE. www.create-ipc.org/pdf_documents/PTA20.pdf).
- Alexander, R. (2008) *Rethinking Dialogic Talk*, (London, Dialogos).
- Anthony, J. H. (2009) Access to Education for Students with Autism in Ghana: Implications for EFA, “*Paper commissioned for the EFA Global Monitoring Report 2010, Reaching the marginalized*”, UNESCO.
- Arap-Maritim, E. K. (2010) Equity on National School Achievement Tests: A Multicultural Perspective in Kenya, *Psychological Reports*, 106, 3, pp. 685-692.
- ARG (2002) *Assessment for Learning: 10 Principles*, (Cambridge, University School of Education), Accessed June 2011: <http://www.assessment-reform-group.org/publications.html>

- Atherton, J. S. (2011) Learning and Teaching: Piaget's Developmental Theory [online: UK], Accessed on <http://www.learningandteaching.info/learning/piaget.htm>
- Banner, A. & Wang, Y. (2011) An analysis of the reading strategies used by adult and student deaf readers, in: *Journal of Deaf Studies and Deaf Education* , 16,1, pp. 2-23.
- Barnes, C. (1992) *Disabling Imagery and the Media: An Exploration of the Principles for Media Representations of Disabled People* (Derby, The British Council of Disabled People).
- Barnes, C. (2001) 'Emancipatory' Disability Research: Project or Process? Centre for Disability Studies, Department of Sociology and Social Policy, University of Leeds, October 2001. Available at: <http://www.leeds.ac.uk/disability-studies/archiveuk/Barnes/glasgow%20lecture.pdf>.
- Barnes, C. & Sheldon, A. (2007) 'Emancipatory' Disability Research and Special Educational Needs, in: L. Florian, (Ed.) *The Sage Handbook of Special Education*, (London, Sage).
- Bat-Chava, Y., Martin, D. & Kosciw, J. G. (2005) Barriers to HIV/AIDS Knowledge and Prevention among Deaf and Hard of Hearing People in *AIDS Care*, 17, 95, pp. 623-634.
- Bhaskar, R. (1989) *Reclaiming Reality*, (London, Verso).
- Black, P. & William, D. (2006) Developing a Theory of Formative Assessment, in: J. Gardner (Ed.) *Assessment and Learning*, (London, Sage).
- Borgia, S. (1990) Language, Thought and Deafness: Conceptual and Methodological Issues, with Reference to Visuo-spatial Processing, Control of Attention and Sign Language, Unpublished PhD Thesis, University of Leeds.
- Bosker, R. J. (2005) *De Grenzen van Gedifferentieerd onderwijs. [The Limits of Adaptive Education]*. (Groningen: Inaugurele Rede, Rijksuniversiteit Groningen).
- Brock-Utne, B. (2001) Education for All - in Whose Language?, *Oxford Review of Education*, 27,1, pp. 115-134.

- Bruner, J. (1985) Vygotsky: A Historical and Conceptual Perspective, in: J. V. Wertsch (Ed.), *Culture, Communication and Cognition: Vygotskian Perspectives*, (New York, Press Syndicate University of Cambridge).
- Bryman, A. (2008) *Social Research Methods*, (Third Edition) (New York, Oxford University Press).
- Bunyi, G. (1997) Multilingualism and Discourse in Primary School Mathematics in Kenya, *Language, Culture and Curriculum*, 10, 1, pp. 52-65.
- Burrell, G. & Morgan, G. (1982) *Sociological Paradigms and Organisational Analysis*, (London, Heinemann Educational).
- Callaway, A. (1999) Translating Theory into Practice in a Different Cultural Context: A bilingual approach for deaf children in China in E. Stone, (Ed.) *Disability and Development: Learning from action and research on disability in the majority world*, (Leeds: The Disability Press).
- Cawthon, S. W., Winton, S. M., Garberoglio, C. L., & Gobble, M. E. (2011) The Effects of American Sign Language as an Assessment Accommodation for Students Who are Deaf or Hard of Hearing, *Journal of Deaf Studies and Deaf Education*, 16, 2, pp. 198-211.
- Chavuta, A. H. , Kimuli, E. & Ogot, O. (n.d.) Community-based Rehabilitation as Part of Inclusive Education and Development. Available at:
http://www.asksource.info/cbr-book/cbraspart_05.pdf Accessed September 2011
- Child, D. (2004) *Psychology and the Teacher*, (Seventh Edition) (London, Continuum).
- Cohen, L., Manion, L., & Marrison, K. (2007) *Research methods in Education*, (Sixth Edition) (London, Routledge).
- Cooper, B. & Dunne, M. (2000) *Assessing Children's Mathematical Knowledge: Social Class, Sex and Problem-solving*, (Buckingham, Open University Press).
- Creswell, J. W. (2003) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, (Second Edition) (Thousand Oaks, Sage).

- Creswell, J. W. (2009) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, (Third Edition) (Thousand Oaks, Sage).
- Creswell, J. & Plano Clark, V. L. (2007) *Mixed Methods Research*, (California, Sage Publication).
- Croft, A. (2002) Pedagogy in School Context: An Intercultural Study of the Quality of Learning, teaching and Teacher Education in Lower Primary Classes in Southern Malawi, unpublished DPhil Dissertation, University of Sussex.
- Croft, A. (2002) Singing under a Tree: Does Oral Culture Help Lower Primary Teachers be Learner-centred?, *International Journal of Educational Development*, 22 pp. 321-337.
- Croft, A. (2006) Prepared for Diversity? Teacher Education for Lower Primary Classes in Malawi, in: A. W. Little (Ed.), *Education for All and Multi-grade Teaching: Challenges and Opportunities*, (Dordrecht, Springer).
- Croft, A. (2010) *Including Disabled Children in Learning: Challenges in Developing Countries*, London/Sussex: Institute of Education/CREATE http://www.create-rpc.org/pdf_documents/PTA36.pdf
- Cummins, J. (1989) A Theoretical Framework of Bilingual Special Education. *Exceptional Children*, 56, pp. 11-119.
- Daily Nation Newspaper. 13th February 2011.
<http://www.nation.co.ke/News/Publishers%20turn%20down%20KIE%20plea%20/-/1056/1106970/-/p3lrcw/-/index.html>
- Daily Nation Newspaper, 6th September 2011. <http://www.nation.co.ke/News>
- Davis, P. & Florian, L. (2004) *Teaching Strategies and Approaches for Pupils with Special Educational Needs: A Scoping Study*, Research report 516, (London: Department for Education and Skills).
www.dcsf.gov.uk/rsgateway/DB/RRP/u013972/index.shtml
- Deaf Child Worldwide website. Accessed June 2010.
http://www.deafchildworldwide.info/about_us/index.html

- Denzin, N. K. & Lincoln, Y. S. (1998) *Strategies of Qualitative Inquiry*, (Thousand Oaks, Sage).
- DFID (2010) *DFID Disability and Education: Bridging the Implementation Gap*, (London: Results, UK).
- Dunne, M., Pryor, J. & Yates, P. (2005) *Becoming a Researcher: A Research Companion for the Social Sciences*, (Maidenhead, Open University Press).
- ESRC (2005) *Research Ethics Framework*, (Swindon: Economic and Social Research Council). www.esrc.ac.uk, Accessed December 2010.
- Finnegan, R. (2007) *The oral and Beyond: Doing Things with Words*, (Chicago, University of Chicago Press).
- Fox, S. (2007) *Etiquette for Dummies*, (2nd Edition), (New Jersey, Wiley Publishing).
- Gans, H. J. (1968) The Participant-Observer as Human Being: Observations on the Personal Aspects of Field Work, in: H. S. Becker (Ed), *Institutions and the Person: Papers presented to Everret C. Hughes* (Chicago, Aldine).
- Gardner, J. (2006) Assessment and Learning: An Introduction, in: J. Gardner (Ed.) *Assessment and Learning*, (London, Sage).
- Geers, A. (2006) Spoken Language in Children with Cochlear Implants, in: P. Spencer & M. Marschark (Eds.), *Advances in Spoken Language Development of Deaf and Hard of Hearing Children*, (New York: Oxford University Press).
- Geers, S. (2003) When 'Equal' means 'Unequal' – And Other Legend Conundrums, in: C. Lucas (Ed), *Language and the Law in Deaf Communities*, (Volume 9), (Washington, D. C., Gallaudet University).
- Ghesquière, P., Maes, B. & Vandenberghe, R. (2004) The Usefulness of Qualitative Case Studies in Research n Special Needs Education, *International Journal of Disability, Development and Education*, 51, 2, pp.171-184.
- Giffard-Lindsay, C. (2007) Inclusive Education in India: Interpretation, Implementation, and Issues, (London/Sussex, Institute of Education/CREATE).
http://www.create-rpc.org/pdf_documents/PTA15.pdf

