

Teaching of Reading and Writing to Deaf Learners in Primary Schools in Uganda

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Dedication

To my beloved guardians Einar and Drude Berntsen, my parents Martin Mark Kasaija and Jane Namulidwa Kasaija my sisters Jane Baitwabusa and Dorothy Birungi, the learners with learning difficulties, my brother George Gario-Kasaija whose untimely death could not allow him enjoy reading this thesis, Namubiru Hanifa and my boyfriend who never lost hope and patience.

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Abbreviations/Acronyms

UWESO	Uganda Women’s Effort to Save Orphans
MoES	Ministry of Education and Sports
NAPE	National Assessment of Progress in Education Reports
NCDC	National Curriculum Development Center
UNEB	Uganda National Examination Board
NRP	National Reading Panel
MDGs	Millennium Development Goals
UNFPA	United Nations Population Fund
NAPE	National Assessment of Progress in Education Reports
UPE	Universal Primary Education
UCE	Uganda certificate of education
UACE	Uganda Advanced certificate of education
A-level	Advanced level
PTTC	Primary Teacher Training College
O- Level	Ordinary Level
S.1-S.4	Secondary one to Secondary four
MOES	Ministry of Education and Sports
TVI	Technical Vocational Institutions
NRM	National Resistance Movement

EMIS	Education and Sports Management Information Systems
DHH	Deaf/hard-of-hearing
UWESO	Uganda Women Effort to Save Orphans
SNE	Special Needs Education
SEN	Special Educational Needs
TV	Television
CD	Compact Disc
B.C	Before Christ
USA	United States of America
ASL	American Sign Language
SimCom	Simultaneous Communication
NSD	Norwegian Social Science Data Services
Tr	Teacher
Htr	Head teacher
P.1 to P.7	Primary one to Primary seven
TVI	Technical Vocational Institutions

Abstract

This study investigates into how deaf learners are taught reading and writing in primary schools in Uganda.

This study adopted the qualitative case study design with the engagement of interviews and observations of lessons being taught. The observation technique used, engaged wide-lens techniques of gathering information based on classroom teaching behaviors. A total of 3 head teachers and 7 teachers from three different schools in different districts participated in the study. Related literature was engaged in order to ascertain how much has been done on teaching reading and writing in lower primary schools in Uganda.

The results of this study revealed that:

The teaching methodology adopted by the teachers was characterized by the use of elements of sing-language, demonstrations, illustrations, and use of varied instructional materials. The methodology followed the whole word/sentence approach of teaching language. The teachers also demonstrated little knowledge of comprehensive methods of teaching reading and writing to deaf learners.

The teachers were aware of the need to maintain eye contact and interpersonal relationships with the learners. They were conscious about the use of space for signing.

The teachers' methodology was impacted on by the level of provision of and nature of instructional materials used in teaching reading and writing to the deaf. Low inputs from the managers, for example, resulted in limited availability of instructional materials.

The study concludes by observing that there is need to revisit programs and methodologies for teaching learners who are deaf to read and write.

The study recommends among others; improvements in pre- and in-service teacher training programs, revisiting the level and type of parent support and involvement regarding the education of their children with deafness.

1 Introduction to the Study

1.1 Preamble

This chapter provides a context framework of the study. The study investigates the methods, strategies, problems experienced by teachers and conditions under which teachers teach reading and writing to deaf learners in primary schools of Uganda. The chapter is organised in eight sections namely; Ugandan system of Education, current trends in the provision of special needs education in Uganda, the purpose and justification of the study, statement of the research problem and focus of the study.

1.2 The Uganda Education System

The curriculum at the primary school level demands that reading and writing be attended to as an integral part of teaching. In the lower classes (P.1 to P.3) reading and writing are taught as subjects during the literacy hour provided for on the time-table. These facts signal a need to for a critical examination of what happens to learners who are deaf regarding learning reading and writing. After nearly a decade of the implementation of the National Reading Panel (NRP 2000) recommendations, there is concrete evidence that literacy levels in most developing countries have continued to be low as measured against the Millennium Development Goals (MDGs) (Gomez, 2005). The Education for All Global Monitoring Report (2011), recommends that nations have to ensure that all children attending primary schools for at least four to five years acquire the basic literacy and numeracy skills needed to develop their potential (GRP,2011).

Uganda, like many other countries world-wide, considers reading as a critical skill. However, a study by the United Nations Population Fund (UNFPA, 2007) revealed that 60% of pupils enrolled in the Universal Primary Education (UPE) in Uganda did not complete primary school, because of academic failure among other factors (State of Uganda Population, UNFPA, 2007). The National Assessment of Progress in Education Reports (NAPE, 2003, 2004) produced by the Uganda National Examination Board (UNEB,2010) indicated that a majority of pupils enrolled in the same program (UPE) reached grade three (P.3) without the required literacy competencies. 64% of learners were unable to read and write, while 79% were inadequate in oral texts (NAPE, 2007). The gap with this study was that it did not include the learners who are deaf. It should be appreciated that reading is a skill that is required

for all aspects of education. This makes it imperative that a study on how deaf learners learn reading and writing be carried out.

The Uganda school system is characterized by three levels. The first level is the primary school that takes 7 years with classes ranging from Primary 1 to Primary 7(P.1-P-7). Upon completion of P.7, the candidates of the P.7 level are subjected to primary leaving examinations (PLE). Performance in these examination results determines the entry to the secondary school level. The second level is the secondary or ordinary level which takes a period of 4 years with classes ranging from Secondary one to Secondary four (S.1-S.4). Completion of this level requires sitting for Ordinary level which is followed by the award of Ordinary Level (O-level) Uganda certificate of education (UCE). These exams also determine the next track to be undertaken by the candidate. In the first case, one can be admitted to advanced secondary education, which is commonly referred to as higher school or Advanced level (A-level). There is an award of the Uganda Advanced Certificate of Education (UACE) upon successful completion. The “Advanced Level examination” is the main determinant for direct entry into university education in Uganda.

In the second case, a candidate can be admitted into Primary Teachers College (PTC) and finally attains a Grade III certificate. Training of teachers in special needs education at diploma level was initiated as early as 1988. This means that teachers, who undertake the track of PTC and wish to continue to diploma level with special needs specialization, were trained in extra programs on how to teach learners with special learning needs; which is not ordinarily done in PTCs. In 2008, the Ministries of Education and Sports (MoES) and Public Service started to appoint special needs education tutors who taught some aspects of Special Needs Education (SNE) including hearing impairment component; in five (5) PTCs; regionally placed. However, the major constraint is that these 5 PTCs are too few to meet the demand of 45 government aided PTCs in the country. These five colleges are constrained in that each has only one tutor to cover all the aspects of Special Needs Education, irrespective of whether that tutor is conversant in the different aspects or not.

In Uganda, at the primary school level, the learners are expected to start schooling at the age of 6, an age at which learners with Special Educational Needs (SEN) may exceed before they are taken or benefit from schooling. This is so because of the persistent negative attitudes of some parents towards such learner. Further, there are a total of 56 local languages spoken in Uganda, though English is the official language. In addition to English as an official language, ‘Uganda Sign Language (SL) for the deaf’ is also recognized by the constitution of Uganda (1995). The Government policy however allows formal instruction in the mother tongue (local language) of a given community, where the

school is located, from the lower primary school level (P.1-P.3) while other classes are expected to be instructed in English. This presents yet another instructional challenge regarding what language the teacher has to use, more especially in regards to learners who are deaf. There are gesture systems that are used at home as opposed to the Uganda Sign Language used at school; therefore the learners who are deaf may meet challenges in understanding and coping with the education systems (Constitution of the Republic of Uganda, 1995).

1.3 The legal Context of Special Needs Education Provisions in Uganda

Education is a basic human right for all the citizens of Uganda regardless of their physical, mental, and social status; their mental disposition, sex, birth or ethnic origin (Constitution of the Republic of Uganda, 1995). Article 30 of the Constitution provides that all persons have a right to education, while Article 35 issues that persons with disabilities have a right to respect and human dignity. It equally states that the state and the society shall take appropriate measures to ensure that the disabled persons realise their full mental and physical potential. Specific National objectives and Directives regarding education as spelled out by objective XVIII of the Uganda Constitution (1995) include:

- The state shall promote free and compulsory basic education.
- The state shall take appropriate measures to afford every citizen equal opportunity to attain the highest educational standard possible.
- Individuals, religious bodies and other non-governmental organisations shall be free to found and to operate educational institutions if they comply with the general educational policy of the country and maintain national standards.

Principle XXIV(c) of the Constitution of the Republic of Uganda (1995) states that: “The State shall promote the development of a sign language for the deaf” (p.8). This provision is critical in that it does not only permit access to education but equally alludes to the importance of this study. Uganda has since then moved towards observing other international commitments such as the Dakar Framework (2000), arising from earlier commitments such as the Salamanca Declaration (1994). A move to provide education for all, through inclusive education, is one of the effects. The Persons with Disabilities Act (2006) establishes the freedom of association and education among others that have to be observed while providing services to persons with disabilities in Uganda. These instruments,

among others, have provided the basis for the education of persons with disabilities, including the deaf learners, the concern of this study.

1.4 Status of Special Needs Education Provision

The Department of Special Needs Education at the Ministry of Education and Sports has in the last two years been engaged in intensive revitalization of the Special Needs Education Services in the country; following the National Education Association (2005) that indicated a need for this attention. This has included the review of special needs education policy, adaptation of curricula at the primary school level, development of teacher training and re-training manuals in special needs education, development of centers of excellence for special needs education at primary teachers' colleges and the training of the teachers. However the results of these initiatives are yet to be evaluated. A total of 900 teachers from various parts of the country attended the courses. Each of these courses took only one week and was not long enough for the teachers to acquire the relevant skills to handle the learners with special learning needs, especially those with deafness. A critical analysis of the training component of training courses indicates that there is no specific focus on preparing teachers to teach reading and writing to deaf learner.

1.5 Justification of the Study

In 2007, the Ministry of Education and Sports launched a thematic curriculum, with an emphasis on the use of local/area languages, after acknowledging the falling standards of literacy in Uganda. The program started with P.1 in 2007, 2008 in P.2 and then rolled to P.3 in 2009. The program stresses the critical role played by language in academic achievement. For this reason, a literacy hour was provided for in every school for primary one, two and three. According to the evaluation report of the thematic curriculum (2008), the use of local language in teaching lower primary classes (P.1-P.3), has privileged learner as they capture the content with ease through their familiar language for free interactions. However, the report does not point out to what extent learners who are deaf have benefited from the innovation particularly in relation to reading and writing. Given the complexity of language diversity in Uganda, the Uganda National Curriculum Centre together with Ministry of Education decided to make a special Thematic Curriculum Teaching Guide (2007) for children with special educational needs. This included the literacy hour where reading and writing are taught.

In spite of this upcoming educational initiative, the learners who are deaf appear to be at a crossroads regarding their education in Uganda. As alluded to earlier, the promotion and enrollment to any subsequent level of education are purely on the basis of passing written exams. These examinations have been noted not to be favorable to learners who are deaf. The exams have not been adapted to suit the learners who are deaf. What is offered to learners, who are deaf, irrespective of their needs, is only an extra thirty minutes in any final examination at the primary level and an invigilator who knows sign language. The invigilator's role is only to explain the examination instructions and requirements. This has often resulted in poor performance and failure of examinations. The Uganda National Examination Board (UNEB) annual candidates' performance reports at the Primary Leaving Examination level (2006-2010) reveal that learners with hearing impairment have continued to score low. Examiners are reported in the same reports to have indicated that the deaf candidates had sometimes incomprehensible sentences. It was roundly believed that their poor performance was related to their lack of proficiency in reading and writing. It is of great importance therefore, to investigate how reading and writing are taught to learners who are deaf.

1.6 Purpose of the Study

The purpose of this study is to investigate how teachers teach reading and writing to learners who are deaf. More specifically, the study focus on methods of teaching, resources used and provisions in place for teaching/learning for learners who are deaf.

1.7 Statement of the Research Problem

In Uganda, learners who are deaf experience difficulty in mastering literacy skills as reflected through persistently failing to pass the PLE which largely results from lack of adequate reading and writing skills. Although new initiative have been put in place to address the issue of literacy manifested through the implementation of thematic curriculum, reading and writing for learners who are deaf has received limited attention. Many learners fail to reach the literacy level as their ordinary peers.

1.8 Research Questions

1.8.1 Main research question

How is reading and writing taught to learners who are deaf in primary schools in Uganda?

There was hence a need to carry out an in-depth study to investigate into how the learners who are deaf are taught reading and writing. To meet this need, the study specifically investigated the following research question: “How are reading and writing taught to deaf learners in lower primary schools in Uganda?” Four sub questions were developed to aid in collecting relevant information to answer the research main question, namely.

1.8.2 Sub-questions

- i. What strategies are used in teaching reading and writing to deaf learners?

This question aims to elicit information from the teacher about the methods and other related actions the teacher engages in teaching learners who are deaf to read and write. It also covers the use of space, instructional materials, and the engagement of the learners themselves or other persons/resources to teach reading and writing.

- ii. What problems are met by teachers and learners during teaching and learning to read and write?

The purpose of this question was to get responses from the participating teachers regarding what they considered as problems impacting on the teaching of reading and writing to learners who are deaf.

- iii. At what level in life does a learner who is deaf begin to read and write.?

This question aimed at exploring the pre-requisite knowledge and skills of reading and writing do learners who are deaf have during their initial exposure to formal education. These would include pre-requisites if any, such as; the type/kind of language that the learners were already exposed to that would facilitate the learning of reading and writing.

- iv. What are the conditions for learning to read and write, when teaching deaf learners?

This question was meant to understand the conditions under which the teaching of reading and writing takes place. Modifications made by the teachers to make the reading and writing suitable to the need of learners who are deaf.

1.9 Significance of the Study

This study comes at the time when the Ministry of Education and Sports, Uganda, is engaged in curriculum reforms at the primary, secondary and teacher education levels. Given that special needs education appears to be receiving considerable attention by both the country's political leadership and the officials at the Ministry of Education and Sports Headquarters, this would be an opportunity to provide evidence in connection with possible areas of Special Needs Education (SNE) services improvement. It is also timely that reading and writing has been identified as a concern to be addressed at the primary school level (NCDC, 2008). There is hence an opportunity to have the teaching of reading and writing for learners who are deaf improved. The findings of this study are hoped to identify good practices from the participating teachers as well as specific aspects that deserve attention. The study should be able to trigger some reflections by the teacher trainers and respective school supervisors on methodologies of teaching reading and writing to learners to the deaf learners. Finally, apart from adding evidence to the area of education for the deaf, this study provides more insights into possible areas for further study.

2 Theoretical Framework

2.1 Introduction

The focus of this study was to investigate how the learners who are deaf are taught how to read and write. It is necessary therefore that concepts such as deafness, teaching, learning, language and the related theories are explained so as to provide the background for understanding the current concern/knowledge under study and bringing the reader as up to date as possible. The selected literature is from similar or related studies and theories to the subject from both current information and back in history; with the intention of providing a comprehensive understanding of the subject save the credibility to my study, as Gall, Gall & Borg (2009) point out that, “Unless your study explicitly builds on the work of other researchers in your area of inquiry, it is unlikely to contribute to research knowledge”(p.96). Marshall (as cited in Gall et al. 2009) emphasized that, “For research to make a substantial contribution, it must be based on adequate knowledge of the field and the study’s introduction must reflect this knowledge” (p.96).

The study presents deaf learners to be understood as those with increased difficulty to perceive auditory information (Gallaudet Research Institute, 2007). This study took interest in the reading developments of deaf learners, challenges met, strategies and methods that the teachers use, and factors responsible for teaching reading and writing in an attempt to deeply understand how the teachers teach reading and writing. For purposes of shaping a thorough understanding of this study, evidence was secured from related studies and other relevant documentation regarding the teaching of reading and writing, at the primary/elementary school level; but with a specific bias to evidence that demonstrates how the learners who are deaf learn to read and write.

Arising from earlier experiences within the schools, deaf learners can be taught to read and write using several different methods. Most times, it has been upon the school/teacher to determine which method to use. The common two methods used are the manual (using elements of sign language) and oral methods. Each of these methods could be interpreted and practiced differently by different educators and traditions. It is in my interest to reveal a comprehensive picture regarding the reality in schools in connection to teaching the deaf learners how to read and write.

2.2 Factors Responsible for Teaching Reading and Writing

2.2.1 Language

Language is very crucial to this study for the obvious reason that the study itself is about two critical aspects of language; reading and writing. It is also either through the existence of a language skill or use of language such as reading and writing, that language itself can be learned or developed. Language can either be transmitted through verbal /spoken language or non-vocal communication (Bonvillain, 1999). As for the case of the deaf, language is commonly engaged by use of signs. The learners who are deaf would best learn language through communicating with those who have the skill or know the language the deaf persons use. Part of the debate about language acquisition and literacy development in deaf and hard of hearing children; centers around the accessibility of language and communication (Briggle, 2005, Marschark, 2001). Briggle (2005) then explains some factors that lead to language learning delays among deaf and hard of hearing children. Some children may be language deprived up until their school exposure, which might be their first experience with a competent language model. In order for one to read, one has to have language skills (Moore, 2006).

Language teaching is always accompanied by teaching of the culture, either indirectly or directly; given that language itself is an integral part of culture (Snell, 1999). This is crucial to the deaf as often they regard themselves as those whose experiences are influenced by the deaf culture. Language has been discussed by various authorities and presented in many forms. This research associates with the following discussions. Ramsey (1997) observes that in reality, language is the medium that structures teaching and learning. Most schooling activities are hence shaped by language as it is used in classroom/school communication. The linguistic relativity or 'Whorfian Hypothesis' (Whorf, 1956) on the other hand holds that the language an individual uses will influence the way he or she perceives and organizes the environment.

Since the discussion is centered on the learning of the deaf to read and write, it is prudent to define the language used by the deaf. The World Federation for the Deaf (1993) explains sign language as a type of language that uses hands, eyes, the mouth, body movements, sometimes accompanied by gestures. One uses the eyes to see the signs, hence often referred to a visual language. Sign languages are structured differently as compared to the spoken/written languages surrounding them. Learning to read and write in English or in any other language, for a deaf signing person, involves also the

learning of a new language system; one which is not accessible for the person in its primary (spoken) modality. Much as English is yet the only official language, sign language has received some prominence in Uganda; following its recognition by the Uganda Constitution (1995). A sign-language dictionary was also developed and published through a project that was placed at Kyambogo University; the first university to start running special needs education programs in Uganda.

The intricacy regarding language; however, for the learners who are deaf is centered on the fact that the learners who are deaf are faced with various modes of communication. At home, because the community or the parents may not have any specific sign language to use; the home-sign systems (the gesture systems) are used for communication. Much as the Uganda Sign language is expected to be used by the deaf community, this too, is not readily available at the community or home levels. At school, the deaf learners are too instructed through use of the signed English (the signing used by the hearing teachers, given that they commonly use English for instruction). This is often used by the teachers who haven't mastered the Uganda sign language. Some learners may however be instructed in the Uganda sign language by teachers who have got training or been exposed to.

2.2.2 Teaching

Various educators have explained the methods of teaching reading and writing in various ways. The available study does highlight McGuiness (2004) who names the methods of teaching reading and writing to include the phonic methods (methods that use the phonemes), syllabic methods (that use the vowels and consonants), eclectic methods (which combine of all the methods) and look and say or look and sign methods (methods that include the whole word, whole sentence, whole story, and whole picture; these methods demand for the teaching in wholes, that is to say no to breaking up words in syllables or phonemes or to the teaching of stories in parts). The methods for teaching writing are associated with the activities that are given to the learners such as scribbling and overwriting (Ministry of Education and Sports, Uganda, 1995).

