

**TEACHER'S USE OF COMMUNICATION MODES TO ENHANCE SOCIAL  
INTERACTION FOR LEARNERS WITH DEAFBLINDNESS IN AN INCLUSIVE  
SETTING: A CASE STUDY AT KILIMANI PRIMARY, NAIROBI KENYA**

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**A RESEARCH REPORT SUBMITTED TO THE FACULTY OF SPECIAL NEEDS AND  
REHABILITATION IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE  
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## **DECLARATION**

I **BETTY JEPKOECH CHESIRE** Student's No. 15/X/15950/GMSN/PE, hereby declare that this report is my own original work and not a duplication of any scholar for academic purposes. It has not been submitted to any other institution of higher learning, for the award of certificate, Diploma nor Degree.

I further declare that all materials cited in this paper which are not my own have been duly acknowledged.

Name; Betty Jepkoech Chesire..... Signature..... Date.....

## **APPROVAL**

This is to acknowledge that this research dissertation entitled “Teacher’s use of communication modes to enhance social interaction for learners with deafblindness in an inclusive setting: : a case of a case study at Kilimani Primary, Nairobi Kenya” is submitted with approval of the undersigned research supervisors.

Supervisors;

1. Name; Dr. Vicent Paul Ojwang

Signature.....Date.....

2. Name: Dr. Stackus Okwaput

Signature.....Date.....

## **DEDICATION**

I dedicate my work to my son Calvin and daughter Eleanor, for their support while I was away. I owe you a lot.

## **ACKNOWLEDGEMENT**

I am grateful to everybody who provided me with both personal and professional support to accomplish my project. Sincere appreciation goes to my sponsors (NORHED) through the regional coordinator Dr. Stackus, who made sure that the course was running smoothly without any interruptions in terms of finance. Dr. Ojwang, patiently and whole heartedly guided me through during the write up of this project. Dr. Ojok whose input was immerse, to help me gain momentum to achieve the goal in the project.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

CBM	-Christ offelblinden mission
CBC	-Competence Based Curriculum
CWD	-Children with Deafblindness
GBU	- Ghana blind Union
ILO	-International Labour Organization
IDEA	- Individual with Disabilities Education Act
LWDB	- Learners with deafblindness
MOE	- Ministry of Education
MSI	-Multi-Sensory Impairment
NCDB	- National Centre on Deaf-blindness
NIMH	-National Institute for the Mentally Handicapped
PWD	- Persons with Disability
SI	- Sense International
SNE	- Special needs education
UNESCO	-United Educational, Scientific and Cultural Organization
URT	-United Republic of Tanzania

## **ABSTRACT**

**The purpose of the study was to investigate teacher's use of communication modes to enhance social interaction for learners with deafblindness in an inclusive setting. The study was guided by the following objectives; to find out modes of communication and social interaction in an inclusive classroom, to determine the challenges learners with deafblindness (LWDB) encounter during interaction with the typical peers in an inclusive classroom and to find out the innovative strategies the teachers apply to improve communication and social interaction on(LWDB) in an inclusive classrooms. The researcher hoped that the study was able to benefit all the stakeholders concerned to support the (LWDB), to fit in the inclusive setting. The study focused Kilimani primary school in Nairobi, Kenya as a case study, where inclusion of children with deafblindness takes place in Kenya; The research design used in the study was qualitative approach. The researcher chose to use semi structured interviews and observation methods. The research paradigm used was constructivism. The study was a case study therefore the population was of a small number. The total Number of participants were nine (9); being seven (7) teachers who were specialized in the area of deafblindness and two (2) (LWDB), who were the only (LWDB) in the inclusive setting in public primary schools in the whole of Kenya. The sampling technique used was purposive sampling technique. The methods of data collection were two; (i) interviewing trained teachers in the area of deafblindness using prepared teachers interview guides and interviewing (LWDB) using interview learners' guides, (ii) Using an observation guide for the same (LWDB). During the data analysis, the researcher employed a thematic analysis system where the objectives that guided the study were used. She presented findings and interpretations using bar graphs where possible and then discussions. Later, she summarized, concluded and gave her recommendations of the study on mode of communication and social interaction on (LWDB) in an inclusive setting.**

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 The Background of the Study**

This section covers the background of the study, statement of the problem, objectives and research problems, the significance of the study, the scope of the study, limitations and definitions of terms. Deafblindness is a condition in which a person has both sight and hearing impairments. Some of these people may be totally blind, while others may have limited useful vision. At the same time, they may be deaf or hard of hearing (with some hearing), (Deafblindness can also be defined as a condition comprising the dual impairments of vision and hearing to a more or less severe degree. It hinders communication with others, access information and movement around their environment. When the individual has usable residual vision or hearing, neither of the senses can be used as a main source of information access. According to the World Federation of the Deafblind [WFDB] (2018) report, at least 0.2% of the world's population are with deafblindness, of whom; 40% live in poor economic conditions, 30% are less likely to be employed compared to people with other types of disabilities, children with deafblindness are 17 times less likely to be in school and between 20-75% of persons with deafblindness have other disabilities. Duquette, (2012) observes that deafblindness is a rare condition as 1 in 3000 Canadians is deafblind. Given the many handicaps associated with deafblindness, people with deafblind are 'left behind' contrary to the underpinning principle in the Sustainable Development Goals (SDGs).

History of deafblindness can be traced as far as early as 1880's when Hellen Keller was born and later tormented by sickness which left her sightless and deaf. Her lecturer Ann Sullivan aided her to create remarkable development with her talent to communicate, until she became the first Graduate student from Redcliff College, USA. As an adult, she fought for the rights of the

people who are blind. Currently, many individuals with deafblindness are teachers, program administrators, and business men and women (Morningstar, Kurth, & Johnson, 2017).

National Institute for the Mentally Handicapped [NIMH], (2003), noted that; visualization plus hearing are sanities that connect the person to theecosphere past his own body and individual space. It is over these intellects that children learn the most about the world and are able to develop a social relationship. However, (Miles & M, 1999) stated that somebody who is deafblind cannot either heed to or read a symbolic language of somebody talking or ratifying to him/her at a far place. He/she can't see whatever other persons are undertaking, overhear chats, or spot with precision in the environment near him/her since deaf-blindness relentlessly confines the chance for an individual to have interaction with persons and stuff in the surroundings.

Passage of information occurs when one individual sends communication to another individual both verbally and non- verbal (National Autistic society, 2016). Communication allows us to express our wants, wishes, obtain, deliver facts and most importantly, build and sustain a relationship with friends (Heward, 2014). The passing of information is critical for social interaction and friendship; however,the absence of communication structure can extensively quarantine a child who is deafblind, especially in an inclusive learning environment (Stremel&Bixel, 2002). Deafblind individuals are both authentically speckled in their statement requirements due to variations in the degree, type, and ancient of their mental deficiencies, (Hersh, 2013).

Regardless of the severity of the condition, the combined effect of deafblindness is disabling especially for learning. First communication with a person with deafblindness can be challenging for the immediate family members, and this can be a real complex issue when the child begins

schooling, especially in an inclusive setting where most learners are typically developing children (Dammeyer, & Ask, 2016). Varying severity of the condition implies that different modes of communication be used to get information across to the person with deafblind and trigger appropriate response from them. Teachers of learners with deafblind in inclusive setting should be apply innovative communication strategies that would help promote the social interaction within this setting. Failure to apply appropriate communication modes may increase mobility challenges for these children as they grow up, increased isolation and dependence (Dammeyer, & Ask, 2016).

People who come into contact with learners who are deafblind might not be conversant with their communication skills and their characteristics. This shows how deafblind teenagers have often continued to be referred to as the highest difficult set of youngsters to educate, as they regularly participate in stereotypic conducts that obstruct with education and communication (Hartshorne,& Schmittl, 2016).). Therefore, their enlightening plan, need to be carefully plan to discourse their unique impairments and their regions of attention (Miles, 2008). The above shows as a proof that communication in an inclusive setting is necessary to bring together all learners and teachers aiming to interact and understand one another.

Modes of communications are simply styles or methods used by learners who are deafblind to express or receive rehabilitation services in order to improve their communication and social interaction skills. The characteristics of these modes of communication, their characteristics, acquisition and use by both teachers and learners with deafblindness in an inclusive classroom is critical for learning and enhanced social interaction (Dammeyer, & Ask, 2016). Several people who are deafblind or poses multi-sensory deficiencies use more than one mode of communication (Kyzar, Brady, Summers, Haines, & Turnbull, 2016). A number of modes of

communication exist which can be used singly or in combination as suggested by (Duquette, 2012), are as follows; Voice amplification system, labial reading, tactile speech reading (Tadoma method), sign language, finger spelling, print- on- palm and writing. One other is reference-to-object systems with the representation of an object for purposes of description, anticipation or reminder, communication board, pointing and technical aids.

According to Damen, Janssen, Ruijsenaars, and Schuengel, (2015), appropriate use of one or combination of communication style with a person with deafblind is intricately related engaging in social activities with other people regardless of the disability. For a teacher in inclusive education setting, the choice of a given or combination of communication modes should be done in a manner that makes and conveys succinct meanings to the child and motivate them to contribute in meaning-making regardless of their impairment. The appropriate style of communication with children with deafblindness should be based on igniting social-cognitive and symbolic understanding as a learning framework (Hartmann,&Weismer, 2016). Deman et al., (2015) also concurs that developing and nurturing communication and interpersonal skills for persons with deafblind requires stimulation of development and social-cognitive approaches with a current set of principle applicable in inclusive education environment.

Social relations can be stated to be a practice in which dualistic persons mutually inspire respective acts (Janseen&Rodbroe, 2007). It is a way in which individuals speak and perform with others. It might include the interfaces for example household and establishments that are made out of the prerequisite to construct order inside the communication itself (WHO, 2011). Non-verbal passage of information is an essential constituent of social relations for children. As teenagers play and study together, then they start to recognize emotions articulated through facial jargons and body linguistic. Friendships are built through regular social interactions;

therefore, directed social relations are useful in building bonds which are essential in building assurance and self-regard (South Shore Children's Centre, 2017).

Inclusive education is a program that has seen many countries bring together learners with different special needs to learn together with regular peers in the mainstream. It secures opportunities for students with disabilities to study together with their normal nobles in common learning lecture hall and when learners with incapacities are educated near the surrounding schools, they develop to be a portion of their native public (Konza, 2008).

