

**Ludwig-Maximilians-Universität**

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**INCLUSION/INTEGRATION OF CHILDREN WITH HEARING IMPAIRMENT IN  
PRE-PRIMARY EDUCATION IN TANZANIA**

Inaugural Dissertation

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Vorgelegt von  
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## **Abstract**

The study investigated the inclusion/integration of children with hearing impairment in pre-primary education in Tanzania. The worldwide inclusion of young children with disabilities into regular pre-primary schools/streams in Tanzania is a subject worthy of investigation. The government of Tanzania has pledged to provide education for children with disabilities in pre-primary education in an inclusive setting. Inclusive education is considered as a means to eliminate exclusion in society and build an inclusive society.

However, it is observed that, despite the advocacy of inclusion, exclusion in education still exists; more importantly in early childhood education programs. Early childhood experience shapes the whole life of the individual and is a foundation for the later stage of child development. Early childhood education can thus be perceived of as a springboard for primary education and other subsequent levels of education. Most children with disabilities face great challenges including failure and drop out in primary education. Therefore, there is a need to ensure a solid background education in pre-primary education, specifically in an inclusive setting, the most preferable educational setting providing education to all children worldwide and in the respective country.

The study was guided by four research questions; the first question focused on the policy concerning children with disabilities in pre-primary schools. Second, the methods and ways used to identify, assess and place children with hearing impairment in schools in Tanzania were considered. The third consideration focused on the kind of activities and support provided during the teaching and learning process in the pre-primary learning environment and the fourth governed the challenges facing integration/inclusion of children with hearing impairment in Tanzanian education.

The study was conducted in two regions: Dar es Salaam and Shinyanga. Two schools in Dar es Salaam and two schools in Shinyanga were purposively selected for data collection. The study employed a document review, semi-structured interviews and direct observation methods in the collection of data. Various documents were reviewed to generate the required information on policy, regulations, guidelines and key information about the children. Teaching, learning activities and play were observed. Teachers were interviewed concerning their personal details including qualifications, professional background and experience, specific information about each child observed during classroom observation and their views

and opinions concerning inclusion of children with hearing impairment- more specifically, hard of hearing and deaf (HH/D) children- in pre-primary education.

Results revealed that in general the government of Tanzania has put some effort into providing an education service for children with disabilities. Education was realized as a basic human right for every child regardless of the status of the child. However, much needs to be done to ensure that this right is fully realized. Also, there was no guideline at national level for identifying and assessing children with disabilities, e.g. screening procedures. HH/D children and likewise other children with severe disabilities were educated in segregated settings such as special schools and special units/classes in integrated settings.

Teaching and learning activities were based largely on the observations generated by the interaction of teacher and child. Environmental and personal factors and child personality influenced the interaction during the classroom learning process and out-door play activities. Environmental factors included the nature of classroom and school environment, classroom structure, size and space. Personal factors observed focused on gender, age of teachers, academic and professional qualifications, teaching experience, training in special education needs (SEN) and motivation to teach pre-primary children with HH/D.

Moreover, the study observed a shortage of support provision to teachers, schools, children and their parents. In addition, several challenges exist concerning policy, the school management, HH/D teachers, parents of HH/D and the HH/D children. The whole HH/D ecological system was subjected to various difficulties affecting the child at the center. Generally, the study found that the ecology of the HH/D was affected by many factors; thus, it was recommended that the provision of pre-primary education for the HH/D should consider all systems surrounding the individual child.

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## **CHAPTER ONE**

### **THE CONTEXT OF THE RESEARCH PROBLEM**

#### **1.1 Introduction**

This study investigated the inclusion/integration of children with disabilities in pre-primary education. Specifically, the study investigated the inclusion/integration of children with hard of hearing and deaf impairment (HH/D) in pre-primary education settings. The main objective of the study was to investigate inclusion/integration of HH/D children in pre-primary schools. More specifically, this chapter presents the background information, overview of the situational analysis with respect to Tanzania, justification of the study, and purpose of the study. It also presents the research objectives and research questions, significance of the study, delimitations and limitations of the study and finally the organizational flow of the thesis.

The study was guided by four research questions; the first question focused on the policy of education concerning children with impairment in pre-primary schools. The second embraced the methods and ways used to identify, assess and place children with hearing impairment in schools in Tanzania. The third consideration focused on the kind of activities and support provided during the teaching and learning process in pre-primary learning environment and the fourth on the challenges facing integration/inclusion of children with hearing impairment in Tanzanian education. The Ecological System Theory guided the collection of data in the study and the analysis of collected data was done using an interpretivist approach.

#### **1.2 Background to the study**

Inclusion in education is currently a global agenda. The struggle for inclusion in education can be traced as far back as 1954 following the United States Supreme Court's decision on racial segregation. The court claimed that purposeful segregation produces a feeling of inferiority in a child- a feeling of being incomplete. More importantly, the feelings of inferiority affect the motivation of a child to learn and have a predisposition to impede their intellectual development. Inclusive education is considered as a tool to eliminate exclusion and segregation in society.

It was agreed at Salamanca and Dakar (UNESCO, 1994, 2000) that countries should adopt inclusive education as an instrument for providing education for all (EFA). According to this statement, inclusive education is viewed worldwide as a tool for providing every child with the opportunity to learn. Tungaraza (2005) pointed out that the right to education for all children is essential for both individual and national development. The emphasis should be placed on the conditions that support inclusion, including the educational process and resources, in which case, schools should accommodate all children regardless of their situation. With regard to EFA, the United Nations Declaration of Human Rights states that every human being has the right to education. It further stipulates that education shall be free at least in the elementary stages. Also elementary education should be compulsory (UN, 1948). In effect, this declaration insists that children with disabilities must have access to education. In order to ensure that all children, including children with hearing impairment benefit from the declaration, classroom interactions should be modified so that they can accommodate all children. Inclusive education is important in implementing education for all. Children with disabilities, including hearing impairment to whatever extent, are required to be educated with their peers in a regular setting with inclusive orientation to promote their development and learning.

If segregated and deprived the right to education and other social activities, the child with impairment may experience an increase in the degree of impairment or acquire an additional impairment. Kristiansen & Kristiansen (1984, 1997) commented that society has to be aware of the conditions that tend to increase the risk of impairment. Furthermore, Whitaker (1998) urged that it is unjust to exclude children from regular education because they have special needs. Generally, it is unjust for all children in the school if children with special needs are excluded. Regarding the need for inclusion of children with disabilities in regular schools, the Salamanca Statement (UNESCO, 1994) makes it clear that:

- regular schools with inclusive orientation are the most effective means of combating discriminatory attitudes,
- building welcoming communities,
- constructing an inclusive society,
- attaining education for all,
- providing an effective education to the majority of children and improving efficiency,
- whilst being the most cost-effectiveness for the entire education system.

However, it is observed that, despite the advocacy of inclusion, exclusion in education still exists (Slee, 2013). Regrettably, this means young children with disabilities being more excluded (NAEYC, 2009, 2002). The inclusion of young children with disabilities into regular pre-primary schools/streams in Tanzania, as practiced worldwide, is a subject that is worthy of investigation. Inclusive education is considered as a means of eliminating exclusion in society and building an inclusive society. Conversely, the conception of inclusion (Ainscow, 2007; Armstrong, 2011) is a big challenge in early childhood life as it is likely to affect the development of the child with disability.

Early childhood experience shapes the whole life of the individual and is the foundation for the child's later stage of development. In this case early childhood education can be perceived of as a stepping stone to primary education and other subsequent levels of education. UNESCO (2014) found that most children with disabilities face great challenges including failure and drop out in primary education whereby the children's pre-primary education is unknown. The treatment that the child receives during early childhood education affects his/her entire later life in a positive or negative way depending on its quality and way of delivery. Every society everywhere in the world has its own way of providing childhood education, whereby inclusive settings are found to be more effective (Stinson & Antia, 1999).

Educating children in inclusive settings provides an opportunity to meet the child's needs within the society where the child lives. The education should aim at developing the child in a holistic manner which means the education program should embrace the development of all child developmental domains, i.e. physical, social, intellectual and emotional. More importantly, it should ensure the development of the child's academic skills necessary for further learning at the next education level. In Tanzania for example, early childhood education includes pre-primary education which caters for children aged five (5) and six (6). Among the objectives of pre-primary education is the objective to prepare the child for primary education (URT, 1995, 2014a). Generally it aims to develop the child fully in all developmental domains. However, it is observed that the majority of early childhood programs in the country concentrates on the provision of education specifically targeting reading, writing and arithmetic skills (Mbise, 1996, 2001; Mtahabwa, 2007) only, ignoring the importance of other developmental domains (UNESCO, 2000). It is obvious that children with disabilities require support and attention in order to develop well physically, socially,



intellectually and emotionally in parallel with developing learning skills necessary for academic achievement (DEC/NAEYC, 2009; Guralnick, 2011).

### **1.2.1 Overview of early childhood/pre-primary inclusive education for children with disabilities in Tanzania**

Currently, inclusive education of young children has become a very important area of concern within the field of early childhood education (Guralnick & Bruder, 2016; Klibthong, 2013; Lee, Yeung, Tracey & Barker 2015; Odom & Wollery, 2003; Reichow, Boyd & Odom, 2016). Several international legislations and conventions on inclusive education have been supporting the changing attitudes (UN, 2006; UNESCO, 1994, 2000). The concern of international and national legislation and conventions rests on the claim that early childhood education worldwide has not yet been addressed adequately. Early childhood education is an important educational level to be considered. Early childhood is the period of development from prenatal to eight years of age (WHO, 2012). It is an important phase in the growth and human life development span. The experience during this phase bears an influence on the entire life span of an individual:

“Early childhood inclusion embodies the values, policies, and practices that support the right of every infant and young child and his or her family, regardless of ability, to participate in a broad range of activities and contexts as full members of families, communities, and society. The desired results of inclusive experiences for children with and without disabilities and their families include a sense of belonging and membership, positive social relationships and friendships, and development and learning to reach their full potential. The defining features of inclusion that can be used to identify high quality early childhood programs and services are access, participation and supports” (DEC/NAEYC, 2009: 2).

Early childhood inclusive education embraces three dimension; access, participation and support (DEC/NAEYC, 2009). Access regarding the provision of access to a range of learning opportunities, settings, activities and environment leads to a high quality early childhood inclusion. Inclusion may occur in pre-primary schools. In most cases the school environment requires modification to enhance access for children with disabilities. Removal of physical and structural barriers are noted to be important for promoting access to early childhood inclusion.

Moreover, after ensuring access the next component to be considered is participation. CWD may need support in order to ensure their participation in school learning. High quality early childhood inclusion is that which fosters social, emotional and behavioral development

alongside learning and development in all other children's domains. Also, participation involves the ability of children to participate in classroom activities, learning tasks and discussion (Stinson & Antia, 1999). Failure to participate in classroom activities is associated with poor academic achievement. Among the criteria for inclusion is the fostering of social integration; literature suggests that social integration can be effectively enforced in an inclusive setting where children with disabilities and children without disabilities participate together (Guralnick, 2001, 2011; Guralnick & Bruder, 2016).

Along with access and participation supportive provision is vital for inclusion Availability of support services is required for teachers and parents to facilitate inclusion of CWD (Guralnick, 2011). Cooperation among key stakeholders such as school administrators, specialists, community, parents/families and teachers is fundamental for the quality of early childhood inclusion. Apart from collaboration, resources and specialized services are vital.