This study also adopts the definition of methods, techniques and strategies as explained by Perrot, Saberi, Brown & Strybel (1990) who observed that the terms “method”, “technique” and “strategy” were often loosely used by teachers to mean ways of teaching; when the words actually referred to different though related activities. A method is explained as the way a teacher decides how the students will learn. It involves a choice between whether learners will mainly be told, or will largely find out by themselves. If the students have to be told, then this culminates into passive methods. If the learners on the other hand have to participate in finding out by themselves, then teachers are using problem solving methods. Perrot et al (1995) sees techniques as those specific actions and processes through which the teaching method is realized. Strategy is looked at as simply the sequencing or ordering of the techniques a teacher has selected to teach the lesson. While discussion and demonstration could be treated as methods in other disciplines, in teaching of language or reading and writing they readily could qualify as techniques, depending on where the teacher puts the thrust of his lesson.

Teaching forms the core of the study, given that it is the concept that is directly being investigated. This research associated itself with the definition that explains teaching as the interaction of a student and a teacher over a subject (Snell, 1999). In this case (study) the subject is reading and writing while the students are the deaf learners. Much as this study doesn't consider the teaching without the physical presence of the teacher, it would be informing to know that the teacher's physical presence may not always be required but through TV, computer, CD and the like teaching could be transacted. It will also be crucial to observe that there can be no teaching without the presence of a learner. During the teaching/learning processes, teachers have to gauge and make tough decisions regarding content, method, space/setting, timing, resources and the like (Davis, 1997). This is equally critical for teaching the deaf learners. Critical to any teaching/learning process is the feedback. Good and Brophy (2003) state that if a teacher does not know how to look, she/he will not see much. Teachers for the deaf students need to know how to look (observe for this case) because any language used for the deaf learners is visual in nature. Byrnes (1998) pointed out the importance of a teacher getting attention of the learner who is deaf, make sure the speaker's face is visible to the learner by avoiding covering the mouth or chewing while teaching, avoiding walking around the classroom or turning towards the board while giving instruction since learner who are deaf have difficulty following conversation that move around the room.

2.2.3 Challenges of Teaching Reading and Writing to Deaf Learners

A number of scholars have conducted studies regarding the challenges the deaf learners encounter while learning to read and write; some of which this study has highlighted. Marschark et al.(2009); revealed that reading achievement among deaf students typically lagged significantly behind hearing peers. Difficulties in comprehending sign language just as the texts suggested that difficulties frequently observed in reading from the text by the deaf learners, could involve more than just reading. Difficulties in phonemic awareness (Harris & Beech, 1998), vocabulary (LaSasso & Davey, 1987; Paul, 1996), syntax (Kelly, 1996; Quigley, Wilbur, Power, Montanelli, & Steinkamp, 1976), and the use of prior knowledge and metacognitive skills (Jackson, Paul, & Smith, 1997; Strassman, 1997) were some of the factors reported to influence deaf and hard-of-hearing children's development of literacy. This demonstrated that many deaf children seemed to have difficulties with both low-level and high-level reading skills (Kelly, 1995; Paul, 2001).Loeterman, Paul and Donahue (2002) also believed that for any instructional reading program to be effective, it needed to address the development of skills such as word identification, word knowledge, and comprehension.

Marschark (2006), however, claimed that there was much that was not known about the deaf learners reading. To him the lack of progress in promoting deaf students' reading achievement was largely the cause of the wrong directions taken. He strongly believed that the challenges in educating students who are deaf usually ascribed to reading and writing were not literacy-related at all. He observed that the students who were deaf made the same kind of mistakes in reading and writing as those made by people learning English as a second language. This observation was however on students of a higher grade. It remains to be investigated whether the same pattern would be applicable to the learners who are deaf and are at the primary school level.

Eisenbraum et al. (2011) noted that learners who were hard of hearing or were deaf used many communication approaches and this had instructional implications. Some of these learners unfortunately were in classes where the teachers didn't know sign language, and a sign language interpreter had to be brought into the classes to provide sign language interpretation. Eisenbraum et al (2011) also observed that there was no consensus among researchers, educators, parents, or those who were deaf or hard of hearing about the best reading strategies for students who were deaf or hard of hearing. Chamberlain (2002) argued that reading development is contingent on a fully developed primary language, and that incomplete or inconsistent signed or spoken language may affect the development of reading proficiency.

2.2.4 Learning

The study is investigating how deaf learners are taught how to read and write. There is no way one can be taught without learning being the outcome or output (given the timing and who evaluates). This research benefits from several discussions on learning. Specifically it focuses on the social and individual learner attributes in a school teaching/ learning situation. Ramsey (1997) stated that the schooling context (the platform for learning) focuses on learners' as social beings; on schools as sites where group life takes on great importance and focuses on interaction with others as the driving force in learning and development. She advanced that the context of schooling and the people they interact with (deaf and hearing peers, their teacher and interpreters), played a critical role in the lives of the deaf learners, and particularly if they returned to societies where there are few people who sign. Ramsey (1997) concluded that for all children, teaching and learning have powerful social roots. This tally with Vygotsky's (1978) strong claims that learning awakens a variety of internal developmental processes which are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Vygotsky's (1978) account of learning and development explains that the children's ability to learn depends on external supports, tools and objects both material and symbolic. Vygotsky (1978) observed that "the tool's function was a means by which human external activity was aimed at mastering and triumphing over nature".

Kozulin (2001) considered the concept of "psychological tools" as the cornerstone of Vygotsky's (1978) socio-cultural theory of cognitive development. He elaborated the psychological tools as the symbolic cultural artifacts involving signs, symbols, texts, formulae, and most fundamentally, language. To him it was the language that enabled one to master psychological functions like memory, perception, and attention in ways appropriate to one's culture. Uttal and DeLoache (2006) observed that using the concrete objects in a symbolic fashion as representations of the contents of boxes helped children gain insight into the idea of using letters as representations. They, too, noted that all symbolic objects have a dual nature as they are both objects in their own right and representations of something else. In the use of a symbol as a representation of something else, hence, one must focus more on what it represents and less on the symbol as an object. Material tools could include crayons, scissors, pencils, and line paper, while the symbolic ones could include alphabetized lists of words on bulletin boards, calendar, classmate finger spelling and written text, entries in their own journals used as lexicons or glossaries, and finger spelling. With these, the learners can engage with their context, both the immediate, local setting (e.g. classroom) and the historical and cultural features transmitted by the settings.

Evidence on the use of the language, the focus on literacy, the organization of space and of equipment and the teachers' pedagogical methods indicate these aspects as very crucial. Vygotsky (1978) recognized the distinguishing mental process of signification by which humans assign meanings to arbitrary stimuli. To him it was with these 'meanings' that human learning was determined by the social and historical context; leading to his belief that human development and learning occurred through their interactions with the environment and the other people in it. This interaction between the teacher and learners, let alone between the learners themselves, is very crucial in development of sign language. The deaf learner benefits from being surrounded by persons who are proficient in sign language in order for him/her to develop his/her own proficiency.

2.3 Language Acquisition Theory

Several theories could be engaged in an attempt to explain and understand the roots that the teaching of reading and writing is based on. For this study Krashen's (2003) theory of second language acquisition was preferred. This theory alludes to the fact that the acquisition of language has to occur within some environment, setting and in consonance with the social aspects of the human existence.

There was a special liking for this theory in that it focuses on acquisition of the second language. The deaf learners on being enrolled to school have some modes of communication used in their families or in the communities they come from. Even after being enrolled into school, these learners could at times continue to use this mode of communication, while at home. This mode may be in form of gestures or other specific signs. The school programs/curriculum does require that this deaf learner learns another 'mode' of communication (often being the Uganda Sign language) for communication and learning at school. In most cases the Uganda Sign Language is picked through teachers who have been exposed to it or during play time; outside the class hours. Schütz (2007) states that, "Language acquisition does not require extensive use of conscious grammatical rules, and does not require tedious drill." Krashen (2003) goes further to name that, "Acquisition requires meaningful interactions in the target language - natural communication - in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding." Similarly the deaf persons/learners are very particularly with the messages being communicated. This explains why a sign may be required repeated or explained, as signs could distort messages. I do note that during the play time, the learners who are deaf may not necessarily go through all this procedures.

Krashen (2003), also stated that the best methods were therefore those that supplied 'comprehensible input' in low anxiety situations, containing messages that students really wanted to hear. He observed that these methods do not force early production in the second language, but allow students to produce when they are 'ready', recognizing that improvement comes from supplying communicative and comprehensible input, and not from forcing and correcting production. This is equally crucial. It is my feeling that the teachers handling learners who are deaf (and this apply to other learners who are not necessarily deaf), should be very patient with the learners. There could be a possibility that some of these learners may have other disabling conditions. Their language involves total use of vision. Naturally this theory allows for a more relaxed and friendly mode of learning, as it allows the learner to learn at his pace and content that he/she would like to hear/know. He further claimed that in the real world, conversations with sympathetic native speakers who are willing to help the acquirer understand, are very helpful. To me this is also very critical. A teacher may not necessarily be an expert in the language for the deaf learner. There could be other deaf peers (children, persons) who know Uganda Sign Language much better than the teacher, or even deaf persons in the community who could be engaged as resource persons. This does not imply that they take over the teaching. The teacher still remains at the fore front of ensuring and teaching the learners, given that it is his/her role. The teachers should be able to access the pre-requisites that the learner who are deaf need in order learn to read and write, one can provide the learners with pre- reading activities such as looking at pictures, maps, diagrams, writing style.

2.4 The Related Studies-on Methods and Strategies

This section discusses the methods and strategies used by various countries (Nations) in teaching reading and writing to the deaf. The methods and the strategies are presented following the trends regarding their emergence on the scene and their use for teaching reading and writing.

Literature regarding deaf people around the world does suggest specific similar patterns observed by most countries, for teaching/learning purposes and in connection to teaching the deaf how to read and write. Trends have followed specific use of strategies and methods, namely, inclusive methodologies; use of sign language; use of the oral methods; engagement of total communication. Medical Technologies have too been used to support the teaching of reading and writing to the learners who are deaf to boost the hearing of the learners. It is important identify the differences in language structure between written English and sign language. Written English is the second language of the deaf. The verb and adverb structure is complex and difficult to learn radically different from the more

concise structure of sign language. Signed sentences are typically made up of nouns strung together and heightened by facial expressions. For example, "You are so kind!" in written English may become "You kind!" with an appropriate smile in ASL. When teaching reading and writing to learners who are deaf, teach the basics. Write single letters, using finger-spelling and ABC charts or books with pictures to help the student recognize written letters. This will be rote memorization, but it is an important step. Focus on nouns and even adjectives using pictures and objects. Help your student identify a picture or object using Sign language, then finger-spelling, then writing. Encourage her to compose simple, short words stringing letters together (cat, sad, mom). Arrange a series of pictures to show a complete but simple sentence. As the deaf student advances, mix up the pictures and have him arrange them into a coherent form. These can be creative or teacher-led. Determining that a student has internal acquisition of written English is an important step in teaching a deaf learner how to read (Reubell, 2011).

Pre-reading activities are most important at lower levels of language proficiency and at earlier stages of reading instruction. As learners become more proficient at using reading strategies, you will be able to reduce the amount of guided pre-reading and allow students to do these activities themselves.

2.4.1 Use of Sign Language as a Factor Associated to Teaching Reading and Writing

The history of sign language dates back to the ancient Greek philosophers. By the 5th century B.C Socrates had thought it perfectly logical for deaf people to communicate using their hands, heads, and other body parts (Dominguez, 2009). Cardano, in the sixteenth century, proclaimed that deaf people could be taught to understand written combinations of symbols by associating them with the things they represented (Butterworth & Flodin, 1995). Sign language started being used for instruction by about 1620. This followed the use of the first Manual Alphabet that was published by Pablo de Bonet. This was then later to be followed by the first school for the deaf in Paris (Butterworth & Flodin, 1995). The manual approaches were very popular in the 1800s and supported by the hearing communities, although there was also continued debate over this among the educators of the deaf.

Literature reveals that the manual approach originated in Paris, France at the French National Institute (the world's first public school for the deaf) and later got introduced to a large number of European countries. In the USA, for example, it got introduced in the school of the deaf in Hart Ford, with support of Gallaudet (1817). Sign language (that then included signed versions of spoken/written languages) was used at all times with or without classes. Gallaudet University in Washington D.C.,

USA (the world's first liberal arts college for the deaf) was instituted purely as a signing institution. The brightest deaf students enrolled in this institution. All teaching/learning transactions engaged sign language. This era was then referred to as the "Golden Age of Deaf Culture and later followed by the Dark age of Oralism (Moore, 2009).

Studies in relation to American Sign Language, for example, revealed that there was growing evidence that knowledge of ASL correlated with reading and English ability (Padden and Ramsey, 1996). This was the time ASL was getting recognized as a language. It would be of interest for the available study to demonstrate the understanding of "sign language" on the part of the teachers. It could be possible that some teachers were treating "sign Language" as a method, while others were taking it as a language. It should, too, be noted that the Handbook for Teachers of Hearing Impaired Children, Uganda (2011) also recognizes the use of bilingualism for instruction; much as the constitution demands the promotion of sign language. This is in consonance with Vonen's (2007) observation that Deaf communities are predominantly bilingual communities. He claimed that there was a constant contact between sign language and the spoken language(s), readily detected in the form of mouthing that he observed were derived historically from the mouth movements' characteristic of the corresponding spoken word and other borrowed Language elements.

Ramsey (1997) argues that for deaf children to approach print they need access to an intelligible social context but which also provides resources for the tasks they have to do. An effective class of the profoundly deaf would best be one where interface (discourse) is structured by the sign language used in the ways the native speaker uses for organizing interface, teaching learning and any other discourse. American Sign language (ASL) for example has been claimed to be a powerful mediator for deaf children learning, specifically because it is a natural signed language with a long history of use in deaf communities (e.g. Padden & Humphries 1988, Lane et al. 1996). It is also observed that ASL is not the only resource signing deaf children need at school. Critical to teaching/learning processes is the well planned instruction in English vocabulary, English grammar and the structure of written texts (for those who use it).

2.4.2 Oral Approaches

The oral approach has existed since the mid-18th Century, practiced early in various European countries. Sign language and oral methods were in most cases used by a number of countries. Available literature specifically suggests that the oral methods of teaching the deaf learners to read and write existed about the first half of the 19th century as the Manual signs, except that there was a

bias towards the manual signs regarding several users of the modes. This method exploited the engagement of the residual speech/vocal aspects of the learner. The approach targeted at training the deaf person to use their residual hearing, speech reading and listening skills, with emphasis placed on listening (aural skills), to comprehend spoken communication and develop proper speech skills. The approach does not promote the use of sign language. More specialized methods such as Auditory-Verbal Therapy and Cued Speech all have roots in the basic oral approach (Rachel, 2008). One has, however, to be cognizant of the fact that Cued Speech is a system for making speech sounds more visible, hence being related to the use of the manual alphabet. Gallimore (2000) observed that cued speech substitutes visual representations for sounds that are heard by the hearing people but are seen with eyes for those who cannot hear. Oral communication is a mode of communication that relies solely on speech (Fitzpatrick, 2011). The underpinnings of the Oral approach are based on assimilation to the hearing world, which the deaf learners are expected to gain from, as they prepare to join it. Chaoyu (2006), however, observes that the oral method risks a child's linguistic, cognitive, social and personal development.

Ramsey (1997) observed that:

“Most deaf learners were even expected to acquire the spoken language in English, in spite of the fact that they were not part of the English speaking Communities. This resulted into lack of intelligible interaction support (a pre-requisite for first language acquisition); early literacy development that would facilitate the unlocking of the learner's inner symbolic power as well as affording admission to a social world.” (p. 3)

In China, the approach continued to be dominant in all schools that were enrolling the learners who were deaf, following the fact that the government policy upheld it (Yang, 2002). This was equally true for the case of New Zealand (ABHR 1879, cited in Townsend (1993), India (Randhawa, as cited by Moores, 2009) and Singapore (Guarinello, Santana, Berberian, &Massi, 2009). Singapore, however, had some children taught by means of written language and subjected to speech training and speech reading; though they received fragmented spoken language (Botelho, 2002, Guarinello, 2007). The main difference from other countries using the oral approaches was only on the emphasis on using the written language to cause the speech reading and writing and the speech training programs. In Germany, it was understood that only the oral method of teaching was practiced in the institutions/schools of the deaf. The German teachers for the deaf preferred the oral methods and the spoken language to any other method (Schuman, 1940). England established schools for the deaf

about the same time then and emphasized the use of the spoken language and speech reading; just like other countries; and for example Germany.

Studies reveal that phonemes could be used in teaching the learners who are deaf to read and write. This method involved matching written letters to sounds. Kozulin (2001) observed that matching written letters to sounds yields improved reading and spelling for normal hearing children. When the deaf learners were subjected to testing using the same instruments (matching the letters to sounds), their phoneme awareness and phoneme graphemes correspondence knowledge (awareness of sounds) were boosted. This increased their ability to engage in reading, spelling. She however warned that the development of phonological experience depended on early experience of an input where phonological constructs are displayed and specified. This agrees with Leybaert and Alegria (1995) who observed that inaccurate speech representation, delivered from lip reading, could impact negatively on their reading and spelling.

However, the use of auditory – oral approach requires hard work from teachers, parents and the children. This approach, just like other specific aspects of oral approach; does discourages the use of signing but requires intensive early interventions requiring individualized programs, use of cochlear implants where possible and use of hearing aids to boost the hearing abilities. Plenty of opportunities to use the spoken language throughout the day would equally be crucial, for those with a hearing loss (Moog, 2000).

The use of the manual approach came about the same time as the oral methods. However there was an emphasis on this approach in the earlier stages of instruction for the deaf, resulting into conflicting perceptions and philosophies regarding the best approach to use. The disagreement was based on the fact that manualists were convinced that the deaf learners were subjected to very tedious methodologies of learning language. The schools that were using the oral approaches were claimed by the manualists to leave no time for the learners to gain academically and socially. The oral methods involved the learners touching the teacher's face, throat, and chest to feel and appreciate the vibrations of sounds and also to watch the teacher's lips move during each sound. It was a method seen by the researchers to yield maximum results in reading and writing (Moores, 2009)In China, the Chinese supported the oral methods, the Chinese sign language and the sign supported Chinese, for teaching of deaf learners. Students who failed to understand the sign-supported Chinese displayed unproductive behavior (Biggs, 2004, Johnson, 2003 and Yang (2006). It was equally observed that learners demonstrated true capabilities, likes and abilities, when they were taught in their first language Chinese Sign Language, (Biggs, 2004 Lytle et al; 2006).

2.4.3 Total Communication

Total communication is the use of any means of communication such as sign language, voice, use of sign and speech at the same time (sim-com), finger spelling, lip-reading, amplification, writing, gesture, visual imagery (pictures). Often the sim-com method tends to dominate in use of total communication. It is philosophy is that the method should be fitted to the child, instead of the other way around (Berke, 2011). Total Communication approach; holds that learners and individual unique personalities have a right to accessible and comfortable communication modes. Total communication hence, recognizes in totality any form or method of communication that works (Fitzpatrick, 2011). Literature suggests that Total Communication came in place by the 1950s. It emerged as a way of easing the rigidity of the oral approaches. The approach emphasized the interplay of various modes in the teaching of the deaf. Several countries that had engaged in the use of oral and the sign language methods for teaching, took to Total Communication. Germany, for example, which had then a special preference for the oral methods, later yielded to the use of the then attractive total communication approach (Gunther, Hennies & Hintermair, in Moores & Miller, 2009).