According to UN resolution on the right of individuals with disability (CRPD), Commentary 24 clause 3(c), the Learning of people, and in specific children that are visionless, unresponsive that is deafblind, is conveyed in the best appropriate dialects, modes and mediums of messaging for the people, and in the surroundings which exploits academic and cultural improvement (Leonard Cheshire Disability, 2008). CRPD identifies the fundamental right of entire youngsters with infirmities to be included either in the overall education channels to receive the persons support they need (WHO, 2011). (LWD) are not excluded in the above statement, however, in the regular classrooms, learners who are deafblind find themselves being taught by teachers who may or may not have been specialized in the area of deafblindness. The peers too may not be socially interactive, due to communication barriers.

In the American context, particularly the USA, National Center for the deafblind 2008 cited in (Miles, 2008) states that; by the fact that it has remained possible to total them, we have over 10,000 children (age from time of delivery up to 22 years), who have been classified as deaf-blind. These children symbolize some of the bottommost occurrences yet a best varied group of students getting early mediation and special teaching amenities. There exist enormously diverse

clusters whose sensory fatalities are frequently supplemented by additional physical or rational infirmities, multiple medical requirements, and conduct challenges (NCDB 2017). Interactive and emotional complications frequently complement deafblindness and they happen to be the natural results of the children's or adult's failure to comprehend and communicate.

Popularly in the UK, the dominance rates projected in the reports and survey population statistics show that there are around 358,000 persons who are deafblind. In the analysis document, 21,000 children were recognized to have undergone some extent of vision and hearing problems. Under this cluster, however, we had 4,000 youngsters recognized as having a substantial hearing and sight impairments. This is partaken to be the set therefore who need specialist help and tactics to school, learning and creating independence (Aitken,Buultjens, Clerk, & Eyre, 2000). Although, IDEA requires that all students regardless of ability should have access to the same curriculum and that their progress should be assessed on the same academic standards, the result in the curriculum, lacked meaning for students with severe disabilities (Heward, 2014).

In Romania Europe, (Basilova, 2017) confirmed that deafblind was legalized in 2006. However, the government had few resources to spare for them because 65% of her population is under the poverty line. Currently, only 3% of the deafblind population receives help from the government through creation of enabling environment to participate in education Many children were misdiagnosed and hidden away in bleak institutions. After several efforts of advocacy, Romanian Education act was stipulated as follows; children with deafblind/MSI ought to be taught in lessons of utmost four pupils, developments of the National Education Curriculum were to be coordinated and to ensure that deafblind/MSI children continue to get suitable education in institutions and raise the group of professional instructors for deafblind/MSI children.

Logic Global located in Peru, Latin America dating back from 1995. They advocated helping children and young adults with deafblind to stay, learn, flourish lead an independent life. In essence to study how to converse and partake out everyday living chores and also to cultivate training deeds for specialists. They opened four sensory stimulation rooms where the deafblind can make use of adaptive technology(LWD) are now recognized. A guide, interpreters' services exist to support deafblind people and also to train teachers for learners with deafblindness for inclusive education (Alias &Salleh, 2017).

In Asia with special reference to India, Sense International effort with 45 companion organizations and the administration in 21 Counties provided facilities to nearly 49,000 deafblind individuals. They convinced the Department of Human Resource Enlargement to comprise deafblind / MSI youngsters in primary faculties both at national and district level. Their array of services comprises initial intervention amenities in hospitals, comprehensive and special learning, and occupational training (Cekada, 2010).

At the same time Sense International, joined forces with Dakha Based Centre for disability development to create, Bangladeshfirst ever program service for (CWD). They set up deafblind services in different locations and districts and introduced Bangla sign language, tactile communication and raised awareness of deafblindness with teachers to understand their unique needs.

In China, there exist at least 20,000 children, from birth stretching forth to 21 ages in terms of years that are both visual and hearing impairments and extra 80,000 children that have visual impairments with other disabilities. Perkins International harmonized the nation's initial training curriculums for trainers of these children. Through partnerships, these curriculums helped instructors to offer quality learning services to youngsters by establishing them on topics on the

growth of persons studying goals for learners, communication methods, literacy (comprising Braille), positioning and mobility, little vision and events to progress socialization and inspire independence, (Toussaint & Tiger, 2010).

In Malaysia, Abosi's (2008) cited in (Wapling, 2016) that, educators and parents regard social inclusion as being a better outcome for their children than any prospective offered by specialized curriculums in special schools. Social inclusion is particularly crucial for children with deafblindness owing to its positive role in minimizing developmental delays, psychomotor, and lack of curiosity and basic motivation in life. Inclusive Education for children with disabilities (CWD) conveys benefits since they are visible to live external, the sheltered boundaries of set apart schools. They also acquire the chance to socialize with normal peers. This promotes the rights, dignity and equality of opportunity, and reduces stigma towards disability. Challenges are that, when it derives to a requirement for further specialist provisions for example communication, sustenance workers, braille apparatus, adapted education and studying materials and professional teaching skills, it's challenging to visualize how that extent of help can be delivered in low revenue countries to each faculty where it could be required for a single or two pupils only (Wapling, 2016).

Since the 1970's, Australia has been integrating students with disabilities in the systematic lecture hall, but specialized isolated amenities remained a selection for children with tough disabilities. Learners, who were incorporated frequently, posed some level of syllabus modification and trainer aide support. However, some learners required specialized modifications that are inclines, modified lavatories, large print or braille tools. Learners with related disabilities were regularly ferried to an institute where such materials could be centralized (Konza, 2008). Consequently, many learners were not capable to study at their close by schools.

Recently, the view of “inclusion” has pressed the debate concerning the learning of scholars with additional disabilities (Forlin, 1997). This draft has been reinforced by United Nations guidelines which support the privileges of children: The United States Agreement on the privileges of the children, 1989; United Nations Customary Rules pertaining the Equalization of Chances for an individual with Disabilities, based on (UNESCO, 1994). Some of the challenges noticed, were as follows; teacher’s professed lack of confidence, scarce pre-service teaching and professional expansion, large lecture sizes, insufficient program resource and help support, (Konza, 2008).

In the African context, South Africa adopted its own constitution for deafblind people in 1996, during the Biennial conference of Deafblind Africa. The reason was to identify the deafblind in the community and to work for their betterment. It was started by an organization that was acting as a mouthpiece of the deafblind. In the past, special education involved segregation system of education for specialized instructions. However, they later saw that there was no need for the students with a disability to be deprived of the interaction with their peers and that was to see them getting full access to the curriculum through inclusive education (Network, 2017).

In West Africa, Ghana in particular, a Centre for (CWD), was established in 1998. It was a joint project between the government and Christoffel blindness mission of Germany. CBM provided infrastructure, maintenance of physical facilities and the supply of equipment and materials for the teaching/learning resources, while the government provided staff salaries. The Centre has maintained links with the Perkins School for the blind, Deafblind International, Sense International and other interested associates. The centre provides educational and rehabilitation services to young students. The programs include; orientation and mobility training, vocational skills, and the development of independent living skills (McInnes&Treffry 1997). However,

(Cloutier, 2015), reported that Perkins International worked with Ghana Blind Union (GBU) to start deafblind units in two schools for the deaf, but resources were a challenge.

In the East African Region, the program for deafblind has been taken seriously. Each of the three countries below is taking the program to a higher level especially towards inclusive learning; however, they experience a lot of difficulties. This is so perhaps due the nature of somewhat different model of inclusive education for children with deafblindness of learning through doing which forms a basis for a strong learning environment.

According to the Republic of Tanzania, PWD'S 2010, article 27 clause 3 & 4 states that; (3) each child with infirmity shall join normal public or private institution apart from where a want for special attention is needed. (4) a child delivered for in fragment (3) above will be provided by means of suitable disability correlated support amenities from a qualified educator or a teacher assigned for that purpose (URT, 2010). With a population of 46 million, Tanzania has an estimated 18,000 deafblind Multiple Sensory Impaired people MSI, (Sense International, 2013). Tanzania attempted to implement inclusive education for deafblind with other areas of speciality, however, they encountered some challenges including; lack of awareness on the part of government officials responsible for education and unclear policy statements among others, (Karakoski & Strom, 2005).

Uganda comprises of 35 million people in the population, with an approximated 14,000 Persons with deafblindness (Patrick, 2015). Sense International Ugandan chapter, has been active since the year 2005. They reported that (PWD) and their relatives are regularly amongst the humblest and most disqualified affiliates of the social order. SI, the administration and Education Organizations aims to equip (PWD)/ MSI contact to appropriate learning. They developed and raised a 'model of distinction' for (CWD) in its nation, by doing some of the following;

functioning in the enterprise with Kentalis, to support Kyambogo Campus to inaugurate a professional teaching program in deafblindness both to teachers and public based personnel that lasted for a year. SI and their partners supported home-based programs for (CWD) and their families. Many community workers were trained, many children have been diagnosed and assessed by Multidisciplinary Assessment teams, who piloted a Community Based Education model that prepares and enables learners with deafblindness to access education in mainstream schools. They worked in partnership with the National Curriculum Development Centre, to develop accessible teaching and learning resources for teachers and interveners. They included the Community Based Education Curriculum and intervener's manual, training of teachers and mentored to support the learning of (CWD) through the Community Based Education Model. Special Education Needs (SEN) teachers and mainstream teachers increased knowledge and skills to support learners with deafblindness.

The Ministry of Education of Kenya, therefore, has advocated for provisions for the education of (CWD) to be included in the draft policies such as; National Inclusive Education Policy and the Uganda National Examinations Board Policy (Bugembe, 2010). Kenya comprises of inhabitants of 42 million individuals with an approximated 17,000 deafblind persons. Since international petitioned productively for the insertion of the requirements of deafblind / MSI children to Special Needs Teaching Policy (International, 2014).

The Kenyan government placed emphasis on comprehensive education done in regular faculties for students with special requirements and incapacities as conflicting to the training of relying on special institutes and special entities merged with regular schools (MOE & Sports, 2003). Kenya has implemented inclusive education in regular schools as per (UNESCO, 1994) in the Salamanca framework, which states that; Education organizations ought to be designed and

executed to meet diversities among all learners. Currently (CWD) are placed in inclusive schools to learn alongside with their typically developing peer in the same classrooms (Mwaura&Wanyera, 2007). Although inclusive teaching is stagnant in the development of implementation, the Ministry of Education have experienced the following challenges among others; the scanty ability of teachers to handle learners having special needs, unsuitable placement of beginners with special concern, scarce learning materials, (MOE & Sports, 2003). (Cloninger&Giangreco, 1995) states that; when people who are accustomed to special education schools and classes think of placing students with deafblindness and multiple disabilities in general education classes, they usually raise a number of questions whether the students will receive appropriate education. In line with the above therefore, this study tried to investigate on the mode of communication and social interaction on (LWDB) in an inclusive setting.