Generally, early childhood inclusion requires practitioners to develop common understanding of early childhood inclusion and a plan for implementation in creating high expectations for every child to reach his/her full potential, developing a program philosophy on inclusion, establishing a system of services and supports, revising programs and professional standards, achieving an integrated professional development system and influencing government/state accountability (DEC/NAEYC, 2009).

Moreover, the Convention on the Rights of Persons with Disability defines persons with disabilities as including people with long term impairment such as physical, intellectual, mental or sensory impairment (visual and hearing) which in their encounter of various barriers may hinder their full and effective participation in society on an equal footing with others. Furthermore, hearing impairment refers to a disability that is worldwide. It is estimated that there are about 278 million people with hearing impairment in the world (WHO, 2006). More important, it is estimated that in 68 million people with hearing impairment the problem can be traced back to childhood.

Conspicuously, WHO reported that one third (2/3) of the population of individuals with hearing impairment are found in developing countries (WHO, 2016a). Undoubtedly, children are among the population of individuals with hearing impairment. Hearing loss in childhood has a significant implication in children's development when compared to adults. It can affect

their communication skills, social skills and early childhood school learning on which their later academic achievement is based. Therefore, hearing loss should be identified earlier in the early years of the child in order to make arrangements for early intervention. If the hearing loss in children is not identified earlier, it can lead to significant developmental delays in language/communication development, intellectual development and education achievement. Therefore, WHO passed a resolution in 1995 that every country should develop a plan for early identification of hearing loss in children, Tanzania included.

Tanzania, despite the absence of accurate data for children with disabilities, is estimated to have 38,400 children aged between 0-18 with HI (TIDA/TDS, 2016). Regrettably, it has been observed that less than one percent (1%) of the population of children with hearing impairment attends school (TIDA/TDS, 2016). The others' whereabouts is not known, a fact that requires national collective effort to remedy the situation. According to Basic Education Statistics of Tanzania, the number of CWD/HH/D is very small at pre-primary education level compared to higher levels. Recent data show that there are only 199 children with hearing impairment enrolled in pre-primary schools in the country (URT, 2014c). Moreover, children with disabilities in Tanzania are required to be educated in inclusive settings as the country has responded to the world call that inclusive education is the best option for education of children with disabilities.

### **1.2.2 Importance of inclusive/integrated education for CWD**

Worldwide estimation of individuals with disabilities up to 2009 was about 650 million people which comprises more than 10 % of world population (UNESCO, 2009a), whilst up to 2012 the number increased to more than one billion which is about 15% of world population (WHO, 2012). Currently, there is no reliable data globally showing the number of children with disabilities (WHO, 2012). Nevertheless, children with disabilities are reported to be more excluded compared to adults with disabilities. In most cases exclusion begins at birth and throughout childhood life. They are neglected, abandoned, concealed and abused, just to mention a few regrettable situations.

The UN Convention on the Rights of Persons with Disabilities (2006) is a considerable step towards recognizing people with disabilities as equal and active members of society. The Convention emphasizes the fundamental rights of persons with disabilities. Moreover, the

Convention postulates the significance of early intervention and inclusion in education of children with disabilities. In addition UNESCO policy on early childhood emphasizes the relevance of early childhood care and education (ECCE). The policy recognizes the importance of ECCE as a tool for remedying differences and overcoming disadvantages and inequalities (UNESCO, 2009a, 2009b).

Early year remedial intervention and enhancement of child development is most effective (WHO, 2012). Literature shows that 80% of child brains develop before they reach three years of age (UNESCO, 2009b). Likewise, early mistreatment has lasting incapacitating consequences. Nutrition and early stimulation are important for child development; the inadequate or lack of nutrition as well as poor or lack of stimulation lead to stagnation which has an impact on child cognitive development and educational performance. Equally important is that neglect in early years has lasting disabling effects (UNESCO, 2009a), thus emphasizing the importance of inclusion in early years.

Providing services for children with disabilities in their early years in an inclusive setting is significant for both children with disabilities and children without disabilities (Barton & Smith, 2015; DEC/NAEYC, 2009; IDEA/Grove, 1990; NAEYC, 1993; Reichow et al., 2016). Specifically, in an inclusive setting, parental support, early stimulation and care improve the status of children with disabilities. It is clear that early childhood programs that are responsive to individual needs as well as respectful of diversity benefit not only all children in inclusive settings but also contribute to construct the basis for an inclusive society (UNESCO, 2009a).

However, a society must devote itself to providing services which are effective, accessible and equitable in early childhood education programs (Schmit, Mathews, Smith & Robbins, 2013; UNESCO, 1994, 2005; Young, 2002). Each national policy of inclusive early childhood education should include early assessment and early intervention, accessible universal and inclusive early education as well as the availability of professional/specialist support to foster provision of community based education.

### **1.2.3 Relevance of early identification and intervention of HH/D children**

Early assessment and intervention should be initiated in the early years before the child goes to school. The service should be available and accessible for all children in order to identify

children with special needs or those at risk. Identification should go hand by hand with support provision to the children identified as those with special needs or at risk. Moreover, parents and other members of the family should be involved to facilitate support provision to these children. Families are key facilitators and prime helpers. Parents should be provided with enough information and alternative programs for their children. Also, they should be informed as to where they may access the appropriate services. Early assessment done parallel with early intervention optimizes the learning ability of children and enhances the chance for the children with disabilities HH/D to participate and flourish in an inclusive education setting (Allen, 2011; Davis & Carr, 2014; DfE/DH, 2011a, 2011b; Eastin, 1999; Gutiez, 2010; Pugh & Duffy, 2014; Sass-Lehrer, 2011; Sirimanna & Olusanya, 2014; WHO, 2016a, 2016b; Yoshinaga-Itano, 2003).

Universal access to early education is important. With respect to the importance of the early years, it is crucial for children with disabilities to have access to formal pre-primary education. However, statistics show that globally only 56% of children have access to any form of pre-primary services. Despite the lack of data regarding children with disabilities' access to formal pre-primary education globally, it is anticipated that they are least included in pre-primary education programs (UNESCO, 2009a; WHO, 2012). Most children with disabilities do not have access to pre-primary education in inclusive settings.

Moreover, it has been observed that inclusive educational approaches and mainstream educational systems typically address the needs of children in few categories only. Only children with mild disabilities, orphans, street children, girls and the like are included in mainstream education. Children with disabilities requiring special services are neglected and subsequently educated in segregated settings such as special schools, units and classrooms. Inability of mainstream education to address diversity needs of children is a barrier to learning especially for children with disabilities. Educational systems should offer accommodation, differentiation and modifications within the general curriculum. Also, they should include early training in orientation, mobility skills and alternative communication. Family involvement, teacher training, availability of support services promotes inclusion in early year education.

#### **1.2.4 Considerations in educating HH/D children in inclusive settings**

The inclusion of children with hearing impairment has been a topic for discussion for many educators and education stakeholders. Inclusion is challenged as to whether children with hearing impairment especially the Hard of Hearing and those who are totally deaf (HH/D) can learn in inclusive settings (Marschark, 2007; Stinson & Antia, 1999). Inclusive education programs should consider the needs of hard of hearing and deaf children concerning communication, social skills, academic skills and their development issues. First, it is suggested that inclusion is more suited to older children than to younger ones. In addition, inclusion is possible for children with mild hearing loss (Stinson & Antia, 1999). Inclusion is expected to be effective when the needs of HH/D children are considered thoroughly in order to ensure academic and social integration.

Second, the language of communication should be considered in the context of effective communication between the HH/D with hearing peers as well as with their teachers. It is observed that children with hearing impairment have problems in developing the spoken language (Hallahan, Kauffman & Pullen, 2012; Kauffman, Ward & Badar, 2016; Leonhardt, 2010; Marschark, 2007). Language is regarded to be a very important aspect of normal development for both children with hearing loss and those without. Although in the lense of human rights all children are equal, the difference between HH/D and hearing peers is obvious. Their differences are based on the early acquisition of language and communication (Marschark, 2007). Evidence shows that although inclusive education targets the promotion of academic and social integration of children, it is observed that HH/D children often face difficulties in academic participation resulting in social isolation in regular schools. Educators suggest having more than one HH/D child in an inclusive school/classroom to foster a social and communication situation (Cohen, 1994). Otherwise, special classes or schools will be the best option in addressing HH/D needs (Hoccut, 1996; Stinson & Antia, 1999; Wang & Baker, 1985). Special settings provide the chance for positive social development of HH/D children. When HH/D children are educated in inclusive settings practitioners should make sure that the environment supports communication, social and academic improvement.

Learning to speak may be easier for children with mild to moderate hearing loss. Literature shows that for HH/D children learning and production of meaningful speech is a very difficult and frustrating task (Marschark, 2007). Furthermore, Marschark (2007) argues that early language stimulation affects language, cognitive, social and emotional development.

Systematic and effective strategies should be developed to assist HH/D children in complete access to communication. Hence, early language stimulation is recommended. Generally, HH/D children need specific academic skills and social skills to be developed during their childhood for further success learning and life in general.

However, educating HH/D in inclusive settings requires the development of strategies to ensure that these children achieve academic and social integration. Social integration is the major challenge for HH/D children in inclusive settings (Stinson & Antia, 1999; Wauters & Knoors, 2008). The ability to interact with peers, make friends and be accepted by peers is a major concern in the social integration of HH/D in inclusive settings. Most HH/D children in inclusive settings were reported to have less opportunity to interact with their hearing peers. They have few friends and are more likely to be rejected than their hearing peers (Nunes, Pretzlik & Olsson, 2013). As a result they are likely to feel lonely (Kluwin, Stinson & Colarossi, 2002; Stinson & Antia 1999; Stinson & Kluwin, 2003). Inclusion is targeted to promote social integration by providing opportunities for HH/D children to interact with their hearing peers. Nevertheless, HH/D children and hearing children were observed to interact more with peers of the same hearing status (Kluwin et al., 2002; Wauters & Knoors, 2008).

Relationship and friendships are important for children in developing social skills. Research shows that the relationship built during childhood is necessary for social development in adolescent and adult life (Gifford-Smith & Brownell, 2003). Children who are rejected are likely to develop aggressive and antisocial behavior (Wauters & Knoors, 2008). Acceptance by peers and friendship relationships nourish the social, emotional and cognitive development of HH/D children.

Moreover, communication skills are a vital element in social integration and academic achievement. Spoken communication in inclusive settings is often associated with a greater chance to interact socially as well as enhance academic success (Marschark, 2007; Stinson & Antia, 1999). Early inclusion of HH/D children leads to communication improvement. This means inclusion in pre-primary education in the context of this study is important for providing HH/D children with an opportunity to experience spoken language which will help them to interact effectively in inclusive primary education as well as at later education levels. Support provisions should be available to enhance communication, academic and social skills depending on the individual needs. As far as early childhood inclusion of hard of hearing and

deaf children are concerned, inclusion is recommended as the best way to promote social integration and academic achievement of these children.

### **1.3 Brief Overview of Tanzania**

Tanzania is located in Eastern Africa. It is bordered by Kenya and Uganda to the North, Rwanda, Burundi and the Democratic Republic of Congo to the West and Zambia, Malawi and Mozambique to the South. The country's eastern border lies in the Indian Ocean which has a coastline of 1,424 km. Zanzibar is a part of the United Republic of Tanzania and consists of two main islands, Unguja and Pemba and a number of small islands. Tanzania has a total area of 945,087 sq.km including 61,000 sq. km of inland water. The 2012 Population and Housing Census results show that Tanzania has a population of 44,928,923 of which 43,625,354 is on Tanzania Mainland and 1,303,569 in Tanzania Zanzibar. The estimated population by 2014 was 51,820,000. The annual population growth rate is 2.7 (URT, 2013).