Baynton (1996) claimed that by the mid-1960s, it became clear that for Deaf students, the oral-only method was a dismal failure, with average academic performance of deaf students far below that of their hearing peers. With the surge in research on sign language and its viability as a natural language, many educators began to reconsider manual communication, recognizing that very few deaf students become orally successful and most needed additional visual input, to re-introduce at least some form of manual or visual communication in the schools. Total Communication was less a method and more a theory in which educators were encouraged to use any and all methods that would benefit deaf students (Scheetz, 2001). While Total Communication included amplification, speech therapy, speech reading, writing, pictures, and signing; in practice it was commonly believed to mean speaking and signing at the same time or simultaneous communication (Lane, 1999). Teachers attempted to use spoken English and some form of sign language simultaneously. Findings indicate that spoken and signed outputs by teachers using simultaneous communication (SimCom) were not comprehensively communicating. Some of the content given through the spoken English was not covered by the signs. (Johnson, Liddell & Erting, 1989; Tevenal and Villanueva, 2009). Total Communication also proved ineffective for most deaf students, since it could not provide students with access to a complete language in either English or Sign Language. Research revealed comparison of the message understood by hearing and deaf participants when information was presented using SimCom, and

found that the “comprehensible inputs received by Deaf and hard of hearing participants on the one hand and hearing participants on the other are not equal” (Tevenal and Villanueva, pp. 284-285).

A multimodal approach (combination of modes using visual and auditory channels) also came in use. This, too, called for the use of the medical technologies, such as the use of cochlear inputs. Developed countries, such as New Zealand, later went in for the use of the cochlear implants, planted into the young children’s ears to cause the hearing abilities (Most, 2006, Wiesel, 2001). Children who got their implants before age 18 months had significantly greater rates of spoken language comprehension and ability to speak than kids who got them later (Barker et.al, 2009) Given that some learners had then cochlear implants, it was inevitable to engage audition, speech reading, print and other productive teaching/learning modes deemed relevant by the teachers. Vonen (2007) observed that if cochlear implantation is done at an early age, children could acquire spoken language skills. Children who use the cochlear implants do surpass those with similar hearing degrees of hearing loss but who use hearing aids for speech recognition, speech production, language content, form and reading (Martinez & Hallahan, 2011). Early intervention in use of this equipment and other related programs do too augment the difference (Martinez & Hallahan, 2011).

2.4.4 Sign Bilingualism as an Approach

Of interest to note was the practice of bilingual bicultural approaches by Ontario (Fitzpatrick,2011).The use of this approach benefited from the concept that a learner had a first language, the sign language, while the second language to be taught then was English language (in case of English speakers). This approach hence targeted at facilitating development of both languages. . It will be observed that Sign Bilingual approaches, like other approaches used in deaf education; are characterized by teaching reading and writing. The instruction of the deaf however localized on sign language, while the teaching of the deaf culture and the hearing culture was also carried out to instill the attitude of belonging to a group of people. Several other countries took to the use of the bi-lingual method for teaching. In Korea, for example, the bi-lingual/bi-cultural approach was believed to improve the reading and writing achievements of the deaf learners that were scored in the third or fourth grades at the standard achievement tests. The method was not only seen to improve reading and writing abilities, but also the quality of life; though teachers faced managerial challenges such as concept of inclusion and cultural concept .(Moore & Miller ,2009); typical challenges teachers usually are confronted with even in the use of other approaches.

In Australia, the learners who were deaf were also exposed to bi-lingual and bi-cultural programs at school; while a study regarding bi-lingual education in China; demonstrates that there was a positive impact on the learner with deafness, on participation ((Moores, 2009). Developments in Singapore system were characteristic of those nations using the oral approach. The only difference is that Singapore (just as many schools in the USA have done)has for example, promoted use of total communication but with a system for visualizing spoken English known as Signing Exact English (Singapore, Ministry of Education, 2006). Their approach included adaptation of individual hearing aids, speech reading, speaking and writing. The use of any linguistic communicative resources and modes that stimulated the hearing was encouraged (Ciccone, 1990). It will be noted that Singapore had earlier emphasized the use of a mode that embraced both the oral approach and sign language. Students in the special class programs in Singapore were however subjected to total communication, but without the auditory – oral approach (Singapore, Ministry of Education, 2006). Mayer & Akamatsu (1999), claimed that sign languages and spoken languages could both play equally important but different roles in the acquisition of written languages by deaf children. In their opinion, any model of reading acquisition of deaf children should acknowledge and explain the roles of both languages in the acquisition of written languages.

Brazil, meanwhile, had the simultaneous communication that engages the oral language and manual codes) that was used by many classrooms for the deaf. This approach facilitated the learning of written Portuguese language, but with intensions to develop the oral language and its written form (Moura, 2000). The manual communication was believed, too, to be beneficial academically (Moores, 2001).

2.4.5 Contemporary Trends in Reading and Writing among Deaf Learners

The contemporary trends have taken advantage of the earlier approaches. This section will highlight some of the approaches and methods that have been developed to other approaches/methods of teaching reading and writing. The earlier approaches taken advantage of include use of the Sign language, Oralism, Total Communication and Bilingualism.

The teaching of reading and writing to the deaf is constantly being transformed through the increased interest and several studies carried out on the subject. Reubell (2011) observed that the deaf use an alternative pathway, specific to reading, not used by people who hear. It will however be noted that reading to deaf learners (an approach that has its base in the bi-lingual approaches) has been observed to be instrumental in the teaching of reading and writing to the deaf. The belief is that the simple most

important activity for building the knowledge required for eventual success is reading aloud to children (Schleper, 1996). The methodology advances the following specific tasks to be observed by the reader: deaf reader translates stories, keep both languages viable, not constrained by text re-read stories or storytelling and reading continuously, follow child's lead, make what is implied explicit, adjust signing style to fit story, connect concepts in the story to read, use attention maintenance strategies, use eye gaze to elicit participation, engage in role play to extend concepts, use variations to sign repetitive English phrases, users provide a positive and re-enforcing environment and expect the child to become literate. However, it is challenging as some children could be profoundly deaf.

Other modern variations include finger-spelling which relies on the use of the Manual Alphabet. Some allow signing (a basic ingredient of sign language) as auxiliary mode (commonly learnt as the sign supported approaches) while others engage the pure oral approaches which forbid the use of any manual communication. In such cases cochlear implants are used as an integral part of the oral based program. The use of Phonics (that has its roots in oralism); one other approach, focuses on hearing to parent connections between sounds and the words and understand how it looks like when written. Alternatively one would use the whole language approach that focuses on seeing the pupil learn to read first, followed by how to say and spell the words. Puente, Alvarado and Valmaseda (2009) observed that the teaching/learning methodologies for teaching the deaf first engaged the oral and written bilingualism. These modes were characterized by attributes such as signed speech which were used to complement and reinforce spoken communication, finger spelling used as a support strategy in reading and writing, sign language and cued speech.

Gates & Chase (1926) observed that the deaf learn spelling by use and perception of visual forms. Likewise the teachers could use the manipulative Visual Language tool, to help children visualize sounds they can't hear (Berke, 2010). It naturally follows that guided reading and writing for the deaf and hard of hearing children, would hence highly be dependent upon the effectiveness of the teacher/teaching processes. Guided reading and writing here refers to an approach for teaching reading and writing of words and language. The reading material or the books to be read is usually a little harder than those usually read by the learners. The teachers' role is to assist the learners in developing fluency, confidence, and insights into themes, styles, divergent opinions, and various forms of literature; while invoking their responses based on their own thoughts, feelings and opinions about the reading process. The teachers have to engage in guiding the learners to discuss and explore the reading process, so that the learners can develop literacy skills which they could later apply to what they learn; when they read and write independently. The teacher guidance in discussing and

exploring the reading process triggers the development of literacy skills, a pre-requisite for reading and writing independence (Laurent Clerc National Deaf Education Center, 2011). Israel, where the support systems in the schools are provided by certified teachers of the deaf, educational counselors, speech/language clinicians and tutor, takes this very seriously (Moores & Miller, 2009).

Several other tests have been carried out to determine the nature of the phenomenon – reading and writing (Miller, 1991). These tests took cognizance of the fact that literacy is of two highly interrelated components, namely reading and writing. They also observe that literacy is of a higher order category that engages person to person oral and manual communication. Studies have suggested that the functional reading ability of the deaf learners is much higher than standard scores as indicated often by achievement tests. They have also demonstrated that the deaf learners use their cognitive abilities and knowledge of the world to compensate for the grammatical challenges of writing. Emphasis on functional meaning other than syntax is hence more meaningful and productive, justifying the need for a more holistic, functional, semantic-based instruction (Stanovich, 1990).

Other particular tests were designed to determine the correlations of measures for factor scores for reading and writing for the deaf children with hearing parents and children of deaf parents. The correlation category tended to be higher for reading and writing than for hearing, language proficiency or speech production. Cummins (2006), cited by Vernon (2007) revealed that students from both Deaf and hearing home backgrounds, who had developed strong ASL proficiency, had significantly better prospects for developing adequate English literacy skills. Vernon (2007) also noted that sign languages had a potential as tools for learning. In a related study of short-term memory, the results revealed that the deaf students performed at a lower level than hearing students. However, after teaching appropriate strategies to deaf students, it was found that the deaf children could function at the same level as the hearing children. The conclusion was that the initial lower performance of the deaf students was not due to a cognitive deficit but knowing which strategy to apply. The argument here is that whatever academic difficulties the deaf have should be interpreted as absence of exposure and to what they don't necessarily do, other than what they can't (Mayer & Akumatsu 1999). The results however did suggest that world knowledge, vocabulary and bottom up skills such as syntax and morphology had substantial inputs to reading and writing.

These methods also recognize the freedom of the learners and the parents to make decisions on what mode of communication to adopt. Some learners would be comfortable with one or more combinations of modes. What is critical is however the support service required to maximally benefit from the education system. Services such as those of audiologists, management of hearing aids,

listening devices and environment are always crucial. Computer speech instruction methods designed to provide visual speakers in articulation; do, too, improve sound production.

It will be of interest for this study to see what aspects of these trends are being engaged in teaching of reading and writing to deaf pupils; given that most teachers in primary schools may have not specifically been trained on the use of these approaches. Pupils also move from one school to another hence being exposed to various modes of learning reading and writing. Finally, if they have been engaged at all, how has it been handled, and which has been prominent.

3 Material and Methodology

3.1 Introduction

In this chapter, I shall demonstrate what research designs were engaged in collection of the data; the respondents and how they were selected; the instruments used to collect data and how schools were selected for the exercise. To help understand some related aspects of the study, during the presentation and analysis of the data, some aspects of what transpired during the engagement of the methodology will be highlighted.

3.2 Research Design & Methodology

Gall, Gall & Borg (2009) defines research methods as sound plans for selecting research sample, collecting data and analysing data. If the plan is flawed, then the results of the study would be difficult or impossible to interpret; for drawing of conclusions. Given the nature of the topic, which has yet not had a significant attention for research in Uganda, to save its complexity, I had to make a decision to adopt a design that would provide a deeper understanding of the subject-teaching the learners how to read and write. Thus this study used the qualitative approach. According to Gall, Gall & Borg (2009), qualitative researchers aim to gather an in-depth understanding using this approach. Given the lived experiences of a limited number of trained special needs tutors and deaf students, the embedded Case study design, a category taken from Gall, Gall & Borg (2009), was used in this particular study. This study treated teaching reading and writing and learning processes as a phenomenon. This method involves an intuitive and reflective scrutiny of the sense-giving acts of consciousness but prior to their conceptual elaboration. It also indicates the process as involving a description of phenomena in the various modes in which they are present to consciousness (Gall, Gall & Borg, 2009).

The design allows flexibility, as the phenomenon is investigated in its natural context and setting (Gall, Gall & Borg, 2009). This is supported by the field data collection guide: The qualitative research method allows flexibility for the researcher to probe further. The qualitative study has several advantages in that probing gives the respondents opportunity to respond in their own words, other than forcing out responses. It uses open ended questions that have the ability to provoke meaningful and culturally salient responses coupled with unanticipated responses by the researchers. Finally, the method is rich and explanatory (Marshall & Rossman, 1999). The teachers were observed

teaching in the classes they always taught and in the nature the classes had always been. Thus I had to prepare the learners regarding the video-recording. Likewise the learners were not coached for the exercise. I equally made sure that whatever step taken, was carried out with permission and support from the relevant authorities; hence consent of the Ministry of Education and Sports (Commissioner for Special Needs Education, whose authority is binding regarding any transactions in Special Needs and Inclusive schools), the school Managers in Uganda, Teachers inclusive and the Norwegian Social Science Data Services (NSD).

3.3 Sampling/ Material

3.3.1 Selection of the Schools

All the schools selected were Government schools, supervised by the local Governments (Uganda runs a decentralized governance system). However, regarding the Supervision of Standards, the Central Government has a major stake, as it can register or de-register a school according to whether it does or does not provide educational services within the set minimum standards. The head teachers in all the schools that enroll learners with special educational needs (SEN) are hence expected to have been exposed to methods of handling such learners (Ministry of Education and Sports Deployment Guidelines, Uganda 2001). Uganda has a total of 145 schools officially registered that enrol learners with special learning needs. Out of this number 40 enrol learners who are deaf. I thus selected schools for the study through purposeful sampling (Gall, Gall, and Borg, 2009, Patton 1990). Primary schools that were directly engaged in enrolling and teaching learners who are deaf were selected to participate in the study. The sampled schools determined which regions were chosen and in this study, East and Central Regions were used. I preferred to engage only three schools in these two regions, to keep the number small and to create a favourable condition for a qualitative study. Given the circumstances under which I was operating; getting guidance from the Department of Special Needs and Inclusive Education, Ministry of Education and Sports, Uganda; the pre-determined mode of sampling became more appealing. My reflection on this was that the experiences of the officers at the ministry of education, during the meeting, served as a review and analysis given that they had prior information regarding the schools in question. I felt that I would end up with effective samples.

The selection of the schools was suggested by the Department of Special Needs and Inclusive Education, the headquarters, and accepted by the Commissioner for Special Needs and Inclusive Education. Following an appointment with the office, a meeting was held with some officers at the

headquarters to guide me on schools that would be readily available and suitable for my study. It was in this meeting that the Eastern and the Central Regions and six schools were selected; from which I selected the three that were fulfilling all the criteria. It was also in this meeting that the Commissioner offered a technician to help me use the video recording during the study. It was also in this meeting that a third region that I had intended to use was dropped on the officers informed guidance. The specific schools I had zeroed on were thought to have done without relevant staff and necessary support for some time; and wouldn't be informing the study.

Although a good number of private special and inclusive schools were available, none of them were picked. It was explained that the Government had at least invested in Government schools (public schools), in terms of providing basic teaching learning materials; had posted and deployed to these schools trained teachers and also often involved them in re-fresher training programs in Special Needs Education for teachers serving in these schools. It was then thought that the private schools wouldn't inform the study in terms of realistic status of the service delivery to the deaf learners.

3.3.2 Selection of the Respondents

The respondents were determined by the sampled schools. The head teachers of the selected schools were to be respondents; while the teachers engaged depended on the selection of the classes to be involved with informed guidance by the head teachers; given the criteria for selecting the respondents for the study. Two teachers per school trained as special needs teachers and teaching learners who are deaf in lower classes (primary 1- 3) were selected. All the teachers selected were teaching deaf learners and were trained teachers who had at least attended a refresher course on special needs education and particularly related to deafness.

Two classes were selected in each school. This covered the lower primary section from age 6 as guided by the 1995, Universal Primary Education (UPE) policy. My intention of covering that level was because it is the base of education in Uganda and it is said that when a learner leaves that level without learning how to read and write it is difficult for him to gain better skills when he joins upper level. Another reason was to keep an eye on the validity and reliability of the study. I had intended to use six teachers as respondents and their three head teachers. Regarding the teachers I had however, to consider some criterion to ensure that validity and reliability was catered for. I had to note whether the teachers had been specially trained in special needs before and whether they had been licensed and appointed to teach. Since the data collection also involved observation and recording of lessons being taught, six teachers would be recorded teaching although in one school two teachers shared a

lesson which change the number of teachers from the initial planned number of six to seven teachers because I found it important to include all the data. The initial plan of the study was to engage the parents and the learners, but this turned out to be practically impossible given that the schools were boarding schools and parents were reported not to come to school often and did not show interest in coming for visitations as reported that some were staying very far away from the school. In addition, the pupils could not answer the questions that I asked them in the pilot study.

3.4 Instruments and Data Collection

In this study, two methods of data collection were used: Interviews and Observation that solely depended on the video recording to investigate into the development of reading and writing, factors and strategies responsible for facilitating reading and writing and challenges involved in teaching reading and writing to the deaf learner. Interviews were used as they are instrumental in gaining first-hand information from the respondents (Gall, Gall & Borg, 2003).

3.4.1 Pilot study

The instruments were first subject to a pilot before use. The instruments for observation and the questions for semi-structured interviews were earlier developed and tested in a primary school not included in the study before engagement in the study (as a pilot study) in the school I was teaching just before I joined the University of Oslo. This school was chosen for various reasons including ease of reach; as I was being accommodated in the school; the existing relationships I had with the teachers and the learners could enhance a smooth and a relaxed atmosphere for the exercise. It was also easier to have open discussions with the teachers regarding the weaknesses of my instruments. As the previous head teacher of the school I hoped that cultivated an attitude of openness and frankness. The teachers had learned and developed an attitude of readily commenting on what they were not happy about and what they felt could improve on the running of the school; let alone the opportunity I had given them to run the school finances through the school finance Committee. I found a lot of trust and thus it was not surprising that they easily gave both positive and negative comments on the instruments.

Generally, before starting the pilot, permission from all the relevant authorities was got. This included the Ministry headquarters, the district and zone administration (where the school is located) and the consent of the acting head teacher. I also involved the acting head teacher in selection of the classes

given that the learners with hearing impairment that had been enrolled to this school were assigned to different classes. Before the study began, the head teacher and the teachers were briefed regarding the study and my expectations of their participation. I also had the opportunity to talk to the selected learners before the pilot study commenced.

Although all the teachers seemed to respect me as their head teacher, this did not stop them from making comments. It was during these discussions with the teachers that the question of engaging the parents first emerged. The teachers wondered how parents who had very little knowledge about reading and writing for the deaf, let alone who showed little interest in their learner's education, would be able to contribute to the study. In this particular school some parents hardly contributed or provided any other support for the education of their learners. They would pay the school fees and only appear at the end of the term to collect their learners. Others would not even collect their children for holidays. The idea of involving parents was however tested until other challenges were encountered in the schools of study; leading to the exclusion of the parents out of the study.

Examining the data that had been collected by the video coverage, we observed that much as the technician had covered the lesson, he had also paid substantial attention to learners who were mischievous in the class. It was agreed he had to concentrate on teaching and reading for the deaf learners. Both the data collected from the interviews with the acting head teacher, the teachers and the video-coverage opened my eyes to the nature of data I was bound to collect. This helped in the presentation, analysis and interpretation of data. The immediate impulse was to use categories for data presentation. I had then believed that a quick eye shot on the tables would easily enable the reader to tell which methods were more favoured or understood or probably known by the teachers/schools. After a thorough discussion with my supervisor and reflecting on the import of these tables in a qualitative study of this kind I later abandoned these tables in my discussions in the study.