## **1.2 Statement of the Problem**

From the background, it is clear that learners with deafblindness (LWDB) represent the lowest prevalence rates among children with disabilities enrolled at all levels of schooling. Some of these learners have multisensory impairments and their system of education especially in an inclusive setting is not well structured, because, in some countries mentioned above, the policies are not clear and teachers have limited innovative strategies to overcome communication barriers with these learners. Therefore, curriculum too is unclear especially to the severe group of (LWDB). Bestowing to (UNESCO, 1994) in the Salamanca declaration, it highlights that; each learner partakes an obligation to Education, and that education systems should be planned in order to suit their interest and abilities. The (LWDB) is included in the statement; however, little has been done in inclusive education for them. As viewed by (ILO, 2009) that, in all developed and emerging countries, encouraging extra inclusive cultures and job opportunities for

individuals having disabilities and special needs improved contact with basic learning. In line with the above statement, (LWDB) are placed in an inclusive setting, to access basic education and in the process, they are expected to interact, socialize and communicate with teachers and other typically developing learners comfortably in the inclusive setting. Despite the fact that, there is a mode of communication being used in the regular classroom,(LWDB) do not understand and therefore do not use it. According to (Kamenepoulou, 2012), the enclosure of this trivial marginal in the social framework of a conventional institute is a challenging duty because numerous features of both individual and context might obstruct participation. It is upon this backdrop that this study sought to investigate the teacher's use of communication modes to enhance social interaction for learners with deafblindness in an inclusive setting, and make recommendations to help improve education access, retention, and participation in learning by children with deafblindness.

### **1.3 Purpose of the Study**

The purpose of this study was to investigate teacher's use of communication modes to enhance social interaction for learners with deafblindness in an inclusive setting.

### **1.4 Objectives of the Study**

The objectives of the study were as follows:

1. To establish the mode of communication and social interaction used by (LWDB) in an inclusive classroom.
2. To determine the challenges (LWDB) encounter during interaction with the peers in an inclusive classroom.
3. To find out the strategies the teachers apply to improve communication and social interaction on (LWDB) in an inclusive classroom.

## **1.5 Research Questions**

The study is directed by the questions below;

1. What various modes of communication and social interaction do (LWDB) use in an inclusive classroom?
2. What challenges do the (LWDB) encounter while interacting with the peers in an inclusive classroom?
3. What strategies do the teachers apply to improve communication and social interaction for (LWDB) in inclusive classrooms?

## **1.6 Significance of the Study**

The study's findings may likely to be of great benefit to stakeholders in the following ways;

Children with deafblindness (LWDB) to be able to communicate and interact with other people in their learning environment, policymakers to come up with ideas and good action plans to meet the needs of (LWDB) in an inclusive setting. The Ministry of Education of Kenya in conjunction with other associates to construct alertness among trainers and apprentices on communication and social interaction on (LWDB) and also to train teachers to come up with proper strategies in inclusive classrooms, Curriculum developers to provide teaching and learning materials to enhance communication and social interaction for (LWDB) in an inclusive setting, to attract other scholars to research more in the area of deafblindness.

## **1.7 Scope of the Study**

This study was to investigate on teachers' use of communication modes to enhance social interaction of (LWDB) in an inclusive setting. The study took place at Kilimani primary school in Nairobi, Kenya. This school hosts the unit for the (LWDB) and serves as the only school that practice inclusive education for learners with deafblindness. The study took place only in one

school. This made the researcher to cut down a lot of movements from school to school, to avoid wasting a lot of time and finances. The participants on her study comprised of seven trained teachers for (LWDB) and two (LWDB) who have joined the regular classrooms. The researcher expected that the participants mentioned above were able to provide information, because the information was collected directly from the experts and the subject cases themselves. All the participants turned up for the interview.

### **1.8 Limitations of the Study**

Various Limitations of this learning were; (LWDB) needed an interpreter, during the interview because the researcher was not quite conversant with the actual signs that the learners used to communicate. The researcher used one school to collect data, and some useful participants in the study might have been left out thus, the information might not be sufficient enough, the researcher consulted the parents to get permission in order to carry out the interview which took a long time for them to respond, the researcher thought that some of the participants would not turn up for the interview, because some might have been too busy with teaching and others might not have been willing to share the information. The researcher expected the study to take place within a period of six months; however, it took more time than expected because there was a long holiday break.

## 1.9 Conceptual Framework

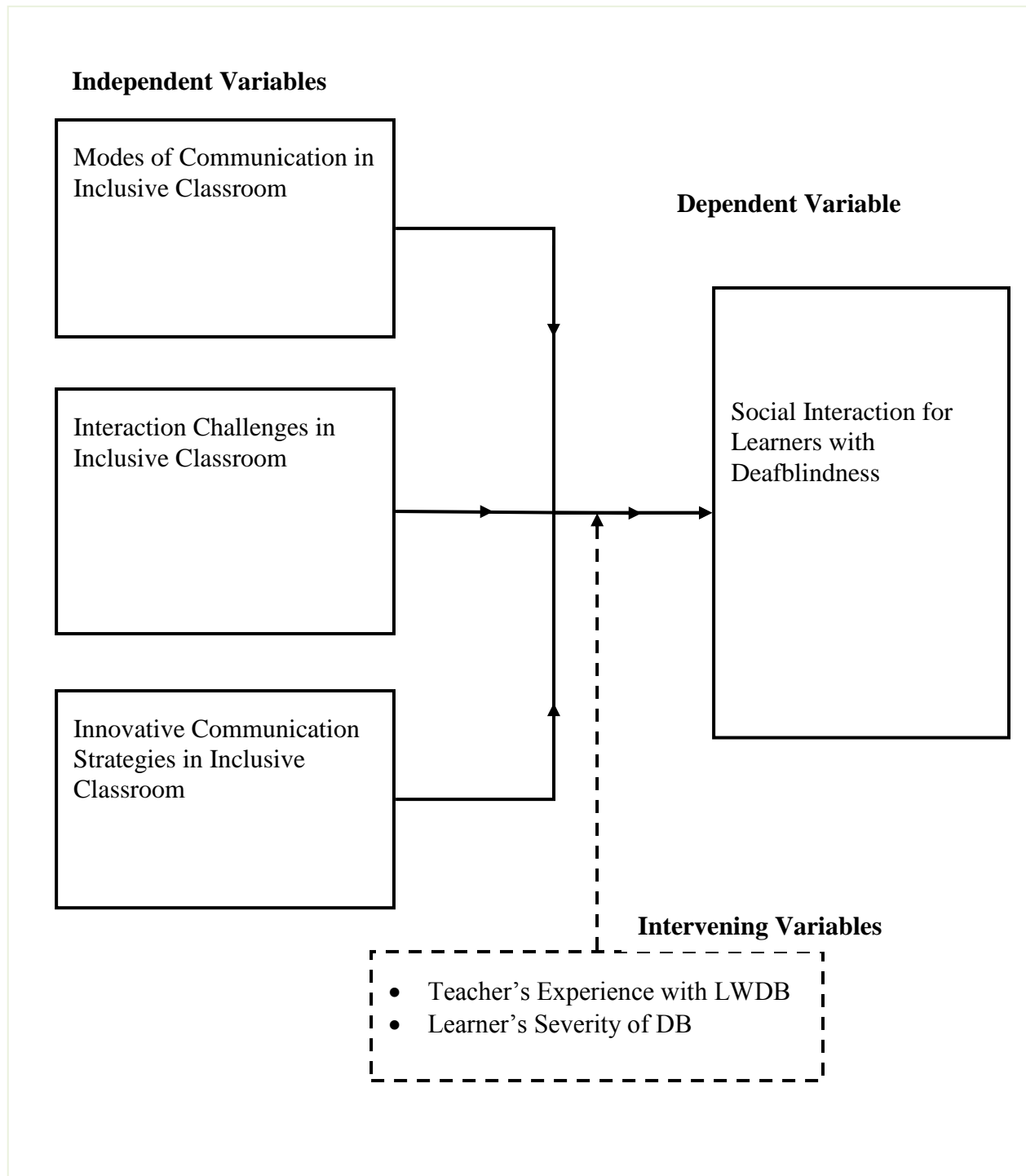


Figure 1: Conceptual Framework

The conceptual framework presented in Figure 1 models the relationship among the variables as depicted from the study topic. Independent variables are the manipulative variables within the study whose impact can be measurable and/or observable in the dependent variable. The dependent variable on the other hand is a response variable whose nature is influenced by the independent variables (Osanloo, & Grant, 2016). In this study, the independent variables are; modes of communication, challenges in interacting with children with deafblindness and innovative strategies used by teachers. The dependent variable in this study are; social interaction for learners with deafblindness.

Intervening variables as used in this study are factors that explain causal link between the dependent and a set of independent variables of the study. These are severity of the deafblindness and the experience of the teacher. Clearly, these variables could affect both the dependent and independent variables simultaneously and thus, some scholars refer to them as moderating variables (Agangiba, & Kabanda, 2016). During the interaction, (LWDB) acquire communication through; learning and experiences from the peers and also the teacher, who in turn will influence the modes of communication and social interaction for (LWDB) in the inclusive classroom.

### **1.10 Theoretical Framework**

The theoretical framework is the foundation from which new knowledge from empirical research is constructed (Osanloo, & Grant, 2016). It provides the structure of scientific inquiry to support critical and innovative thinking proposed in the statement of the problem and guide creative ideas brought out by the hypothesis and research questions. According to Osanloo, and Grant, (2016), the theoretical framework provides a grounding base for review of literature and justification for proposed methodologies and analysis. In this study, the following two

theories are thought to be relevant in the above topic. The Vygotsky Sociocultural theory and Symbolic Interactionism theory adapted by (La Rossa and Reitzes, 1993) from Scott Plunkett's course park.

### **1.10.1 The Socio-cultural Theory**

The theoretical framework in this study focused on the basic function of the social interface in the expansion of perception (Vygotsky 1978). He highlights that; society performs an important function in the course of "making meaning." the surroundings within which kids develop up will impact the manner they reason and anything they think on. He placed huge weight on the function of semantic in rational progress and that aged people are very essential spring of intellectual advancement to youngsters.

Basic relevance of this theory to the researcher's work is that the teachers and the people around the learners with deafblindness can lead them to develop language through the modes of communication and social interaction to acquire meaning in the environment. This theory was thought to be appropriate because the educators and the learners with deafblindness ought to practice a mode for communication and social interaction in the process of learning. Both learners in inclusive setting need to understand one another during communication and social interaction, supported by an adult who is the teacher.