- Goffman, E. (1968) *Notes on the Management of Spoiled Identity*, (New Jersey, Penguin Books, Prentice-Hall, Inc.).
- Gregory, S. (2005) Deafness, in: A. Lewis & B. Norwich (Eds.) *Special teaching for special children? Pedagogies for inclusion*, (Maidenhead, Open University Press).
- Gyimah, E. K. (2006) Teachers' Attitudes to Inclusion in Ghana. Unpublished DPhil Thesis, University of Leeds.
- Habermas, J. (1979) *Communication and the Evolution of Society*, (London, Heinemann).
- Haller, B., Dorries, B. & Rahn, J. (2006) Media labelling *versus* the US disability community identity: a study of shifting cultural language in *Disability & Society*, 21, 1, pp. 61–75.
- Harlen, W. (2006a) On the Relationship between Assessment for Formative and Summative Purposes, in: J. Gardner (Ed.) *Assessment and Learning*, (London, Sage).
- Harlen, W. (2006b) The Role of Assessment in Developing Motivation for Learning, in: J. Gardner (Ed.) *Assessment and Learning*, (London, Sage).
- Heath, C., Hindmarsh, J. & Luff, P. (2010) *Video in Qualitative Research: Analysing Social Interaction in Everyday Life*, (London, Sage).
- Hermans, D., Knoors, H., Ormel, E. & Verhoeven, L. (2008) The relationship between the reading and signing skills of deaf children in Bilingual education programs, in: *Journal of Deaf Studies and Deaf Education*, 13, pp. 518-530.
- Heugh, K. (2006) Theory and Practice – Language Education Models in Africa: Research, Design, Decision making, and Outcomes, in: H. Alidou, A. Boly, B. Brock-Utne, D. Satina, K. Heugh, & H. E. Wolff (Eds.) *Optimizing Learning and Education in Africa – the Language Factor: A Stock-taking Research on Mother Tongue and Bilingual education in Sub-Saharan Africa*, (Paris: ADEA).
- Heutzel, K. L. & Rothstein, W. G. (2001) HIV and AIDS Knowledge and Information Sources among Deaf and Hearing College Students, *American Annals of the Deaf*, 146, 3, pp. 280-286.

- Hoffmeister, R. (2000) A Piece of the Puzzle: ASL and Reading Comrehension in Deaf Children, in C. Chamberlain, J. Morford, & R. Mayberry (Eds.), *Language Acquisition by Eye*, (Mahwah, NJ, Lawrence Erlbaum).
- Humphries, B., Mertens, D. M. & Truman, C. (2000) Arguments for an ‘Emancipatory’ Research Paradigm, in: C. Truman, D. M. Mertens, & B. Humphries (Eds.), *Research and Inequality*, (London, UCL Press).
- James, M. (2006) Assessment, Teaching and Theories of Learning, in: J. Gardner (Ed.) *Assessment and Learning*, (London, Sage).
- Johnson, R. E., Liddel, S. & Erting, C. (1989) Unlocking the Curriculum: Principles for Achieving Access in Deaf Education, Gallaudet Research Institute Working Paper Series, No.89-93, (Washington DC, Gallaudet Research Institute).
- Kenya Institute of Special Education Website. <http://www.kise.co.ke/>
- Kiyanga, N. B. & Moores, D. F. (2003) Deafness in sub-Saharan Africa in *American Annals of the Deaf*, 148, 1, pp.18- 24.
- KNBS (2009) Kenya 2009 Population and Housing Census Highlights, Government of Kenya.
- KNEC (2009a) KCPE 2009 English Section A: Language, KNEC
- KNEC (2009b) KCPE 2009 English Section A: Language Hearing Impaired, KNEC
- KNEC (2009c) KCPE 2009 Social Studies and Religious Education, KNEC
- Knoors, H. & Hermans, D. (2010) Effective Instruction for Deaf and Hard-of-Hearing Students: Teaching Strategies, School Settings, and Students Characteristics, in: M. Marschark & P. E. Spencer (Eds.), *The Oxford Handbook of Deaf Studies, Language, and Education* (Volume 2) (New York, Oxford University Press).
- Koistinen, M. H. (2006) Understanding Experiences of Vocational Training and Employment for Persons with Disability in Zambia: Lessons for the Future, Unpublished DPhil Dissertation, University of Sussex.

- Krashen, S. D. (1988) *Second Language Acquisition and Second Language Learning*. (New Jersey, Prentice-Hall International).
- KSLRP (2004) Kenyan Sign Language, Interactive Dictionary and Vocabulary Builders. DVD.
- Kvale, S. (1996) *Interviews: An Introduction to Qualitative Research Interviewing*, (Thousand Oaks, Sage).
- Ladd, P. (2003) *Understanding Deaf Culture: In Search of Deafhood*, (London, Cromwell Press Limited).
- Lang, H. G., McKee, B. G. & Conner, K. N. (1993) Characteristics of Effective Teachers: A Descriptive Study of Perceptions of Faculty and Deaf College Students, *American Annals of the Deaf*, 138, 3, pp. 252-259.
- Lederberg, A. & Spencer, P. (2009) Word-learning Abilities in Deaf and Hard-of-hearing preschoolers: Effect of Lexicon Size and Language Modality, *Journal of Deaf Studies and Deaf Education*, 14, pp. 44-62.
- Leonardi, M., Bickenbach, J., Ustun, T.B., Kostanjsek, N. & Chatterji, K. S. (2006) The Definition of Disability: What is in a Name?, *The Lancet*, 368, pp. 1219-1221. Available at: <http://www.mhadie.it/publications.aspx>.
- Lewin, K. & Dunne, M. (2000) Policy and Practice in Assessment in Anglophone Africa: Does Globalisation Explain Convergence? *Assessment in Education: Principles, Policy & Practice*, 7, 3, 379-399
- Lewin, K. & Sabates, R. (2011) *Changing Patterns of Access to Education in Anglophone and Francophone Countries in Sub Saharan Africa: Is Education for All Pro-Poor?* (London/Sussex, Institute of Education/CREATE).
http://www.create-rpc.org/pdf_documents/PTA52.pdf
- Lewis, A. and Norwich, B. (2005) (Eds.) *Special teaching for special children? Pedagogies for inclusion* (Maidenhead, Open University Press).
- Lewis, M. P. (2009) (Ed.) *Ethnologue: Languages of the world*, 16th Edition, (Dallas, Texas, SIL International). Available at: <http://www.ethnologue.com>.

- Linton, S. (1998) *Claiming Disability*, (New York, New York University Press)
- Lucker, J. (2010) Preparing Teachers of Students who are Deaf or Hard of Hearing, in: M. Marschark & P. E. Spencer (Eds.), *The Oxford Handbook of Deaf Studies, Language, and Education* (Volume 2), (New York, Oxford University Press).
- Luckner, J. L. & Bowen, S. (2006) Assessment Practices of Professionals Serving Students Who Are Deaf or Hard of Hearing: An Initial Investigation, *American Annals of the Deaf*, 151, 4, pp. 410-417.
- Luckner, J. L. & Hanks, J. A. (2003) Job: Perceptions of a National Sample of Teachers of Students Who are Deaf or Hard of Hearing, *American Annals of the Deaf*, 148, 1, pp. 5-17.
- Luttrell, W. (2000) Good Enough Methods for Ethnographic Research, *Harvard Educational Review*, Vol. 70, 4, pp. 499-523.
- Marschark, M., Sapere, P., Convertino, C., Mayer, C., Wauters, L. & Sarchet, T. (2009) Are Deaf Students' Reading Challenges Really about Reading? *American Annals of the Deaf*, 154, 4, pp. 357-370.
- Marschark, M. & Spencer, P. E. (2010) The promise of Deaf education: From Research to Practice and Back Again, in: M. Marschark & P. E. Spencer (Eds.), *The Oxford Handbook Deaf Studies, Language, and Education* (Volume Two) (New York, Oxford University Press).
- Marschark, M. (1997) *Raising and Educating a Deaf Child*. (New York: Oxford University Press).
- Marschark, M. (2006) Intellectual Functioning of Deaf Adults and Children: Answers and Questions, *European Journal of Cognitive Psychology*, 18, 1, 70 – 89.
- Marschark, M., Convertino, C. & LaRock, D. (2006) Assessing Cognition, Communication, and Learning by Deaf Students, in: C. Hage, B. Charlier, & J. Leybaert (Eds.), *L'évaluation de la Personne Sourde*, (Brussels, Mardaga).