The official capital of Tanzania is Dodoma, while Dar es Salaam is the country's commercial capital and is also the major seaport for the countries serving its landlocked neighbors. The Government of the United Republic of Tanzania comprises 30 administrative regions; 25 regions on the mainland and 5 in Zanzibar. Native Africans make up 99% (of which 95% are Bantu consisting of more than 120 tribes) of the population with the remaining 1% consisting of Asians, Europeans, and Arabs. Generally, Tanzanian culture is a product of African, Arab, European and Indian influences. Tanzania has more than 120 vernacular languages which children acquire for communication within the family and community. More important Kiswahili is the national language which every child must learn. Apart from Kiswahili Tanzania also uses English as a medium of teaching and learning from secondary education to university. The diversity of culture and language has an impact on the provision of education for CWD in the country.

#### **1.3.2 History/Evolution of Education for CWD in Tanzania**

Education of children with disabilities in Tanzania is influenced and linked to the global education system for people with disabilities. The development of an education system for people with disabilities worldwide started in Europe in the 1600s with residential schools serving the specific disability category. It started with schools for the Deaf, followed by



schools for people with visual and intellectual disabilities (Braddock & Parish, 2001; Peters, 2003). In Europe, schools for people with physical disabilities were opened later.

Americans established residential schools for people with disabilities in the 1800s. Braddock and Parish (2001) pointed out that in the United States, education of people with disabilities started for people then labeled as deaf and dumb. Schools for people with visual impairment were opened in New York and Boston respectively in 1832. Schools for children with intellectual impairment were opened in Barre, Massachusetts in 1911 (Braddock & Parish, 2001). Religious and charitable organizations pioneered for the provision of education services. The development of schools for people with disabilities took off throughout Europe and North America in the 1900s. Thereafter various countries, including Tanzania, established schools for children with disabilities.

The history of education for people with disabilities in Tanzania can be traced back to the history of education in the country. During pre-colonial times, children received an informal education. This was based on practical skills geared towards the knowledge and skills required for various jobs and activities. Values and norms were transmitted through storytelling and other forms of verbal communication. Elders in the community were the teachers and what to teach depended on the nature and needs of that community. There was neither school nor formal education; learning took place in the field through real life and practice. Since the education was not book oriented, there is limited information as to whether children with disabilities were included. This is, however, most unlikely since the society did not allow children with disabilities to live (Possi, 1999; Tungaraza, 1994).

Formal education in Tanzania followed the same path in introducing special education for people with disabilities. Provision of formal education started during the colonial era. In Germany Christian missionaries were the first to introduce formal education. Germany ruled Tanzania, the former Tanganyika, between the years 1884-1918. At that time, Christian missionaries built several schools but there was no school meeting the needs of children and adolescents with disabilities. Education focused more on reading, writing, counting, Christian teachings and technical skills (Tungaraza, 1994). Schools were few and the teaching geared towards the few assisting missionaries and colonial rulers to perform lower administrative jobs. Thus, at that time, one can prove beyond reasonable doubt that there was no chance for individuals with disabilities.

After the First World War, Germany was defeated and the British obtained a mandate over the Tanganyikan territory. They made some changes in education although the purpose of education remained the same, designed for the few Tanzanians who could support the rulers. Boarding schools were opened with the result that the children attending them developed negative attitudes towards their non-educated peers. Hence the beginning of segregation in society (Tungaraza, 2005).

After independence in 1961, Tanzania inherited the British education system which was segregated in nature. Children in schools were segregated according to their class, religion, gender and race. For example, there were schools for Europeans, Asians and Africans, hence African children were considered to be inferior to other races. In the early post-colonial era of formal education, children with disabilities lagged behind.

Special education for children with disabilities was started at special primary schools opened in 1950. These special schools were opened to cater for a specific disability category, starting with visual impairment, followed by deaf, then intellectual and finally physical impairment. Most of the first schools were established by religious organizations. The first special school for blind boys was established in 1950 by the Anglican Church in the Dodoma region. The school is now known as Buigiri School for the Deaf. The second special school was the school for deaf children opened by the Catholic Church in 1963 in the Tabora region. The school was known as the Deaf-Mute Institute. The third category to receive special education was children with physical impairment. The first school for children with physical impairment was established by the religious organization known as the Salvation Army in 1969 in the Mgwani, Dar es Salaam region. Thereafter, children with intellectual impairment attended the school opened in 1982, which was established by the Ministry of Education in the Lulindi, Mtwara region.

Further, in 1963 the government of Tanzania adopted integrated schooling, and later on, in 1997, inclusive schools were opened. Tanzania adopted IE in 1997 after the Salamanca agreement through the United Nations Educational Scientific and Cultural Organization (UNESCO) pilot project (Mmbaga, 2003). Inclusive education started with the provision of education of children with disabilities in regular schools at primary school level. The first inclusive primary schools under this project were in the Dar es Salaam region. Various

organizations have supported the Tanzanian government with regard to inclusive education to ensure that children with disabilities have access to education.

Additionally, the Salvation Army and Tanzania Association for the Mentally Handicapped joined forces to train personnel and introduced inclusive education services in several regions including Zanzibar. Since the mid-1990s, the provision of education for children with disabilities in Tanzania has undergone some improvements in terms of the number of schools. At least each category of disability has been provided with education at the primary level. The available data shows that, by 2007, Tanzania had 20 special primary schools, 231 integrated primary schools and 195 inclusive primary schools which form a total of 446 primary schools catering for children with disabilities (URT, 2007).

Equally important, each primary school is encouraged to establish pre-primary education classes. In this way, each primary school, whether special, integrated or inclusive oriented, is supposed to accept and enroll children with disabilities in pre-primary classes. Despite the lack of accurate data on children with disabilities in pre-primary education, available data shows that there is a fair number of children with disabilities enrolled in pre-primary education in the country (URT, 2013). But the placement information for the enrolled children with hearing impairment is not yet known. Thus the recent study has aimed to identify the placement settings of the enrolled hard of hearing and deaf children, and harvest valuable information regarding HH/D within the respective pre-primary education setting.

### **1.3.3 Education structure**

The education system in Tanzania is divided into three levels; basic, secondary and tertiary. The basic level of education consists of pre-primary, primary and ordinary secondary education (URT, 2014a). The secondary education level includes ordinary and advanced levels of school education. The tertiary level includes programs and courses offered by higher education institutions including bachelor, masters and doctoral degrees. The formal education system in Tanzania comprises two years of pre-primary (Kindergarten) education, seven years of primary education, four years ordinary secondary education, two years of advanced secondary education, and three and/or above years of tertiary or higher education. Kiswahili and English are employed as the media of instruction; Kiswahili is used in most government pre-primary and primary schools while few government schools and all private and international schools use English. Also, English is used as a medium of instruction from

secondary to higher learning levels (URT, 2014a). According to the Tanzanian constitution and education policy, all children, adolescents and adults have the right to education regardless of their background and differences, including persons with disabilities. (URT, 1977, 2014a).

**Table 1.1 Education Structure in Tanzania**

<b>Number of Years</b>	<b>Level of Education</b>	<b>Approximate Age (Years)</b>
2	Pre-primary Education level	4-6
7	Primary Education	6/7-13
4	Ordinary Secondary Education	14-17
2	Advanced Secondary Education	18-20
7+	Tertiary or Higher Education	21-23+

**Source:** URT (2014a)

In this educational system, early education is of prime importance. It builds the foundation for later education levels. The objective of pre-primary education, when effectively implemented, may ensure success in the future academic life of the child and his/her holistic development. Because children with disabilities are vulnerable and at risk of exclusion in pre-primary education, strategic measures are mandatory to ensure access, participation and support provision in the early years. Therefore, the recent study set out to investigate the situation of inclusion/integration for HH/D children in pre-primary education in Tanzania.

#### **1.4 Justification for the study**

In Tanzania all children aged five and six must attend pre- primary school/education program as a preparation for primary education. Pre-primary education is a component of early childhood education programs as well as of basic primary education. Tanzania signed the Convention of the Rights for People with Disabilities and the Convention of the Rights of the Child. This implies that children with hearing impairment including the Hard of Hearing and the Deaf have an equal opportunity for enrollment in pre- primary education. The government has embarked on inclusive education so as to ensure equal access and equity to quality basic education for all children (URT, 2007). Furthermore, the government has acknowledged that the early years of life are critical to the child’s development and learning, hence formalized

pre-primary education for all children aged five and six as stipulated in Education and Training Policy (URT, 1995).

Despite such government commitment, the situation of children with disabilities in pre-primary education has not yet been determined. More specifically, the experience of children with hearing impairment in inclusive pre-primary schools has not yet been identified. What was the theory behind ECE for children with disabilities? How are HH/D children identified? Where were the children with hearing impairment- specifically HH/D- educated in pre-primary schools? Are they in inclusive settings? How are they learning in that particular educational setting? What are the unique challenges facing HH/D pre-primary education?

Although Tanzania has adopted inclusive education since 1997, there is little empirical research concerning inclusion of children with hearing impairment in early childhood education. One research has conducted a study on inclusive education in pre-primary education (Nzima, 2009) to examine the adequacy of pre-primary teacher education curricula in handling inclusive classrooms targeting children with disabilities in general. Moreover, the country advocates pre-primary education for all children regardless of their developmental status. More important, the focus is on educating all children in inclusive settings as far as possible (URT, 2009a). However, the situation and experience of inclusion/integration of HH/D children in pre-primary schools has not yet been established. Against this background, this study was conducted to investigate inclusion/integration of HH/D children in pre-primary education settings in Tanzania to throw light on the identified knowledge gap. It traces the theoretical orientation as depicted through policy and legislations, identification, assessment and placement, teaching/learning and play interactions, support provisions and challenges facing inclusion/integration of HH/D children within the entire ecology of the child.

### **1.5 Purpose of the study**

The purpose of this study was to investigate inclusion/integration of HH/D children in pre-primary schools. The study was guided by four objectives and four research questions:

#### **1.5.2 Objectives of the study**

Specific objectives of the study were to;

- identify policy and legislations concerning early childhood education for children with disabilities in pre-primary education in Tanzania.
- examine methods used for identification, assessment and placement of hard-of-hearing and deaf children in pre-primary education/schools in Tanzania.
- explore teaching and learning activities, interactions with peers and teachers, play activities, and support provision for hard-of-hearing and deaf children in inclusive/integrated pre-primary learning environment.
- identify specific challenges facing inclusion of hard-of-hearing and deaf children in pre-primary education and create strategies to rectify the situation.

### **1.5.3 Research questions to guide the study**

To accomplish the purpose and specific objectives of the study, the following research questions were developed to obtain the required information for the study;

1. What were the policy and legislations governing early childhood education for children with disabilities in pre-primary schools?
2. What were the methods and ways used to identify, assess and place hard of hearing and deaf children in schools and classrooms in Tanzania?
3. What were the characteristics of teaching and learning activities, play activities, support provisions concerning hard-of-hearing and deaf children and their interactions with peers in pre-primary learning environment?
  - Were children with hearing impairment involved during the teaching and learning process?
  - How were they involved?
  - Communication style? Language used, teaching methods, materials, media ...?
4. What were the challenges facing inclusion of hard-of-hearing and deaf children in pre-primary education and the strategies to overcome them?

### **1.6 Significance of the study**

Findings from the current study are expected to be useful in numerous ways. First, the study is expected to add knowledge to existing literature about early childhood inclusive education. Also, the study will provide empirical enlightenment for the Tanzanian community and guiding educationists about the learning experience and challenges facing children with HH/D in school learning. Furthermore, the study expects to inspire further studies by scholars in the

field of inclusive early childhood, the inclusion of children with disabilities in pre-primary school, so as to help children to have equal access and quality of early education important for achieving academic success.