### **1.10.2 Figurative Interactionism Principle**

According to (Griffin, 1997), symbolic interactionism theory has three elements: meaning, language, and thought. Based on three components the theory on 'self' may be constructed. (La Rossa and Reitzes, 1993), stated that a principal emphasis on consideration to those people who associate through signs, for example, lyrics, signals, guidelines and functions. They said that; figurative interactionism is one way of interpreting and giving significance to the biosphere from end to end as we interact with our colleagues. Language can be a foundation of sense. Meaning

ascends from social relations and semantic as a medium system. Wood (1997) citation from (La Rossa and Reitzes, 1993) that; community life and passage of information flanked by individuals are conceivable only once we appreciate and be able to practice on corporate semantic, and the mind is a contemplative break over which we adjust various interpretations of signs. The topic of this study can use this theory because a mode of communication needs to be used in the inclusive classroom for all the learners to understand one another and to make meaning to the world through social interactions with others. This theory is relevant because in the classroom a language must be used during communication and social interaction. The mind has to interpret the language used, to come up with a meaning.

### **1.11 Definitions of Terms**

**Deafblind;** both hearing and seeing senses are missing in an individual.

**Deafblindness;** this is a condition that distracts an individual from using his or her hearing and seeing in the normal way like other people.

**Community relations;** this is the practice in which people perform and respond to those around them. It comprises of those deeds individual perform in the direction of the other and giving responses in return.

**Inclusive Setting;** This is an educational program that allows all learners including SNE to be taught in the same school, same classrooms, following the same curriculum, interacting with other learners, taught by the same teacher and being included in every activity that is taking place in the school.

**Mode of communication;** These are ways used to explain the human communication process, how the information is sent from the sender through, either sight, auditory or tactual senses,

depending on an individual, to be able to receive that information appropriately. The communication modes include natural speech, facial expression, and gesture.

**Model of excellence;** this is a successful platform that has proved to thrive the projects in promoting children with deafblindness, in especially education in Uganda.

**Multisensory impairment;** Learners suffering from Multi-Sensory Impairment (MSI) possess a mixture of sight and hearing problems. Occasionally, revealed as learners with deafblindness with little remaining vision and audible range. Most of these learners possess extra infirmities that are composite and could be challenging to establish their rational skills.

**Tadoma method;** this is a way where learners with deafblindness receive information through touching either the mouth the cheek or the trachea of the partner to feel the movements during talking or even eating.

**Typical peers;** these are regular learners who are given mandate or are entrusted to support the learners with deafblindness, in and outside the classroom.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The section comprises of the following topics; introduction, mode of communication and social interaction, Challenges encountered and Strategies to improve communication and social interaction.

Based on (WHO, 2011), approximates for the total population of children (0–14 years) staying with incapacities varies from 93 million to 150 million. In Basic Education Act (2013), the Kenya National Survey for persons with disabilities showed that about 67 per cent of PWD have some primary education. Of these, only nine per cent attended public schools with non-disabled children (Aseka&Kanter, 2014). Children who are deafblind belong to a low incidence group. Some of them acquired deafblindness later in life, often as a consequence of a specific condition such as Usher syndrome (Vervloed, Van, Knoors, & Van, 2006). Just like any other learner, a learner with deafblindness would like to interact, communicate and to make friendships. Romer& Haring, 1994 cited in (Kamenepoulou, 2012) in comparison with the social contribution of pupils having deafblindness in comprehensive environments, occasions for relations have been established by observational educations to be improved in such settings, but not significant enough to build extended permanent relationships.

#### **2.2 Mode of communication and social interaction used by learners with deafblindness in an inclusive classroom.**

Communication is the process of transmitting thoughts, ideas, information and messages from one person to another; it is developed through the social process (NIMH, 2003). Approachable passage of information is the method of getting and decoding information from another

individual, while expressive communication is the process of sending the information to a different person, the ways by which state of mind, needs, likes or dislikes by others are expressed (McNulty, 2002). Communication schemes for people that are deaf-blind regularly comprise of numerous methods of communication: images, snapshots, objects, voice production devices, sign cards, verbal words, symbols, and blends of any or all of stated above methods (Belote, 2000). Communication intervention for individuals with deafblindness must begin with a conceptual understanding of the individual's ecosystem, the system of mutual relationship between organisms and their environment. A change in ones' physical environment as in a student's inclusion in a typical classroom may change the social relationships in which that person is involved (Haring & Romer, 1995). Individuals with deafblindness need to rely on diversity of communication systems in the mandate to work together with individuals that are not aware of their definite method of communication (McNulty, 2002). Academic learning will go hand in hand with social interaction and sharing and all children will gradually learn to be responsible for their own learning (MOE & Sports, 2003). During communication, sensory system is challenged when the child communicates with the partner because, one has to; make and sustain contact, while sharing the topic of communication presented. It can be done using gestures, speech, pointing to object or sharing the object in the environment. Here both partners need to pay attention to take turns to share emotions (Andreassen & Rodbroe, 2006). Since students who are deafblind have varying degrees of sensory loss, varying skills and abilities and hence varying needs, the selection of modes for communication and systems or devices to support communication require careful consideration (Huebner, Prickett, Welch, & Joffee, 2003).

### **2.3 Challenges encountered with peers during communication and social interaction in an inclusive classroom**

People with congenital deafblindness often do not have the prerequisites for engaging in communication with their counterparts, due to the dual sensory impairment, and that it is quite difficult to reduce these obstacles without the introduction of human assistance. These interactions only become possible if the physical and social environments are made accessible to facilitate mobility and accomplishing activities of daily living (Duquette, 2012). Generally, an individual who has been deaf blinded cannot converse with an extra individual at the same period. Their collective understandings are very dissimilar to those of enquiry and visionary individuals who have very wide experience of public duties and amenities. Lack of these experiences, a deaf-blind individual, regardless of how intelligent they are, may look generally awkward or insolent, when in the circumstance he had not even gotten a chance to take part in relations of facial terms and signs which are important aspects of public interactions. Thus; communicative and sensitive difficulties repeatedly complement deaf-blindness because they are the accepted products of the adult's or child's incompetence to comprehend and converse (Miles B., Resource packet: Deafblindness, 2009). Children that do not practice formal approach to make others understand what they need frequently use conduct as a method of the expressive message, e.g. biting, crying and also lobbying objects that may be materially and emotionally destructive equally to the youth and others (McNulty 2002). Consequently, these can obstruct with knowledge, social communication with deaf-blind children necessary upon others in making the language available to them. Nevertheless, they encounter the trials of winning in relations by the greatest of their capabilities and of benefiting themselves with the speech if chances are provided to them (Miles, 2008).

The protagonist of the majority peer collection is to perfect communal talents, the preparation of retreating from the lecture for one by one work may be reasoned to delay socialization and liberation because it nurtures talents that are essential for adult-child communications, and therefore not constantly appropriate to exchanges with identical-age peers. (Kamenepoulou, 2012), nevertheless assumed that in exceptional institutes, scholars may have narrow occasions to practice age fitting social relations, since the majority of scholars have severe and compound disabilities (Evants& Lunt, 2002).

Mainstream institutes may offer opportunities for enlarged peer communication, though alarms have been elevated concerning diversity strategies employed, like one-by-one training, and their influence on socialization. Working associations at the faculty shows meager announcement between educators as a hurdle to social addition, because distinctive educational wants teachers, stated feeling secluded and poorly sustained by other tutors, who seem not to sense answerable for these learners. (Kamenepoulou, 2012).

Obstacles to relate with the surroundings, mainly for deafblind persons who converse through the trace may top to great levels of tension and/or problems in lasting focus. (Hersh, 2013).

It is important to know, that interactions with individuals with deafblindness, can be made principally isolated except when they are in adjacent vicinity, or in uninterrupted physical exchange, with another individual. The logic of isolation triggered by deafblindness generates the greatest barriers in the life of a person with this disability, (Miles & Riggio 1999). (Aseka&Kanter, 2014), also reiterated that school problems or challenges to learners who are special needs are as follows; curriculum, Physical barriers, labelling, attitudinal, violence, bullying and abuse.

## **2.4 Strategies to improve communication and social interaction for learners with deafblindness in the inclusive classroom.**

Persons who are deaf-blind especially school going children use touch, taste and smell to explore objects, to understand the relationship of those objects to their learning environment, to perceive feelings, to act and to communicate. While there are various conventional tactile communication methods and tactile language interventions teachers can use to communicate with these children, teachers require innovative strategies to usefully use them to enhance social interaction of learners with deafblindness (Dammeyer, 2011). Uroegbu(2002) notes that for effective implementation of inclusion of children with deafblindness in general classrooms, teachers need to be trained to understand persons with special needs, and specifically those with both sight and auditory impairments, to be in a position to take care of the educational needs of learners in the general classroom and be able to provide necessary instructional materials.

Support is largely vital both to acquire the novel skills essential for liberation as a deafblind individual and to receive and participate in the new uniqueness. Learning applied skills will commonly require the participation of professional instructors, whereas mental support can originate from a range of sources, comprising friends, family, Administrations of blind individuals, psychologists, and additional professionals (Hersh, 2013). Various professionals or support personnel such as interpreters, interveners can help the person with deafblindness to acquire information, interpret and transmit it in turn. They can facilitate social relations, interactions with the environment and in accomplishing activities of daily living (Duquette, 2012). (Cloninger&Giangreco, 1995) Found out that, modified approaches to learning to include the students with deafblindness frequently found that many or all the other students benefitted as well.

The role of aristocracies has also been decorated in order to upturn peer receiving, it is essential to raise alertness of the deafblindness and the situation implications for the announcement, like the part that makeover expression shows in communications or that of inquiry intonation (Heller, Alberto, & Bowdin, 1995). Definitely, interventions taking benefit of the nobles' role by locating up communal networks nearby deafblind acolytes in mainstream faculties have reported encouraging results in relations of improved peer exchanges and permanency of relationships (Breen, Romer Haring, & White, 1995). Facilitating relationships and interactions amongst peers can include several policies as follows; offer opportunities which help to convey students together such as class activities, present the person with infirmities to others positively in a manner, make rooms or adaptations to the situation to help include the people with infirmities in meaningful means, use the classroom curriculum to impart about multiplicity, equality, and relationships, use teaching approaches that encourage collaboration among scholars and suppose the learner with infirmities to contribute in class happenings by his/her peers. Reacting to puzzling actions in a manner which teaches peers constructive social or surviving skills (Miles B., Resource packet: Deafblindness, 2009) scaffolding strategies may take place. These consist of a fun activity for interaction among peers and/or a direct contact between peers because having fun with other people has an emotional impact and stimulates communication; and also give them a reason to interact and communicate with each other (Duquette, 2012).

Schooling for a teen or childhood with deaf-blindness requires to be extremely individualized; the restricted channels presented for learning requires an organizing a platform for each youth that will report the child's exceptional ways of education and their own (Miles, 2008).

Therefore, teachers who share a problem solving process with the class tap student's natural creative abilities and provide them with a generic way to overcome various social, academic or personal challenges that arise (Cloninger&Giangreco, 1995).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This section covers the following topics; research design, research paradigm, study population, sampling technique, methods for data collection, the procedure for data collection, data analysis and ethical considerations.