- Marschark, M., Sapere, P., Convertino, C. & Pelz, J. (2008) Learning Via Direct and Mediated Instruction by Deaf Students. *Journal of Deaf Studies and Deaf Education*, 13, 4, pp. 546-561.
- Marschark, M. & Wauters, L. (2008) Language Comprehension and Learning by Deaf Students, in: M. Marschark, M & P. C. Hauser (Eds.), *Deaf Cognition, Foundations and Outcomes*, (New York, Oxford Univeristy Press)
- Mayer, C. (2007) What Really Matters in the Early Literacy Development of Deaf Children, *Journal of Deaf Studies and Deaf Education*, 12, 4, pp. 411- 431.
- Mayer, C. (2010) The Demands of Writing and the Deaf Writer, in: M. Marschark & P. Spencer (Eds.), *The Oxford Handbook of Deaf Studies, Language, and Education*, (Volume Two), (New York: Oxford University Press).
- Mayer, C. & Akamatsu, C. T. (1999) Bilingual-bicultural Models of Literacy Education for Deaf Students: Considering the Claims, *Journal of Deaf Studies and Deaf Education*, 4, pp. 1-8.
- Mayer, C. & Wells, G. (1996) Can the Linguistic interdependence theory Support a Bilingual-bicultural Model of Literacy Education for Deaf Students? *Journal of Deaf Studies and Deaf Education*, 1, pp. 93-107.
- Meinefeld, W. (2004) Hypotheses and Prior Knowledge in Qualitative Research, in: U. Flick, E. Von Kardoff & I. Steinke (Eds.), *A Companion to Qualitative Research*, (London: Sage). Available at: <http://www.leeds.ac.uk/disability-studies/archiveuk/Barnes/glasgow%20lecture.pdf>.
- Mercer, G. (2002) Emancipatory Disability Research, in: C. Barnes, M. Oliver & L. Barton (Eds.), *Disability Studies Today*. (Oxford, Blackwell Publishers).
- Mercer, N. & Littleton, K. (2007) *Dialogue and the Development of Children's Thinking: A Sociocultural Approach*, (London, Routledge).
- Mertens, D. M. (2003) Mixed Methods and the Politics of Human Research: The Transformative-emancipatory Perspective, in: A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in the Social and Behavioural Sciences*, (Thousand Oaks, CA: Sage).

- Miles, S. (n.d.(a)) Engaging with the Disability Rights Movement....: The Experience of Community Based Rehabilitation (CBR) in Southern Africa. Available at: <http://www.eenet.org.uk/resources/docs/engagcbr.php>
- Miles, S. (n.d.(b)) Partnership with Disabled People, Parents and the Community: Lessons from Community Based Rehabilitation (CBR) in Southern Africa Available at: <http://www.eenet.org.uk/resources/docs/lessncbr.php>
- Miles, S. (1995) The Deaf Dilemma, Article for CBR News, No. 20, May-August 1995. Available at: <http://www.eenet.org.uk/resources/docs/deafdilm.php>
- Miles, S. & Singal, N. (2010) The Education for All and inclusive education debate: conflict, contradiction or opportunity? *International Journal of Inclusive Education*, 14 (1), pp. 1-15.
- Miles, S., Wapling, L. and Beart, J. (2011) Including Deaf Children in Primary Schools in Bushenyi, Uganda: a community-based initiative. *Third World Quarterly* 32, 8, pp.1515-1525.
- MoE (2009a) The National Special Needs Education Policy Framework. (Nairobi, Government Printers).
- MoE (2009b) Primary Education Social Studies Syllabus. (Nairobi, KIE).
- MoE (2010) Approved List of School textbooks and Other Instructional Materials for ECDE, Primary Schools and Teacher Training Colleges, (Revised Tenth Edition), (Volume 1), (Nairobi, KIE).
- MoEST (2004a) Primary Education Syllabus for Learners with Hearing Impairment, English, (Nairobi, KIE).
- MoEST (2004b) Primary Education Syllabus for Learners with Hearing Impairment, Kenyan Sign Language, (Nairobi, KIE).
- MoEST (2004c) Primary Education Syllabus for Learners with Hearing Impairment, Science, (Nairobi, KIE).
- MoEST (2004d) Development of Education in Kenya. Available at: <http://www.ibe.unesco.org/International/ICE47/English/Natreps/reports/kenya.pdf>
Accessed January 2011.

- MoEST (2005a) Kenya Education Support Sector Programme 2005-2010: Delivering Quality Equitable Education and Training to all Kenyans. (Nairobi, Republic of Kenya).
- MoEST (2005b) Schools for the Deaf 2005 KCPE Results Analysis, Directorate of Quality Assurance & Standards. (Nairobi, MoEST).
- Moore, D. (2001) *Educating the Deaf: Psychology, Principles, and Practices* (Fifth Edition). (Boston, Houghton Mifflin).
- Morris, J. (2003) Including all children: finding out about the experiences of disabled children, Presentation at Childhood Disability Research Forum. Available at: <http://www.leeds.ac.uk/disability-studies/archiveuk/index.html>.
- Morrison, K. R. B. (1995) Habermas and the School Curriculum. Unpublished PhD Thesis, School of Education, University of Durham.
- Morrow, V. (2009) The Ethics of Social Research with Children and Families in Young Lives: Practical Experiences, Working Paper No. 53, Young Lives, Department of International Development, University of Oxford.
- Mukangu, G. M. (2008) Resource and Pedagogical Constraints to Teaching Social Studies at Kerugoya School for the Hearing Impaired, unpublished MA thesis, Kenyatta University.
- Mundi, E. (2009) Socio-cultural Perceptions of Teachers and Parents on Inclusive Education in Four Selected Special and Integrated Schools in Kenya, unpublished M.Ed thesis, Kenyatta University.
- Muthwii, M. J. (2004) Language of Instruction: A Qualitative Analysis of the Perceptions of Parents, Pupils and Teachers among the Kalenjin in Kenya, *Language, Culture and Curriculum*, 17, 1, pp. 15-32.
- Ndurumo, M. M. (1993) *Exceptional Children: Developmental Consequences and Intervention*, (Nairobi, Longman Kenya Ltd).
- Ngao, G. (2005) The Socialisation of the Hearing Impaired Children: The Case of Machakos School for the Deaf, unpublished M.ED thesis, Kenyatta University.

- Niemann, S., Greenstein, D. & David, D. (2004) *Helping Children Who are Deaf: Family and Community Support for Children Who Do Not Hear Well*, (California, The Hesperian Foundation).
- Ogot, O., Mackenzie, J. & Dube, S. (2009) Inclusive Education and Community-based Rehabilitation, in: S. Hartley & J. Okune (Eds.), *CBR Policy Development and Implementation*, (Norwich, University of East Anglia). Available at: <http://www.afri-can.org/CBR%20Information/CBR%20-Inclusive%20Policy%20Development%20and%20Implementation.pdf>
- Oketch, M. & Somerset, A. (2010) *Free Primary Education and after in Kenya: Enrolment Impact, Quality Effects, and the Transition to Secondary School*. London/Sussex: Institute of Education/CREATE. Available at: http://www.create-rpc.org/pdf_documents/PTA37.pdf
- Okombo, O. (1994) Kenyan Sign Language: Some Attitudinal and Cognitive Issues in the Evolution of a Language Community, in: Ahlgren & Hyltenstam, I. K. (Eds) *Bilingualism in Deaf Education*, (Hamburg: Signum).
- Okombo, D. O. & Akach, P. O. (1997) Language Convergence and Wave Phenomena in the Growth of a National Sign Language in Kenya, *International Journal of Sociology of Language*, 125, 1, pp. 131-144.
- Oliver, M. (1983) *Social Work with Disabled People*, (Basingstoke, Macmillan).
- Oliver, M. (1990) *The Politics of Disablement*, (Basingstoke, Macmillan).
- Oliver, M. (1992) Changing the Social Relations of Research Production, *Disability, Handicap and Society*, 7, 2, pp. 101-114.
- Oliver, M. (1996) Defining Impairment and Disability: Issues at Stake, in: C. Barnes & G. Mercer (Eds.), *Exploring the Divide*, (Leeds, The Disability Press).
- Ottom, E. (1980) An Analysis of Cognitive Studies with Deaf Subjects, *American Annals of the Deaf*, 125, pp. 564-575.