### **1.7 Limitations and delimitations of the study**

The study focused on inclusion/integration of children with disabilities in government pre-primary schools in Tanzania. The findings, conclusion and recommendations presented in the study do not reflect the situation in the private pre-primary schools or other settings which provide special education for young children in the Tanzanian context. Delimitation of the study addressed how the study was narrowed in scope. Taking into account that inclusive early childhood education is a broad term, the study was confined to the learning of children with disabilities in regular schools only. This study covered only four selected pre-primary schools located in the Dar es Salaam and Shinyanga regions. In these schools, the study concentrated on children with disabilities specifically HH/D. Also the study was confined to policy and legislations concerning CWD, identification, assessment and placement of HH/D children, learning in classroom and outdoor play, support provision and barrier hindering inclusion of HH/D. Therefore the findings cannot be generalized to all children or to all schools in Tanzania or to other inclusive education aspects.

### **1.8 Organization of the thesis**

This thesis includes nine chapters. The first chapter introduces the study by providing the background of the study, rationale of the study as well as purposes, objectives and research questions.

Chapter two presents the theoretical and conceptual framework of the study. The chapter presents detailed information concerning the ecological system theory of development, interpretive paradigms and conceptual framework underpinning this study.

Chapter three presents a review of the literature on inclusive/integration education in early childhood education (pre-primary education). The review concentrates on key issues concerning integration/inclusive and hard of hearing and deaf (HH/D) education. Sub topics such as overview of integration and inclusive education, teaching and learning in inclusive/integrated settings, importance of inclusive education, barriers to inclusive/integrated education, hard of hearing and deaf education issues, and importance of early

identification and intervention of HH/D children as well as overview of early childhood/pre-primary inclusive education are discussed in detail.

Chapter four presents the methodology employed in the study. It describes the methods used in data collection and analysis. Matters concerning research design, procedures and protocol for data collection as well as management of data, validity, reliability and ethical consideration are included.

Chapter five, six, seven and eight present the study findings and discussion of the findings. Chapter five concerns pre-primary educational policy and legislations governing the provision of pre-primary education for HH/D in Tanzania. The chapter analyses the strengths and weaknesses of policies and legislations governing the provision of education for CWD in Tanzania.

Chapter six presents and discusses study findings on identification, assessment and placement of HH/D children in Tanzania. The chapter is divided into sub headings such as identification and assessment of disability procedures, placement options, early identification and early interventions, types and causes of hearing loss.

Chapter seven presents findings on teaching and learning as well as support provision for HH/D children in pre-primary education. The findings on the characteristics of activities and support during the teaching and learning process in pre-primary learning environments providing education for HH/D children in Tanzania are included. It also presents the results and discussion of observation from play activities outside the classroom.

Chapter eight describes and explains the findings on challenges facing integration/inclusion of children with hearing impairment in Tanzanian pre-primary education. Policy challenges, school management challenges, HH/D teaching challenges, challenges facing parents and the family of HH/D, challenges faced by HH/D children are discussed in detail.

The last chapter, chapter nine of this study, presents the summary, conclusion and recommendations made. The summary, conclusion and recommendations are based on the study findings.



## **CHAPTER TWO**

### **THEORETICAL FRAMEWORK OF THE STUDY**

#### **2.1 Introduction**

This chapter presents the theoretical and conceptual framework underpinning the study on inclusion/integration of hard of hearing and deaf (HH/D) children in Tanzanian pre-primary education. The chapter is organized under sub topics such as the ecological system theory of development, interpretive paradigms and conceptual framework.

#### **2.2 Theoretical and conceptual framework of the study**

##### **2.2.1 Ecological System Theory of development (EST)**

The Ecological Theory established by Bronfenbrenner's 1979 is the most influential and remarkable in the context of integration/inclusion of children in pre-primary school. The theory looks at an individual child's development within the context of the system that involves relationships in the child's environment. The theory describes layers of the environment that are complex, each having an influence on the child's development. The interaction between the child, family, neighbours, school and the community at large influence the development. The theory suggests that in order to study the child development all interaction between the immediate and the larger environment should be considered.

The theory is important in explaining factors influencing the provision of education services to HH/D children (Odom & Wolery, 2003). In this study the theory contributes to explaining the importance of the factors such as classroom, school, home, neighbours, communication between the school and home, i.e. communication between parents and teachers and the macro factors such as education policy and cultural values.

Generally, raising a child with disabilities presents unique challenges to parents when compared to parents of children without disabilities. The Bailey and co study observed that parents often reported the need for information concerning their children with disabilities (Bailey & Buysse, 1993). They ask about the status of their children, the services available, availability of facilities, resources and support.

Settings which are more developmental and supported are necessary for successful and independent participation in those settings (Dunst, Hamby, Trivette, Raab & Bruder, 2000; Odom & Wolery, 2003). Moreover, Odom & Wolery (2003) identified settings where the participation may take place such as:

- learning opportunities occurring in the home context,
- participation in inclusive pre-school play grounds,
- social integration interventions in inclusive settings.

### **2.2.2 Historical development of the ecological model**

The Ecological System Theory of Development is the theory developed by Urie Bronfenbrenner (1917-2005) that has been used in educational psychology to study human development over time. Urie was a developmental psychologist. The work of Urie was influenced by Lev-Vygotsky, a famous and well known developmental psychologist and the founder of social cultural theory (Madeline, 2017) and Kurt Lewin, the founder of social organization and applied psychology (Wikipedia, 2008). Today the theory is sometimes referred to as the Bioecological model because the theory values the contribution and involvement of the individual in his/her environment (Madeline, 2017; Wikipedia, 2008). Bronfenbrenner was motivated to develop the theory as a result of his belief that an individual development is influenced by the environment and all within it. The environment is divided into five different levels perceived as a nested structure in which one structure is interwoven in another structure. The interaction process between the child and other members in the systems starts from the innermost structure/layer to the outside structure. These structures are also known as systems labelled microsystem, mesosystem, exosystem, macrosystem and chronosystem.

#### **Microsystem**

Microsystem is the first inner structure of the nested system that has immediate contact with the child. The structure includes child relationships, interpersonal interactions and immediate surroundings (Berk, 2000). The relationship between this structure can be the relationship between a child and his/her parents, siblings, or school environment (home, child care center, and other environment where the child spends time). The relationships between the child and factors at this level have an impact in two directions known as **bi-directional influences** such as the direction away from the child and the direction toward the child (Bronfenbrenner,

1990). Moreover, the bi-directional influences are resilient and have the highest effect on the child development. Conversely, the interactions at outer levels can relatively influence the inner structures. The theory asserts that a child's parents may influence the child's behavior and beliefs; nevertheless, the child correspondingly may influence the behavior and beliefs of the parents. More important, the interactions of structures within the layer as well as interactions of structures between layers are significant to this theory.

### **Mesosystem**

This is the second layer of the system surrounding the microsystem; it includes the interactions between the members of the microsystem. It should be noted that not all interactions between members of the microsystem and the surrounding is mesosystem. The interactions are considered as mesosystem only if they have a direct influence on the development of the individual child. An example of mesosystem could be the relationship between the parents of the child and their school teachers or school management (parent-professional and professional-professional relationships) (Berk, 2000).

### **Exosystem**

Exosystem is the third layer that contains elements of the microsystem that may indirectly influence the child development (Berk, 2000). It has no direct influence on the individual child, but the child may get an impression of the positive or negative power involved in the interaction with the microsystem, e.g. the situation and conditions of parents' work or work place. If the work is so demanding and therefore time consuming for the parent, this may have an effect on the child. Uncertainty of job security may cause stress to the parent that indirectly affects the child. The relationship of parent with local, state, and national agencies, social groups, medical services bears an influence on the child.

### **Macrosystem**

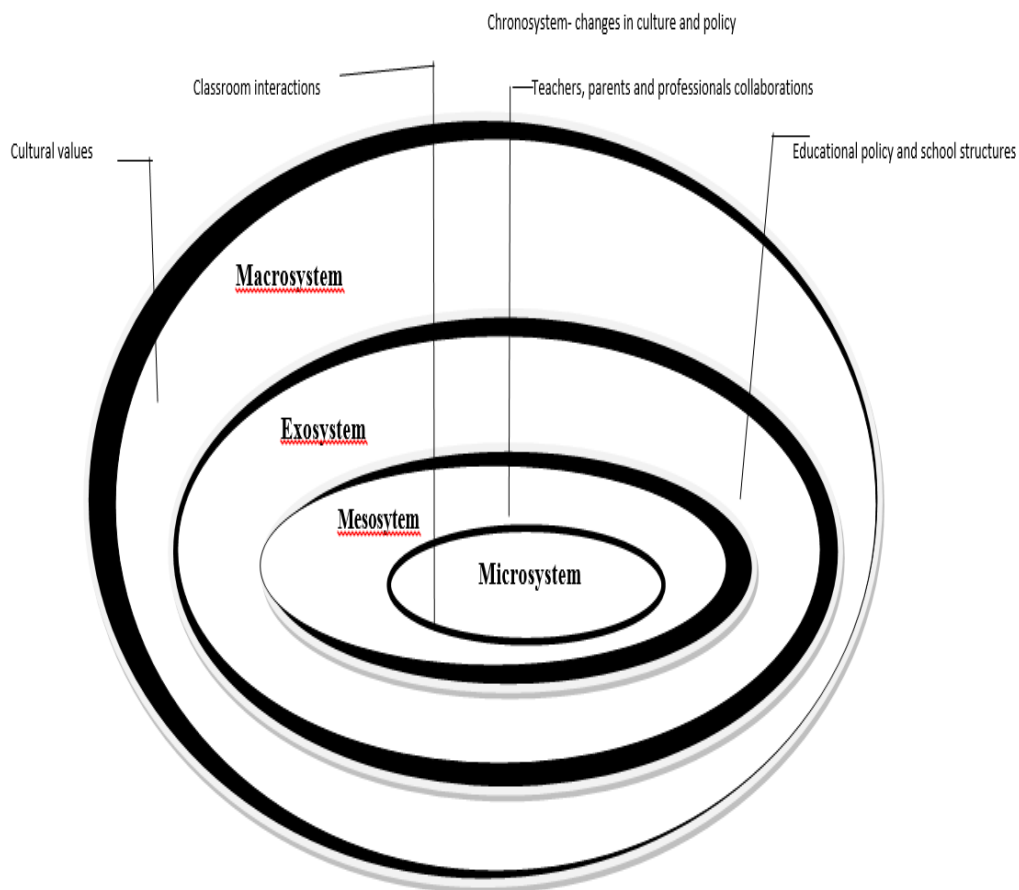
The macrosystem is the fourth layer of the system that contains societal beliefs, cultural values, laws, customs and other programs that affect individual child development (Berk, 2000). The macrosystem does not have a specific structure, e.g. the cultural norms, societal attitudes, national legislations and laws and religious beliefs. The effect of larger principles defined by the macrosystem have a cascading influence throughout the interactions of all other layers. For instance, in the society where they believe that parents are responsible for raising their children, it is likely that the society will not provide support for the parent

regardless of the ability of the parent and the need of the child. The belief is likely to affect the structures in which the parents function. It is the outermost layer of the bioecological model.

### **Chronosystem**

The fifth system of the theory is the chronosystem; in developing the model Bronfenbrenner added the chronosystem that involves the patterning of environmental events, transition and social-historical circumstances. It involves the changes that occur over time to a person and the environment. Those changes bear an influence on child development. For instance, divorce and death of a parent are one of the transitions that affect child development. The key tenet of the Bronfenbrenner model is based on the importance of the interactions between the child and his/her environment. The model categorizes the interactions into systems and shows how it influences the child's development.