#### **3.2 Research Design**

The researcher adopted a qualitative research approach. This is a design that permits one to study peoples' understandings in detail, through using a precise set of enquiry methods like, focus group discussions, in-depth interviews and observation (Hennink, Hutter, & Bailey, 2011). However, for the aim of this learning, the researcher used semi structured interviews and observation methods respectively. She prepared semi structured guides for the teachers who are trained in the area of deafblindness, learners with deafblindness and also observation guide for interaction of learners with deafblindness and the peers during break time. The researcher used a case study to collect data from a small number of participants; because she was interested in a particular case itself.

#### **3.3 Research paradigm**

The research paradigm used in the study is constructivism. This is a philosophy based on surveillance on how people interact and learn in natural surroundings. Constructivism refer to a concept of knowledge that claims that humans generates information and importance from an interface between their skills and their concepts and so individual construct their personal understanding and awareness of the biosphere through undergoing things and reproducing on those skills, (Educational Broadcasting cooperation, 2004). The paradigm of constructivism

theory as used in this study is based on the active role of social context between the teacher and the learner, during which implicit learning takes place. This paradigm was selected to be used in this study due to its congruence with the current competence-based curriculum (CBC) in Kenya which requires the teaching and learning process is learner centered. The CBC also requires the teacher to implicitly teach core competencies such as social interaction and digital literacy in the course of their teaching. The approach used is an interpretive one, that try to understand lives practices from the perception of the individual themselves, and it identifies that reality is communally erected as individuals experiences take place within public, historical, cultural or personal context (Hennink, Hutter, & Bailey, 2011). The researcher has chosen constructivism because it is also based on qualitative research approach. According to (Creswell, 1994), qualitative scholars are concerned on how persons make intelligence of their lives, experiences, and their structures of the world. The researcher went physically to the people, in the institution to observe or record behavior in its natural setting. The researcher therefore went out to observe and interview the learners with deafblindness and their specialized trained teachers, in an inclusive school, collected the data in that natural environment and got the first hand information from the participants chosen.

### **3.4 Study population**

The participants were those groups or individuals who provided information during the collection of data. The total Number of participants was nine (9). These were seven (7) teachers and two (2) learners with deafblindness. The seven teachers were specialized in the area of deafblindness, the two learners were the only learners with deafblindness in the inclusive classrooms in the school. The researcher chose these participants because the teachers who were specialized in deafblindness had a lot of background experience in the area of deafblindness. The

learners were directly involved in the study and she believed that the participants gave lots of information concerning the study.

### **3.5 Pilot Study**

Pilot study refers to a primary small-scale learning that scientists conduct in mandate to support them choose how finest to conduct a real data. Using an experimental study, the scientist can recognize or perfect a research problem, number out what approaches are finest for tracking it, and approximate how much it takes for things that are required to finish the greater version, between other things (Crossman, 2017). This helped to omit or note any item that was unclear or missed to be added. The researcher chose a different school from the one for the large-research project. She chose an inclusive school where visually impaired learners were placed, to be able to do the pilot study. This was because the school chosen to collect real data is the only inclusive school where learners with deafblindness are placed in the whole republic. The researcher opted to be there two weeks before the real collection of data so that she could be able to make corrections on the study tools where possible. She wrote a consent letter to the school she chose and requested for two teachers trained in the area of visually impaired, willing to be interviewed for piloting and two learners with total blindness. She made observations on the same learners outside the classroom. The results may not have reflected the reality, because none of them had hearing difficulties but at least, being an interviewer, it proved how much confident and competent the researcher might have been.

### **3.5 Sampling technique**

The researcher used purposive sampling technique. This is a non- probability sampling where a scientist is not concerned in choosing a sample which is a symbolic of inhabitants. (Merriam, 2009) stated that, the most appropriate sampling strategy is non-probability sampling because it's

the method of choice for most qualitative researchers. Purposive sampling is a feature of qualitative technique where the models are expected to be selected on a measured manner in order to acquire those which produced the most applicable and ample data (Yin, 2011). In the case study and the above information applies, because the number of participants was small and chosen deliberately by the researcher. There were two categories of participants. One category was seven trained teachers and the other were two learners with deafblindness in the regular classrooms.

### **3.6 Methods of Data collection**

The researcher used two methods: The interview and observation. She prepared semi-structured guides for interviewing the specialized trained teachers and guides for learners with deafblindness. The researcher chose the above because she opted to collect the data on one on one basis and through interviews; she was able to generate participants' perspectives about ideas, opinions and experiences concerning the study at hand. The researcher acted as a participant in all areas during the interview. An observation guide for the same learners during interaction with the regular learners outside the classrooms was prepared, because observations are designed to generate data on activities and behaviors where the observer can be able to view. However, the researcher was a non-participant. (Hennink, Hutter, & Bailey, 2011), viewed that; the approach of observing without participation provides one with another insight on the activities observed and so, non-participants observation is not observing through deception, but observing with a purpose and from a distance.

### **3.7 Procedure for data collection**

After the approval of the proposal and the research tools, the researcher obtained a letter of introduction from Kyambogo University for identification. She proceeded to her country to meet

and seek permission from the authorities to collect data. She booked for an appointment to meet, the Director of education to give details of her visit to his office. She proceeded to the school where the data collection took place, to seek for permission from the Head of the institution; to carry out the research exercise. The head teacher introduced the researcher to the participants and gave reasons of her visit to the school. The researcher explained to the participants her purpose of visit and showed how she expected them to support her in providing some important information about the learners with deafblindness. She gave the breakdown on how she expected to conduct the interview i.e. interview the learners who are deafblind, while requesting interpretation by the specialized trained teachers, also to interview the specialized trained teachers, then proceeded to observe the learners who are deafblind during interaction inside and outside the classroom. She requested them to allow her record the conversation in case she forgot some important information. They agreed on the date of the interview.

### **3.8 Data analysis**

Data analysis refers to a process of examining, transforming and displaying data by an aim of discovering useful evidence, suggesting conclusion and subsidiary decision making (Koomey 2009). The researcher employed a thematic analysis system where the objectives that guide the study were used. The researcher picked the interview guides and the observation guide of the different categories and coded them by putting together the numbers with the same answers according to the responses, those that had different answers from one another and those without answers. The researcher provided a detailed interpretation on the responses presented in chapter four of the report. Conclusions and recommendations based on the research findings were documented in chapter five.

### **3.9 Ethical consideration**

Confidentiality issues are problematic during research on illegal, moral or unethical behaviour (Aitken, Buultjens, Clerk, Eyre, & Bailey, 2007).

The researcher assured the participants who provided the information collected that, the information collected would be for the purpose of the studies and nothing more, and that they had a right to participate or not. However, the researcher had to show the importance of the exercise and the effects cost if the objective was not met. She considered confidentiality in what was collected i.e. reporting the findings and not writing or mentioning participants' names anywhere. She recorded all the information that was to be analyzed with the permission of the participants and after analysis, she destroyed the recordings.

## **CHAPTER FOUR**

### **PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION**

#### **4.1 Introduction**

The chapter presents the findings, interpretations and discussions of empirical data collected from the field. The chapter begins with discussing the demographic structure and nature of respondents, an exploration of communication modes and social interactions in inclusive setting. It proceeds to explore the challenges encountered by learners with deafblindness in inclusive classroom. The chapter ends by discussing some of the strategies teachers apply in the attempt to improve communication and social interaction for (LWD) in inclusive setting.

#### **4.2 Demographic Information of Respondents**

The source of the data determines its quality, validity and reliability. In order to achieve this, the researcher established the key demographic structure of the respondents such as their sex, highest level of training in special needs education, areas of specialization and the experience in teaching learners with deafblindness. There were 9 respondents; 2 learners and 7 teachers in the study, out of which 2 (29%) were male and 5 (71%) were female. With regard to their highest education level in SNE, majority 3(43%) had bachelor's degree, 2 (29%) had Masters Degrees, 1 (14%) had a Diploma and 1(14%) had a Certificate. All the respondents had at least 2 areas of SNE specialization and deafblind was common to all of them. In addition, 1 respondent was specialized in inclusive education, 3 were also specialized in hearing impairment and 2 had training in visual impairment.

### **4.3 Communication mode and social interaction in inclusive setting**

The researcher sought to establish various modes of communication and social interaction used by learners with deafblindness in inclusive setting. The study indicated that the mode of communication and social interaction between the teachers and learners with deafblindness varies depending on the severity of the disability. For instance, in instances where the learner is blind yet they have some residual hearing, more than half of the teachers prefer using different modes of communication such as speech, facial expression, pointing, sign language, using objects, using pictures, and vocalization. Teachers use speech in different ways including talking close to the ear and deliberately being loud. It was found out that, use of gestures and tactile sign language was used by more than 75% of teachers to communicate and interact with the (LWDB). Interviews from learners with deafblindness reinforced the use of tactile sign language to foster social interaction among learners. Learners who were interviewed explained how they use sign language, and sometimes typical learners speak in loud voices to improve their interaction with those who are deafblind. Other modes of communication between and among (LWDB), teachers and peers as brought out from the study included use of Braille, miming and enlarged contrasting coloured pictures.

It was found that teachers did not only teach academic and social interaction to learners with deafblindness but also activities of daily living, with the aim of helping them lead independent lives. As such, teachers were more focused on understanding the way these children communicated with them. Some of the modes of communication children with deafblindness used included pushing away a plate of food, picking an object and giving it to the teacher whenever they wanted more of the same, some would bang their head,

This finding is similar to (Belote, 2000) who in his study found that communication schemes for people that are deafblind regularly comprises of numerous methods of communication, these includes; images, snapshots, objects, voice production devices, sign cards, verbal words, symbols, and blends of any or all of stated above methods. Similarly, Haring and Romer(1995) in their study on welcoming students who are deafblind into typical classrooms also concluded that communication intervention for individuals with deafblindness must begin with a conceptual understanding of the individual's ecosystem, the system of mutual relationship between organisms and their environment. Thus, the findings of this study on communication modes for learners who have deafblindness resonate well with the existing literature which emphasizes on facilitation of an enabling environment to break interpersonal communication barriers.

When teachers were asked about the number of (LWDB) they are able to attend to while teaching typical learners in the same classroom, the study revealed that only 42% of teachers can attend to 2 learners in inclusive setting while the rest (58%) of teachers can only attend to one student. They also cited that the number of students in class, severity of deafblindness and sitting position of the child affects the number of children with disability one can attend to in an inclusive setting.