Feedback regarding my role when conducting the interviews was also interesting. One teacher noted that I was looking rather strict in my talk. She believed that if I appeared little softer teachers would be more relaxed while giving responses and also would give more genuine thoughts about the whole teaching/learning processes. Since no other teacher within the discussion group raised a point of disagreement on this, I quickly understood that this was one of the areas to work on. The teachers in general were in agreement with the set instruments and their use.

3.4.2 The Study Schools

My study took place at the time the ministry was holding the first training workshops for the teachers handling special needs education in the primary schools; this was just before I was called upon to facilitate in similar workshops across the country. Advantage of these workshops was taken; since they also included the head teachers and school inspector that I had targeted; to introduce my study to these officers in the venue that they had been invited for the workshop. At that time permission had already been secured from Commissioner for Special Needs and Inclusive Education, Ministry of Education and Sports to hold the study.

The study was introduced to them as planned, and I informed them about the clearance by the Ministry of Education and Sports (MoE.S) to hold the exercise. We further shared how the study was intended to be carried out. The head teachers then proposed that the teachers in the given schools would be alerted of the exercise and each would provide an appropriate time for the exercise. My later visit to the district offices was more of a formality to report the start of the data collection. At the school level I reported to the head teachers' offices for purposes of knowing that the programs would be guided by the head teachers. This included getting to know which classes and teachers to be included in the study.

3.4.3 The Video recording

The focus of the study was to understand how the deaf learners are taught reading and writing. It was upon me to determine which methods would best demonstrate how these learners were exposed to the reading and writing. The methods chosen were to collect the required data without any bias and also to provide first-hand information regarding the teaching of reading and writing. It was for this reason that I chose on using the video-coverage to capture the teaching/learning aspects as regards reading and writing; that was taking place in the classroom. This method has been used in Clinical Supervision and specifically in Supervision of Classroom Instruction (Wiles,1952) to capture the teachers moves; how the learners are taken through the teaching/ learning experience; what activities the learners get engaged in. Given that the camera picks up all that transpires in front of it in the class, there is no room for any bias or any editing of the data collected by the Camera. It was for this reason too (first-hand information) that the interviews were used.

At the schools where the study took place, the teachers of the concerned classes were called to the head teachers' offices and formalities for the study were again presented; given that the head teachers had already briefed them of the study. Likewise before all the lessons were observed and recorded we

agreed that some time would be provided to brief the pupils and to simulate the video-recording. In each class this simulation was to take about fifteen minutes. This of course meant adjusting the lesson time for the classes in question. In all the schools it was agreed that the lesson observations/video-coverage could start. I also agreed with the teachers that the technician would video record film from the back of the class. He would only change his direction of focus when a learning activity or response was triggered by either the teacher or learner in a given position. This would mostly be activities done at the sides that could call for change of camera position. The principle for the technician was however to focus at positions that would demonstrate the teaching/learning of reading and writing in groups or focus at one person while in the front of the class. In the meantime, I would take my notes to make sure that I did not lose out on crucial aspects of the teaching /learning of reading and writing. After each session the study would be followed by the interviews with the teachers. The head teachers would be the last to be interviewed. After these briefs and agreements, the video-coverage went on un-interrupted up to the end of the lessons, in all schools. The technician would only quickly halt to change the tapes. Although my initial plan was to involve only two teachers per school, in one school, one lesson was conducted by two teachers which increased the number of teachers to seven from the original number of six teachers. I could not leave the seventh teacher because the data from that class would be incomplete.

3.4.4 The Interviews with the teachers

Although we had earlier discussions with teachers in the head teacher's office, regarding the interviews, it was important to me that I went through again what I was expecting of the teacher. This was necessary to remind the teachers that this was for the study purpose and to continue to build rapport with the teachers (Gall, Gall, & Borg 2009). While conducting the interviews I had to be sensitive to concerns raised by the teachers of the pilot school regarding my personality. I was also cognisant of many aspects for effective interview management in the Data Field Guide as agreed to by Marschall & Rossman (1999) and Gall, Gall, & Borg (2009). These included introductions, clarifying the duration of session, clarifying guidelines such as keeping responses confidential; and encouraging positive perspectives; while pointing out what could be negative. It was important for me to ask questions according to the guide. Whenever there was a need to probe, this would be done within the context of the study. Where the participant alluded or volunteered information that matched with the questions that were to be asked, this question would not again be asked, as the information would then have been received. Other questions I also kept asking myself (as provided for in the Data Field Guide) included:

- What else do I need to ask to understand this person's perspective?
- Am I hearing everything I need to understand?
- What is the meaning of this/these responses?
- How much time do I have left for this interview?

When I did not understand a response I would ask for some clarification from the respondent. I found it productive to thank all the participants at the close of the interview session. I as much as possible avoided getting personally involved by way of engaging in personal disclosure, to avoid influencing the responses of the participants and hence impacting negatively on the study, because the respondents could be tempted to consider my point of view (Gall, Gall, & Borg (2009).

3.4.5 Interviews with the Head teachers

The interviews with the head teachers basically followed the same format as that which was used for the teachers. The only little difference was that the head teachers focused their responses towards administrative aspects, tending to make me appreciate the managerial aspects of managing special needs education services as very critical.

3.5 Ethical Issues

I had to take a lot of precautions as regards safeguarding the interests of the participants and the institutions. As part of the preparation for the study, I noted that the Data Field Guide as stated by Marschall & Rossman (1999) and Gall, Gall, & Borg (2009) were strong about researchers attending a professional course on ethics before embarking on any research. I resorted to a pilot study on the topic and ensured that I observed the relevant aspects spelled out, for my study. This included respect for the participants; respect for the communities; justice and beneficence (reducing any risks that could emerge during the study). I also took guidance of the Data Field Guide Marschall & Rossman (1999) and Gall, Gall, & Borg (2009), regarding caution on collaborative relationships, fabrication of data and plagiarism. Whatever information or data that was used was acknowledged. Seeking of formal consent from the organisation and relevant persons responsible for research, coupled with seeking their views regarding my intended moves was hence critical. The Authorities and the participants had to be given a clear picture of what I had planned to do in the study; without

necessarily mentioning about the exact phenomena I was to investigate. In all cases I had to show my appreciation for the participants provided during the exercise.

The ethical issues were considered all through the study including the planning stage. I got permission from the commissioner's office at the Ministry of Education and Sports headquarters for the study. Much as the country operates decentralised governance, the centre, where this office is, has the overall mandate regarding the programs and activities that are run in schools. The headquarter decides when to have schools open or closed; what activities to be done in a given part of the year; type of teachers to be engaged and generally sets the minimum standards to be followed by the schools. The headquarters' decisions are respected and followed. It was also critical to get permission from the District Offices, given that these Offices manage the Programs spelled out by the Ministry. At their local level the Districts have some mandate, limited though, to shift programs but for a specific reason and often after consent of the headquarters. Ignoring these offices could cause huddles in running and getting support for any related need. And finally with the introduction letter from the Headquarter, there was still need to get permission at the school level from the heads of the schools. This allowed cordial relationships and boosted the support from the schools. This also helped to make sure that we operated within the school programs and no aspect of the programs was disadvantaged by my presence in the school.

Although I was aware that in Uganda, once the authorities have given their word, the subordinates often have no alternative but to comply, in respect for my participants, I had to find out whether they were prepared to participate in the exercise. Thus it was critical for me to ask for participants' consent and create collaborative and cordial relationship and hence a favourable condition for my study. I would hence talk to the teacher and the head teachers about their readiness to participate in the study.

It was also important for me to instruct the technician who was assigned to work with me to keep to this ethical code. I guided him on the need for him to focus only on the teaching/ learning aspects of reading and writing of the lesson and to be friendly to the participants. Since he was the one recording it was critical that confidentiality was observed even by him. I also made sure I personally kept the tapes every after coverage and likewise during the transfer of the data to DVDs. I was personally there to take part (more correctly, to ensure that the tapes and the DVDs had no other copies made from them). It was for these same reason that I also asked the participants whether they were comfortable being video-recorded and find out for how long they would accept we did so; knowing well that if I had to investigate how teaching reading and writing was being carried out, one would need to observe the whole lesson. The teachers however did indicate that I was free to be in the

classes as long as I wanted. I also revealed to the teachers that I would be taking some notes while the technician was covering the lessons. It was important for them to know that these notes were only a support and a reminder for me regarding critical aspects of the lesson so that I could be sure I wouldn't miss out important aspects for my study. I finally had to assure them again that the data were purely for the study purposes.

It was also important for me to talk to the learners giving information about what we were doing in their classes. In most cases the teachers involved took this task. I however made sure that I personally thanked the learners and the teachers at the end of the lessons for welcoming me and the technician and being part of the study.

Likewise before the interviews I had to seek from the teachers and the head teachers consent regarding the video coverage. They had no objections to my request. I assured them again that those data were confidential and would not be used for any other purpose but this study. I also wanted to know where they would be comfortable during the interviews. Interestingly all the teachers preferred having the interviews in classroom and all the head teachers preferred having them in their office.

In an attempt to comprehensively attend to confidentiality, the names of the schools, the head teachers and the teachers are not presented in the study. They were assigned letters and numbers. One sees in the study, for example, Htr.1 for head teacher 1 or Tr.4 for teacher 4. For the sake of further anonymity protection, I have consistently referred to the teachers as "she" and the head teachers as "he". I however met challenges in implementing the NSD requirements. I could not use a written consent form for the teachers and head teachers. It is culturally challenging to involve written signatures in surveys and research in Uganda. In any case if one insisted on their use, especially with the parents and the primary school teachers; they become suspicious of the exercise; as it is hardly done. The Ministry of Education and Sports Headquarter officials had also, advised against its use, as the authority for surveys are provided by the headquarters and the schools are required to cooperate. The headquarter officials also indicated that I would get questionable responses if I did insist on the subject. Similarly, I couldn't have the parents' consent to the exercise for the same reasons; let alone their physical absence from the schools visited. I did make contact with NSD on this issue and articulated the challenges I met.

3.6 Limitations

Uganda has many schools that enrol learners with hearing impairment. Given the nature of the study design adopted, it was not practical to engage all these schools in the two regions, as this would have presented a lot of challenges regarding the transport to the given schools, let alone the long distance to the eastern region. After a briefing to the teachers in all the selected schools a number of them were surprisingly interested in participating in the study, but this wasn't possible; as numbers would make it difficult to gain the deeper understanding of the teaching phenomenon.

I had earlier planned to engage the parents and the learners, but earlier this was not possible due to long distances to be covered by the parents, let alone the import of engaging learners. I didn't involve the learners, given that I couldn't readily understand what they were communicating, during my earlier interface with them (in the pilot study). I had no intention to receive secondary information through the teachers, for fear of receiving doctored responses.

Finally, I limited myself to the interview and observation of data by use of the video coverage. I had a feeling that the two instruments would provide, I hence did not find it relevant to use other instruments for gathering sufficient data for the study.

4 Data Presentation and Analysis

4.1 Introduction

The purpose of this study was to investigate how deaf learners are taught reading and writing in schools in Uganda. The study particularly examined the lower primary school level of education.

This chapter contains a presentation and analysis of the data collected from the classroom teaching/learning behavior, the teacher's methodology, the instructional material involved, the learners' activities and other relevant activities going on in the classroom regarding the teaching of reading and writing to the deaf, and of the data from the interviews held. The presentation and the analysis pivot on the concept of teaching explained as the interaction between a pupil and the teacher on a given subject irrespective of the nature and level of resources; various teaching models used; the learning climate; and other relevant non-academic but supportive services or programs. The discussion equally holds the understanding that the teachers' physical presence would be critical in teaching/learning processes (Davis, 1997). The chapter also demonstrates the language used by both the teachers and the learners in the teaching/learning processes.

The data is presented following the critical components that form the body of any classroom teaching/learning processes/lessons. I used these components to develop the themes/categories for data analysis. These include the educational technology theme or "fool proof materials" that are crucial in the teaching (Lovel & Wiles, 1975); the teacher's methodology theme, that is argued to engage high levels of creativity, sound judgments (professional) and insights- a coordinated move likened to the Symphony conductor (Eisner, 2010) and the teaching/ learning process feedbacks, that are provided through the learners' activity/assignments. Davis (1997) argues that there can never be any teaching without the learners. Another theme was that which encompassed the Setting/Environment in which the learning takes place. I chose to specifically provide another component as regards the "teacher movements" but only to be used for the data collected through the classroom lesson observations; as captured by the Wide-lens technique- the Video coverage (Lovel & Wiles, 1975). It was important to consider teacher movements as it directly impacts on the signing space and signs, as for those who use sign language. An exaggerated hand movement as a result of general body movement especially while pacing up and down the class, for example, could send a wrong message (Kyambogo University Sign Language Dictionary, 2006). Much as the video coverage was executed to get data from the teachers during the interview, this method was not

engaged for purposes of capturing all that transpired during the interview but also capturing what was not done and seen during observation. The final theme I engaged covered the teacher perceptions of the teaching/learning processes. I found this critical, too, as one's perception of himself/herself and his/her environment does influence one's actions. These themes covered the challenges teachers were confronted with in teaching reading and writing to the deaf; their perceptions regarding what they found out regarding when learners learned to read and write, and what the conditions for learning to read and write were, as for learners who were deaf. The evidence collected from the interviews held with teachers and head teachers, coupled with data collected from classroom lesson observations, was designed to provide a comprehensive picture of how reading and writing are taught to the deaf learners in lower classes (Primary 1-3) in Uganda. It will be noted that I made some observations/comments regarding data in each of themes presented.

The chapter is structured in such a way that the first part covers the respondents (the teachers and the head teachers); the second part covers the evidence from the respondents, following the interviews and the evidence from the lesson observations. Comments come last. I have chosen to discuss each theme across the data collected from the respondents and the lesson observation. The intention is to provide a clear picture of how each theme performs across the board. In the discussions, I have chosen to represent the teachers with the symbol Tr. Regarding the teachers who shared the class and the lesson, they shall share the same number but with the second teacher assigned an additional letter "b". I assigned the Head teachers the symbol Htr. I have also chosen to provide the data in each theme following the research questions, for purposes of ascertaining that the research concerns were covered and the threading of the study is concrete. This follows that the interviewees were asked these questions during the interviews and the questions were also used as a guide for examining and analyzing the data in the videos/transcriptions.

4.2 Head teachers and Teachers

This study had only two head teachers as respondents. For ethical reasons and the purposes of the presentation I have omitted information about which teachers or head teachers belong to which school. I have hence used the symbol Htr. to represent the head teachers and Tr. to represent the teachers. None of the head teachers had been trained to teach learners with special learning needs but had long serving experiences as head teachers in the schools for the deaf.

Likewise, not all the teachers had formal training in teaching learners with special educational needs but had taught in the schools for the deaf for several years. They also did not have similar training in teaching the deaf, save teaching them to read and write. Tr.5 and Tr.6 had had training in Special Needs Education (SNE) at Kyambogo University but at the Diploma Level. Tr.2 reported that she was hard of hearing (hearing impaired) and had only learned sign language through interface with other deaf persons. Tr.1 was undergoing her training in SNE at Kyambogo University (on internship) but for a Diploma award in SNE. Tr. 3 and Tr.4 had only attended some seminars on special needs education. What was common to all the teachers, however, was that they were all trained to teach at the Primary schools level (grade III).

I interviewed 7 teachers, three in one school, two in another and two more in the last one. I found it relevant to include the third teacher in one of the schools for the interview. I had planned to have only two teachers per school interviewed but during the study, I was in one school, confronted with a class that had two teachers who taught the same lesson. One covered the teaching of the reading aspect of the lesson, while the other covered the writing aspect of the lesson. Much as these teachers had claimed to have done their scheming and lesson preparations together and were using the same lesson plan for teaching (giving room to a possibility of dropping one for the interview), I chose to involve both the two teachers not only for purposes of complementing each other's inputs, but to be sure I captured all the aspects of the lesson. I reasoned that it was possible the two teachers had always shared their lesson in that format, hence a possibility of one having an upper hand in relation to questions of interest to the study.

One teacher in one of the schools was interviewed the following day (after the teaching) as she had suddenly to attend to other unexpected program. This was hence not recorded by video. Regarding the lesson observations, all the teachers were observed and video recorded while teaching. In one school however, it was inevitable that I engage three teachers instead of two as it was for the other schools, as explained earlier that the two teachers in turns shared the same lesson. They all taught aspects of the lesson which were all important to the study. The teachers had been assigned to teach in one class. The third teacher handled a lesson that covered the teaching of reading and writing. These gave two lessons observed in all the schools.

My original plan was to interview even the parents of these deaf learners and the deaf learners themselves, but this did not materialize. The parents were reported to have a negative attitude towards the education of their children. There was hardly any substantial parent support registered by any of

these schools in connection to the children's education hence a challenge in enhancing the reading and writing learnt at school. When I asked about the parent support, Htr.1 had the following to say:

“Parents just bring children here without any support. Some children are neglected and we have even to use our own money to buy them pencils. If a parent says he doesn't have anything you can't neglect the child”.

Furthermore the children were reported to have been enrolled from distant districts, rendering it difficult for the parents to travel for the interviews. I had hence to drop the idea of engaging the parents for the interviews. I likewise had to drop the plan of interviewing the learners given that the few I interfaced with in the pilot study were hard for me to pick up regarding their way of communication and they seemed to be unable to answer questions even when I wrote the question on the paper. The children equally looked reserved and hesitant to open up, for reasons I couldn't readily fix. I had no intention to use the teachers to interpret for me for fear of teachers relaying the wrong information or substituting children's responses. All learners were learning the sign language from their peers through play and other activities; but not as a result of deliberate teaching. Lave & Wenger (1991) explained this form of teaching as legitimate peripheral participation.

4.2.1 The Instructional Materials

The responses in this section were specifically targeting to contribute to answering the research questions on what strategies are used in teaching reading and writing and what problems were met during the teaching of reading and writing to deaf learners.

4.2.2 Interviews

Teaching materials

Evidence shows that all the 7 teachers reported that they were using instructional/teaching materials for teaching reading and writing. Prominent among the methods reported used was the use of real objects; cards; charts; pictures; drawings; reading materials; the blackboard itself; the curriculum materials and teacher made materials. Specifically Tr.1, following prompting by the interviewer, explained:

“First of all, like now you a teacher, you have, to have pieces of chalk, blackboard. Learners must have pencils and books, we also have the teacher’s Guiding book for reading and writing, that is a text book.”

I probed to know whether they had any other equipment, upon which she added:

“Text books, are they not materials?... we follow the curriculum book”.

To her the teacher’s guide was very crucial in assisting the teachers to determine what action and area to cover regarding the syllabus. Strangely, Tr.1 did not even name the very teaching learning aids (the drawings of birds) that she had used in her lesson; let alone other instructional materials which could have been applicable to this lesson but were not engaged. She alluded, however, to the fact that real objects could be used, when she stated that:

“.....and may be you can even bring in the “house” and then you ask, do you know the thing that stays in such a house?”

Tr.2 made a similar statement as Tr. 1. An extract of the interview with Tr.2:

“Interviewer: What kind of materials do you use when you are teaching these children reading and writing? Specifically reading and writing.

Interviewee: Ok, we use charts. Sometimes, Ok. They use pencils, books, slates then chalk.

Interviewer: Those are the materials. Do you have other equipments you use when you are teaching reading and writing?

Interviewee: No we don’t have.

Interviewer: So these are the ones specifically, these are the materials you use when teaching reading and writing?

Interviewee: Yes”.