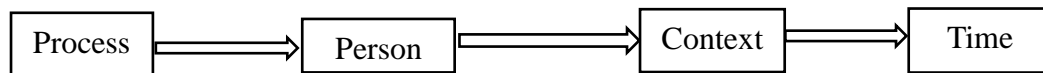
**Figure 2.1: Bronfenbrenner Ecological System of Development**



**Source:** Modified Bronfenbrenner Ecological System Model (1977, 1978, 1995) adopted by Reichow et al. (2016).

Moreover, EST is closely related to process, person, context and time (PPCT) model. PPCT is observed to be the foundation of the Bronfenbrenner theory. The essence of the PPCT model lies in Bronfenbrenner' belief that child characteristics greatly influence the development of the child alongside environment factors.

**Figure 2 2: PPCT Diagram**



**Source:** (Odom, 2016)

**Process,** Bronfenbrenner acknowledged the importance of developmental proximal process as the critical principle mechanism for the child's development. It contains the bonded and vigorous relationship between the child and his/her context (Bronfenbrenner & Morris, 1998). The interaction between a child and environment determines the child's development.

**Person,** Bronfenbrenner & Morris (1998) described three characteristics of the child that can influence development. First characteristic is the disposition of the child that can make the proximal process continue in a particular developmental domain (cognitive, social, emotional and physical domains). Second is the bioecological properties required for active functioning of the proximal process such as ability, skills, experience and knowledge. Third is the stimulus characteristics from the social environment that can foster or hinder the interactions between the child and environment. The role of the child and his/her characteristics in social interactions is vital for development and social interaction. For example, age, sex, gender and physical appearance are identified to be key characteristics of a human being that influence development (Odom, 2016).

**Context** comprises five systems where child development takes place. The micro system includes environments where the child has an opportunity to stay and interact for long periods of time. Such environment includes home, school, pre-primary school, day care center and other institutions where children spend long periods of time (Odom, 2016).

**Time**, interactions assessed over a chronological scale. Development is measured across time. The extent of process occurrence is significant for child interactions in the environment.

### **2.2.3 Application of EST in early childhood inclusive/special education**

Ecological System Theory (EST) has been one of the vital theoretical frameworks used in the field of early childhood special education (Odom, 2016), i.e. early childhood education for children with disabilities (Sontag, 1996) and early childhood inclusion of children with disabilities (Guralnick, 1982; Odom & McLean, 1996; Peck, 1993). The theory provides explanations on the role of biological factors and environment for young children with disabilities, the service provided by parents and caregivers both at home and outside home such as at day care and pre-school- viewed as a very important target for intervention (Reichow et al., 2016). The theory guides the attention not only to the child and the immediate system but also to the interactions among the entire ecological system.

“The ecological model proposes that intervention must consider the interrelatedness of all systems that impact the child and care givers rather than only considering the child and care giving adults” (Reichow et al., 2016:11).

The EST has been widely used in understanding and planning programs such as education, care and development services in early childhood special education/inclusion. The practice of provision of children with disabilities has swung from the special settings to the inclusive setting. Researchers in the field advocate the holistic development of the child in inclusive settings rather than in specialized settings. The underlying tenet of the idea is the influence of child characteristics and the entire environment surrounding the child. The study conducted by Odom et al., 2004 found the use of Bronfenbrenner’s ecological system relevant in developing programs for children with disabilities together with their peer children without disabilities.

The program should focus on the child characteristics (biosystem), classroom practices (microsystem), family perspectives (mesosystem), social policy (exosystem), (macrosystem) and changes of variables across time (chronosystem). Characteristics of children with disabilities form the central system of the model (Bronfenbrenner & Morris, 1998). The emphasis on the characteristics of the child is important for any program. Studies on pre-school inclusion show that there are two dimensions of child characteristics such as type of disability and severity of disability (Odom et al., 2004). Often types of disability mentioned in literature include visual impairment, Down syndrome, autism and hearing impairment.

Specifically, inclusion of children with hearing impairment is entangled with the debated concerns of type of communication intervention, context and intensity of services. The second dimension- the severity of disability- influences the decision on the placement of children with disabilities in inclusive settings. Literature shows that children with mild disability are more likely to be enrolled in inclusive settings than children with severe multiple and sensory impairment, HH/D included (Buysse, Bailey, Smith & Simeons son, 1994).

Educating children with disabilities in an inclusive setting has many advantages compared to segregated settings. In inclusive settings positive developmental behavioral outcomes occur for both children with disabilities and children without disabilities. However, as a group, children with disabilities are not socially integrated as their peers without disabilities. The National Association for the Education of Young Children (NAEYC) recommended that early childhood education programs should consider developmentally appropriate practice (DAP). The practices that are developmentally appropriate focus on child development domains as cognitive, motor and social domains (Godon & Browne, 2014; Bredekamp & Copple, 1997). The quality of learning activities is that which facilitates motor, cognitive and social skills. Godon & Browne (2014) outlined three core components of DAP:

- What is known about child development and learning? The knowledge of age-related characteristics that permit general predictions about the kind of experiences that can promote child development and learning.
- What is known about the child as an individual in order to respond to individual child needs and to identify the strengths and weaknesses of each child?
- What is known about the social and cultural contexts in which children live- the values, expectations and behavioral and linguistic conventions that shape children's lives at home and in their communities? In developing the program, practitioners should understand how to make school learning meaningful, respectful and relevant for each child and the family.

The responses to the questions lead to the modification of the school environment conducive to the development and learning for children using DAP guidelines (Godon & Browne, 2014):

- building a caring community of learners. Programs that are supportive and value all children regardless of ethnicity, race, age, ability, and gender,

- teaching to enhance development and learning,
- Planning curricula to achieve important goals. Consideration of child interests and needs and inclusion of all developmental domains,
- assessing children's development and learning to monitor each child's progress regularly,
- establishing reciprocal relationships with families that promote a sense of corporation based on mutual understanding and negotiation.

Among the challenges facing the education of children with disabilities is mixed ages within the classroom. In most cases CWD are put in one class together regardless of their age difference. The mixed age group proved to have positive and negative impacts. Literature reveals that mixed age groups enhances a higher level of play mastery for children with disabilities than same aged groups (Blasco, Bailey & Burchinal, 1993), promotes greater interactions among peers for younger children (Bailey & Buysse, 1993), promotes conversations among children with disabilities and children without disabilities and accelerates cognitive development (Roberts, Burchinal & Bailey, 1994) whilst promoting language and motor development for young children (Bailey & Buysse, 1993). However, the mixed age group situation was observed to affect attention engagement with peers (McWilliam & Bailey, 1995).

The studies from US observed that parents hold positive attitudes towards inclusion of their children with disabilities. However, they raised some concerns about inclusion, important in the planning of education for CWD. Furthermore, social policies in the US system, the use of standards and the fiscal issues hinder facilitators in the implementation of pre-school inclusion. Several policy factors impact the implementation of early childhood inclusion. Policy factors include program and institution standards as well as financial resources. Likewise interpretation of policy by educational administrators is reported to have considerable effects on inclusion decision making (Smith & Rous, 2011). Attitudes and beliefs held by educational administrators have the greatest effects on the placement of children with disabilities (Kochanek & Buka, 1999).

Cultural variables shape the nature of inclusive classrooms as well as family access to inclusive settings. EST was also used in various other studies, e.g.:



1. Odom and colleagues conducted an ecological system study of pre-school inclusion to determine facilitating factors and barriers affecting the provision of inclusive services (Odom, Wolery, Leiber, & Hanson, 2002).
2. the stability of inclusive services across time (Odom et al., 2002),
3. Transitions of children receiving inclusive services into elementary school (Hanson et al., 2001),
4. factors influencing the implementation of pre-school inclusion (Odom & McLean, 1996),
5. child-teacher relationships and achievement (O'Conner, 2007),
6. pre-school inclusion in the United States (Guralnick & Bruder, 2016).

### **2.3 Interpretivist paradigm**

The recent study employed the theoretical framework of interpretivism. Interpretivism is the school of thought that emphasizes the significance of observation and interpretation in understanding the social world (Ritchie, Lewis, Nicholls & Ormston, 2013). The utilization of the paradigm in qualitative research resulted from the work of Emmanuel Kant in 1781 publication titled "*Critique of Pure Reason*". Kant highlighted the fact that human perceptions depends on the interpretations of what the senses see. In qualitative research, researchers place stress and value on individual interpretation of the social world and importance of interpretation of both participants and the researcher as well as understanding the case being investigated. In addition, Wilhelm emphasized the importance of understanding in qualitative study and studying persons' life experiences across a particular historical and social context (Ritchie et al., 2013)

The goal of interpretivist theory is to understand a particular social reality as constructed by people within the specific context as they engage themselves in interactions (Bogdan & Binklen, 2003; Ritchie et al., 2013). Interpretivist researchers believe that there is no single reality as reality is constructed by the individual hence it is subjective (Lather, 2006; Ritchie et al., 2013). Although it is difficult to capture social reality accurately, the researcher tried to represent participants' meanings as faithfully as possible. The main goal of interpretivism is to value subjectivity in research. Thanh & Thanh (2015) argued that researchers using the interpretivist theoretical framework use flexible means for gathering information from participants in order to elicit the reality experienced as part of a particular society or culture. However, reality can be affected by the research process; facts and values are not distinct and

it is impossible to have free objective values. To avoid subjectivity in the recent study the researcher attempted the neutral position by exposing the research processes. Moreover, the research processes are significant as interpretation is grounded in the data.

Furthermore, Taylor and Medina (2013) explained that in education the use of interpretivism commenced in 1970s, when researchers embarked on understanding the reality in the classroom through the daily experiences between teachers and their learners. The key idea is the belief that in order to understand the meaning of the world people must interpret it. The theory asserts that people are different due to diverse background and experience thus they develop different meaning and interpretation about social phenomena. The use of interpretivism allows scientific investigation in the field of education that focuses on people instead of methods for example the experience of teachers and children.