In relation to the mode of communication between (LWDB) and other typical peers during classroom, the study found that the typical learners copy and use the communication styles the teacher uses to communicate and interact with such learners. Majority of the teachers (43%) reported that typical peers in inclusive setting have particularly learnt how to prompt their friend and sometimes bring things close to them. However, the choice of a particular communication mode was affected by the specific learners needs since the severity of the disability is obviously varying. Learners who were interviewed also indicated that some of their peers allow them to

participate in other activities out of class, a way to enhance their social interaction. One learner said the following when asked about the activities they are involved in by other peers.

*'Listening to a story and telling a story, they allow me to play a ball with them, skip jump, singing a song, listening to songs in a radio, working out numeral numbers, reading out letters of alphabet, reciting memory verse'*-Learner in an Interview

This finding on communication style for students who are deafblind is similar to what Huebner Prickett, Welch and Joffe (2003) in their study on essentials of communication and orientation and mobility for students who are Deaf-blind. In their study, they also concluded that since students who are deafblind have varying degrees of sensory loss, varying skills and abilities the selection of modes for communication and systems or devices to support communication require careful consideration. Based on this, it is important for learners with deafblindness to be assessed with a multidisciplinary team so that specific communication needs are accurately identified.

The study, through teachers who participated also revealed that in inclusive setting, regular learners give support to those (LWDB). It was found out that a lot of support given by other learners include environmental orientation and also in learning. Environmental orientation includes taking their friends to places such as dining halls, playground, washrooms and ensuring that their sitting arrangement is not distorted. Learning support given to (LWDB) by their peers include helping them carry Braille machines and papers, repeating for them words spoken by the teacher, teaching them understand arithmetic and helping them arrange their lockers appropriately. The study also revealed, through field observation, that (LWDB) are good volunteers. It was observed that these learners would occasionally volunteer to sweep the floor,

clean the chalkboard and some would pick the utensils from the table. Such gestures encourage other typically developing learners to be more supportive and receptive in inclusive learning.

This finding concurs with the findings in the study by Stremel and Bixel (2002) in which they conclude that the passing of information is critical for social interaction and friendship; however, the absence of communication structure can extensively quarantine a youngster who is deafblind. Similarly, Hersh (2013) comments that ensuring that the education of persons, and in particular children, who are deaf-blind, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximize academic and social development is the core business of classroom inclusion.

#### **4.4 Challenges learners with deafblindness encounter in inclusive classroom**

The researcher sought to explore some of the challenges (LWDB) encounter while interacting with their typical peers in inclusive classroom. (LWDB) face a number of challenges in inclusive classroom in trying to socialize with their peers. In the study, it was observed that among the major challenges (LWDB) face in inclusive classroom is isolation. During the interview with a (LWDB), the issue of isolation was evident. The learner said, “... *they go and play and leave me alone so I go and sit outside. I cannot share books with other learners because I need to bring it closer to my eyes. Sometimes I feel pain on my neck because of pending a lot*” Learner 2.

The teachers reported that regular learners ordinarily would avoid working either in groups or in pairs with (LWDB) because they are unable to communicate effectively. These learners avoid interacting with (LWDB) and often shift blames to them in the event on anything wrong such as tearing of books, making noise in class or injuring others.

The above findings concur with the remarks made by (Duquette, 2012) about the social interaction that exists between typical learners and those who are deafblind. Duquette

commented that generally, an individual who has been deaf blinded cannot converse with an extra individual at the same period. He also added that their collective understandings are very dissimilar to those of enquiry and visionary individuals who have very wide experience of public duties and amenities. Due to lack of these experiences, a deaf-blind individual, regardless of how intelligent they are, may look generally awkward or insolent, when in the circumstance he had not even gotten a chance to take part in relations of facial terms and signs which are important aspects of public interactions.

Secondly, the study revealed that regular learners have negative attitude towards (LWDB) in their class. The teachers attributed this kind of attitude to lack of awareness creation among regular learners on disability and the process of inclusion.

*“No creative awareness has been made to the other regular learners in the school towards learners with deafblindness and so they do not have positive attitude towards them”*—**Teacher 1**

The negative attitude created among the regular learners makes them treat learners with disability with pity and sympathy. Learners expressed themselves bitterly regarding how other learners treat them in inclusive setting. One learner said *“...they laugh at me when I answer questions, they say I talk like an old man, they make a lot of noise, I cannot hear them well”*-*Learner 1*. Teachers reported that when (LWDB) realize that their colleagues pity them, they are affected psychologically.

*“Others sympathize with them some have not even attempted to greet the learners with deafblindness”*—**Teacher 2**

Other challenge (LWDB) face in inclusive setting includes communication difficulties. Teachers reported that not all regular learners know how to use sign language, tactile language or braille.

During the interviews with (LWDB) a concern was raised about selective enablement to access educational materials. Learners said that they face challenges accessing written content in subjects they value most. One learner said, *“They should enlarge all the prints so that I can be able to read story books”-Learner 2*

For this reason, passing communication to them or getting information from them is difficult and thus majority of regular learners prefer not to draw closer to them. Lack of proper communication among learners in inclusive setting makes the life of (LWDB) difficult in school.

*“Most regular children fear to come close to the learners with deafblindness and that may create isolation on learners with deafblindness” - Teacher 3*

Teachers also observed that (LWDB) get confused when many of their peers are trying to support them. They reported that (LWDB) take time to learn approaches one uses to support them. In the event that the instructions are received from different people, their trend of thought is distorted and they get mixed up. This can then be translated into their writing where they have tendencies of leaving out some sections of the sentence that may not seem to them as making clear sense.

Stigma is another challenge facing (LWDB) in inclusive setting. Stigma can be used to exclude and marginalize people. The prejudice and fear caused by stigma may even prevent people from seeking the help they need. From the study, it was evident that some (LWDB) who use assistive devices are stigmatized and, in most cases, prefer not to use them for fear of being labeled as having a disability. When these learners avoid using their assistive devices, their ability to hear, communicate and interact is affected.

*“Some do not like putting on the hearing aids, because they see that they are the odd ones out. They feel that other learners will laugh at them because they would think that they are identified as impaired and that they are different from them”-Teacher 4*

Other challenges facing (LWDB) in inclusive setting include significant age differences where regular learners are on average younger than those with disabilities making it difficult to freely interact and the perception of them being low performers. This was however a teacher perception and the study did not find similar response from learners themselves.

Special needs education (SNE) teachers also face challenges when teaching learners with deafblindness in inclusive setting. Some of these challenges include pressure from the school administration to post better mean score. At the same time, some learners with disabilities expect everything to be done for them. Other learners come from religious denominations that prohibit use of assistive devices such as hearing devices making it difficult to help a learner with hearing impairment. Teachers also reported that many (LWDB) are prone to chronic, diseases making them visit clinic much more frequently meaning that they are absent most of the time. Workload was also mentioned as a key challenge for the SNE teacher in inclusive education. It was reported that apart from pressure to post a higher mean score, class enrolment is also very high and attending to this large number of learners with a special case such as deafblindness becomes a cumbersome task. When asked to propose ways to solve and minimize some of the challenges facing (LWDB) in inclusive setting, teachers proposed the following; Refer to the Figure 3 below:

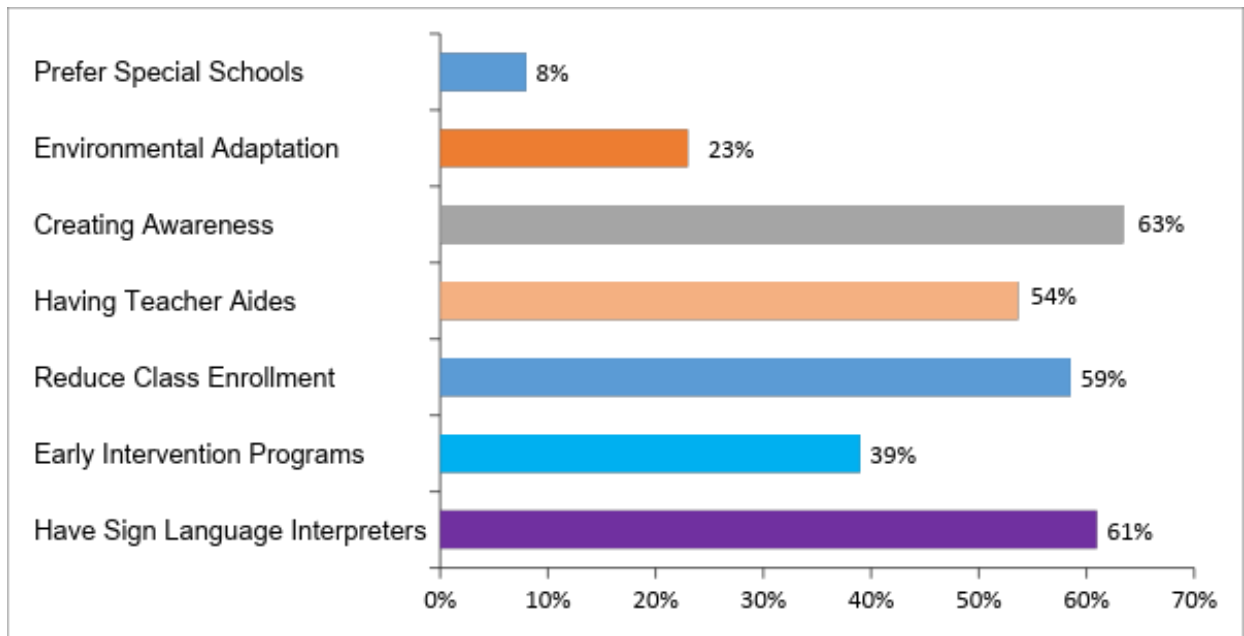


Figure 2: Proposed Ways to Solve and Minimize Challenges Facing LWDB in Inclusive Setting.

#### 4.5 Strategies to Improve Communication and Social Interaction in Inclusive Classroom

The researcher sought to find out the strategies teachers apply to improve communication and social interaction for (LWDB) in inclusive classrooms. The researcher investigated the best practices in communication and social interaction, their applicability in inclusive setting, strategies of communication and general advice in improving communication and social interaction with (LWDB). The results indicated that, a significant number of teachers cited total communication involving peer tutoring, Augmentative and alternative communication as the best method of enhancing communication and social interaction with (LWDB). Other teachers reported that using total communication is necessary but must be complemented with object of reference.

*“Objects of reference is a strategy for communication for learners with deafblindness, using an object to represent something e.g. a toilet paper to mean time for toilet, or a cup to mean tea time etc” – Teacher 2*

Other teachers encouraged free communication and working in groups with regular peers to project positive attitude towards each other as the best approach to communication and enhancing social interaction in inclusive setting. However the teachers also reported that in pairing up learners one need to select kind hearted and responsible regular peers. Other issues mentioned by some teachers include; multilayered conversations, modeling to promote self-esteem, repetition, choice making, using calendar system routines such as going for lunch, break, home.