Tr.2.b on the other hand stated that she used flash cards, real materials, charts, sometimes pencils, books, slates, and then chalk. Asked whether they had some equipment they used when teaching reading and writing Tr.2.b first responded: *“like what?”* To me this was an indication of not being sure of what equipment was. I prompted with examples of computers, projectors as used in some

countries and she responded as: *“For us here we don’t have such things”*, as she insisted that what she had named was the only materials they used. I again did ask if this was all and she said: *“Yes”*.

Tr. 5 revealed that the materials she used for teaching reading and writing included charts, local materials. I inquired to know what she meant by local materials and she indicated that she meant things found growing naturally in the environment, such as leaves, and objects found such as stones. She also revealed that they used the ordinary school curriculum. When I probed further she said: *“the same syllabus”*. The school/teachers were using the same syllabus as other primary schools for teaching reading and writing. There was no evidence of reference to other support/ Supplementary Guides (Adapted curriculum) that had been provided to the schools by the ministry of education and sports. The adapted curriculum was specific adaptations of the present ordinary school curriculum, designed to meet the needs of the learners with special learning needs. The guides were designed and developed to support and give an opportunity even to the teachers who had not been trained formally to teach learners with special learning needs to be able to teach these learners, when required. This equally pointed fingers at the teacher’s lack of knowledge regarding other materials and methods of teaching reading and writing. Tr.6 on the same subject reported *“...you may have a blackboard ruler...you...”* Her attention was more on the methods.

Tr.5 and Tr.6 used a variety of materials and especially real objects during the teaching but never named all of them during the interview. This is similar to the evidence on the interviews regarding the first teachers. Tr.4 and Tr.3 emphasized the use of real objects and charts. They also reported to have used a projector at one time when it was functioning. All the teachers reported that instructional/teaching learning materials were very essential for the teaching/learning processes. They also indicated lack of these materials; as highlighted by the extract above; as a serious problem.

Interviews with the head teachers revealed teaching/learning materials to be considered very crucial for teaching learning purposes. Htr.1 stated that,

“...the ministry of education has not supplied any instructional materials yet and we are just trying to improvise since we have none.”

He sounded very concerned that the parents were not even supporting in providing their children with any writing materials. He reported that materials were very critical for reading. Htr.1 reported, *“once the child knew how to read first, and then writing would easily be picked”*. His concern was that reading was very critical in upper classes. Htr.1 and Htr.2 all named the use of writing materials

typically found in ordinary schools. This included pictures, jigsaws, pencils, colors, paper, real objects and teacher-made instructional materials. Htr.1, who was in a school located within a city, was also emphatic on audio-visual equipment such as TV, and audio equipment such as radios and tapes. Htr.2, who was far from the city and in the rural area, only highlighted the commonly known and used materials such as pencils, sign-language books.Htr.2 stated,

“We used books like in the ordinary classes and we bought one sign language book which they are using”

I interpreted this to be an example of an influence of one’s environment on one’s performance and thinking.

4.2.3 The lesson Observations

All the 7 teachers observed teaching used various instructional (teaching/learning) materials. This included the blackboard, the cards, real objects, and charts and pictures. Tr.1 engaged the blackboard and the drawings. Tr.2 used the blackboard which was partitioned into two sections; one was for use while teaching the learners reading and the other for teaching the deaf learners how to write. Each word that was taught would first be signed, and then written on the blackboard. One boy/learner was once called upon to write on the blackboard.Tr.2 also used a chart with drawings of birds. The learners would be required to provide sign names of the birds pointed at on the chart by the teacher. Tr.2.b who took over the lesson from Tr.2 continued to use the blackboard but in the section which had been marked for teaching writing. She also used the top of the learners’ desks which learners used to practice writing the letters. Finally the pupils used their writing materials (pencils and exercise books) to do the exercise on ‘writing’ given by the teacher.Tr.3 had a combination of several other materials.

The instructional materials used included the use of cards which had different sizes of letters. Some were written in capital case while others were in lower case letters; each card was shown to the learners and they wrote the letters in the air. Other cards were of drawings of objects to be taught, for example the shorts, the sun, and the snake. She would show the card to the pupils and follow it up with signing the sign name for that object drawn in the card. As was the case for Tr.2 and Tr.1, Tr.3 had her blackboard, divided into two sections. She however did not identify which area was for which; the learners who had the opportunity to try out writing the letters on the board wrote in

whatever section of the board they felt fit. She occasionally cleaned the learners work on the board to get room for her use.

Objects were equally used as teaching/learning aids. These included the use of stones of various sizes, which were passed round the class for the learners to feel the texture and to explore their weights, and so was sand. Tr.3 also used a learner who was putting on a pair of shorts to explain what a short was and finally had the pupils use their exercise books to write out patterns and letters. Tr.4 had similar materials to the ones used by other teachers. Likewise her colleague, Tr.3, had the blackboard planned with distinct sections though not named. She used cards that had drawings of a bicycle, a bus and a boat; while others were of letters. The cards were displayed to the learners and the learners had to sign what was on the card. She later introduced cards, some of which had words that were complete and others incomplete. She for example had a card written as:” *b-s*.” The learners were then asked to fill in the missing letter/complete the words correctly. Some of the cards with complete sentences read as: “This is a boat,” and “A box is in a bus”. The teacher would raise the cards, show them to all learners, and the pupils would be asked to read (sign) the sentences. Much as her lesson plan indicated the use of real objects for teaching reading and writing, there weren’t any used. Like her colleagues the desk tops were used to practice writing the letters. Tr.5 had no specific planned materials used apart from the blackboard, the exercise books, pens, pencils, and the pupils’ desks. Finally the teacher encouraged the learners to do the exercise in their books.Tr.6 mostly engaged real objects that included a bucket, clothes, the blackboard, plates, soap, slates with words written on as ‘washing’ and ‘cleaning’, to teach the concepts that the learners would later learn to read and write.

4.2.4 Conclusion on Instructional Materials

All the teachers were enthusiastic to use instructional materials and often engaged the learners in the use of the instructional materials; when explaining concepts/words. Children were, for example, often called upon to write words on the blackboard. I generally observed that these instructional materials were used to facilitate learning to read and spell words and also learning writing; as children read out the words or sentences; either copied or drew patterns of the letters; let alone wrote sentences using the words. The materials were also used to introduce the meaning of words or to teach the concept. Real objects directly provided the meaning, clearer and quick understanding of what was being taught.

The common teaching/learning aids engaged by all the teachers as demonstrated by the data from observation included blackboards that were used both by the learners and the teachers; cards; real

objects; charts; drawings and the exercise books. I observed that the use of real objects appeared very instrumental in triggering natural learning and facilitated faster learning. The learners actively, and with interest, explored the materials and spontaneously provided responses regarding the objects, when asked about them. Several real objects such as stones and sand were used by Tr.3 for the learners to feel their texture, weight and hardness. This was meant to make the learners understand why the stone was assigned such a sign; a sign which they saw demonstrated that a stone was hard. Likewise the sign for sand was motivated by an association with falling dust. What was characteristic of the drawings and the cards was that they were representing or had representations of commonly known or seen objects such as of birds and transport modes. All the 7 teachers had several teaching/learning aids which the learners were allowed to interface with. Creativity by the teachers however played a large part in relation to what materials teachers used. Tr.1 and Tr.2, for example, had only drawings of birds, Tr.3 had several other real objects, and Tr. 4, 5, and 6 had drawings and charts. Evidence collected from the interviews regarding materials and equipment used for teaching reading and writing to the deaf heavily agreed with the lesson observations. Real objects, cards, pictures, teacher-made materials, drawings, syllabus and textbooks were all used by the teachers in their lessons.

The data demonstrates that teachers used a variety of instructional teaching/learning materials to facilitate the teaching of reading and writing. A further analysis of the relationships between the data collected from the classroom lesson observations and the data collected from the interviews conducted on teachers reveals some discrepancies in use. In the interviews, for example, the use of the blackboard ranked low, as only Tr.1 named it as a teaching/learning aid. The lesson observation reveals that all the teachers were using the blackboard for teaching/learning purposes. Interestingly, Real objects were revealed by one teacher, during the interviews, to be crucial for teaching, and the lesson observations demonstrated that only her colleague from the same school named it too.

4.3 Teachers' Methodology

This section of the study was specifically designed to contribute to answering the research questions on what strategies were used in teaching reading and writing to deaf learners; on what problems were met during teaching/learning to read and write; and on how much time the learners took to learn to read and write.

I discussed these aspects following what transpired during the interviews and what I observed and what was recorded in the video coverage. This facet covers all that the teachers planned and did in the classroom teaching/learning time, to cause learning on the part of the children and to teach some specific content. The concerns of language use will be critical to this facet too. Specifically the methods that promoted the learning of reading and writing were crucial to me and the study. I have chosen to present all that was named by teachers as methods of teaching reading and writing, and in most cases to render the teachers' exact words. The purpose was to present exactly what the teachers had in mind and were using as methods for teaching reading and writing to the deaf learners.

4.3.1 Interviews

The evidence from interviews reveals that the teachers had various ways (that they referred to as methods) of teaching the deaf learners to read and write. The methods that were commonly named included the use of the sign language; finger spelling; the use of demonstrations, the need to go at the pace of learners; use of gestures; the engagement of parents in learning and using the sign language. The other "methods" that featured included reading out to the learners and having the learners repeat after the teacher; using whole word/sentence approach; using learning aids to trigger or support understanding; use of lip reading; signing words as you say them; being precise with hand shapes or forming shapes, while signing and total observation of how the learners sign. The data reveals that all teachers were not just using one "method" but a combination of others.

The teachers specifically had the following responses. Tr.1 claimed, when asked about the methods she used for teaching reading and writing: "*I sometimes lip, is it lip reading*", (on my making the hum sound to confirm her thoughts, she continued) "*I lip read some words, which I sometimes can even pronounce some words for them and sign*", When I probed further to understand if the learners actually learn to lip read she said: "*Hah they learn*". To her the deaf learners were lip reading the English language. Tr.6 was too in agreement and following my inquiry as to how many learners knew lip reading in her class, Tr.6 claimed: "*only one*", but quickly added that the children had not mastered it; much as I did not see her use the method in the lesson she handled/taught.

Tr.1 also claimed: "*We use demonstration method, illustration; I don't know whether explanation is also a method*". (She certainly wasn't sure whether explanation was a method as she repeated) "*I don't know whether it is also a method*". She further claimed: "*you sign names of birds*". When I asked her which method she would recommend for teaching reading and writing she said: "*observation method, demonstration method, illustration method*". On inquiring whether all these go

hand in hand, she said: *“Yah, when teaching reading and writing.”* She also revealed that this had to be accompanied with some illustrations on the blackboard.

When I asked Tr.2 about the methods she uses for teaching reading and writing, she claimed that the language background of the children she taught was sign language and that she used sign language for teaching. She claimed that she used sign language for all of them because they don't hear and they don't talk. When I asked if she talked while she signed she said *“Yes, we are supposed to talk anyway, because I understand that some children who at least hear, hear partially, and there are those who can understand at least what you are saying ...so we are supposed to talk while teaching; talking then making signs.”* She also claimed that she talked English while teaching. She revealed that she also used even the local language because there were some who heard. The only difference she claimed was that when she was talking she would use local language but when teaching English she would use English. I understood this to mean that she used the local language for all other subjects except when teaching English; which called for her talking in English. I inquired to know whether she also taught them lip-reading. She (Tr.2) said, while shaking her head, *“NO, they cannot understand”*. This sounded strange as the teachers (Tr.1 and Tr.2) teaching the classes within the same range/level had contradicted themselves; pointing to questions regarding their methods of teaching reading and writing. Discussing the methods further I asked Tr.2 which methods she specifically used, and she said: *“Demonstration and illustration”*.

Responding to the question regarding which methods she used of r teaching reading and writing to the learners who are deaf, Tr.2.b, said: *“You have to explain, explanation; demonstrate; this children they have to observe what you are....observation; they have to see, bring real objects so that they see.”* I wondered how she would teach abstract words like America and she said: *“You draw and show them; use flash cards”*. She emphasized that explanation, demonstration, observation were critical methods. On whether she used the methods concurrently when teaching reading and writing she said: *“You have to use them. You have to explain...you have to explain to them...you have to demonstrate to them...for example when we were teaching words then you show them...then observation, you show them...they have to see the objects...the charts, flash cards..”* Tr.2.b, on recommendation of methods, said: *“Make sure you have learning aids; when you are teaching these children, the way you stand when teaching them, they... you be in a position whereby they have to look at you, because for them they use eyes; ...they look at you, so that they see you properly especially when you are ..'oba' (a local language word that means may be or alternatively and or) writing, the way you stand...”* When I insisted to know specific methods to be used she reported:

“demonstration- you demonstrate; observation”. She emphasized that this would make an effective teacher for reading and writing.

Tr.3 and Tr.4, who taught in the same school, had similar responses. They claimed that they used the whole word/sentence approach; sign-language; explanation; reading to learners and signing the words that were read to the learners; as methods. After my asking Tr. 5 on what methods she used for teaching reading and writing she responded (after thinking for a few seconds): *“Methods, methods, ...”* (then stopped to think again and thereafter, with uncertainty, said) *“I think I was on the right, when I said the whole word, then whole sentence; ...use look and sign ;imitation; I think aaa...”*

She reported that the children’s language background was sign language and local signs in particular, which the parents would too communicate in with their children. She reported that: *..”For them their language is sign. They were using the local signs.When they came here we introduced the English sign language. Then when they go back home they try to also teach their parents...for them they stick to what they have got at school and they change their parents.”* She reported that after learning the ‘English sign language’ they changed to using the ‘English sign language’; a sign language I understood to be the Uganda sign language. The teacher must have mistaken the Uganda Sign language for an English sign language. All Government schools for or enrolling the learners who are hearing impaired are required to and do use the Uganda sign language for instruction in all subjects. She too claimed that even when they are teaching in inclusive settings, they teach in the local language to other learners, but for the learners who are deaf, *“... they have to sign in English”*. She emphasized this when she claimed: *“we don’t teach them the local signs, no...”* She reported that the children did not know the local language apart from one who had a hearing loss and had earlier developed the local language.

Regarding what she did when teaching the local language, Tr.5 claimed that she still signed in *“English to the deaf.”* This position was similar to that of Tr.6 who claimed: *“... don’t teach the deaf in local language but English.....there is no sign language in local language”*. It appeared that to her, the signs in local language (which I understood to be gestures) were equivalent of the local language itself as she claimed: *“the signs are the same as the local language”*. The explanation here was that the deaf learners were learning reading and writing in English while the non-deaf in the inclusive settings were learning reading and writing in the local language. Tr.5 emphasized that the learners in the inclusive classes had to learn in the local language because that was the language prescribed for the lower classes. She also revealed that remedial lessons were had for learners who are deaf, just to make sure that they are at the same wave length with their other non-deaf learners in reading and

writing; in the inclusive classes. This raises questions on the kind of concept and knowledge the deaf learners were acquiring and on the teacher's methodology of teaching reading and writing. Tr.5 recommended the whole word method, look and sign and demonstration for use in teaching reading and writing.

Tr.4 was not very specific when I asked her about the methods she used to teach reading and writing. She at first replied (with uncertainty):

“Okay the methods...ok like you write the aa.. you write the poem as I have written that one then after you read for them, you read for them like for two three four times; then after they read after you, then after reading.....you get some words which are like they are hard for them.... you explain to them..” She reported that most of the time they have items to go along with the words to explain the meaning of the words; as she said: *“You sign the word then show the item...”*

I inquired to find out if she meant she was using the whole word method and she said: *“yes, we use whole word, whole sentence, all those”*. On inquiring what she meant by oral literature she claimed (but again looking uncertain): *“Oral literature is like... okay.... it is also like reading, then (stops to think) sign language sometimes, because it is the one we use like sign language...”*. When I wondered whether oral was something spoken out, she said: *“...in this case it is sign language.”* Her recommendation on methods to use for teaching reading and writing was: *“like those whole word and whole sentence, it can work for them... but most of the time you have to be with items....with learning aids to show themmost of the time....real ones”*. Tr.6 reported the following regarding the methods: *“there is observation; I use observation method, demonstration, illustration”*. Regarding the methods to recommend, she proposed: *“illustration, demonstration, even imitation.”*

The head teachers had unique views regarding the methods to be used for teaching reading and writing to the deaf learners, as compared to those of the teachers. Ht.1 tended to be more managerial in his proposals / approach than his counterpart. He made proposals that were enhancing and supporting the teaching learning processes other than direct inputs to teaching. His inputs included following children to their homes; calling parents to talk to children in class and to support in providing relevant materials to their children; calling on the Ministry and other sympathizers/well-wishers to come to the rescue of the school; carry out home-based programs (programs to support the parents of the children to manage some programs for these children while at home) and to follow normal curriculum and a timetable which should provide an hour for reading followed by writing.

When I asked what other methods he would recommend for teaching reading and writing, he had this to say:

“.....Myself, for upper classes use reading first, then follow with writing. They should follow one another”.

He claimed, however, that he had observed his teachers using methods based on matching pictures with words, since it was not possible to use the phonic methods. One had then to use matching as the main method. To him writing was easy to handle. Teachers had only to use *“the look and write methods.”* Htr. 2 tended to be pedagogical in his submission. He named the use of demonstration; use of sign language; teaching according the level of the learners; being sensitive to the hand shapes; introduction of the alphabet and then followed by word. He emphasized the children getting to know the meaning of the word first, followed by spelling the word, then giving the sign name of the word. This however appeared a strange method to handle learning of vocabulary. One would have expected that the signs could have come much earlier to introduce the concept; then thereafter be followed with teaching of the meaning. The head teacher all the same considered practice in using sign language as very crucial too to him.

The teachers also named several challenges/problems they met in the teaching of reading and writing. When I asked about these problems Tr.5 readily said *“Some words are hard to sign.”* She revealed that sometimes they came across words they just couldn't sign because they were meeting them for the first time. She also agreed with Tr.1, who said: *“Some words have no sign names...let me say sign... eh., have no signs.... So you get ways of explaining that word.the child will not be able to understand you properly since the words have no sign”.* Tr.2.b, however, disagreed with this position as she claimed, when I asked if all words had sign names: *“Yes... all the words, they have sign names”.* Tr.5 however, sounded disappointed that the National Curriculum had provided only sixty minutes per lesson, on the timetable, for teaching both reading and writing. Tr.2 had however a contrary position regarding the time allocated for reading and writing. She claimed that the time allocated for reading and writing on the timetable was enough for teaching reading and writing. I found this contradicting to what other teachers had claimed. It was tempting to want to understand why this teacher claimed so, especially given that she herself was hard of hearing.

Tr.5 went further to recommend the use of real objects during the teaching as she claimed that this was crucial in communicating the messages/concepts to the learners. She gave an example of the word “Equator”. She claimed that it was hard to bring to picture to explain the imaginary line of the

equator, to these deaf learners. She also complained that: *“You find that there are some signs for different words”*. Tr.6 was in agreement with this observation as she remarked: *“YesSome signs collide, learners take time to differentiate, like cleaning and washing, you find them mixing .So it is a challenge”*. Other concerns included lack of instructional materials for teaching reading and writing such as manuals. I probed further to know whether the deaf were able to follow the programs as other children do, upon which Tr.5 said, while shaking her head: *“No, they are not always at per...”* She claimed that under such circumstances the teachers had to come in to make sure these learners also learned something.