- Paterson, J. F. & Konza, D. (1997) A Response to Hall: Bilingualism in Deaf Education explored, *International Journal of Disability, Development and Education*, 44, 1, pp. 67-74.
- Paul, P. & Moores, D. (2010) Introduction: Toward an Understanding of Epistemology and Deafness, *American Annals of the Deaf*, 154, 5, pp. 421- 427.
- Paul, P. V. (2003) Processes and Components of Reading, In M. Marschark & P. E. Spencer (Eds.) *Oxford Handbook of Deaf Studies, Language, and Education*, (pp. 97-109) (New York, Oxford University Press).
- Peinkofer, J. R. (1994) HIV Education for the Deaf: A Vulnerable Group, in: *Public Health Reports*, 109, 3, pp. 390-396.
- Power, D. & Leigh, G. (2003) Curriculum: Cultural and Communicative Contexts, in: M. Marschark & P. E. Spencer (Eds.) *Oxford Handbook of Deaf Studies, Language, and Education*, (New York, Oxford University Press).
- Power, D., Hyde, M. & Leigh, G. (2008) Learning English from Signed English: an impossible task? *American Annals of the Deaf*, 153, 37-47.
- Pryor, J. & Crossouard, B. (2008) A Socio-Cultural Theorisation of Formative Assessment. *Oxford Review of Education* 34, 1, pp. 1-20.
- Pryor, J. B. (1993) He, She, and I.T.: A Case Study of Group work in a Gender-sensitive Area, Unpublished DPhil Thesis, Sussex University.
- Punch, K. F. (2005) *Introduction to Social Research: Quantitative and Qualitative Approaches* (Revised Edition), (London, Sage).
- Republic of Kenya (1976) Report of the National Committee on Educational Objectives and Policies (Chairperson: Peter Gachathi). (Nairobi, Government Printer).
- Republic of Kenya (1998) Kamunge Report: Education and Manpower Training for the Next Decade and Beyond. (Nairobi, Government Printer).
- Republic of Kenya (2005) MOEST: A Policy Framework for Education, Training and Research, Sessional Paper No. 1 (Nairobi, Government Printer).

- Rieser, R. (2008) *Implementing Inclusive Education: A Commonwealth Guide to Implementing Article 24 of the UN Convention on the Rights of People with Disabilities*. (London, Commonwealth Secretariat).
- Roald, I. (2002) Norwegian Deaf Teachers' Reflections on their Science Education: Implications for Instruction, *Journal of Deaf Studies and Deaf Education*, 7, 1, pp. 57-73.
- Roberson, J. L. & Serwatka, T. S. (2000) Student Perceptions and Instructional Effectiveness of Deaf and Hearing Teachers, *American Annals of the Deaf*, 153, 3, pp. 328-343.
- Robson, C. (2002) *Real World Research*, (Second Edition) (Oxford, Blackwell Publishing).
- Ryan, G. W. & Bernard, H. R. (2003) Techniques to Identify Themes, *Field Methods*, 15, 85-109.
- Save the Children (2002) Schools for All: Including Disabled Children in Education. Available at: http://www.eenet.org.uk/resources/docs/schools_for_all.pdf
- Schick, B. & Moeller, M. P. (1992) What is Learnable in Manually Coded English Sign Systems? *Applied Psycholinguistics* 13, pp. 313-340.
- Schirmer, B. R. & Williams Cheri (2003) Approaches to Teaching Reading, In M. Marschark & P. E. Spencer (Eds.) *Oxford Handbook of Deaf Studies, Language, and Education*, (pp. 110-122) (New York, Oxford University Press),.
- Schwandt, T. A. (2001) *Dictionary of Qualitative Inquiry*, (Second Edition) (Thousand Oaks, Sage Publications).
- Sen A. (2009) *The idea of justice*. Cambridge, (The Belknap Press of Harvard University Press).
- Serpell, R. (1993) *The Significance of Schooling: Life-journeys in an African Society*, (Cambridge, Cambridge University Press).
- Singal, N. (2007) Conceptualising Disability and Education in the South: Challenges for Research. RECOUP Working Paper 10. World Bank: *Inter-Agency Disability Knowledge Base*.

- Singal, N. (2010) Doing Disability Research in a Southern Context: Challenges and Possibilities, *Disability & Society*, 25, 4, pp. 415- 426.
- Slobin, D. I. (2008) Breaking the Molds: Signed Languages and the Nature of Human Language, *Sign Language Studies*, 8, 2, pp. 114-130.
- Spencer, P. E. & Marschark, M. (2010) Evidence-based Practice in Educating Deaf and Hard-of-hearing Students, (New York, Oxford University Press).
- Srivastava, P. (2006) Reconciling Multiple Research Positionalities and Languages in International Research, *Research in Comparative and International Education*, 1, 3, pp. 210-222.
- Stake, R. E. (1998) Case Studies, in: N. Denzin, & Y. Lincoln, (eds.) *Strategies of Qualitative Inquiry*, (Thousand Oaks, Sage).
- Stone, E. & Priestley, M. (1996) Parasites, Pawns and Partners: Disability Research and the Role of Non-Disabled Researchers, *The British Journal of Sociology*, 47, 4, pp. 699-716.
- Stredler-Brown, A. (2010) Communication Choices and Outcomes during the Early Years: An Assessment and Evidence-based Approach, in: M. Marschark, & P. E. Spencer (Eds.) *The Oxford Handbook of Deaf Studies, Language and Education*, Volume 2, (New York, Oxford University Press).
- Stuart, J., Akyeampong, K. & Croft, A. (2009) *Key Issues in Teacher Education: A Sourcebook for Teaching Educators*, (Oxford, Macmillan).
- Stubbs, S. (2008) *Inclusive Education: Where There are Few Resources*, (Revised Edition), (Oslo, Atlas Alliance).
- <http://www.eenet.org.uk/resources/docs/IE%20few%20resources%202008.pdf>
- Sutherland, P. (1992) *Cognitive Development Today: Piaget and his Critics*, (London, Sage).
- Swanwick, R. A. (2000) Deaf Children's Developing Sign Bilingualism: Dimensions of Language Ability, Use and Awareness. Unpublished PhD Thesis, The Open University.

- Swisher, M. V. (2000) Learning to Converse: How Deaf Mothers Support the Development of Attention and Conversational Skills in their Young Deaf Children, in: P. Spencer, C. Erting & M. Marschark (Eds.), *The Deaf Child in the Family and at Home*, (New Jersey, Lawrence Erlbaum).
- Tabulawa, R. (1997) Pedagogical Classroom Practice and the Social Context: The Case of Botswana, *International Journal of Educational Development*, 17, 2, pp. 189-204.
- Thibeault, R., Gebremedhin, T., Gallaher, O. & Herbert, M. (2009) CBR: Building partnerships before programmes, in: S. Hartley & J. Okune, (Eds.) *CBR Policy Development and Implementation*, (Norwich, University of East Anglia).
- Thomas, C. (1999) *Female Forms: Experiencing and Understanding Disability*, (Buckingham, Open University Press).
- Thomas, G. & Vaughan, F. (2004) *Inclusive Education: Readings and Reflections*, (Maidenhead, Open University Press).
- Traxler, C. B. (2000) Measuring up to Performance Standards in Reading and Mathematics: Achievement of Selected Deaf and Hard-of-hearing Students in the National Norming of the 9th Edition Stanford Achievement Test, *Journal of Deaf Studies and Deaf Education*, 5, 4, 337-348.
- Tucker, B. (1998) Deaf culture, Cochlear Implants and Elective Disability, in *Hastings centre Report*, 28 (4), pp. 6-14.
- UNCRC (1989) Convention on the Rights of the Child:
<http://www2.ohchr.org/english/law/crc.htm>.
- UNCRPD (2006) Convention on the Rights of Persons with Disabilities:
www.un.org/disabilities/convention/conventions/html.
- UNESCO (1994) *The Salamanca Statement and Framework for Action on Special Needs*. Available at: www.unesco.org/education/pdf/SALAMA_E.PDF