On the other hand, the strategies suggested by the learners that could improve their communication and social interaction, with both their teachers and peers were attitude changes. Learners appealed that if teachers stopped giving up on them and peers stopped laughing at them then their communication and interaction among them will improve.

The proposed approaches were based on teacher experiences as they say that those methods have worked for them previously. Teachers reported that in using those techniques, they have managed to teach other regular learners to treat those with disabilities with dignity and respect. They also reported that (LWDB) become more open and ready to learn and improve on their ability to socialize with people and have more friends in class.

Teachers gave the following advice to other teachers and professionals working with (LWDB) regarding their communication and social interaction; to have unconditional regard to (LWDB) by providing proper information, showing empathy and not sympathy for them and carefully studying the present level of performance of every learner to know their strengths and weaknesses, so that they use the strengths to work on the weaknesses. Teachers are largely responsible in building either positive or negative attitude towards (LWDB). For instance, making sure that a (LWDB) is clean may encourage other regular learners to sit comfortably

with them in class. Teachers also observed that building good relationship with the parents of (LWDB) is important. This can help the teacher to monitor the learner even when they are away through their parents and thus enhance the chances of achieving long term goals for the learner. Teachers handling (LWDB) also need to embrace teamwork and seek knowledge from other experts as a way of building their own capacity and competence.

In his study, Uroegbu (2002) also proposed teachers training so that they understand persons with special needs, to be in a position to take care of the educational needs of learners in the general classroom and be able to provide necessary instructional materials and similarly, Hersh(2013) observed that having professional instructors would be the best strategy in inclusive classrooms to fostering and promoting communication.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of the findings as presented in the previous chapter in line with the objectives of the study and corresponding conclusions. The recommendations presented in this chapter are based on the empirical evidence of the study in light of the contemporary literature and emerging trends in communication modes by children with deafblindness in inclusive education settings

#### **5.2 Summary**

The purpose of this study was to examine teacher's use of communication modes to enhance social interaction for learners with deafblindness in an inclusive setting, taking a case study of Kilimani primary school in Nairobi, Kenya. In addressing the above stated objective, the researcher established three specific objectives and corresponding research questions.

First, the researcher sought to establish different modes of communication and social interaction behaviour used by (LWDB) in an inclusive setting. The study found that (LWDB) use various modes of communication to enhance social interaction of children with deafblindness in inclusive settings which are often influenced by the severity of learner's deafblindness and experience of the teacher in teaching these learning. For instance, those with mild hearing combined with severe sight loss use different communication modes compared to those with severe loss of hearing ability. However, the study established that use of gesture and tactile sign language was used by more than three quarters of teachers to communicate and interact with their learners with deafblindness (LWDB). Other modes of communication included use of Braille, miming and enlarged pictures. It was found that most teachers of children with

deafblindness acknowledge that these children need to be facilitated to develop a safe and secure relationship with the world around them, and this is possible by enhancing their social interaction with others in inclusive education setting. This study found that regardless of the mode of communication chosen by the teacher, its efficiency in enhancing social interaction is dependent on the teacher's level of innovation to create an innovative environment that maximizes the learner's response to learning and desire for social interaction.

Further, it was brought out from this study that teacher's innovative strategies to communicate with their learners with deafblindness are more important than having conventional approaches of communication. This was evidenced by the fact that while there are age-appropriate modes of communication with persons with deafblindness, especially children, the focus on relevant and meaningful activities is much more important than the mode of communication adopted.

The study explored some of the challenges teachers and learners with deafblindness (LWDB) encounter while interacting with their typical peers in inclusive classroom. The study revealed a number of these challenges which primarily make inclusion seem like another form of exclusion where (LWDB) still feel isolated. This study found that regardless of the situation and learning environment, isolation of children with deafblindness perpetuates their narrow focus of the world. These challenges include communication barrier existing between regular learners and those with disabilities, negative attitude from regular learners, fear and stigma. Other challenge that were not necessarily from within the school setting included barbaric religious teaching which teach against the use of assistive devices and technologies hence making it difficult for teachers to help learners who are in such need yet they cannot use them due to religious teachings.

Finally, the study sought to find out the strategies teachers apply to improve communication and social interaction for (LWDB) in inclusive classrooms. The study revealed a general consensus from teachers that total communication was the best strategy to communicate with (LWDB) due to their different degree of severities and also a way of fostering their social interaction skills. However, teachers agreed and reported that (LWDB) are completely unique and hence minor adjustments can be made in the communication method adopted by the teacher for effective communication. For this reason, collaborative partnerships meant to exchange knowledge and ideas came out as the best way to continuously improve strategies.

### **5.3 Conclusion**

Several conclusions were drawn from the study based on the findings of the study. First, the nature, extent and severity of dominant disability for a (LWDB) influence the mode of communication and the social interaction approaches adopted by the teacher in an inclusive setting. Having well equipped resource rooms for (LWDB) and by extension those with other disabilities is a collective responsibility. In addition to what the government, NGOs and well-wishers give the school; teachers have a role in adapting locally available materials to supplement the existing resources. The challenges facing (LWDB) in inclusive schools are systemic in nature that the law cannot remedy. This is because the entire society including religious teaching and parenting styles shape the attitudes towards disability and the nature of response people have. Creating awareness among growing children may be the best way to inculcate values and the right attitude of embracing diversity which includes accepting to live and learn with (PWD). Attitude change towards people with disabilities will make inclusion to work in Kenya. This is because with the right attitude, communication and social interaction among learners in inclusive setting will be enhanced. Strategies for improving communication

and social interaction for (LWDB) in inclusive setting depend on the teacher. This can influence the other learners, parents and their colleagues' attitudes towards those (LWDB). Teachers too are able mobilizers of knowledge in pursuing the best practices.

## **5.4 Recommendations**

Having realized therefore, the uniqueness of a (LWDB), the researcher would like to make the following recommendations that deemed fit to enhance social interaction of children with deafblindness within inclusive classroom and to bring harmony and understanding not only between the peers and the (LWDB) but also to the entire school;

### **5.4.1 Recommendations for Practical Solutions in School Environment**

1. The school administration needs to identify a day in a week whereby the (LWDB) are given an opportunity to express themselves and to specifically participate in school activities to demystify the negative attitudes towards them.
2. For children with deafblindness who are able to recognize familiar objects but have difficulties recognizing new ones, teachers could consider using multi-sensory approaches to help them learn the new objects
3. For children with mild visual loss and profound hearing loss, teachers would consider reducing visual distractions in their learning settings by minimizing the number of objects within their environment

### **5.4.2 Recommendations for Policy Improvement**

1. The Kenyan Ministry of Education needs to train more teachers for special needs and especially for (LWDB), to be able to create more awareness on deafblindness and to use the rightful mode of communication that enhances social interaction for children with

deafblindness. The Ministry could consider adding more grants to boost the purchase of needful devices like the Braille machines, spectacles, white cane and hearing aids.

2. Kenya Institute of Curriculum Development (KICD) could consider including communication strategies for persons with deafblindness within the competency-based curriculum as one of the core competencies for special needs teachers training.
3. The Non-governmental Organizations (NGOs) too are encouraged to continue participating in support of the (LWDB) in providing them with more resources.
4. The Kenya Institute of curriculum development needs to adapt instructional materials to suit the needs of (LWDB) and to liaise with specialized trained teachers for (LWDB), on new upcoming developments from the learners. The Institute needs to support them in enhancing communication and social interaction.
5. The specialized trained teachers need to give the regular learners a chance to learn some modes of communication and encourage them to use when they are interacting with the (LWDB) in and outside the classroom to erase communication fear and isolation barriers in all learners in inclusive setting.

#### **5.4.3 Recommendations for Further Research**

This study proposes a joint international research to be conducted by leading institutions in Special Needs Education in East Africa, to produce reliable data and the prevalence of deafblindness in each of the participating countries. This data would be critical for government, Non-governmental organizations and scholars who wish to pursue this area.

The National Research Fund of Kenya, Uganda and Tanzania may consider financing this endeavor for the purpose of enabling access to quality data and planning for support of children and persons with deafblindness.

## REFERENCES

- Agangiba, M., & Kabanda, S. (2016), Towards a Conceptual Framework for E-Government accessibility for Persons with Disabilities in Developing Countries. In *CONF-IRM* (p. 7).
- Aitken, S., Buultjens, M., Clerk, C., & Eyre, J. (2000). Teaching children who are deafblind: Contact communication and learning. Great Britain; *David Fulton publishers*.
- Aitken, S., Buultjens, M., Clerk, C., Eyre, J., & Bailey, C. A. (2007). A guide to: Qualitative field research.
- Alias, A., & Salleh, N. M. (2017). Analysis Of Problems Faced By Special Education Teacher In Teaching The Multiple Disabilities Students. *Journal of ICSAR*, 1(1), 60-67.
- Alsop, L. (2000). Understanding Deafblindness, issues, perspectives and strategies.
- Andreassen, E. & Rodbroe, I. (2006). Assessment and making individual plans for learners that are deafblind. *The Norwegian Directorate for health and social Affairs*.
- Aseka, W., & Kanter, A. (2014). African disability rights year book, Basic education acts 2013.
- Association of special needs Education. 21<sup>st</sup> Brisbane, Sept 25-28, 1997
- Basilova, T. (2017). History of Deafblind Education in Russia.
- Belote, M. (2000). Developing Communication Systems that meet everyone's needs. *Vol. 10, No. 8*.
- Bugembe, J. (2010). Perceived usefulness, perceived ease of use, attitude and actual usage of a new financial management system: A case of Uganda National Examinations Board. (Doctoral dissertation, Makerere University).
- Cekada, T. L. (2010). Training needs assessment: Understanding what employees need to know. *Professional Safety*, 55(03), 28-33.
- Cloninger, C. & Giangreco, M. F. (1995). Including Students with Deaf-blindness in General Education classes: *Journal of Visual impairments and Blindness*, Vol. 89 (3) 262.

Cloutier, S. (2015). Vision of Ghana's future.

Council of Ontario Universities;(2017). Teaching Students with deafblindness. Retrieved 2 12, 2018, from [www.accessiblecampus.ca/tools-resources/educators-too-kit/teaching-tip](http://www.accessiblecampus.ca/tools-resources/educators-too-kit/teaching-tip)

Creswell, J.(1994). Research design, qualitative and quantitative approaches.

Damen, S., Janssen, M. J., Ruijsenaars, W. A., & Schuengel, C. (2015). Communication between children with deafness, blindness and deafblindness and their social partners: an intersubjective developmental perspective. *International Journal of Disability, Development and Education*, 62(2), 215-243.