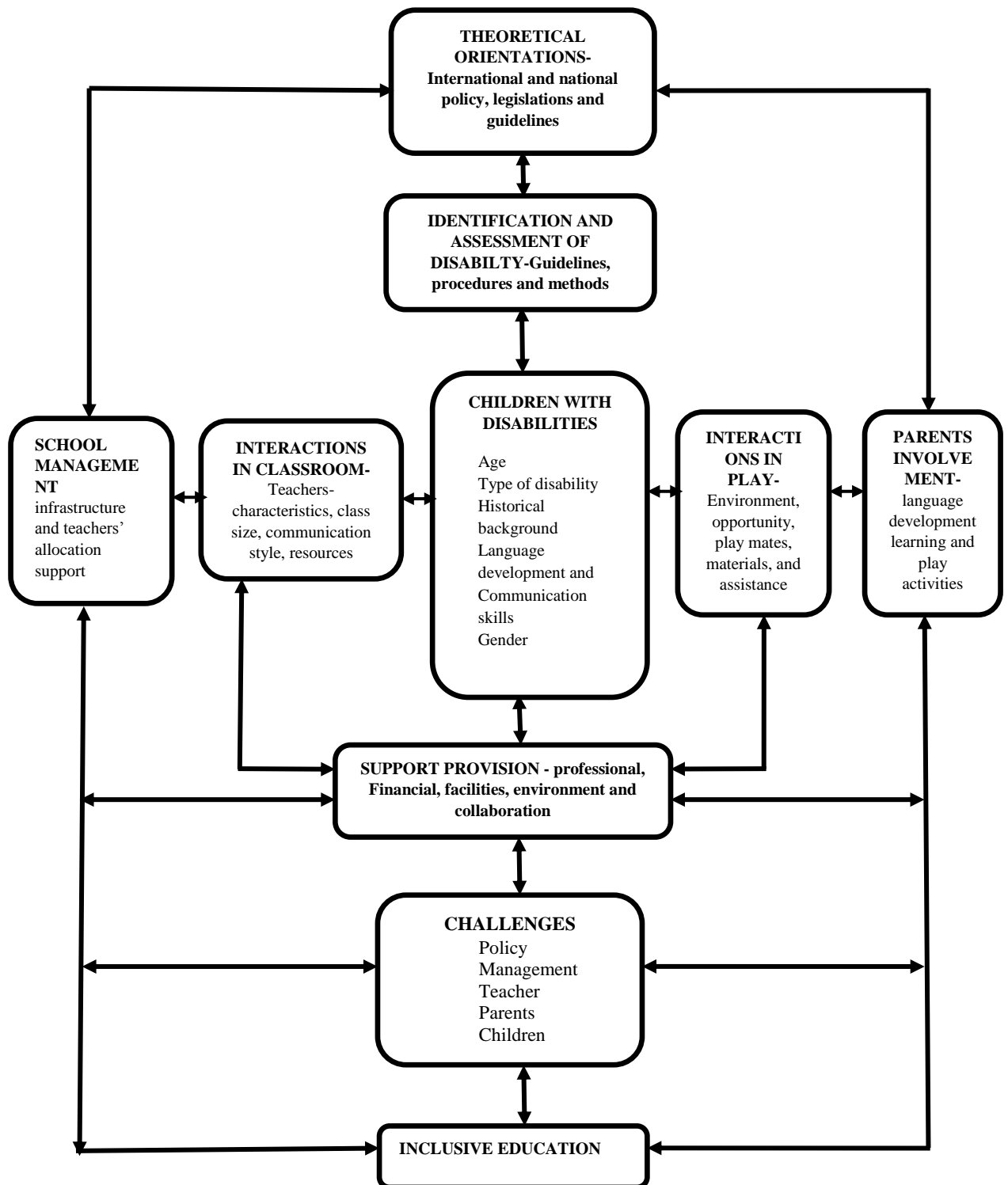
The crucial objective of interpretivism is to understand personal experiences whilst acknowledging that there is no single reality and reality that is constructed by the person. The theory maintained that reality is socially created hence various perceptions are acceptable (Lather, 2006; Patton, 2002). A researcher in education is required to be more naturalistic, start to focus on the experience of participants as the theory values persons' experiences. Various methods of data collection are used under this theory that allow the researcher to recall individual experiences. Methods include interviews, participant observation and document analysis, ethnography (Lather, 2006; Lincoln & Guba, 2013; Schwandt, 1994).

The methods allow researchers and participants to be more flexible hence obtaining valuable information. More important is for the researcher to be an effective listener, observing/watching, recording and probing during the data collection process (Schwandt, 1994). The recent study employed the interpretivist methodology in data collection. Interpretivist methods use methods that allow the researcher to investigate in depth phenomena, and the recent study used case studies. Moreover, interpretivist methods seek knowledge and understandings of human behavior, explain actions from the participant's perspective and do not dominate the participants views (Scotland, 2012). For instance open-ended interviews and open-ended observations were employed. These methods usually generate qualitative data. However, as analysis is based on the researcher's interpretation, the researcher is required to develop systematic ways of analysis. The researcher in this study provided adequate evidence to support the study findings.

Following thorough review of literature and analysis of various theories and models, the researcher developed the conceptual framework which comprises key elements observed to be vital for effective implementation of inclusive education for children with disabilities including hard of hearing and deaf children in Tanzanian pre-primary education. The conceptual framework comprises theoretical orientation revealed in policy, identification process, school management, teachers and parents.

## 2.4 Conceptual Framework

Figure 2.3 Conceptual Framework



Source: Researcher

### **Education policy**

This implies the policy important in enhancing or hindering inclusive education in the country, i.e. important in transforming the education system from traditional to inclusive (Ainscow, 1999; Ainscow & Miles, 2008; Peters, 2003; Armstrong, 2004; Donohue & Bornman, 2014). International and national policies attract equal attention for the effective implementation of inclusive education.

### **Identification and assessment of disability**

Identification and assessment of the disability is important for educational provision. Identification induces the practitioners to understand the needs of the child. The needs of children with disabilities have to be considered in order to ensure that they develop and learn as other children do regardless of their special needs (NAEYC, 1991). Identification has several benefits including economic and child development, the planning of early intervention and support to the child, parents, education and other services (Guralnick, 2017; McGrath & Vohr, 2017; Pugh & Duffy, 2014; Sass-Lehrer, 2011). The timing of identification has a potential implication for child development. For example, the unidentified hearing loss or late identification of hearing loss has a negative implication for the child's language, communication, cognitive, social and emotional development (Davis, & Carr, 2014). Also it affects the accessibility of the child to quality education services that may influence future life.

### **School management**

Since teaching and learning take place in the school environment, schools are thus a crucial component in the provision of education for children with disabilities. School generally includes school management, classroom environment, teaching and learning materials, play facilities, guidelines for child development and performance, screening and placement of CWD, assessment and evaluation of learning and development achievement. The development of the child's relationships in school, where the child spends a fair amount of time, is very important for the child's development. Positive interactions that lead to good relationships between the HH/D children in school promote the intellectual and emotional domain of the child's development. Therefore according to EST theory, the role of teachers as adults in school is crucial.

### **Interactions in classroom**

Teachers are the implementers of inclusive education in the classroom. The knowledge and understanding of the concept of inclusive education and children with hearing impairments (CHI) are factors promoting inclusion. Teachers' attitudes and views concerning hearing impairment as a disability have an impact on their teaching and involvement for CHI learning. Equally important is the relationship between teachers and HH/D children in school which affect the child's learning and development. Teachers are required to support primary relationships as well as create a warm, nurturing family environment in school.

The role of the teacher and methods of teaching are important factors in pre-primary school. It is assumed that young children need individual attention, and they need personal and warm relationships with adults. In traditional pre-primary schools the number of children in one classroom is recommended to be small, usually less than 20 children in a class (Godon & Browne, 2014). For children with disabilities the teacher-child ratio is supposed to be less than in the ordinary classroom.

Teacher characteristics such as age, gender and professional status influence the teaching and learning of children at school. Teacher preparation/training is of paramount importance. All teachers require training on how to handle CWD in the classroom to ensure responsibilities and quality are met (Agbenyenga & Klibthong, 2015; Brownell, Ross, Colon & McCallum, 2005; Forlin, 2010; Forlin & Chambers, 2011; Early, Maxwell & Burchinal, 2007; Obiakor & Rotatori, 2015; Sharma & Das, 2015).

### **Interaction in play**

Play is a vital element of the child's cognitive, language, social and emotional development. Language skills and familiarity of playmates influence play among children. Teachers are responsible for supporting children's play activity. Children with hearing impairment -as with children with disabilities in general- may require assistance in order for them to engage successfully in play with their peers (Lundqvist, Allodi & Siljehag, 2015; Mallory & New, 2013). As HH/D children lack communication skills, peers are required to be taught communication skills such as how to read and understand cues, gestures and signs used by HH/D children. Likewise, HH/D children are required to be taught play skills as well as strategies for successful communication with their peers. Teachers' involvement is vital to enhancing engagement and participation in peer play. Mallory and New suggested that for

those children whose sensory characteristics hinder their ability to participate in peer-initiated play intensive forms of scaffolding and direct instruction of play may be required (Mallory & New, 2013).

Environmental and play materials need to be well arranged and placed to facilitate easy access. The role of teachers or other adult and peers is important for HH/D children. Play plays a key role in the cognitive and social-emotional development of HH/D children. Activities should be well designed and supervised to support child competence and social inclusion. Children learn social skills through play. Play with their HH/D peers and hearing peers are reportedly the starting point for children's social inclusion. Isolation in schools especially during play may impair children's ability and opportunity for the acquisition of the social skills required for integration in society. Peer interaction between children with disabilities and children without disabilities is improved when there is a chance to interact with children without disabilities (Guralnick, Neville & Connor, 2007; Roberts et al., 1994). Availability of play materials encourages the child to engage in and sustain play. Space available for play plays a vital role in children requiring free outdoor plays. In Tanzania as in other countries schools and child centers in urban areas are challenged by the availability of open space to accommodate free space for outdoor play (Waller et al., 2010).

### **Parents/family involvement**

The family is the most influential, powerful, the closest and most durable fragment of the mesosystem. The impact of the family embraces all other aspects of the child's development. Parents as part of the family are important for any kind of child learning and development. Provision of basic needs such as food, shelter, security and love influences child development. Children learn language from their parents in their early years. In the early stage of life children depend greatly on their parents. Parental support is observed to be vital for their children's learning and development progress. The parents of HH/D children are the prime elements of support (Hettiarachchi & Das, 2014).

The relationship between parents and teachers is significant for the extension of child development from home to school learning. Parents are the key and central source of support for the children's development and learning. HH/D children receiving parental support are observed to be in a better position when compared to their peers without parent support. Thus, they may require access to training, supportive services and information in order to be able to

assist their children effectively (Eastin, 1999). Challenges facing parents affect the child directly and conversely, challenges facing the child affect the parents. School, religion, society, community and cultural factors from within the mesosystem and the exosystem have a direct influence on the family, e.g the attitude of society toward the family affects the family and the child.

### **Support provision**

Teachers, children and the school in general require supportive systems to facilitate the provision of education for CWD. Teachers need support in order to meet the needs of children with special needs in their classrooms. The support includes institutional support. Good cooperation with school management is viewed to be important for teachers' work (Sharma & Das, 2015). The cooperation should be continuous. There should be a clear and open guideline and procedures for appropriate information to parents on available services, communication development and hearing loss status.

### **Family-teacher interaction**

Good relationships between parents and teachers is important for effective child development and learning. Batten, Oakes & Alexander (2013) argued that all children can achieve success when parents and teachers work together

### **Challenges facing inclusion**

Early childhood education settings designed for inclusion is a challenge. Teachers may react differently toward the challenge; some may accept the children in their classroom while others may deny acceptance. Parents and the community may hold negative attitudes toward inclusion, be reluctant to send their CWD to school or fail to support the children. The school structure and education system should adapt to accommodate an inclusion culture that will support CWD learning and participation in the school.

### **Inclusive education**

Inclusion in a broader concept aims to include all children with special education needs in a setting with children without special education needs. It could imply full inclusion whereby children share the same school environment and the same class for the whole day or partial inclusion where they stay together in the classrooms for some hours in the day. Inclusion is



not a matter of strategies or placement; most important is the feeling of belonging in the school community. Inclusive approaches include the medical, charity and social models.

The medical model observes children with disability as children with a deficiency. The child with disability has a deficiency that prevents the child from conforming to social norms. Therefore, the child must struggle in order to fit into the school community (Martin, 2013). The charity model, rooted in religious beliefs (Das & Shah, 2014), considers children with disabilities as victims of misfortune requiring empathy from other people in society. Services provided to CWD are considered to be acts of kindness. The social model views disability as a neutral phenomenon. Children with disabilities are considered to be part of the society at large. They should enjoy values common to other members of society (Batten et al., 2013).