Tr.1 claimed: *“when you look at these children of ours, they take long to understand, get something. An hour is not enough”*; a position with which Tr.2, Tr.3 and Tr.4 agreed with. When I asked her (Tr.1) whether her pupils knew/understood the local language and she said: *“I can’t know whether they know (name of the local language) because...”* This demonstrated inability as a teacher to understand one’s learner and hence to employ the relevant methodology. She further revealed that: When I interjected, asking whether she meant that she would have to bring real objects she said: *“yah. You use real objects”*. I asked Tr.2 to estimate the percentage of the slow learners and she said: *“Most of them”*. She also estimated the percentage of the slow learners in relation to the whole class to be 60 % (she emphasized the sixty as she repeated it). As a teacher she said: *“You have to repeat, you have to repeat, you have to repeat so that the slow learners can also pick something”*, a situation Tr.3 and Tr.4 equally observed. Tr.3 wondered if these children did not have other barriers to learning. Regarding the 40% who were not slow learners, (with laughter) Tr.2 claimed that other deaf learners who were bright and capable would be helping those who are slow learners. She gave an example (on my prompting); of teaching finger spelling through child to child (though at the initiative of the learners themselves not by or through the teacher) approaches.

All the head teachers had similar observations as those of their teachers. Specifically, Htr.1 claimed that the learners took long to get the concepts. He was also convinced that learners, who were deaf, took a long time to learn how to read and write, qualifying them as slow learners. As claimed by the teachers, he too observed that the teachers had to make sure they demonstrated thoroughly; explained and repeated teaching content/concepts; to make sure that learners learned the intended content. This had to be in a teaching learning environment with plenty of instructional and real materials. Htr.1 also claimed that learners couldn’t easily form letter shapes as they had stiff fingers. To him children were only able to use their hands/fingers with a lot of practice. Htr.2 only lamented at the lack of sufficient support on teaching learning materials, regarding the Ministry of Education and Sports Headquarters,

and the total lack from the parents. To conclude, both the teachers and the head teachers operated from the same knowledge base, regarding what they considered as methods of teaching reading and writing.

4.3.2 The Lesson Observations

I chose to cover two aspects in this part of the study. The first part was that of the teachers' lesson plans. I had particular interest in seeing what kind of methods and instructional materials the teachers had planned to use. This would too help me understand if these planned methods and materials were actually used during the teaching of reading and writing to the deaf learners; and to help follow the lessons taught. The second part of this section was the observed practical use of the methods.

The lesson Plans

All the lesson plans were typical of one another in terms of the format. They all had methods that were indicated in the lesson plan and included demonstrations, illustration, observation, explanation and the whole word method. Specifically Tr.1 had only demonstration and illustration; Tr.2 had demonstration and illustration, Tr.2.b had demonstration, illustration and observation; Tr.6 had observation, illustration and demonstration. Tr.3, Tr.5 and Tr.6 were the only ones that named the "whole word" method in their plans. All the lessons had the lesson content as "Reading and Writing" and the competencies to be taught as "reading names of things" (such as soap, salt, pencils, maize, stones, and sand) and "finger spelling". Tr.3 and Tr.4 also indicated matching of words as competencies to be learned. The blackboard illustrations, charts, cards and the use of real objects (for example stones and sand named by Tr.3; buckets, plates, clothes named by Tr.6) were among the materials indicated in the lesson plans, as learning Aids (instructional materials). For all the lesson plans, it was indicated that the learners would sign the words, finger spell and write patterns in their exercise books. Tr.5, for example, indicated in her plan that writing would be initially introduced by writing of patterns of the letter "S" that the pupils would later be led to write in their books. I observed that all other lessons that had earlier been taught by all the teachers had had the same pattern; with Tr.5 consistently naming that she would use the "whole word method".

The lesson observations (observation on use of the methods)

Given that I was anxious to include as much as possible in collecting the data from lesson observation, I chose to use the wide-lens technique and particularly the use of video coverage and anecdotal report, as for Tr.1, who declined to be video recorded. This approach captures the classroom teaching/learning events as they appear with minimal room for bias or influence of the users (Lovel & Wiles, 1975).

Specifically, Tr.1 used the Uganda sign language for the instruction. She energized the class at the start of her lesson by making them jump. While teaching the concept 'birds,' she signed the sign names of birds (the hen, turkey, duck and pigeon). She pointed at the written words on the board and the learners followed/imitated or repeated the same actions. She later finger spelled the words and the learners again followed/imitated her. She spoke very softly and later became fairly audible; but with her mouth forming the words as she spoke. Later she asked the learners to give sign names of objects named and written on the board. She finally wrote the words 'hen', 'turkey' on the board and asked the learners to fingerspell the words. This was done in groups and also individually. Where the learners were not very confident, she again demonstrated, gave examples of birds, illustrated and made further explanations. For every word she taught, she wrote the whole word on the blackboard followed with a sign.

Video captures her picking a small boy who was at the back of the class and apparently uninvolved in the lesson. The boy was later shifted to sit at the front and made to respond to some questions. She introduced the new words as a whole (not broken into phonemes) with the help of drawings of birds. Tr.2.b handled the same lesson as Tr.1, but only the writing aspect, and basically used the same approaches as Tr.1. She exploited the "demonstration" method but with support of the use of sign language. She demonstrated writing letters by writing in space but while turning her back towards the learners; also on the board but within the lines drawn on the board. She at times stood by the learner and together wrote in space or on the desk tops to further help the learner see how the words are shaped. These hand movements and hand positions were intended to help the children see the hand movements involved in forming the letters. Tr.2.b introduced writing by writing patterns using letter "e"; an exercise all children did by first writing the pattern in space and finally in their exercise books.

Tr.3 involved several other techniques and methods. Among these were the use of energizers; signing accompanied by speaking but with a low voice. The teacher matched the drawings with written words on cards, for example the word 'snake' with the drawing of a snake. The learners would then read the

word snake or spell the word snake or give the sign for a snake. She would too write the new words on the board, show their sign name, and ask the pupils to follow/repeat the sign name. As it was done by Tr.2, this was followed by drawing of patterns using letters and finally writing the words using those letters. Tr.2's and Tr.3's methods of teaching writing differed in that Tr.2 demonstrated how to form letters by writing in space and facing the blackboard (helping learners to see how to form the letter shapes); while Tr.3 never demonstrated in space. She went straight to demonstrate on the blackboard how to write letter "S" (with some being called upon to write the letters or patterns on the board) and later a pattern using the letter S, and thereafter writing words that had the letter S, for example 'Sand'. Tr.3 would talk for some time then keep quiet, sign without talking, then again begin talking while signing. As was the case for Tr.1 and Tr.2, Tr.3 taught the words as a whole, with support of the instructional materials such as stones and sand.

Tr.4 employed similar methods to that used by Tr.3. She however exploited flashing the cards and having the learners spell out the words/letters by use of finger spelling and signing and sign names. She also engaged the learners in using their learned experiences/ knowledge by asking for any words that children knew of and that started with letters they were being introduced to, in class. An example was: "*What are other words that start with letter B*"? Tr.4 wrote in space to demonstrate how to form the letters but while facing the children, then on the learner's tables; which was contrary to what her colleague did. Several of the learners in this class had difficulty and took time to get their writing correct, much as she demonstrated how to write patterns on the blackboard. She also had a tendency to hold the learner's hand to assist write the letters correctly. Just as her colleagues, she, too, taught the words and the sentences as a whole.

Tr.5 and Tr.6 had a unique aspect, much as their method was similar to their colleagues' approaches. These two teachers, who also taught in the same school, used sign language as a medium of communication but with limited spoken language. Their lips/mouths would form shapes that would suggest some words but without any sounds being made. They, too, taught the reading and writing of words and sentences as a whole. Tr.6, however, was quite slow in her signing as compared to all the other teachers. As a group, I observed that Tr.1, Tr.3 and Tr.4 used motivation/rewards and energizers to keep the learners focused and learning. They repeated making explanations to ensure that the concepts were understood. There was evidence, too, that teachers were creative and did not use only the same generic methods. Tr. 3, Tr.4 and Tr.5, for example, took to other modes of teaching reading and writing by matching words with cards, pictures, then on blackboard and filling in the missing letters in written out cards. This was not the case for the first lessons observed being taught.

All the 7 teachers exploited their interpersonal relationships with the learners. Interpersonal Relationships is an association between two or more people that may range from fleeting to enduring. This association may be based on several attributes including classroom interactions, or some other type of social commitment. These are usually formed in the context of social, cultural and other influences and are regulated by several factors, too, of which mutual agreement is one (Vygotsky (1978)). If this skill is used by the teachers in the course of their teaching; explaining, demonstrating, showing meaning, describing, introducing new words and the total classroom teaching/learning processes; name it; their teaching could be more productive; as trust between the teachers and the learners becomes dominant.

I observed that signing was critical to all the 6 teachers in teaching reading and writing. What was common to all the teachers except two was using total communication. All the teachers spoke English, as they signed. The spoken English language did not however appear to be connected to the need to lip read, as the teachers did not display any eagerness or moves to make follow up steps required by lip reading that often include observing the mouth, the lips, holding the sound cavity areas and so on. Tr.3 and Tr.5 during the interviews named the use of lip reading, but never actually used it as a method for teaching language. This also leaves a question regarding whether they understood or meant exactly what they thought or said regarding what they named as methods for teaching reading and writing.

In conclusion, the evidence shows that the methodology used (as claimed by the teachers) was similar in most cases but with some variations, following the creativity of the teachers. Critical and common to all the 7 teachers was the use of demonstration; use of signing; delivery in teaching/learning processes while squarely facing the learners (a critical pre-requisite for using sign language); engaging things which were common and within the environment and providing sufficient practical work. Demonstration/illustration was critical and was used by all teachers as a weapon for giving direction, presenting concepts to be learnt and demonstrating expected behavior (learning) performance; on the part of the learner.

The evidence from the interviews indicated that some “methods” were used less but the observations (video recordings) show the use of the same “methods” by all the 7 teachers. Only Tr.1 and Tr.2, during the interviews, reported the use of signing during the teaching /learning sessions; and yet the observations showed that all the teachers were using it. The question to answer is whether this difference is the result of limited knowledge of what a method entails. This was the same even for what was stated regarding helping learners to sign. Tr.1, Tr.2, Tr.2.b, Tr.5 and Tr.6 specifically named

the use of demonstrations and yet all the teachers were using them. Tr.1 and Tr.2 were the only ones who mentioned the need to involve the parents in the teaching learning process. This suggests the limited perception regarding teaching and learning that the teachers had. Evidence has confirmed that parents have an impact on their children's learning (Nikisha, 2010). Children's learning can be shaped as children imitate their parents' language and behavior or through their parents' modeling of positive behavior and engaging of their children in social conversations (Nikisha, 2010).

Several types of materials were used by the teachers for teaching reading and writing. Most of the materials were drawings. Tr.5, for example, used charts, local materials. I inquired to know what she meant by local materials, and she indicated that things found growing naturally in the environment, such as leaves, and objects found, such as stones. She also revealed that they used the ordinary school curriculum. When I probed further, she said: "*the same syllabus*". The school/teachers were using the same syllabus as other primary schools for teaching reading and writing. There was however no evidence of reference to other support/ Supplementary Guides (Adapted curriculum) that had been provided to the schools by the Ministry of Education and Sports. The Adapted Curriculum was specific adaptations of the present ordinary school curriculum, designed to meet the needs of the learners with special learning needs. The guides were designed and developed to support and give an opportunity even to those teachers who had not been trained formally to teach learners with special learning needs to be able to teach these children, when required. This equally pointed fingers at the lack of awareness of the teacher regarding the methods of teaching reading and writing

I also observed several other learning challenges/problems that the teachers grappled with. Tr.5, for example, who taught in a class of three learners operated in the same classroom with another class of hearing children that were many in number and often made some noise throughout their lesson. Much as the teacher did not indicate this as a problem, I found that it was very disruptive as the learners occasionally had to turn her attention to this other class. One particular girl caught my attention as she communicated to the hearing girl in the next class (a class that had the hearing learners) using sign language. I questioned myself whether it was necessary then to have the two classes separated. Their learning space was also confined to some given area in the classroom only. The teacher equally had to selectively use the small blackboard hence seemingly selecting what to write on the blackboard.

The evidence on the video clip also indicates some learning problems the learners were subjected to by the teachers. In connection to the use of the instructional materials, Tr.5, for example, while demonstrating the writing of the letter "S" on the learners' desk, faced the learners; and yet the learners would have been expected to benefit from the shape and direction the hand would follow

while forming the letter. She also asked the learners to learn how to write the letter “S” using the exercise book covers; yet the exercise books had even ruled pages that could have easily and quickly guided the formation of words. It was paradoxical in that she herself was using a ruled blackboard to demonstrate how to write the letter “S”; that she neatly did and kept on asking the learners whether they had seen her example. She later required the learners to write in their exercise books, which had ruled pages but which the learners had not practiced with. This rendered her methods of teaching writing questionable; as this could culminate into the development of poor writing in the learners; slowing the learning process; let alone poor use and maintenance of the book.

Tr.5 did not also appear to be sensitive to the learning needs of her learners. In spite of having only three learners in her class it took her long to realize that one of the three pupils had no writing material (exercise book and pencil). I had to offer a piece of paper from my note book for the girl to do her exercise on. Unlike Tr.5, Tr.6 had a difficulty in the use of the blackboard. She did not rule her blackboard, and when she wrote on it, the letters were not in one straight line. To me this was indirectly teaching the learners that straight lines in writing were not very important. The letters were also not propositional. The letters on the flash boards were instead surprisingly neatly and propositionally written, giving the suspicion that it was written by someone else other than the teacher herself.

Like Tr.5, Tr.6 stood at the front of the class and demonstrated in space how to write the letters; while directly facing the learners. This led to misconception regarding the direction the hand should take while writing the letters/words. The video clip reveals the two boys each earlier demonstrating the shape of letter “S” using different directions- the reverse of each other. The teacher in this case, in spite of having also only three learners, couldn’t identify the differences the learners demonstrated in forming the shape of letter “S”. This wasn’t corrected, too, by the teacher since she did not see it. By looking at his friend’s work, the learner finally got the right direction to use. This too poses questions regarding the teachers’ methodology or concentration in the teaching/learning. One boy (Tr.6’s class) appeared to have little space for writing. He had to tilt his book to the right in order for him to get room to write. This also could affect his learning to write. The teacher either did not see this difficulty or was not sensitive to this need. Tr.2 didn’t, too, write in a straight line (writing started at the bottom and tended to move to the top of the board). Even the proportions of the letters were not followed (see appendix 2, hen, turkey, duck, and pigeon). This was however the reverse with her colleague (Tr.2.b) who took over the lesson and wrote within the lines provided.

The teachers did not appear to be very conscious about the necessary conditions for learning reading and writing; as this was not planned for in all lessons observed. Tr.5, for example, had not ensured that all the three learners, as a pre-requisite for learning to write, had somewhere to do the exercise in. In all cases, it was only eluded to that the teachers knowledge/acquisition of sign language was a relevant pre-requisite for the teachers to be able to teach reading and writing to the deaf. I observed that Tr.6 had similar problems to those of Tr.5 in relation to classroom space available for teaching/learning purposes. The learners shared the same desk, while the teacher, too, and operated in a corner of the classroom. The blackboard, too, was as small as the one earlier used by Tr.5, affecting the room and space to write on- though the teacher herself did not effectively plan the use of her little blackboard. There was for example no space left for other content/reading and writing learning experiences (especially as generated by learners on the blackboard); other than that which was planned to be taught. Unlike their colleagues, Tr.3 and Tr.4 taught in a well-resourced school; hence were not confronted with any significant challenges worth naming.

I observed that the learners were able to read and write during and after the lesson, after they had been taught. I noted that the teachers went round their classes seeing what the learners were writing and providing support (a relevant condition for learning) to the learners who were still on the writing of the patterns. Much as all the learners were able to read the letters and to perform the pattern writing at the end of the lessons, I observed that some of them took some time to be able to read and write. Sustained, selected and individualized support in learning to read and write during the lessons, but with different intensities and levels as regards the learners' abilities, was necessary. Some learners learned reading and writing faster than others.

4.4 Teacher Movements

This theme was specifically designed to contribute to answering the research questions on the conditions for learning to read and write, and what strategies were used in teaching reading and writing to deaf learners.

All the 7 teachers made some movements while in the class. The data reveal that teachers' movement were confined to the front of the class except when providing specific support to individual learners. The teachers looked at the learners directly in the faces and only turned their backs to the class when writing on the blackboard and when demonstrating writing in the space. Occasionally the teachers would move to the learners that had been picked to respond to questions or who were to be picked to

respond to questions. Specifically, Tr.1 was confined to the right hand corner and at the front of the class throughout all her time of teaching. Since her class was small in size, this might have had no impact to the teaching/learning processes. Tr.2, like Tr.2.b, moved all through the class when there was need to attend to learners. Tr.3, on the other hand, was confined only to the right hand corner. Tr.4, Tr.5 and Tr.6 were confined to the front while teaching the whole class, but moved to individual learners later to provide individual help. I observed, however, that whenever the teachers made any movements, they also attempted to maintain some eye contact with the learners they were targeting.

The teachers' movements suggested that they were making attempts to get closer to the children and certainly to make sure they were understood. Their movements were also accompanied by a lot of facial expressions and gestures, a necessary component for sign language.

4.5 Learner Activity

Consideration of the learners' activity was specifically to contribute to answering the research questions on the strategies used for teaching reading and writing; how much time the deaf learners took to learn reading and writing; the problems met in the learning process.

4.5.1 Interviews

There were a number of activities reported by the teachers during the interviews, as those that the learners go through. All of them were however centered on writing in their exercise books, finger spelling and signing (reading), writing in space, imitation/repeating after the teacher and naming of objects. Tr.5 also claimed that the deaf learners would copy the work which was in the local language. Tr.6 reported: "*they read, they write, they act, they demonstrate, they finger spell, they also sign*". Tr.2.b stated: "*Drawing ok like the topic we taught, they can draw these common animals and name them; ok common animals found at home and name them, even they label them...*" Learners' observing what was being taught was also crucial to her. She reported that these were the only activities required to be given to the learners. To her these activities were done after the lesson, and during the lesson she claimed that learners could be asked to write the words she demonstrates, on the blackboard, or even to sign or figure spell words.

4.5.2 Lesson Observations

Activities named by the teachers as those the deaf learners went through during reading and writing lessons, tallied with those observed during the lessons. The data demonstrates that all the teachers engaged the learners in the teaching/learning activities in one way or another. The only variance with what was observed from what the teachers reported was stemming from the activities the learners were involved in that were determined by what was being taught, such as feeling the objects. These were designed either to assist in learning reading or learning writing. Reading activities mostly stemmed from the teaching of the new words. The teachers would, for example, demonstrate or explain the concepts/words, and thereafter ask the learners to either also demonstrate, spell, use the words in sentences or explain the same concepts. The activities to do with writing always followed the reading activities. Likewise these were first demonstrated by the teachers and later followed by the students. The common reading activities I observed being done included sign naming; spelling, matching the words with pictures or sentences with pictures; completing the naming of cards written with missing letters; naming of objects drawn on cards and forming simple sentences using the learned words. The writing activities included writing in space to enable children to appreciate the shapes of letters; writing on the blackboard; drawing; writing letters and patterns in the exercise books and writing simple sentences.