Dammeyer, J. (2011). Mental and behavioural disorders among people with congenital deafblindness. *Research in developmental disabilities*, 32(2), 571-575.

Dammeyer, J., & Ask Larsen, F. (2016). Communication and language profiles of children with congenital deafblindness. *British Journal of Visual Impairment*, 34(3), 214-224.

Duquette, J. (2012). Communication between people with deafblindness: How could it be facilitated? *Institute-Nazareth et-louis-Braille*.

Educational Broadcasting cooperation. (2004). Retrieved 11 30, 2016, from [www.thirteen.org/edonline/concept2class/constructivism](http://www.thirteen.org/edonline/concept2class/constructivism)

Evants, J., & Lunt. (2002). Inclusive education: Are there limits? *European journal of special needs Education*.

Facilitating school participation, learning and friendships. Baltimore: Paul H. Brooke.

Forlin, G. (1997). Participation of the stress associated with inclusive education and their

- Griffin, E. (1997). A first look at communication theory. .  
guide. Toronto: Canadian catalogue.
- Haring, G., & Romer, L. (1995). Welcoming students who are deafblind into typical classrooms:
- Haring, T., Haring, N., Breen, C., Romer, L., & White, J., (1995). Social relationships among
- Hartmann, E., & Weismer, P. (2016). Technology implementation and curriculum engagement  
for children and youth who are deafblind. *American annals of the deaf*, 161(4), 462-473.
- Hartshorne, T. S., & Schmitt, M. C. (2016). Social-emotional development in children and  
youth who are deafblind. *American annals of the deaf*, 161(4), 444-453.
- Heller, K., Alberto, P., & Bowdin, J. (1995). Interactions of communication partners and students  
who are deafblind. *Journal of visual impairment and blindness*.
- Hennink, M., Hutter, I., & Bailey, A. (2011). Qualitative Research Methods.
- Hersh, M. (2013). Interpersonal Communication Languages. *Journal of deafblind studies and  
deaf education advance access*.
- Heward, L. (2014). An Introduction to exceptional children: Pearson new international  
education, exceptional children.
- Huebner, K., Prickett, J., Welch, T., & Joffe, E. (2003). Hand in Hand: Essentials of  
communication and orientation and mobility for students who are Deaf-blind. *Vol. I*.
- ILO. (2009). Inclusion of people with disabilities in Kenya: Decent work for people with  
disabilities. Retrieved from ILO/Irish Aid Partnership program: [korpinen@ ilo.org/  
wcms\\_115097](mailto:korpinen@ilo.org/wcms_115097)
- International, S. (2014). Disability prevalence among adults: estimates for 54 countries and  
progress toward a global estimate. *Disability and rehabilitation*, 36 (11), 940-947.
- Janseen, M., & Rodbroe, I. (2007). Communication and congenital deafblindness, contact and

- Kamenepoulou, L. ( 2012). .A study on the inclusion of deafblind young people in mainstream schools: key findings and implications for research and practice. *British journal of special education, Vol.39 No. 3, 2012.*
- Karakoski, J., & Strom, K. (2005). Special needs education in Tanzania. A fact finding Mission.
- Konza, D. (2008). Inclusion of students with disabilities in new times. *Responding to the college.*
- La Rossa and Reitzes. (1993). Symbolic Interactionism theory:. Retrieved from [www,csun.edu/\\_whw2380/542/symbolic interactionism.lecture,html](http://www.csun.edu/_whw2380/542/symbolic%20interactionism.lecture.html)
- learning and friendships. Baltimore M.D: Paul H. Brooke.
- Leonard Cheshire Disability. ( 2008). The UN convention on the rights of persons with disability.
- McInnes,J.,M.&Treffrey, J., A. (1997). Deafblind infants and children: A developmental
- McNulty, K. (2002). Communication facts sheets: National Technical Assistance Consortium for children and young adult who are deafblind.
- Merriam, B. S. ( 2009). Qualitative research: A guide to design and implementation.
- methods of coping: Report paper presented at the national conference of the Australian
- Miles, B. (2008). Overview on deafblindness. Retrieved from <http://www.aadb.org> db-link
- Miles, B. (2009). Resource packet: Deafblindness. Retrieved from [http://www.vanderbilt.edu/kennedy/treds/ ed\\_07.09](http://www.vanderbilt.edu/kennedy/treds/ed_07.09)
- Miles, B., & M, R. (1999). Remarkable conversation: Understanding deafblindness.
- MOE, & Sports. ( 2003). Inclusive Education: Special and diverse educational needs in inclusive school setting. Making inclusive education in Uganda a reality.
- Mwaura, S., &Wanyera, S. (2007). *Introduction to learners with special needs.*

- National Autistic society. (2016). communications. Retrieved 09 30, 2017, from [www.autisim.org.uk](http://www.autisim.org.uk).
- Network, I. S. (2017). Retrieved from [www.deafblind.com/dbsar.html](http://www.deafblind.com/dbsar.html)
- NIMH, N. I. (2003). Education of children with deafblindness and additional disabilities.
- Osanloo, A., & Grant, C. (2016). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your “house”. *Administrative issues journal: connecting education, practice, and research*, 4(2), 7.
- Otiato, C., & Kithure, M. (2007). Teaching and learning strategies for learners with special needs
- Patrick, O. J. (2015). Teachers’ use Of Communication Techniques For Achievement Of Daily Living Activities By Learners With Deafblindness In Primary Schools, Uganda. social interaction. Denmark: Danish resource centre on congenital Deafblindness.
- Stremel, K., & Bixel, B. (2002). The National Technical Assistance Consortium for children and young adults who are deafblind. *Communication fact sheets for Parents*. Retrieved from <http://www.tr.wou.edu.ntac> students who are deafblind into typical classrooms: Facilitating school participation,
- Toussaint, K. A., & Tiger, J. H. (2010), Teaching early braille literacy skills within a stimulus equivalence paradigm to children with degenerative visual impairments. *Journal of Applied Behavior Analysis*, 43(2), 181-194.
- UNESCO, (1994); The Salamanca Statement and framework on SNE.
- Uroegbu, U. V. (2002). An overview of inclusive education for special needs Children in Nigeria. *A Journal of special needs and primary Education*, Vol.3 No.1. Retrieved July 2007
- URT, (2010); The persons with disabilities: *.Act supplement*.

- Vervloed, M. P., Van Dijk, R. J., Knoors, H., & Van Dijk, J. P. (2006). Interaction between the teacher and the congenitally deafblind child. *American Annals of the Deaf*, 151(3), 336-344.
- Wapling, L. (2016). Inclusive education and Children with Disabilities: Quality education for all in low and middle income countries. . Retrieved from [www @cbm.org](http://www.cbm.org)
- WHO. (2011). World report on disability. .
- World Federation of the Deafblind [WFDB] (2018), First Global Report on Deafblindness. Sense International. <https://doi.org/10.1016/j.proeng.2012.04.055>
- Yin, R. (2011). Qualitative research from Start to finish.

## APPENDICES

### SEMI- STRUCTURED INTERVIEW GUIDES FOR SPECIALIZED TRAINED TEACHERS AND LEARNERS WITH DEAFBLINDNESS

The study to which these guides have been made is intended to investigate on the mode of communication and social interaction on learners with deafblindness in an inclusive setting. The guides are only prepared for the purpose of the research and nothing else. The information collected will be treated with confidentiality it deserves.

#### 1. A semi-structured interview guide for specialized trained teachers

The interviewer to put a tick on the boxes below

##### PART A: Demographic data

i.) Gender                      Male                      ☐                      Female                      ☐

ii.) Highest level of education in special needs education

Cert                      ☐                      Dip                      ☐                      Degree                      ☐                      sters                      ☐

iii.) How long have you taught learners with deafblindness?

1-2 yrs                      ☐                      3 yrs                      ☐                      4 yrs                      ☐

Any other, Specify -----

-----

## **PART B. General Questions**

### **Section A: Mode of communication and social interaction used by learners in an inclusive classroom.**

1. What mode of communication do you and your learners with deafblindness use during interaction in the inclusive classroom?
2. How many learners with deafblindness are you capable of communicating and interacting with while teaching them together with the regular learners in a lesson?
3. What mode of communication do the learners with deafblindness use to communicate and interact with regular learners during your lesson in inclusive classroom?
4. What relevant support do the regular learners give to the learners with deafblindness in the classroom during communication and social interaction?

### **Section B: Challenges encountered with peers during communication and social interaction in an inclusive classroom.**

1. What difficulties do the learners with deafblindness encounter while interacting with regular learners in an inclusive setting?
2. How do you think the difficulties (C1) above can be resolved?
3. What other difficulties do you face during communication and social interaction in an inclusive classroom?

**SectionC: Strategies to improve communication and social interaction for learners with deafblindness in an inclusive classroom.**

1. What are the best methods do you use on learners with deafblindness to better their communication and social interaction in inclusive classroom?

How appropriate are those strategies you are using on learners with deafblindness in an inclusive classroom?

2. What other strategies do you find more appropriate in teaching learners with deafblindness in an inclusive classroom?

3. What advice can you give to a new teacher regarding handling learners with deafblindness during communication and social interaction in an inclusive classroom?

The study to which these guides have been made is intended to investigate on the mode of communication and social interaction on learners with deafblindness in an inclusive setting. The guides are only prepared for the purpose of the research and nothing else. The information collected will be treated with confidentiality it deserves.

**2. Semi-structured interview guide for learners with deafblindness**

1. How do you communicate and interact with your peers to be able to understand one another in and outside the classroom?

2. How do your peers support you to communicate and interact during a lesson?

3. What activities do you participate in during communication and social interaction in the classroom?

4. What assistive devices do you use in learning during communication and social interaction?
5. What support do specialized trained teachers provide in the inclusive classroom?
6. What challenges do you encounter with your peers during communication and social interaction in and outside the classroom?
7. What best way do you think you can be supported to resolve the challenges in communication and social interaction with other regular learners in your classroom?

The study to which these guides have been made is intended to investigate on the mode of communication and social interaction on learners with deaf blindness in an inclusive setting. The guides are only prepared for the purpose of the research and nothing else. The information collected will be treated with confidentiality it deserves.

### **3. An observation guide for learners with deaf blindness**

The researcher is expected to observe the learners with deaf blindness and make descriptions under the following statements;.

1. Communication and interaction level of learners with deaf blindness and regular learners.
2. Participation of the learners with deaf blindness in volunteering activities.
3. Ability to share materials with regular learners.
4. The ease of understanding between the learners with deaf blindness and regular learners.
5. Working preference approach.
6. Regular learners involving learners with deafblindness in activities outside the classroom.
7. Usage of assistive devices by the learner with deafblindness.
8. Accuracy in following instructions.