## **CHAPTER THREE**

### **INTEGRATION/INCLUSION AND HARD OF HEARING (HH) DEAF (D) EDUCATION**

#### **3.1 Introduction**

This chapter presents a comprehensive review of literature pertaining to the study. The topic focuses on key issues concerning the integration/inclusion of hard of hearing and deaf (HH/D) children. The chapter is organized into sub-topics: overview of integration and inclusive education; teaching and learning in integrated/inclusive settings; importance of inclusive education; barriers to inclusive/integrated education; hard of hearing and deaf education issues and importance of early identification and intervention of HH/DD children together with an overview of early childhood/pre-primary inclusive education.

#### **3.2 Overview of integration and inclusive education**

Integration and inclusion are common concepts used in education for children with disabilities (CWD) and children with special education needs (CWSEN). The term integration has been used for decades in special education (Thomas, 1997), while the concept of inclusion first appeared in the Salamanca Statement (UNESCO, 1994). Integrated education is the placement of CWD in regular schools with provision of specialized assistance and services. It is the education strategy in which children with special needs attend regular classes, part-time or full time with other children without special needs. The integration of CWSEN is reportedly effective in inclusive settings (Rodriguez, 2015).

Before the Salamanca Statement most countries provided education for CWD through integrated systems. CWD were enrolled in mainstream settings. The integration required the CWD to fit into the regular school system. Thus in many countries only children with mild disabilities were enrolled in regular schools because they could fit into the school system. Children with severe disabilities were educated in segregated special schools whenever thought necessary. Inclusive education requires CWD to be educated in regular classrooms with mainstream teachers. It is broader and wider than integrated education as it supports the enrollment of all children in a regular education system. It is a process for increased child participation in the regular school. Special support outside the classroom is provided only if it has been proved that the CWD are in need of extra support. In most countries, including

Tanzania, integration has been used as an approach in the process of inclusion (Sharma, 2005; Tungaraza, 2010). It is a struggle to eliminate segregation in education and in society at large.

NIACE (1992) stipulated that segregation in education meant exclusion from the main stream in separate settings without a time limit or an integration plan. Also, it is an education under separate management from the main stream such as a special unit in a regular school. According to the description above, special schools and special units in ordinary schools provide segregated education. Discrimination of learners during teaching and learning due to their disabilities can also be identified as segregation. Mmbaga (2003) argued that, with globalization, the concerns of inclusion are taken into account, making it a globally acceptable practice in education. It is believed that implementation of IE should lead to the improvement of learners in schools, resulting in the elimination of segregation of children (UNESCO, 1994). Inclusive education is a means to facilitate a change in the discriminatory or segregation attitude of members of society, starting with the classroom environment (Thomas, 1997).

Moreover, segregating children in the education system due to difficulties they experience in learning could be reduced through inclusion orientation. Inclusion supports elimination of all segregation in education on the basis of learning difficulty. All countries are required to adopt inclusive policy as a commitment to the elimination of segregation of children in education. As well as promoting equal opportunities, ending of segregation in education is conceived of as a human rights issue.

Exclusion of children from the mainstream due to learning difficulties is devaluing and discriminatory. The advocacy of integration for people with learning disabilities observes segregation in education as a major cause of society's prevalent prejudice against people with learning difficulties. Therefore, efforts to increase participation of people with learning difficulties in learning community life will be extremely threatened unless segregated education is reduced and ultimately ended (CISE, 2003; NIACE, 1998).

The struggle against exclusion led to the establishment of an educational approach that would provide opportunity for inclusion of the excluded children. Inclusion in education is currently a global agenda. The struggle for inclusion in education can be traced as far back as 1954- the United States Supreme Court's decision concerning racial segregation. The court claimed that

purposeful segregation produces feelings of inferiority. These feelings affect the individual child's mental and emotional status in a way that it is considered as incomplete. More importantly, the feeling of inferiority affects the motivation of a child to learn and has a predisposition to impede their intellectual development. Additionally, Kristiansen & Kristiansen (1984) commented that society has to be aware of the conditions that tend to increase the risk of impairment. When segregated and deprived the right to education and other social activities, there is a risk that the degree of impairment might increase or another impairment might evolve. Furthermore, Whitaker (1998) urged that it is unjust to exclude children from the mainstream education because they have special needs. Generally, excluding children with special needs is unjust for all children in the school. Regarding the need for inclusion of children with disabilities in regular schools, UNESCO (1994) identifies key criteria for promoting regular schools with inclusive orientation:

- to avoid discrimination,
- to create a warm environment for inclusive communities,
- to construct an inclusive society and realize education for all,
- to provide an effective education for the majority of children,
- to improve efficacy in the education system, and
- to reduce expenses in education.

In this context, the Salamanca statement raises a concern for the need to begin to develop a vision for the future in order to encourage the wider political structures that promote local mainstream schools and colleges. The essence of mainstream education is to provide an opportunity for every child to be actively involved and participate as a member of the school community. The involvement and participation should be valued regardless of the differences and diversity of learners so as to build inclusive schools (IS) (SCERT, 2010). Children with disabilities require a warm environment in inclusive schools that can enhance their psychological and cognitive wellbeing important for learning.

### **The concept of inclusion**

There is no universally agreed definition of the term `inclusion` and `inclusive education` (Humphrey, 2008). McLeskey, Waldron & Algozzine (2014) raised concern about the lack of agreement concerning the definition of inclusive education. Lacking agreement on the definition of inclusion led to different translations of the term. Inclusion has been interpreted

as a best way for children with disabilities to fit into a regular school setting (Eleweke & Rodda, 2002). It is a child who is required to fit into the school setting rather than the school meeting the needs of the child. Diane Sydoriak defines inclusion as not a place or a placement but a philosophy concerning the provision of free public education appropriate to children with disabilities (Eisner, 2012). It is worth noting that inclusion should consider the real inclusion of children with disabilities. Literature shows that most CWD are academically, socially and emotionally excluded in inclusive classrooms in inclusive schools (Smith, 2010). Additionally, Booth & Ainscow (2003) view inclusion in a broader sense in that the child has to be a real member of mainstream school environments whenever possible. The following aspects should be considered:

- presence- the child has to be fully educated in the regular classroom together with his/her normal developing peers without segregation services,
- participation- the child has to receive quality education service,
- acceptance- the child has to be accepted by peers and teacher, and
- achievement-academic and other developmental skills necessary for child development.

In addition IE is defined in different perspectives; Sharma & Das (2015) defined IE in terms of development. There is a difference between IE in developed and developing countries. In developed countries, IE means inclusion of ethnic groups, girls and marginalized groups as well as children with learning difficulties and children with disabilities. Children belonging to these groups are supposed to be educated in regular schools, hence dispensing with special schools. Particularly children with disabilities should receive education service in inclusive settings. Schools are required to be modified to meet the needs of learners thus requiring a restructuring of curricula and pedagogy.

IE in developing countries according to Sharma & Das (2015) is viewed as a process of increasing access and participation in education. Contrary to developed countries, in developing countries most children with disabilities do not attend school. They are denied their right to education. Nevertheless, even the few enrolled in school reported that they did not enjoy the right of education compared with their peers without disabilities. They are not learning as others and most of them do not finish school and most of those who do finish fail to move up to another level (HakiElimu, 2008; Mmbaga, 2003; Sharma & Das, 2015; Tungaraza, 2010). Thus

IE in developing countries is mainly concerned with simply providing an opportunity to include the excluded in the education system.

Inclusive education is defined in two channels on the lense of disability perception- the biological and social model. In the biological model, disability is viewed as a dysfunction on the part of the child or person with disability. The dysfunction limits the child to participate in mainstream society. The problems in inclusion are related to the individual rather than the environment and social obstacles (UNESCO, 2002).

The social model concentrates on the environment and the interaction between the individual and the environment. The social model blames the environment as the source of exclusion of PWD from full participation in mainstream society (UNESCO, 2002). It insists that it is the duty of society to take responsibility for the care of its PWD in their society as well as to ensure that these people are treated with respect and encouraged to participate in social activities. Inclusive education is assumed to be the best way to build an inclusive society by starting with the inclusion of the excluded children within the school community.

Moreover, IE is defined as a reform in education (UNESCO, 1990). IE targets the reform of the entire education system to meet the diverse needs of all children. The school should be prepared for all children and not the children for the school system (Booth & Ainscow, 1998; Martin, 2013). It is the responsibility of the school curriculum and teaching methodology to meet the needs of all children in the regular school. In general, Berlach & Chambers (2011) view inclusive education as a process to ensure the provision of quality learning environments for all children. This would promote better learning and all children would benefit from an inclusive education that considers individual needs.

In addition, Dyson (2010) described inclusive education as embracing politics, pragma, rights and efficacy. First, from the political viewpoint, inclusive education is about elimination of injustice at school. It is described as a method to build inclusive society starting from the classroom. An inclusive society could be developed as a result of the elimination of injustice and inequity in the school system. The inclusive school system should ensure that justice and equity are maintained. Second, inclusive education in the pragmatic lense means inclusive education in practice. The inclusive school should make the school more effective.

Third, inclusive education in the context of efficacy considers IE as a cost-effective approach in the provision of education services to all children. Fourth, inclusive education as a right means it is a method to guarantee educational rights to every child. In this perspective education is realized as a human right to every child and through IE the right could be extended to all children including CWD (Dyson, 2010).

Apart from the narrow and broader definitions, the common idea of each perspective focuses on inclusion of excluded children. The philosophy of inclusive education is to build an inclusive society. An inclusive society is a society where every member is respected and valued and has equal access to community activities. Theoretically, inclusive education is a means to build an inclusive society whereby the school system is designed to meet individual differences. The inclusive school that practises inclusion promotes the socialization of children in the school as well as in society.

UNESCO stipulated that the ultimate goal of inclusion in education is to remove all forms of discrimination and encourage social unity (UNESCO, 2011). Additionally, Fletcher and Atilas consider inclusion in education as a placement, participation and as an education for all (Fletcher & Atilas, 2005). Inclusion involves the participation of children with disabilities in regular schools or classrooms with the aim of providing equal opportunities and experiences as typical or non-disabled learners. Inclusion as a placement is described differently by different scholars. Battenet al. (2013) described three placement models:

1. full inclusion model

Children with disabilities receive all education services in regular classrooms; there are no pullout services.

2. combined service model

In this modal the child receives service in regular classrooms as well as resource rooms.

3. pullout model

Children who require special education needs receive services in the resource room provided by specialized teachers. In this modal there is no formal collaboration between special education and regular/general teachers. Everyone works independently.

On the other hand, Heiman (2004) proposed four approaches toward inclusion:

1. in-and-out

In-and-out was viewed as important for children with learning disabilities who require special instruction outside the regular classroom.

2. two teachers

The two teacher approach is used in regular classrooms with children with disabilities who require special education assistance. The two teachers are: one regular teacher teaching all children, and one special education trained teacher assisting children with disabilities.

3. full inclusion

Full inclusion embraces the integration of children with disabilities in regular classrooms without in-and-out or special assistance. All children are taught by one regular teacher.

4. rejection of inclusion

Rejection of inclusion promotes segregation of children with disabilities as it advocates teaching CWD in a separate classroom.

Moreover, IE is viewed as a means to provide Education for All. According to Miles and Singal (2010) the broad vision of EFA as stipulated by UNESCO (2000) includes:

- increase in early childhood care and education services,
- assurance of provision of free and compulsory primary education for all children,
- encouragement in learning and life skills for the young and adults,
- increase in adult literacy by 50%,
- realization of gender equality by 2015,
- improvement in the quality of education.