- UNESCO (2000) *The Dakar Framework for Action: Education for All: Meeting our collective commitments*, (Paris, UNESCO) Available at: <http://unesdoc.unesco.org/images/0012/001211/121147e.pdf>
- UNESCO (2005) *Guidelines for Inclusion: Ensuring Access to Education for All*, EFA Global Monitoring Report, (Paris, UNESCO).
- UNESCO (2006) *Literacy for Life*, Education for All Global Monitoring Report, (Paris, UNESCO).
- UNESCO (2010a) *Reaching the Marginalized*, Education for All Global Monitoring Report, (Oxford/Paris, Oxford University Press/UNESCO).
- UNESCO (2010b) UNESCO National Education Support Strategy (UNESS) for the Republic of Kenya 2010 – 2011, (Nairobi, UNON).
- Vygotsky, L. S. (1962) *Thought and Language*, (trans E. Haufmann and C. Vakar), (Cambridge, MA, MIT Press).
- Vygotsky, L. S. (1978) *Mind and society: The development of higher mental processes*, (Cambridge, MA, Harvard University Press).
- Wang, Y. (2010) Without Boundaries: An Inquiry into Deaf Epistemologies through a Metaparadigm, *American Annals of the Deaf*, 154, 5, pp. 428-434.
- Wasanga, P. M. (2010) Press statement Council Secretary KNEC, Daily Nation 20th January 2010.
- Wasserman, L. H. (2007) The Correlation Between Brain Development, Language Acquisition, and Cognition, *Early Childhood Education Journal*, 34, 6, 415 – 418.
- Werner, D. (1987) *Disabled Village Children: A Guide for Community Health Workers, Rehabilitation Workers, and Families*, (CA, Hesperian Foundation).
- Wertsch, J. V. & Stone, C. A. (1985) The Concept of Internalisation in Vygotsky's Account of the Genesis of Higher Mental Functioning, in: J. V. Wertsch (ed.) , *Culture, Communication and Cognition: Vygotskian Perspectives*, Press Syndicate (New York, University of Cambridge).

Wertsch, J. V. (1985) *Culture, Communication and Cognition: Vygotskian Perspectives*, Press Syndicate. (New York, University of Cambridge).

WHO (2011) World Report on Disability.

http://www.who.int/disabilities/world_report/2011/report/en/index.html

(Downloaded 12th August 2011).

WHO (World Health Organization) (2006) Disability and Rehabilitation WHO Action Plan 2006–2011. Downloaded on 10th June 2011.

http://www.who.int/disabilities/publications/dar_action_plan_2006to2011.pdf

Wilbur, R. & Petersen, L. (1998) Modality Interactions of Speech and Signing in Simultaneous Communication, *Journal of Speech, Language, and Hearing Research*, 41, pp. 200-212.

Wilkins, C. & Hehir, T. (2008) Deaf Education and Bridging Social Capital: A Theoretical Approach, *American Annals of the Deaf*, 153, 3, pp. 275-284.

Wolcott, H. F. (1990) Making a Study 'More Ethnographic', in: *Journal of Contemporary Ethnography*, 19, pp. 44-72.

Woods, D., Bruner, J. & Ross, G. (1976) The Role of Tutoring in Problem Solving, *Journal of Child Psychology and Psychiatry*, 17, pp. 89-100.

Woolsey, M. L., Herring, T. J. & Satterfield, S. T. (2009) Social Studies Instruction in Signing Programs for Deaf and Hard of Hearing Students: An Eco-behavioral Assessment, *American Annals of the Deaf*, 154, 4 pp. 400-412.

Yin, R. K. (2003) *Case Study Research: Design and Methods*, (Third Edition) (Thousand Oaks, Sage).

Appendices

Appendix 1: KCPE Performance 2006 – 2009

Wema School							
Year	No. of candidates	English	Kiswahili	Mathematics	Science	Social Studies	Mean score
2009	14	30.5	19.0	31.16	17.7	12.4	112.0
2008	17	38.58	21.11	30.44	21.58	11.05	123.29
2007	13	34.0	19.69	29.92	21.31	14.77	119.69
2006	12	46.92	20.17	30.5	24.42	17.08	139.09

Source: School records

Upendo School							
Year	No. of candidates	English	Kiswahili	Mathematics	Science	Social Studies	Mean score
2009	No data	27.00	23.31	34.85	22.15	17.00	12.31
2008	No data	27.66	33.83	32.50	25.58	9.58	129.17
2007	No data	30.31	23.31	31.56	20.69	20.69	127.04
2006	No data	28.75	22.50	26.63	23.25	13.31	113.24

Source: School records

Appendix 2: Sample of KSL KCPE examination

Appendix 3: Lesson observation guide

Areas to be considered during observation

1. Class size
 - The number of learners in a class
 - The size of the room
2. Lesson introduction
3. Available teaching and learning resources and how they are used during instruction
 - Chalkboard
 - size
 - quality
 - Textbooks
 - Distribution in class
 - Quality
 - Others
4. Language used during instruction
 - ASL
 - KSL
 - SEE
5. Mode of communication
 - Sign language only
 - Simultaneous communication
6. Teaching and learning activities
7. Lesson content in relation to syllabus/grade level
8. Assessment of lesson content
9. Any other occurrence

Appendix 4: Semi-structured interview guides

Appendix 4.1 Interview with Head teachers

1. For how long have you been the Head teacher in this school?
2. Have you ever taught deaf pupils in your teaching career? If so, for how long?
3. In which college did you train as a teacher?
4. Have you been trained as a special education teacher? If so, in which college or university?
5. What area of special education did you specialise in?
6. What are your teaching subjects?
7. Tell me about the history of this school.
8. Which geographical areas does this school serve?
9. Do you admit pupils straight from home or through the Assessment Centres?
10. How many pupils are enrolled in the school? How many boys and how many girls?
11. How many teachers are assigned to the school?
12. Are all the teachers teaching deaf learners trained as special education teachers?
13. Is the number of teachers sufficient considering the special learning needs of these pupils?
14. How many teachers teach Social Studies?
15. How has been the performance of Social Studies in KCPE in the last five years?

Mean score in KCPE Social Studies per year (2005 – 2009)			
2006	2007	2008	2009

16. How is the performance of deaf learners as compared to that of hearing learners?
17. How would you rate the curriculum content for Social Studies in relation to deaf learners?
18. What challenges do teachers for deaf children face in teaching Social Studies?
19. What are the textbooks used to teach Social Studies in your school?
20. Are they the same books used to teach deaf learners?
21. What other Social Studies teaching-learning resources are available in the school and are used for the learning of deaf pupils?
22. Are there any visual teaching-learning resources available in the school for teaching Social Studies?
23. In your opinion, why has the performance of Social Studies among deaf learners been poor especially when you compare with that of hearing pupils?
24. What suggestions would you give with regard to the Social Studies curriculum content, time allocated to Social Studies periods and teaching-learning resources, to improve the current situation?
25. What challenges do you face as a Head of a school with a special unit?

Appendix 4.2 Interview with teachers

1. In which college did you train as a teacher for deaf learners?
2. For how long have you been teaching hearing impaired learners?
3. For how long have you taught Social Studies to hearing impaired learners?
4. Have you ever taught hearing pupils in your teaching career? If so, for how long?
5. Do you always complete your lesson plan within the time set for the lesson? If no, what would you attribute this to?
6. What would be the most suitable time that should be allocated to a Social Studies period to facilitate completion of the lesson plan? Give reasons for your answer.
7. Are you always in a position to complete the syllabus at the end of the year? If no, why?
8. How many periods should be allocated to Social Studies per week to be able to complete the syllabus with deaf learners?
9. What is your general assessment of the curriculum content for Social Studies?
10. As a teacher of deaf pupils, what are your suggestions in relation to this?
11. What mode of communication do you find most appropriate and effective in teaching Social Studies to hearing impaired pupils?
12. Are you always able to translate concepts into sign language? Explain this in more details.
13. Are there times when communication breakdown occurs during the teaching-learning process?
14. If yes, how do you deal with this and how do you avoid it happening in future?
15. What are the pupils' reactions in the event that this happens?
16. Are there any resources that you use to aid you in this?
17. How would you rate the textbooks recommended by KIE for use in teaching Social Studies?
18. In your opinion, do they address the learning needs of deaf pupils?
19. Given the opportunity, what would you suggest to be done to make them more responsive to the learning needs of your deaf pupils?
20. Apart from textbooks, what other teaching-learning resources do you use in your teaching?
21. What criteria do you use in selecting the teaching-learning resources to use during a particular lesson?
22. How do you acquire these teaching-learning resources?
23. What are the visual teaching-learning resources do you often use in teaching SS?
24. How often do you assess your learners?
25. What is your general feeling about testing in Social Studies both locally and nationally?
26. Does the style of testing recognise the special needs of deaf learners?
27. What are your suggestions in relation to this?
28. Is the time allocated to the Exam paper enough for the learners? If not, why? What would be the most suitable duration of time for deaf pupils?
29. What are the three most important things you have learnt about teaching Social Studies to deaf learners?