4.6 Setting/Learning Environment

This section was meant to highlight aspects concerning the question on the conditions required or met for teaching reading and writing. The learning environment specifically refers to how each teacher designed/arranged his class in readiness for and during the teaching learning activities. It also had aspects of the space used in the classrooms, seating arrangements, and the movement space. This aspect was very crucial to me, too, as sign language (a language that was used much of the time outside and in the classrooms for communication) is a visual language (Handbook for teachers of Hearing Impaired Children, Uganda, 2011, which also recognizes the use of sign language and the spoken language at the same time in the classroom teaching. These manuals were designed to suit the teaching in inclusive schools). The class and the teacher hence required to be positioned in such a way that they all clearly saw the signs either of them was using.

Evidence from the video clips demonstrates that all the 7 teachers used the same sitting arrangement and patterns. The desks, on which the learners sat, were arranged in rows. There was also space left in

between the rows for teachers' or pupils' movements. On the walls were a number of charts with drawings. All the teachers, when asked about the importance of the charts on walls answered that it was for the children's learning while at their leisure time. Since these charts had equally some labels and writings on them; I concluded that the children were also learning to read by reading the writings/labeling on the charts. This is in agreement with Nikisha (2010) who sees incidental learning as a process in which children gain knowledge from interactions with the environment. To him the learning process lacks the formal structures or objectives but is guided by real word experiences. Education is hence highly self-guided by the students themselves.

4.7 Teacher Perceptions

I had designed this section to contribute the response on questions on how long the deaf learners take to learn reading and writing; the problems faced in the teaching of reading and writing to the deaf learners and to the question on what conditions are necessary for the deaf learners to learn to read and write.

The teachers' perception of the learners is very crucial in guiding the teacher regarding the choice of methods to select/use. The teachers unfortunately had a low opinion regarding the learners with deafness; given that they were qualified by the teachers to be slow learners; not readily able to learn. The teachers all cried out on lack of instructional materials; some of which they could have made themselves using the local available materials (often in the environment-communities). I was tempted to think that the teachers were either not committed to their work (though it would not be possible to have all the teachers not committed) or were just ignorant of what they should have done as creative teachers. Perceptions regarding timing for teaching, reveals that all the teachers were in agreement that these learners took a long time to learn to read and write (slow learners at that); except Tr.2. Tr.1 claimed boldly that the learners took long to pick anything just because of their deafness (disability); save the time allocated for the learning.

The teachers also alluded to various components of conditions relevant for teaching reading and writing to the deaf learners. Tr.2 stated, while responding to a question on how to determine that the learner had understood what was being taught said: *"Ok, when he signs the word correctly, then he finger spells it."* On my probing further she reversed the order to: *"when he can figure spell the word then sign...then sign the word"* To her signing, for example, of the sign names of the birds was what she referred to as signing the words; and that was the exact moment to prove that one had understood

what was being taught, leading to further learning. Tr.3 capitalized on warm up activities before the lesson. She also had raised attention of all the learners before she began teaching and attempted to make sure that each child had fairly sufficient space around herself/himself. Every attempt or response by learners was rewarded with a clap from peers.

The teachers had not seriously taken into consideration relevant conditions for teaching reading and writing. The interview revealed an apparent ignorance of or interest in the subject. On inquiring, for example, about the subject, Tr.5 wondered: "*Conditions like what?*" With my example of 'classroom learning space' as a possible condition, Tr.5 reported that they didn't have enough space. They had P.1, P.3, P.4 and a girl in P.6 in the same classroom. All the teachers would conduct different lessons to their classes, at the same time for example in the same room. She explained: "*You find these ones are seated and may be they are taken up by the other lessons.*" I did, also, experience a lot of interruptions and noise from the other classes of the hearing learners, while following the lessons of my interest. Tr.6 orientation of the subject had a locus on methodology as she said: "*You give short words, e.g. cup, in teaching you bring realia...object and you ask the child to name it, and then sign*".

She claimed this would make the teacher know that the learner was able to read; suggesting that the use and presence of real objects is a relevant condition to trigger learning of reading and writing by the deaf learners. Regarding when the learners began to read and write, all the teachers indicated that there was no specific time. Tr.6 specifically indicated that she had learners with varied ages in her class as she reported: "*Some are at 10, some are at 12; 8 the age is varying*"; and on the age mark when the learners began to read and write she claimed: "*It is a continuous process.*" To her there was need for support to this learner from primary 1 to 7 because it helps the learner even to take external examinations. She also revealed that in their school, reading and writing was only taught from P.1 to P.7 to the deaf and not to other, non-deaf learners. On the programs she followed or had while planning to teach the deaf reading and writing she replied: "*...remedial time-table.*" To her this was the time for patching up gaps where the learners with hearing impairment lost out.

Regarding the curriculum, Tr.6 claimed that she followed the same curriculum used by other ordinary schools, regarding the teaching of reading and writing to pupils. Tr.1 instead claimed that if there was to be any learning of reading and writing, it was dependent on the teacher's ability to explain the words clearly and to convey the right meanings of words; without which the learners would not be able to learn the words. She was emphatic on explaining to the learners the words; using figurative; and where possible accompaniment with the use of real objects. She argued that for any teacher to be able to teach reading and writing, that person should be able to use observation, demonstration and

illustration methods concurrently; as to her these methods went hand in hand. Tr.2 was very sketchy with her response even when provoked further, and indicated that one had only to follow the books and the curriculum. She however, did not name the adapted curriculum guides that were provided to them by the Ministry of Education and Sports. Tr.2.b was in agreement with Tr.2.

To conclude this report on the findings, it will be observed that the discussion (chapter 5) that I proceeded, to was based on the findings; as reported in this chapter.

5 Discussion

5.1 Introduction

The purpose of the study was to investigate into how the deaf learners were being taught to read and write. This study was carried out in special primary schools in Uganda, which enrolled learners who were deaf. The discussion is presented following the themes as presented by the data. This included the methodology, the instructional materials engaged, the setting/learning environment, the teachers' movements and the teacher perceptions of the teaching/learning processes in relation to reading and writing. The learner activity shall be an integral part of the discussion of other themes. The discussion will also take interest in the challenges posed in the teaching of reading and writing to the deaf (as named by the teachers) and the recommendations made.

5.2 Strategies Used by Teachers in Teaching Reading to Deaf Learners

The findings, indicates that teachers use a variety of methods to teach learners who are deaf how to read and write. Among other, they include; demonstrations, illustration, explanation, and sign language. The most common strategies used by teachers were sign language and demonstration. The teacher's approaches relate to what is reported in previous studies (Dominguez, 2009). In spite of their engagement in the teaching/ learning situations, analysis demonstrated that the teachers' understanding of methods was inconsistent. While the majority reported to be using a variety of method as in teaching of reading and writing for learner who are deaf, evidence from observations shows the contrary. Three categories of teachers immerge from this finding. This means that although the teachers were not doing what they were supposed to do, at least some were aware of what methods they aught use while others were not aware and did not do. The educational implication of this finding is that, there is great need to harmonies teacher's conceptual knowledge regarding strategies. This finding is consistent with Perrot's arguments that "method", "technique" and "strategy" were often loosely used by teachers to mean ways of teaching. He observed that these concepts referred to different though related activities.

This study adopted the definition of methods, techniques and strategies as explained by Perrot Saberi, Brown, & Strybel (1995). Perrot ,Saberi, Brown, & Strybel (1995) claimed that concepts He

explained “method” as the way a teacher decided how the students would learn (involving a choice between whether learners will mainly be told, or will largely find out by themselves.) He observed that if the students have to be told, then this culminates into passive methods; while if the learners participate in the learning processes; then teachers are using problem solving methods. Perrot ,Saber, Brown, & Strybel (1995) saw ‘techniques’ as those specific actions and processes through which the teaching method is realized and described a ‘strategy’ as simply the sequencing or ordering of the techniques a teacher has selected to teach the lesson. While discussion and demonstration could be treated as methods in other disciplines, in teaching of language or reading and writing they readily qualify as techniques The context in which the teachers used what they called ‘methods’ qualified them to be more of techniques than what they were thought to be.

The teachers’ limitations on how to tap the potential of other specific strategies/methods in teaching reading and writing was evident in the results. For example, the learners were made to look at pictures, visually explore objects and to read cards or match them. The use of vision appeared to be based on a belief that once the learners saw the materials then they would easily be able to perceive and understand the concepts taught. The importance of visual performance especially in relation to phonological awareness (as a method) was not exploited. Cunningham & Allington (1999) explain phonological awareness as the ability to isolate individual sounds (phonemes) in spoken words. This process facilitates connecting sounds with letters, decoding words and deriving meaning from print. The use of this method is also applicable with the use of sign language (Brunet, 2010), as the Ugandan Sign Language also exhibits variations at the phonological level and mostly in the hand shape parameters, variations of which are mutually intelligible (Lule et al, 2001, in Uganda Sign language Dictionary ,2006). Similarly the learners were made to read or write words without understanding the roots.

Evidence from the observations demonstrates the teachers presented concepts to be learned as a whole word. New words and sentences were either written out on boards, cards, or blackboards and were taught exactly as they were. There was no splitting or subdividing of the words into smaller parts guided by the sounds/phonics or otherwise. Even where the learners were to fill in missing letters, words or sentences, as exercised by Tr.3, Tr.4 and Tr.5, this did not follow any sound patterns or phonemes. Learners were hence expected to sign whole sentences or words and to provide meanings of the words. This method is characteristic of the whole sentence/word approach of teaching reading. Beck & Juel (2002) refers to the whole word approach as a method to teach reading by introducing words to children as a whole unit without analyzing their sub parts. This method involves teaching

children to “sight read words”. This means pronouncing a whole word as a single unit (Mayer, 2003). For the case of the learners who do not hear well enough to benefit fully from spoken language this will require signing the whole word or providing the sign name or signs of the words. Although the teachers used this method, they appeared not to have been aware of it, except for Tr.3 and Tr.4, who said that they were actually using the method. Mayer (2003) further reveals that the whole word approach has been transformed to the whole language approach. The approach involves language being learned as a whole; learned with meaningful and relevant text. This would include reading and writing being handled at the same time. Although the teachers may not have been aware of this development, they all treated reading and writing within one lesson. Probably this was done because the timetable and the curriculum required so. One needs to examine the use of the curriculum in primary school in Uganda.

One may ask what kind of method is more productive or effective for teaching reading and writing to the deaf. Several discussions have already been engaged regarding this issue. Rudolph & Robertson (1995), challenged the use of the whole word approach and advocated for the return to the Phonics methods, but because he lacked evidence his argument has yet to be considered (Beck & Juel, 2002). Rudolph & Robertson (1995) also revealed other educators’ beliefs on the same topic. This included questions on how one would be able to pick parts of the words to help understand the meanings if one was using the whole word approach only. Light (1980) did agree with this and claimed that pronunciation of unfamiliar words would be difficult if one had not been introduced to phonics. Thagard, Hilsmer & Easterbrooks (2011) however claimed that it was productive to use a combination of methods. The whole word approach was limited in amount of words memorized by learners (Price, 2010). Price (2010) believed that a child would proceed to higher levels with only a mere total of 800 words if he was exposed to only the whole word approach; and yet one would be required to have at least a total of 50000 words. He also, noted that if one ignored the sound clues and concentrated on design clues, one ran a risk of frustration and possible developmental dyslexia. This is probably the kind of discussion the NCDC needs to consider engaging in, to reach more effective ways of teaching reading and writing to deaf learners in Uganda; given that it provides for only the whole word/sentence approaches.

The findings as based on observations go beyond the teachers’ methods of teaching reading and writing to the deaf but also suggest some discussion regarding whether the learners who are deaf should learn in segregated settings like it was for these lessons. Tr.5, for example, taught in a classroom whose space was shared by two classes. One class was for the deaf learners and the other

was for the learners who could hear. I wondered why these classes had to be separated, given that there was an indication that the hearing children in the other class appeared to have known and understood sign language; as was demonstrated by the communication in sign language between the deaf learner and the hearing learner, during the lesson. The presence or learning together with their peers who were hearing could have had an added advantage of meaningful interaction, sharing of experiences or direct support in the learning of reading and writing, as alluded to by Krashen (2003), in his discussion of interaction within the context of the theory of acquisition of the second language. Interface was possible given that the learners were already communicating.

Tr.5, appeared to operate at a fairly uninformed knowledge base, regarding the nature of languages. She claimed that she signed in English to the deaf but had them do/copy the work which was in the local language. I found this as somehow confusing to the learners. The English sign language or the English language does have its own structures typically different from any Ugandan local language. The unresolved question of what language to be used by the teacher/ the school in an inclusive setting became paramount. Given that the ministry has prescribed that the local language is used at this level. It was of interest to discover why school/teachers had chosen not to use the Uganda Sign Language. It was evident from observations that there was a mix up on what the teacher called the 'English sign language' and the local language. When I asked for the source of their 'English sign-language' the teacher showed to me the Uganda Sign Language Manual that had been produced by the Ministry of Education, before the Uganda Sign Language dictionary was published. This was an indication of lack of harmony on teaching resources being used on the part of the teacher. It should be appreciated that the Uganda Sign Language dictionaries are not part of the basic text books for primary schools in Uganda an issue that contradicts inclusive education policy. This reflects lack of adequate preparation on part of teacher education and lack of support by the ministry of education and sports.

Limitations on the part of all the seven teachers on what constitutes a method were conspicuous. Given that they named strategies/techniques such as demonstration, explanation, observation, illustration (that give the implementation framework for the general teaching learning approaches) and took them to be methods for teaching reading and writing. Much as they all used the whole word approach/method, in most cases there was a mix up of the concepts. Tr.5 for example recommended the whole word method, look and sign then demonstration. A finding that is consistent with Perrot, Saberi, Brown, & Strybel (1995). However, I need to point out that the Uganda Thematic Curriculum as designed did omit the provision of pre-reading activities which include critical aspects such as listening, speaking, and scribbling and some scaled down reading for both the hearing and learners

who are deaf. This calls for the NCDC's attention to incorporate such aspects as a way of modifying the curriculum for the benefit of learners who are deaf. Concluding on the methodology, I did observe that there was no case of use of cochlear implants.

5.3 Instructional Materials

Instructional Materials are regarded as forms of communication. These materials should be selected and used in a manner that is effective for persons with disabilities and in this case for learners who are deaf (Uttal & DeLoache 2006; Reubell, 2011).

According to the results, teachers used a variety of instructional materials which were mainly including; real objects, chalkboards, classroom furniture, pupil's exercise books, charts and flashcards. Used as a support to the teachers' methods in teaching the deaf learners to read and write were either introduced before the new words were taught or were used during the teaching to convey or consolidate the concepts learned. Although the use of these instructional materials varied in use by the teachers, they presented a similar pattern of use. The materials either represented whole words (cards for example) or were directly used to demonstrate meanings or concepts that were relational in nature. Tr.6, for example, used a bucket, soap and other real objects to explain and teach the concept of washing. The act of washing was practically demonstrated with use of the washing materials. The concept of washing was then taught as a complete word. The learner activity had learners signing words, making sentences using the words. This is characteristic of the Whole word/sentence approach of teaching reading and writing. However, one may question whether all the players are on the same page regarding how to secure effective teaching through instructional materials for teaching reading and writing to the deaf learners. Tr.5, for example, had not checked on all the relevant conditions for learning for her lesson. Evidence from the result shows that, there were isolated cases where some learners were not adequately monitored during teaching/learning process. This has potential impact on how well the learners may master the skills of reading and writing. As indicated in the results, some learner lacked adequate monitoring from their teachers. An example of this scenario is where in one of the classrooms, one of the three learners no writing materials had; suggesting that the teacher did notice that one learner lacked an exercise book and pencil. There is no way a deaf learner, just like all other learners, would have learned how to write without the relevant materials (Good and Brophy, 2003).

Tr. 5 teaching raised a number of other related concerns in connection with methods of lesson evaluation/assessment; developing the lesson; seeing to the whole learning and teaching processes in teaching reading and writing and sensitivity to what was going on in the class. One was also inclined to question her knowledge of the value of instructional materials. A valuable opportunity of a one to one interface (Krashen, 2003) with this very small number of learners with hearing impairment in this class was not exploited. This incidence explained the level of support (a relevant condition for learning) the parents gave to their children while at school. For this particular girl, the parents or her guardians clearly had little concern regarding this girl's education; let alone learning to read and write. They should at least have been able to provide some exercise book to write on; given that an exercise book does not cost a lot to procure in Uganda. Even the poorest person with a family in Uganda should be able to find means of acquiring it. This specific observation on the parent support corroborates with the information provided by the teachers and particularly Htr.1 who emphasized this weakness.

I noted that the teachers appeared to have mixed concepts about instructional materials, save different levels of operation. Tr. 1 and Tr. 2, for example, did not even highlight what they had just used as instructional materials. Much as the teachers could be engaging some materials in either preparation or teaching/learning processes, it appeared they hardly considered them as serious instructional materials. One teacher out of the 7, for example, included curriculum materials, while the blackboard featured more among the materials named. It was interesting to note that no teacher mentioned anything regarding adaptations of or the use of adapted teaching aids. I observed that the instructional materials hence referred to by all the 7 teachers interviewed could equally be used for other ordinary classes (classes for learners without those with hearing impairment); such as charts, drawings, real objects etc. Evidence also reveals that cards, charts (representation of real objects) and the real objects were named commonly used by all the teachers

Evidence, too, suggests that Htr.1's focus on the materials/equipment was fairly misplaced. His understanding/belief on the learning materials was biased towards procured materials. Htr.1 even remarked that they hadn't received any materials from the MoES for long and they had been neglected; creating several challenges/problems in the teaching of reading and writing, as claimed by both the teachers and the head teachers. This apparent attitude and concept of materials for these learners by the head teachers could have resulted into the teachers claiming that they lacked materials. The head teacher is the first supervisor and motivator in any learning process. Htr.2, too, on the other hand was seen to emphasize the need for procured materials, whereas teachers had been trained on

how to make some use of local materials; given that Uganda, like many developing countries, faces a scarcity of resources to meet all the required needs.

5.4 Teacher Movement Patterns

As indicated by the data, the teachers made most of their movements at the front of the class. This only changed when they moved round the class to support individual learners. In general movements served as a technique to support the teachers' method of work. Naturally these movements draw the learner's attention to focus where the teacher is positioned and also indicate to the learners that specific attention is required of them (especially if made towards the learners). Thus it was surprising, then, that Tr.1 and Tr.3 were confined to specific positions. This raises the question of the teachers' understanding of the role of the teacher's movements in class. Much as sign language requires one to squarely be seen by the person being communicated to, this is not tantamount to being fixed to certain positions. On the whole, the teacher movements did not interfere with their signing, an aspect that is critical to the instruction.

5.5 The teacher perceptions of teaching reading and writing

The findings reveal that the teachers' perception of the factors influencing teaching/ learning processes was affected by the nature of their understanding of the learners and the provisions made to support the teaching. This was characterized by the challenges the teachers named, that depicted lack of support services and other relevant tools/ materials to be used by the teachers and the learners. I attributed much of their challenges to their lack of effective training and readiness for the task. Tr.3 went ahead to suggest that the children had a problem with their eyes and that was why they couldn't write correct words. It is not surprising that the teachers and head teachers except Tr.2 claimed that most of the pupils were slow learners and hence limited the kind of "methods" they used for teaching reading and writing. Tr. 2's response was unique and informing. This too demonstrated the attitude of the teachers towards their learners and also their inability to appreciate the learners' learning challenges; save the ability to use and having the knowledge of which methods to use for such learners.

This claim does not reflect the normal curve (expected of any group of performers), where the majority of learners would be expected to fall at the centre of the normal curve (Normal Curve, 2011).