Appendix 4.3 Interview with deaf teachers

1. In which school did you receive your primary school education? Did you sit for the final exam?
2. Did you attend secondary school? What grade did you attain?
3. When did you train as a teacher for deaf children? In which college did you train?
4. Were you trained to teach special children – deaf children?
5. For how long have you been teaching deaf learners?
6. Have you ever taught hearing pupils in your teaching career? If so, for how long?
7. What learning challenges did you face when you went through school?
8. Did you learn GHC or Social Studies in primary school?
9. Did you face any challenges when learning this subject?
10. Do you teach Social Studies in this school? If so, which class(es)?
11. Do you always complete your lesson plan within the time set for the lesson? If no, what would you attribute this to?
12. What would be the most suitable time that should be allocated to a Social Studies period to facilitate completion of the lesson plan? Give reasons for your answer.
13. Are you always in a position to complete the syllabus at the end of the year? If no, why?
14. How many periods should be allocated to Social Studies per week to be able to complete the syllabus with deaf learners?
15. What is your general assessment of the curriculum content for Social Studies?
16. As a teacher of deaf pupils, what are your suggestions in relation to this?
17. What mode of communication do you find most appropriate and effective in teaching Social Studies to hearing impaired pupils?
18. Are you always able to translate concepts into sign language? Explain this in more details.
19. Are there times when communication breakdown occurs during the teaching-learning process?
20. If yes, how do you deal with this and how do you avoid it happening in future?
21. What are the pupils' reactions in the event that this happens?
22. Are there any resources that you use to aid you in this?
23. How would you rate the textbooks recommended by KIE for use in teaching Social Studies?
24. In your opinion, do they address the learning needs of deaf pupils?
25. Given the opportunity, what would you suggest to be done to make them more responsive to the learning needs of your deaf pupils?
26. Apart from textbooks, what other teaching-learning resources do you use in your teaching?
27. What criteria do you use in selecting the teaching-learning resources to use during a particular lesson?
28. How do you acquire these teaching-learning resources?
29. What are the visual teaching-learning resources do you often use in teaching SS?
30. How often do you assess your learners?

31. What is your general feeling about testing in Social Studies both locally and nationally?
32. Does the style of testing recognise the special needs of deaf learners?
33. What are your suggestions in relation to this?
34. Is the time allocated to the Exam paper enough for the learners? If not, why? What would be the most suitable duration of time for deaf pupils?
35. What are the three most important things you have learnt about teaching Social Studies to deaf learners?

Appendix 4.4 Interview with deaf learners

1. How far is your home to school? _____Kms/How long does it take you to get to school from home? _____
2. Are there people in your home who understand the language you use in school?
3. Do you get any assistance at home when you are doing your homework?
4. Do you enjoy learning Social Studies? Why?
5. Do you have a Social Studies textbook?
6. Do you have any problems understanding the contents in the textbook?
7. What other challenges do you face in learning Social Studies?
8. Are there times when you do not understand the signs used by the teachers? How do you react to this? / What is your feeling when this happens?
9. Are there occasions when you are not able to use sign language to express yourself in a Social Studies class?
10. Does this affect your attitude towards the subject?
11. How did you perform in the last Social Studies assessment?
12. Give your suggestions to improve the current situation?

Appendix 4.5 Interview with the KIE Officers

1. Communication is known to be one of the most significant drawbacks that hearing impaired learners encounter. How has the institute addressed this problem in developing the curriculum and teaching and learning materials for deaf learners?
2. Recently, efforts have been made to develop adapted teaching and learning materials for learners with disabilities. So far what materials have been developed?
3. What is the main concern during the adaptation?
4. This institute is tasked with the responsibility of organising in-service courses for teachers when the need arises. How has the institute prepared the teachers in the mainstream schools to facilitate the learning of the deaf learners who have been included in their classrooms?
5. What are the current significant challenges that this institute is facing in ensuring that the educational curriculum addresses the needs of learners with hearing impairment?
6. What other strategies has the institute put in place?
7. What more could be done?
8. What is needed to help you achieve this?

Appendix 4.6 Interview with the KISE Officers

1. Currently, is this institute training special education teachers specifically to teach hearing impaired learners?
2. Communication is known to be one of the most significant drawbacks that hearing impaired learners encounter. How has the institute addressed this problem in training teachers and equipping them with the skills required to communicate and instruct hearing impaired learners effectively?
3. This institute is tasked with the responsibility of training special education teachers in all the areas of disability in the period of two years. What would be the implications of training teachers only in one particular area of disability so that they are well prepared in handling that specific group of learners and teach them effectively?
4. The government has made efforts in integrating learners with disabilities in the mainstream schools. How has the institute prepared the teachers in the mainstream schools to assist and include these learners and particularly deaf learners who are learning in their classrooms?
5. How has this institute been working in collaboration with MOE, KIE and KNEC in relation to decisions affecting the education of disabled children, curriculum and materials development as well setting and marking of exams for disabled children?
6. What still needs to be done?
7. How could this happen?
8. What part could you play in this?

Appendix 4.7 Interview with the KNEC Officer

1. Recently, efforts have been made to develop adapted exams for learners with disabilities. So far what subjects are considered during adapting exams for deaf learners?
2. Communication is known to be one of the most significant drawbacks that deaf learners encounter. How has this examining body been addressing this problem in setting exams for deaf learners?
3. One of the major difficulties that these children face during learning is reading and understanding complex English sentences. Has this ever been used as a basis during the adaptation of examinations?
4. Do you ever consider adapting the Social Studies examination for deaf learners?
5. KSL is now being taught as a subject to deaf learners and will be examined at the end of this year in KCPE. Do you think the deaf learners are fully prepared to sit for the KSL paper this year?
6. You have been setting examinations for learners with visual impairments in Braille and have overseen the de-braille of their responses. Would you in future consider setting the exams for deaf learners in KSL since it is now their official language of instruction?
7. What other strategies has this examining body put in place?
8. What more could be done?
9. What is needed to help you achieve this?

Appendix 4.8 Interview Guide with KSDC Staff

1. For how long have you worked for this organisation?
2. KSDC's main education activity during its inception was the building of primary and secondary schools for deaf children in Kenya. Who determines where the schools are built?
3. This organisation has been training school directors with support from UNSDP? Who is UNSDP? What kind of support does it provide?
4. This organisation has worked with support from other organisations to reach out to parents of deaf children through teaching them sign language. How successful has this been?
5. One of your target areas is the education for deaf children. What have been your activities in relation to this?
6. KIE has developed adapted the Science and English syllabuses for use by deaf learners in primary schools. What role have you played as an organisation for deaf children in this process?
7. For the adapted syllabuses that are already in use, do you think this adaptation is sufficient? What, in your opinion, can still be done to make them more responsive to the needs of deaf learners?
8. Would you consider working together with KIE in preparing visual teaching/learning materials for these learners, e.g. documentaries in form of DVDs?
9. As an organisation interested to improve the education of deaf learners, what do you think needs to be put in place to improve their learning and performance in national exams?
10. KSL is now being taught as a subject to deaf learners and will be examined at the end of this year in KCPE. What is your position as an organisation regarding this move and making Kiswahili an optional subject for deaf pupils?
11. The majority of teachers are not well skilled in KSL and so some still use ASL and SEE. As an organisation, what can you do as a contribution towards the improvement of the current status?
12. KSL has been declared the official language of instruction for deaf learners. What needs to be done in order to make this move a success with regards to teaching/learning materials and exams for deaf learners?
13. What other activities is your association involved in that aim at improving the learning of deaf pupils?
14. What more do you think can be done to ensure that deaf learners are not left behind due to barriers encountered during learning?

Appendix 4.9 Interview with deaf organisations

1. When did this project/program/organisation start?
2. What was the rationale behind its inception?
3. How do you collaborate with the Government in running this program?
4. What successes have you achieved since the inception of the program?
5. What challenges are you facing in running it?
6. What role do you play in the education of deaf children?
7. What kind of contribution would you offer towards the improvement of the learning achievements of deaf children?

Appendix 5 A deaf teacher's experience

This story was mainly narrated in KSL combined with limited speech. It has been selected since it gives a clear illustration of what many deaf children and adults in Kenya go through. It states one of the common causes of deafness in Kenya and Faith's challenging experiences in school and at home as well as the kind of social segregation that deaf people experience.

I was not born deaf, I was born hearing but I suffered Meningitis and was very sick for three weeks. I was having continued pain in the head. In 1998 while I was in Form 2, I was taken to hospital where they did a brain scan. I was given medicine and every time I went back I would be given more and more medicine. The problem still continued.

In 2001, at the age of 17 and in Form 4, I started losing my hearing and I was advised in school to sit near the teacher to be able to lip read. My uncle advised me to go to Mombasa to have my hearing assessed. After assessment, it was noted that my right ear had some residual hearing while my left was completely deaf. I was then given a hearing aid for the right ear and the doctor advised me not to move to a deaf school. I continued in the same school where I completed in 2001 and scored grade C.

I later joined a regular P1 teacher training college in 2003 up to 2005. I was posted to a regular school where I taught hearing children but I used to have problems communicating with small children. I was using my voice while teaching but I would not hear properly when the children spoke to me or asked me questions although I was using a hearing aid. I would get a bigger pupil to come and write for me what the children were saying.

The hearing problem continued and although I was using a hearing aid, I realised I could not hear. I saw another doctor in Mathari hospital who referred me to Kenyatta National hospital. I saw a deaf doctor who told me to accept that I was deaf and advised me to continue using my voice and not sign language. I later met a lady working at the Educational Assessment Resource Centre (EARC) who advised me to join KISE. It was at KISE that I learnt sign language as I trained to teach deaf children. I was taught by a fellow deaf student. That is when I accepted my deafness, after I met that deaf man who was also training as a special education teacher. I still have my voice and many people encourage me to use my voice and not just rely on sign language.

So I can say I became deaf in 2003 although I became completely deaf in the year 2006 but I still have my voice. I developed a lot of interest in sign language when I saw that man who was learning with us. I got very motivated and I told myself that if he was going to pass I too had to pass. It reached a point where we were even competing in sign language!

At KISE, we were trained on how to teach deaf children but first we were given general training then later we specialised. We had to learn how to communicate with the

children. We were told that we must always maintain eye contact with the children, make use of visual learning aids such as charts and that we needed to move slowly as we teach and do a lot of explaining.

When I realised that I was deaf, my first challenge was acceptance. I did not want to accept that I was unable to hear. My other challenge was communication with my family which became very difficult. I also lost most of my friends when they came to know that I had become deaf. They just disappeared. For example one of my good friends told me that she could not continue being my friend because I was unable to hear. I kept wondering what I could do to change the situation but I realised that it was not possible. When I became deaf they changed their attitude and started feeling like I was not able to continue or to do anything. Their attitude towards deaf people is very negative. I also lived in denial – I could not accept the fact that I was deaf. My family too has made life difficult for me because even now they force me to talk and to hear. My family (parents and all my siblings) has not yet accepted that I am deaf and so they do not make any effort of learning sign language. Maybe they want me to use my voice which I do but when they speak to me I do not hear. I strain my ears but I do not hear them.

They may not know sign language but they do not know how to communicate with a deaf person. For example, when they want to call me, someone picks something and throws it towards me to draw my attention. This makes me feel bad and it lowers my self-esteem and I keep asking myself why I became deaf. They need to understand deaf culture so that they can tap, show something, rather than be too rough.

At school, teachers would come to class and lecture but I wouldn't hear anything. They would dictate notes as the students wrote. I would ask the person sitting next to me to let me look at what they have written. Some would accept while others would not which meant I missed a lot of information. Other students did not accept my deafness and so they gave me bad nicknames that made me experience stigma. For example one girl always told me that I am 'snobbish', that I am always laughing and ignoring what the teachers say. I would try and tell her that I did not understand what was taught but she would not understand me. People do not understand the challenges deaf people face. In school one misses very basic information. I would fear asking teachers questions because I did not know how they would react.

While in secondary school, one teacher realised that I had become deaf and she advised me to move and sit at the front during her lesson. At the regular teacher training college, one teacher who had special education training, called me and told me to be sitting at the front of the class so that I could lip-read as the teachers taught. She then appointed two students to be sitting beside me and to allow me to copy notes from them and possibly explain to me. The teacher also told me that I could go to her later for explanation in case I did not understand.

I advise pupils who become deaf later in life against denial and I would like to tell them that the best thing is to first of all accept themselves (that they have become deaf) and

never ask why they have become deaf later in life. The reason is that there are other people who have become deaf when they are adults, just like me. So I accepted, continued with my education and I have achieved a lot in and through education. I encourage them to focus on their education rather than think about why they became deaf because it is important for them to achieve. I try to look for pictures of other deaf adults who have succeeded and also other teachers who are deaf to share with the children here. The three of us here in this school (Upendo) challenge the deaf children a lot because we have achieved the same as the other hearing teachers. So I ask them, why not them? So they feel challenged and want to become the same as us.

The parents of this school know that their children are capable but most of them have abandoned their children here. They don't make any follow up of their children's education. I have a feeling that they don't think that their children can continue with learning after they leave this school. They just want them to finish class 8 and leave school. They don't encourage them to work hard nor come to see them here in school. They leave the whole responsibility to the teachers and teachers only come and teach and leave. The children lack that parental care and encouragement.

So if I can get a chance to meet them, I would like them to see me and know that one can become deaf even in adulthood. Maybe then they can understand that God can in future make these children important people. Parents must change their attitude towards these children by first accepting them then encouraging them to work hard and making follow up of their children's education. Next Saturday we will be having an Education Day here and all the parents are expected to attend. But I know it will not be possible to get the opportunity to talk to them. The best time would be when they come here for a one week conference when they come to learn sign language. They are taught sign language by teachers and also deaf adults come to teach them but not all of them come. Some just ignore. Most of them do not see as if their children can perform. Some children have challenges because most of them are orphans.

Appendix 6 Lesson Observation in Huruma school

Standard 5

The lesson is meant for two Standard 5 pupils (a boy and a girl) sitting amongst ten other pupils. The 12 pupils are all seated in a horse-shoe shape and the two pupils are on the right hand side of the teacher, sitting next to each other after one Standard 4 girl who is closest to the teacher.

The lesson started at 12.20pm

The chalkboard is divided into four parts. The teacher rubs one quarter of it and writes:

STD 5 SOCIAL STUDIES

Physical Environment

Focusing on the two pupils and using speech together with signing, Juma, a hearing teacher, calls for attention and reminds them that last time they learnt about different things that they are able to see around them. He asks them: "Did you finish writing them down?" He then tells them to sign the things that they wrote down. He walks to the pupils and looks at the girl's exercise book. Then he shows her and says, "1. Trees" and he signs "Tree". He then walks back to the front and tells the girl to sign a second thing that is found around. He asks the pupil to stand up and read from her exercise book and sign the words. She signs: bird, cow, valley, banana, house, coconut, car, goat, pawpaw. The teacher mentions the items represented by the signs and writes the words on the board. Then the teacher turns to the boy and asks him to stand up and tell the class what he has seen around the school. He looks in his exercise book but he seems not to see anything; he turns pages but reads nothing. The teacher also opens his book and realises that the book he has in front of him is not a Social Studies exercise book. So he asks in sign language, "Social Studies book where? You write where?" The girl tries to help him look inside the book but she doesn't see the notes. So she opens hers, shows him the date that they wrote the work. The boy stands up and the teacher goes to the chalkboard and writes:

Things that are seen around are:

Meanwhile the boy has left his seat together with a Standard 4 pupil sitting next to him and the two have walked to the back of the class and are looking for something (I guess the Social Studies exercise book) in a carton box. They walk back to their seats with an exercise book. The teacher asks the girl to sign again the items she had signed earlier and this time the teacher is listing them on the chalkboard. All this time, the boy is flipping through the pages of three exercise books looking for where he wrote his work. He goes back again to the box but comes back with nothing. When the teacher finishes with his list, he turns to the class and asks for other examples. He realises that the boy is still lost and so he walks to where he is seated and with the two pupils sitting next to him, the teacher helps him look for where he wrote his work. A conversation in Sign language ensues and they all seem to be blaming him for not being sure of where his work is. The classmate (Standard 5 girl) keeps telling (in sign language) the teacher that what he is looking at in his book was work that had been done a while ago. This continues for about five minutes and the pupil seems to be quite embarrassed. He is only looking at them but does not respond to their comments.