Naturally this raises suspicions on the teachers' methods, as a majority of the children cannot be expected to be slow learners. The learners' activities in this lesson involved spelling, writing and reading of the new words. The evidence demonstrated by the video clips did show that in all cases (lessons) the learners were able to read and write what was expected of them by the teachers during the lesson, and after being taught; defeating the argument that these pupils were slow learners. I interpreted the teachers' classroom experiences to explain that the learning just didn't occur at a go or at once for all learners. Continuous, sustained or selected or individualized support in learning to read and write was critical but with different intensities and levels as regards the learners' abilities. Some learners certainly learned reading and writing faster than others. To conclude, the evidence clearly reveals that both the teachers' and the head teachers' perceptions and methods of teaching were wanting. The teachers needed to appreciate that the deaf and hearing children don't necessarily learn same way - diversity with deaf children is a reality (Marschark, 2006).

Results revealed lack of supervision in some schools as Htr.2 equally joined in the lamenting regarding the lack of the required materials to support the teaching learning, and yet the data revealed that school had a variety of effective teacher-made teaching/learning materials such as hand written charts, drawings among others. One may wonder to what extent these head teachers were familiar with the activities in the classrooms. Head teachers are the engines of any meaningful school output. Reubell (2011) observed that head teachers are safeguards to learners; while Lutchmun (2011) sees the head teachers as the most senior teachers in the school. The head teachers are the leaders and supervisors of the school; let alone teachers in their own capacity. Lutchmun (2011) noted that head teachers should naturally have excellent teaching skills yet in this study, results indicate that more effort need to be put in the training of teachers in order to have gain excellence. Grima. (2007) sums it up by claiming that the head teachers need to have a vision of where they're taking the school, based on their understanding of the issues involved. He should also offers advice on teaching skills and classroom strategies. This call for another look at the head teachers' qualification in Uganda as all the results of this study revealed that all the head teacher of the schools where the study was conducted head not head a formal training in special need education. Conclusively, the study revealed lack of enough instructional materials despite the teacher's initiative of improvising of materials.

Berke's (2009) observations on challenges met by the teachers of the deaf or hard of hearing were also true for this particular study. Parents were reported to be preoccupied with ensuring that the basic needs; such as food and shelter; for the family survival were met; rendering learning of sign language difficult. This situation is predominant for most families where these deaf learners come from, in

Uganda. Teachers often learned sign language or improved their sign language while at school (through teaching the deaf learners). In most cases such teachers would be offered short courses to update their signing skills. Evidence has confirmed that parents have an impact on their children's learning (Davis, 1997). Learner's learning can be shaped as children imitate their parents' language and behavior or through their parents' modeling of positive behavior and engaging of their children in social conversations (Thompson, 2010).

5.6 Learner Activity

As observed in the data, the teachers were conscious about participatory learning. The learners were engaged in a number of activities that led to the practice and learning of reading and writing. Most of the activities called for both the teacher's and pupils' involvement and were directly related to learning to read and write, providing an opening for language accessibility and hence language acquisition (Briggle, 2005, Marschark, 2001). This would enable structuring of teaching and learning (Ramsey, 1997). I however did observe that the teachers hardly exploited the presence of other learners in the class. All through the learners got involved in individual learning activities other than group or even pair and share methods; as would be productive for language learning (Krashen, 2003). Vygotsky's (1978) reminds us that the children's ability to learn depends on external supports. He observed that the learning processes could only happen when the learner is interacting with people in his environment and in cooperation with his peers.

5.7 Learning Settings/Environment

As indicated in the results chapter, the seating arrangement in these classes all had the traditional patterns where the learners sat in rows, while facing the teacher. While this was suitable for the teachers' communication to the learners (Uganda Sign Language Dictionary, 2007), It was apparent that this setting could have been altered to encourage a more interactive atmosphere during the exercises (Krashen, 2003). Those who sat in different rows had limited visual access to each other's utterances let alone the facial expressions and the signing. It however appeared to that the teachers were not conscious enough of the need to plan for the learning environment to promote or enhance the learning of reading and writing. What teachers planned and used for all lessons were the instructional materials. Other aspects of the settings or environment such as writing space for both the teachers and learners; ascertaining the availability of the pre-reading and writing skills before engaging the learners in the reading and writing activities; looked out of reach of the teachers approaches. For examples

observation data showed that one teacher (Tr.1), who could not use the blackboard effectively, while another teacher (Tr.5), who gave out a writing exercise without first ascertaining that all the learners had the writing materials or other learners' readiness attributes. Such attributes would for example include ability to scribble, to sign/ sign the alphabet or have fingers that were not rigid (that would hamper signing). As data earlier indicated that one teacher (Tr.3) gave some basic hand exercises, though it was not readily clear whether it was for relaxing the hands or for keeping the class alert and ready for the lesson.

6 Conclusion

The aim of study was to understand how reading and writing was being taught to the deaf learners in Uganda with an aim to generate information that could be used to modify existing practices for the benefit of such learners to the optimum from their schooling (given that the Uganda National Examination Board (UNEB, 2006-2010) reported that their performance has continued to be very low). The Examiners too believed that their poor performance was related to their proficiency in reading and writing levels. To understand this, the main question that drove the study was: “How are reading and writing taught to deaf? The sub-questions were “What are the strategies used in teaching reading and writing to deaf learners?”

“What are the problems met during teaching and learning to read and write,” “At what level in life does a deaf learner begin to read and write?”, and “How are the conditions for learning to read and write, when teaching deaf learners?”

This was a qualitative study based on observations and interview with 7 teachers and 3 head teachers. I was sensitive to all responses received during the interviews and reported all the responses as they were provided. Data collected through the 7 video recordings were treated with comprehension and categorized. Regarding the question on strategies for teaching reading and writing, my findings indicated that the teachers taught reading and writing within the means and resources at their disposal. Much as these schools had some differences in levels of resourcing and location (urban verses rural), their methodology and understanding of the teaching of reading and writing to the deaf were typical of one another. Findings indicated that the teaching of reading and writing to the deaf followed the whole word/sentence approach. They also heavily relied on the instructional materials at their disposal during the teaching/learning processes. The teachers all equally used several approaches to teach deaf learners. These included a combination of the approaches in teaching the deaf; of oral approaches; signing/ using sign language; but with insignificant use of the contemporary approaches. Lip reading was also named used by one teacher but was however not actually followed during the observed lesson time.

Based on the findings, the teachers did not either pay critical attention to the methods themselves or lacked comprehensive facts of what constituted the methods for teaching reading and writing (let alone their use); as portrayed by the interviews and the observations/recordings. The teachers named all that they did and presented these actions; such as demonstrating, illustrating, observation as

methods- though three of them also mentioned the whole word as a method. The head teachers provided supervisory support within their perceptions. Findings also demonstrated the understanding of instructional materials used for teaching, by the teachers, as wanting. Much as they had so many instructional material that they had made, they still cried out that lack of instructional materials was one of the challenges. The enthusiasm of the teachers and the head teachers was however a great strength and opportunity for improvement in methods of teaching reading and writing to the deaf.

The main problems/challenges met during the teaching of reading and writing shuttled between the parent support, teachers perception of the learners and the teaching learning context, the limited support from key support providers such as the Ministry of Education and Sports as perceived by the teachers and the head teachers and the key supervisors (head teachers) themselves. To alleviate the concerns of teachers and head teachers, in an attempt to improve the performance of learners who are deaf; let alone improve the teaching of reading and writing. One needed a holistic approach that specifically had the parents, guardians, service providers such as teachers and the MoES officials to interface their support at various levels. Other key players in the education of the deaf needed, such as the NCDC, the UNEB and PTCs (where teachers for primary schools are trained) needed to be brought on board.

The attitude of the parents regarding supporting their children to learn to read and write, for example, required to be attended to, given the lack of interest and commitment on their part; as reported particularly by the head teachers. The findings revealed that the parents had very limited inputs and in most cases were reported to lack in supporting their deaf children to learn. One could too argue that the parents or the guardians may just not see that value in educating these deaf learners. Most homes in Uganda take their children to school as an investment. On completion of schooling and attaining some job, one is expected to provide for the family or support his/her sisters or brothers too; through the same or similar systems. It would be hard for some families to believe that investing in such learners could yield the same or similar dividends. Regarding teachers and challenges, I did conclude that much as there was considerable effort on the part of teachers to teach reading and writing to deaf learners, it was clear to me that there was need to revisit the programs and methodologies regularly (including understanding the learners); which looked was not the case then. This would involve interface with the parents given that the children at certain times of the year also stayed with their parents (for those in boarding schools) while those in day schools spent much of the time with parents. Similarly the head teachers needed to be more pro-active. Much as they demonstrated

commitment in the education for the deaf learners it was not sufficient to bank all the hopes on Government for instructional and other support materials as was demonstrated by the evidence.

Findings also revealed that the teachers were not very certain regarding when learners began to read and write. They were all in agreement that the learners who were deaf took long to understand what they were taught, including in reading and writing; and that they were actually slow learners (an aspect they indicated as one of the challenges they encounter while teaching reading and writing to the deaf). My findings, however, did demonstrate that the learners were actually able to read and write even during the lessons, after their being taught to. This demonstrated that much as the teachers had basic knowledge, skills and the will to teach reading and writing, they needed more support in understanding their learners and their learning patterns save for the methodology of teaching reading and writing. They needed some instructional support in appreciating further the conditions necessary for teaching reading and writing, and particularly the pre-requisites for teaching reading and writing (pre-reading and pre-writing skills being part). Other relevant classroom or lesson delivery modes were crucial to consider.

6.1 Recommendations

The study set to find out how reading and writing was taught to the deaf learners. Apart from the main findings of the study, other related concerns that affect the teaching/learning processes, and that require attention, got revealed. Since it shall not be possible to address all of them, specific ones with related recommendations shall be highlighted and as follows:

Methods of teaching

- 1) All the teachers observed teaching had been trained at Kyambogo University either at Certificate or Diploma level. There is need to investigate into the methodologies provided to students for teaching reading and writing for learners who are deaf.
- 2) Further in-service refresher courses should be organized by the MoES regarding re-training in the area of teaching reading and writing to the deaf. There is a need to consider other areas of special learning needs. Supervisors (head teachers and the Inspectors of schools) need to attend these courses.

- 3) Kyambogo University, the main University providing courses in SNE should spearhead further researches on education for the deaf; regarding reading and writing for learners who are deaf and those who are hard of hearing. .
- 4) A comparison between the ways the teachers who are hearing impaired teach the learners who are deaf and that of the teachers who are not hearing impaired should be studied further. This could take interest of the observation from the data that the hearing impaired teacher was comfortable with the time allocation while the others were not.
- 5) There is need for consistence in the teaching of reading and writing to learners who are deaf. For example, it was not clear if the learners in this study followed one teacher who suddenly changed from using signs and spoken language to using only signs for instruction (teaching/learning purposes).

Parent Attitude

Both the teachers and the head teachers were very concerned about the nature and the low level, if not absence of parents' support regarding the education of their children. Head teachers complained of negligence on the part of parents. There is need to have an in-depth study on the role played by parents of the learners with special learning needs potentially those whose children are deaf.

Managers

There was an outcry from the Head teachers that the MoES was not providing sufficiently for management of the curriculum, as regards the instructional materials. There will be need for the MoES to be debriefed about the findings of this study. The Ministry Headquarters should consider reviewing its supervisory support to teachers and support to schools. Likewise, since Uganda is running a decentralized system of Governance, where primary education is seconded to the local Governments, there is also need to interface with the Local Governments, as regards their support to schools.

6.2 Reflections

Much as the study was conducted to find out how deaf learners were taught to read and write, it has given me the opportunity to reflect on the whole SNE provision in Uganda; given that the head teachers often lamented on lack of support from the relevant organizations. One of the classes in one of the schools was conducted in some closed corner. Introducing services or programs, especially to the poor in Uganda as a country, has to be handled with a lot of caution. One has to be even more cautious if the subject of concern is considered to be among those not prioritize, special needs education having been one of them. One doesn't have to start programs or import them from other countries just because they have been implemented successfully in other countries. One needs to study the context of given environments, examine the cultures to be interfaced with and gauge possible and relevant possibilities. The methods of teaching language at the Primary school level, for example, has each time been changed following guidance of expert rates but only to revert to the original dropped practices. The teaching of reading and writing in the past emphasized the use of syllables and phonemes but later was replaced by the whole word approaches. The on-go discussion is now again on reverting to the use of the phonemes and syllabic modes of teaching reading and writing. These drastic changes call for respect for research endeavors.

Uganda has now a nationally recognized Sign language. The Uganda Constitution requires that the Uganda Sign language should be developed and used as any other recognized languages (Constitution of the Republic of Uganda, 1995). Discussions should, now be centered on the untapped potential of Uganda sign language, as a language for learning for deaf children - within a bimodal bilingual teaching approach. Given that the teachers' statements witness a lack of adequate understanding of the uniqueness of the Uganda sign language. My observation, also, is that Uganda has very good written and comprehensive policies that examine all facets of education provisions and that would effectively provide for the learners with special learning needs. The huddle is in the implementation of these policies. These policies cover all aspects of the provisions including Universal Primary, Secondary Education and Government sponsorship at the University level for 4000 students who perform best at A-Level. To provide more effective services in SNE and in this case education of learners who are deaf, there needs to be a concerted effort by all concerned players.

The study is a start to see the short comings, it does not give the final answer, more studies on the same study in Uganda and other countries need to be conducted to come out with more comprehensive conclusions.

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Appendix 1: Guiding Question for Interviews

1. How much time do you use per lesson?
2. What is the language background of children you teach i.e. first language?
3. What language did the deaf children have before they came to school?
4. What language do you use when teaching the children with deafness?
5. How do they learn to read and in what language?
6. What materials, equipment etc. do you use when you are teaching to read and write?
7. How do you decide on what they should learn and what programs do they follow?
8. What specific methods do you use for teaching reading and writing to the deaf children?
9. What challenges do you meet teaching reading and writing?
10. How do you know a child has learnt to read and write?
11. What time in life do the deaf learners begin to read and write?
12. At which level do you begin to teach the deaf child to read and write?
13. What are the conditions that enhance the reading and writing ability for deaf learners?
14. What contribution do the parents provide for reading and writing to the learners?

Guiding questions for Head Teachers

1. What kind of materials do you give to your teachers for teaching reading and writing?
2. What programs do you follow in your school (curriculum)?
3. What language do the teachers use for instruction?
4. How do the children communicate to/with the teachers and their peers?
5. Who provides the material/equipment that is used for teaching reading and writing?

Appendix 2:

Introduction Letter From Universitetet I Oslo



UNIVERSITY
OF OSLO

Department of Special Needs Education

P.O.Box 1140, Blindern
N-0318 Oslo
NORWAY

Your ref:
Our ref: 03/10 SW/db
Contact person: Denese Brittain d.a.brittain@isp.uio.no

Visiting address:
Helga Eng's Building
3rd and 4th floor

Date: June 2, 2010

Telephone: + 47 22 85 80 59
Telefax: + 47 22 85 80 21

FACULTY OF EDUCATION

TO WHOM IT MAY CONCERN:

This is to certify that **SIIMA BAITWABUSA, Sheilla Annette**, date of birth 12.12.1975, is a full-time student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Master of Philosophy in Special Needs Education (M. Phil. SNE).

This is a continuous two-year programme run on the "sandwich" principle, which involves periods of study and field work/research in both Norway and the home country. The student is currently in the second semester of the initial study period in Norway and will be working on the collection of data and the writing of a thesis during the autumn semester 2010. This involves a period of field work in Uganda from 1 July to 31 December 2010. The student will then return to Norway for the final part of the degree. The period of study will be completed at the end of May 2011.

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

Yours sincerely

Ass. Professor Siri Wormnæs
Academic Head of International Master's Programme
Department of Special Needs Education

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

Institutt for spesialpedagogikk
Det utdanningsvitenskapelige fakultet
Universitetet i Oslo
Norge

Appendix 3: Research Authorisation NSD

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Handil Håberges gate 29
05-0207 Bergen
Bunøy
tlf: +47 55 58 21 12
fax: +47 55 58 96 56
nsl@nsl.no
www.nsl.no
Org nr. 505 323 084

Arnfinn Muruvik Vonen
Institutt for spesialpedagogikk
Universitetet i Oslo
Postboks 1140 Blindern
0318 OSLO

Vår dato: 02.02.2011

Vår ref: 24746 / 2 / LMR

Deres dato:

Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 25.06.2010. All nødvendig informasjon om prosjektet forelå i sin helhet 31.01.2011. Meldingen gjelder prosjektet:

24746	<i>The Teaching of Reading and Writing to Deaf Learners in Primary Schools in Uganda</i>
Behandlingsansvarlig	Universitetet i Oslo, ved institusjonens overste leder
Daglig ansvarlig	Arnfinn Muruvik Vonen
Student	Annette Sheila-Siima Bairwabusa

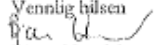
Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsl.no/personvern/forsk_stud/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsl.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 31.05.2011, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Bjørn Henriksen


Linn-Merethe Rød

Kontaktperson: Linn-Merethe Rød tlf: 55 58 89 11
Vedlegg: Prosjektvurdering
Kopi: Annette Sheila-Siima Bairwabusa, Olav M. Trolviks vei 10, 0864 OSLO

Ansvarlig leder / Director Office

NSD: 0501 Universitetet i Oslo, Postboks 1045 Blindern, 0316 Oslo. Tlf: +47 22 85 52 31. nsl@nsl.no
NSD/BIRJA: 0501 Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tlf: +47 73 50 19 07. lsm@nsl.no
NSD/SIS: 1501 Høgskolen i Sørøst-Norge, 3037 Stovsund. Tlf: +47 77 64 14 34. nsl@hio.no

Appendix 4: Letter of Permission from Ministry of Education and Sports Uganda

Telegram: "EDUCATION"
Telephone 234451/8
Fax: 234920



Ministry of Education & Sports
Embassy House
P.O. Box 7063
Kampala, Uganda

In any correspondence on
this subject please quote No ADM/263/298/01

28th June, 2010

The Director of Education,
City Council Schools.

Re: MS SIIMA ANNETE BAITWABUSA

I do make reference to the above. The purpose of this letter is to:-

- Introduce to you Siima Annette Baitwabusa, one of our Special Needs Education Teachers, who is pursuing her Masters in Special Needs Education at Oslo University, Norway.
- Observe that Siima is back for her Research which is to be conducted in six months time.
- Indicate to you that she has the Ministry (MoES) authority to conduct the research.
- Request you to accord her all the relevant support she may require.

NB: Choices of schools shall be dictated by the Topic.
Some adjustments could however be made as the experiences may dictate.


Omagor Loican Martin
For: **PERMANENT SECRETARY**
Special Commissioner for
Special Needs Education & Career Guidance
MINISTRY OF EDUCATION & SPORTS

cc District Inspector of Schools - Kampala
Headteachers

Appendix 5:

Request to Conduct Research in Schools

Goodwill Special Needs Demonstration Academy

P.O. Box 113,

Kyambogo

Dear Sir/Madam,

RE: PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

I send you greetings and thank you for the work you are doing for the country. I am currently a Master's degree student at the University of Oslo, Norway. I am required to do research as part of my course. My research problem is on teaching reading and writing to deaf learners in primary schools in Uganda. The research design is a case study and the samples are purposefully selected. Only one head teacher, two teachers, two parents and two learners in a selected school will be expected to participate in the study. Observations and interviews will be conducted by the researcher. All information provided and obtained will be treated with utmost confidentiality.

The purpose of this letter therefore, is to request for permission to collect data from teachers, learners, parents and headteachers. Your grant of permission will be highly appreciated.

Yours Faithfully,

Siima Sheilla Baitwabusa Annette