12.40pm

All this time, the other ten pupils are just watching doing nothing, most of them preoccupied by my video camera. The teacher then walks back to the chalkboard and asks for more examples. He then asks the boy to stand up and name other things that he sees around him. He signs 'chicken' then 'bird'. The teacher

writes 'chicken' on the chalkboard. The girl signs 'mango' and the teacher writes the word on the chalkboard. Then the boy signs 'forest', and the teacher agrees that there are forests around. The teacher then signs 'hills' and when he asks the boy for another example, he signs, 'mountain' but the teacher writes 'hills' on the chalkboard. The rest of the pupils have now started participating as well, mostly copying the signs that the pupils in Standard 5 are using. About three of the younger ones are now signing 'mountain'. The boy, still standing, signs 'lemon' and the teacher writes the word on the board. Then the girl uses a sign very close to that of lemon and the teacher writes 'orange'. The boy says, 'Same, difference nothing'. A Standard four girl sitting next to the teacher also says, 'difference nothing'. The teacher makes no comment on this but asks for more examples.

The girl signs 'cat' and teacher asks, 'Cat here? Here at school, cat? Home cat yes but school nothing.' The rest of the class, including those in the lower levels, laugh at this. So the teacher tells them to name only those things seen around the school. The boy, still standing, attempts naming other things but this time the rest of the class participates. (It is time for morning break and the rest of the school is outside. I realise that the head of the deaf unit is beckoning me at the window. He talks to me in sign language asking whether the noise outside is disturbing us. I answer in the negative. This distracts the pupils.) The pupils mention/sign and the teacher writes: tables, chairs, books, pencils, cups, rulers. He then asks the boy to sit down and he moves to rub a section of the chalkboard.

12.50pm

He writes a subheading: **Natural things**. He then tells the pupils, "Now, I want you to choose things that were created by God only." One of the boys laughs out loudly. The teacher continues ... "from these two lists here". He repeats the task and he signs as he speaks. He goes to the list and says, "Things like trees....". The Standard 5 pupils do not agree that trees are created by God. He asks, "Trees created by God? True?" They both do not agree but one Standard 4 girl agrees. One Standard 4 boy signs, 'different'. But later, the boy in Standard five agrees that forests are made by God. The teacher now wants them to select items from the lists. The girl signs, 'bird', the boy signs 'cow' and most of the pupils now are also signing 'cow'. The teacher moves to the table and is looking at the text book so he doesn't respond to the pupils' answer. After about two minutes, he tells me, "Just a minute" and he walks out (He goes to talk to the head of the unit who is sitting outside the class). This time the class is distracted, some looking at the camera and the two Standard five pupils discussing what is written on the chalkboard. After about a minute, the teacher walks back and asks the pupils to continue with selecting the items that God created. They sign 'cow', 'valley', and the teacher lists them. This time the whole class is quite active with almost all the pupils raising their hands up. The teacher picks on one quiet girl, walks down to where she is seated and tells her to stand up and encourages her to sign. She then signs 'goat' as all the others attempt to be given a chance. The teacher goes back and writes on the chalkboard. One girl signs 'home' but the teacher disagrees. Other items named are: pawpaw, palm tree/coconut, lemon, mango, mountains and chicken. The pupils still want to give more answers but the teacher tells them, "*Tosha, tosha* (Swahili meaning, 'enough, enough'). There are so many ... so many things that God created. Now I want you to tell me or to sign things that person, person made...things that were..... (This time, he is talking and attempting to sign but it is evident that he is not very conversant with sign language.) ... just a minute..." He then walks out.

(He comes back after about a minute. I learn later that he had gone to ask the head of the unit for the sign for 'made'). He tells them as he signs, "I want you to choose from these two lists (he shows the lists) items that were made by person. God... nothing.... made by person." The two Standard 5 pupils are looking at the lists while the ones in the lower levels are attempting to answer with their hands up. One of them selects 'bird' but the teacher tells the class that the answer is wrong. The boy in Standard five selects, 'table' and the teacher acknowledges the answer. The boy is happy that his answer is correct. The teacher then writes a sub heading **Human environment** and asks for more examples of things made by man. The pupils give the following: chair, window, bottle, grinding stone, soda, cooking oil, umbrella, mortar and pestle, ball, bucket, as the teacher lists them under the subheading. All these examples are

given by the pupils in the other classes; none from Standard 5.

1.03pm

He then consults the text book and his note book and writes the sub heading **Non-living things**. He tells them verbally and signing some words, "I want you to think of things which do not live, living... I meanzero living things. I mean, things that... living (signs a plant growing and childbirth) nothing. For example, 'hills' (he says the word, signs and fingerspells it)". Then he signs 'mountains', writes both words on the chalkboard, draws some hills on the chalkboard and explains the difference between 'hills' and 'mountains'. The girl signs something and the teacher writes on the chalkboard 'Roads'. The boy seems not to understand what the teacher is after and so he tries to seek clarification. He confuses the sign for 'living' with 'lungs' and so he fingerspells the word 'lung' to clarify with the teacher. As he fingerspells, the teacher writes on the chalkboard and later tells him that it was not a correct answer. He then walks to the back of the class and picks an empty tin and tells the pupils that it is a good example of something that is not living. He writes the word 'tin' on the chalkboard and asks them for any other example. Now all the other pupils start participating and name these things as the teacher lists them down on the chalkboard: bell, chalk, pen, pencil, saw (Standard 5 pupil fingerspells), and hammer (boy points at the item on the wall). The teacher notices that they are looking at the charts on the wall and so he asks them to think then give examples. One girl signs, 'ball', another 'kettle', the Standard 5 girl signs 'sandals'. The teacher does not understand what the sign represents until the Standard 4 boy signs again several times. He writes 'sandals' on the board, another one signs 'shoes' and another 'ruler'.

1.15pm

One small boy has been standing for the last 5 minutes in order to attract the attention of the teacher so that he can give his example. The others tell him to sit down as the teacher walks towards me to tell me that the lesson is over. The teacher then tells the pupils that they are free and releases them to go and have their lunch but tells them to come back to class later.

Appendix 7: Social Studies Textbook Analysis

Features	Book publisher and class			
	Dhillon Standard 4	Oxford University Press Standard 4	Kenya Literature Bureau Standard 6	Longman Kenya Standard 7
Appearance	Not very colourful	Full colour – very attractive	Not appealing - colour used sparingly and small font size	Full colour – very colourful. Every chapter with a distinctive colour
Sentences	Some short but long ones mostly used	A mixture of long and short sentences	Some short but mostly long ones used	Some short and long ones used in some chapters
Paragraphs	Long paragraphs and pages of text	Short paragraphs but a few long ones	Long paragraphs and pages of text	Generally paragraphs have numbered points but a few pages with long ones.
Tables	A few small tables used	Some tables used to summarise information	No summarized information in tables.	Summarised information in tables commonly used.
Illustrations	Very few used repeatedly in the different sections for different provinces	Well balanced with text	Few pictures used with some uncoloured maps.	Illustrations minimally used. More text than pictures.
Vocabulary	Some of the difficult words are bolded and the meanings explained within the text	A combination of simple and difficult words used. Some meanings explained within the text.	Some difficult words used without meanings explained	The end of every chapter has a 'dictionary' in a text box with the meanings of the difficult words. Some not explained, e.g. Viscous (pg.103)
Bullet/numbered points	Some bullets used to list items	Summarised information in bullet points	No use of summarized information in bullets or numbers	Numbering of important points commonly used
Checklist of important points	None	None	None	At the end of every chapter