Inclusive education promotes EFA goals by providing opportunity for provision of quality education to all children including children with disabilities (Fletcher & Atilas, 2005). The target is to minimize or end discrimination in education by educating all children. Moreover, Ainscow & Cesar (2006) have developed a typology of six ways of considering inclusion as:

- a concern with children with disabilities and other categories as having special education needs,
- a process to punitive exclusion,
- relative to all groups perceived as vulnerable to exclusion,
- developing schools for all,



- education for all,
- a principle in education and society.

These different interpretations of inclusive education denote first the different conceptions concerning the concept of IE and second the possibility of the existence of different forms of IE. Dyson (2010) commented on the importance embedded in the IE process of aiming to eliminate exclusion in the education system. Different interpretations should not be considered as a key issue, what matters is the practice of inclusion. The fundamental objective of inclusive education should focus on the elimination of exclusion in education by including the excluded. Children with disabilities have the right to receive quality education in inclusive setting options suited to their educational needs.

### **3.1 Teaching and learning in inclusive/integration settings**

#### **3.1.1 An overview of teaching and learning**

The main activities in the classroom are teaching and learning. Bloom (1976) considers learning as an interaction between the learner and the learning content in a particular environment which can be measured through cognitive and affective outcomes. This statement is in line with Omari, 2006 who defined learning as a permanent change of behavior resulting from experience and reflection. This includes thinking, feeling and attitude. School learning largely occurs together with teaching which means that students are engaged in learning while teachers teach. Teaching is a process of putting across the subject content to a group of children with consideration of their unique learning characteristics in a specific learning situation (Mbunda, 2006; Wilson & Peterson, 2006). The teaching method can be decided according to the direction of communication between the teacher and the learners or the learners themselves. Thus the role of the teacher in the learning process is crucial, especially for people with disabilities who need special attention.

#### **3.1.2 The role of the teacher**

Teachers are key elements in guiding teaching and learning practices in school (Marin, 2014; Ainscow, Dyson & Weiner, 2013). Inclusive classrooms include children with diversity needs. Teachers are responsible for planning the teaching and learning strategies that meet the diverse needs of the individual child. Promotion of inclusion in the classroom depends on the intention and knowledge of the teacher. Teachers are required to be innovative in developing teaching and learning tasks for all children. Moreover, Agbenyenga & Klibthong (2015);

Agbenyenga (2007); Florian (2008) emphasized that teachers should be creative in developing inclusive environment in the classroom and resources that enhance inclusion.

Teachers may create an inclusive environment in which all children are valued and respected in inclusive schools (SCERT, 2010). Every child should have the opportunity to enjoy the sense of belonging to a school community (Chapman, 2006). Teachers should promote effective interactions that foster social interactions between all children. Positive interactions promote a positive social and emotional development of the children, specifically CWD. Well organized inclusive schools motivate high level interaction and foster development of friendship among children in school which is a very important aspect in early childhood development (Antia et. al, 1994; Buysse, 1993; Finkel, McNaughton & Drager, 2009; Guralnick, Neville & Connor, 2007; Theodoru & Nind, 2010). Moreover, Antia and co. suggest that the time spent in inclusive settings determines the degree of social interaction (Antia, Jones, Luckner, Kreymayer & Reed, 2011).

Teachers are a very important component of inclusive education; they are responsible for providing instruction in the classroom that benefits CWD (Bhatnagar & Das, 2014b). Teachers are key facilitators of inclusive education. The success or failure of CWD depends largely on teachers as they are responsible for teaching and learning processes by creating learning opportunities for all children within their classroom.

Children with disabilities have learning needs that must be considered at all times, particularly in the planning, presentation, and evaluation of the lessons, if desired learning outcomes are to be achieved. For instance, some CWD need concrete teaching methods; some need to touch, taste and feel things to learn about them (UNESCO, 2001). Consequently, the use of pictures, film, photos, drawings, and audiotapes can stimulate the children's knowledge and experience through stimulating their imagination. Generally, the learning needs of CWD depend on the type and severity of the disability. This means children with visual impairment, children with hearing impairment, children with intellectual disability and children with physical disabilities all have different needs which need to be considered during classroom instruction.

All children could learn at a level according to their own individual pattern of development. This recognition of difference points to the fact that learning does not follow the same route for every individual child. Instead, each individual will learn and develop in a different way and at

a different rate (Save the Children, 2001). Bearing this in mind, education must seek to meet each individual's basic learning needs and be geared towards helping individuals reach their full potential. The fundamental arguments of those who advocate IE for CWD are not only based on educational issues but also on the social and moral significance relating to learners with special needs (Inclusion International, 1998).

In addition, there are two methods guiding classroom communication, which involve question and answer technique, discussion and role playing (Bodrova, 2008). In general the techniques encourage curiosity useful for the exchange of ideas, increase knowledge and changing attitudes. Also they help to develop teamwork and group responsibility in decision making. They also encourage cooperative learning especially in the inclusive classroom where both normal children and those with special education needs can cooperate to make the learning effective as well as improve inclusive education. Increasing the number of CWD included in the regular classrooms alerts educationists that there is a critical need to provide teachers with appropriate skills (Ainscow, 2003, Nzima, 2009).

### **3.1.3 Play and learning in early childhood education programs**

Play and learning for young children are inseparable and are natural components of the everyday lives of children:

“When children are asked what they like to do best, the answers are unanimous: to play”. “On the other hand education for children is, on the whole, organized to promote learning rather than play” (Samuelsson & Carlsson, 2008:623).

Pre-school is more often associated with play rather than learning while traditionally school is a place for learning and not playing. Learning is observed as a teacher initiated activity whilst play is perceived as an activity initiated by children. In early childhood education both play and learning are regularly separated in terms of space and time. School timetables always show the time where children engage in learning activities and playtime as well as location of activity. Learning activities usually involve literacy, number, reading, health and art work. These perceived learning activities take place in the classroom while play is left aside until break time and it may take place inside or outside the classroom. Play is considered as leisure after accomplishment of the planned learning task.

More importantly, play often takes place outdoors and children are free to do what they like; hence perceived as child initiated activity. Notably, early childhood education curricula show worldwide that play is supposed to be of the greatest significance.

“Teacher’s role is equally important for learning and play” (Samuelsson & Carlsson, 2008: 638).

Teachers should help children to interact and sustain in play, encouraging and supporting children in deriving meaning of the world from the play. Samuelsson and co. recommend a sustainable pedagogy which integrates learning and play for enhancing creativity in children and future generations (Samuelsson & Johansson, 2006).

Constant pressure to start teaching academic skills to children in their early years in traditional early childhood education is conceived as a challenge in many countries in the world. Vygotsky suggests the approach of teaching young children basic academic skills by using play. Teachers are supposed to play a role by organizing the scaffolding of play (Bodrova, 2008). In kindergarten/pre-primary education teachers concentrate on developing necessary academic skills for the purpose of preparing children for later academic learning (Golinkoff, 2006). In this situation the learning environment is classroom oriented often resulting in boredom.

Nevertheless, there is limited research to show the effect of teaching young children academic skills in their later learning lives. Literature suggests that academic skills can be developed through engaging children in stimulating and enjoyable play which will lead to both motivational enjoyment and the development of required skills. Vygotsky (1978) defined play as being a dramatic or make-believe-play typically for pre-school and primary school children, to the exclusion of other activities like exploration and manipulation of objects. Bodrova (2008) reported that real play according to Vygotsky comprises three elements:

- children create an imaginary situation,
- take on and act out roles, and
- follow a set of rules determined by specific roles.

Literature shows that the three elements promote abstract and symbolic thinking influencing mental development.

### **3.1.4 Implication of play and learning for HH/D children**

Play is a vital element of the child's cognitive, language, social and emotional development. Language skills and familiarity of playmate influence play among children (Musyoka, 2015). Teachers are responsible for ensuring that children are familiar with each other and they can communicate to enhance play activity. Children with hearing impairment as in children with disabilities in general may require assistance in order to engage successfully in play with their peers (Lundqvist et al., 2015; Mallory & New, 2013). As HH/D; children lack communication skills and peers require to be taught communication skills such as how to read and understand cues, gestures and signs used by HH/D children. Additionally, HH/D children need to be taught play skills as well as communication strategies with their peers. Teachers' involvement is thought to be vital to the enhancement of child engagement and participation in peer play. Mallory & New (2013) suggested that for those children whose sensory characteristics hinder their ability to participate in peer-initiated play intensive forms of scaffolding and direct instruction of play may be required.

Environment and play materials need to be well arranged and placed to enable easy access for the child. The role of teachers or other adult and peers is important for HH/D children. Play plays a key role in the HH/D children's cognitive and social-emotional development. They should be well designed and supervised to support child competence and social inclusion. Children learn social skills through play. Play with their HH/D peers and hearing peers is reported to be the starting point for children's social inclusion. Isolation in schools especially during play may impair the children's ability and opportunity to learn the social skills necessary for integration in society. Additionally, children need to be engaged in play activities that match their cognitive ability (Mallory & New, 2013).

Out of classroom time gives children the opportunity to engage themselves in play (Waller et al., 2010). During play children internalize the role responsibilities of society. Boys at play pretend they are driving a car or riding a bike. Pretended play should be well organized and supervised in order to ensure that children acquire rules and principles relating to the pretended role. These include motor activities, productive activities, games with rules, and pre-academic activities (Bodrova & Leong, 2007). Play promotes the holistic development of all children including children with disabilities.

Therefore, HH/D children should be given the opportunity to engage themselves in play with other children during outdoor play sessions. Children need an open and free environment outside the house/building in order to engage themselves in play. Worldwide, schools and child centers in urban areas are challenged with the availability of open space to accommodate free playing areas for children (Kernan, 2010; Waller et al., 2010). Literature reveals that urban settings expose barriers for children to interact freely within their environment. Urban infrastructures create lonely environments for children where they cannot move and play freely. Schools and other settings where children live have turned to ‘islands’ isolating children from the neighborhood community.

Literature suggests that playing together is important for all children including children with disabilities (raisingchildren.net.au). Likewise, child developmentalists believe that children learn almost everything through play. For children play is paramount to daily life. Child play helps them to be together with other children as well as make friends. Play and friendship for children with disabilities enhance their development in cognitive, social-emotional, language and communication and physical development domains (Bergen, 2002; Guralnick et al., 2007; Musyoka, 2015; raisingchildren.net.au). Also, play activities stimulate the child’s concentration and readiness for school activities (Fisher, Hirsh-Pasek, Golinkof, Singer & Berk, 2011). Hence play should not be separated from learning in child education programs as they are naturally inseparable (Theodoru & Nind, 2010).

Playing together provides children with an opportunity to explore the environment by using all five senses. During play, children learn several skills including cooperation, sharing and working together. In the process of sharing, cooperating and working together, children build friendships. Friends can help and share emotions such as empathy and compassion. Peer interaction is very essential for social development in all children (Spencer, 2012; Goldstein, 2012). Playing together provides children with an opportunity to develop relationships and attachments. Also play enhances positive emotions such as joy and self-esteem while reducing negative emotions like anxiety, fear, anger, and stress.

Play is important for HH/D children as it fosters language and communication development which is a big challenge to them (Janvey, 2013). Interaction during play involves communication in terms of talking and exchanging ideas. The child has an opportunity to learn language skills such as listening and talking for the purpose of communicating. Children

learn new vocabulary from other children by observing what they say in relation to the object. For children play is very important for the development of the body and basic motor skills. Play is of paramount importance for HH/D as it improves body balance, coordination and movement.

Play activities like building or making objects, jumping, climbing, running, walking and throwing objects contribute to physical development. The joy and pleasure experienced during play stimulates the efficiency of the body's immune, endocrine and cardiovascular system. Interaction with other children is facilitated when children get the chance to play together. Guralnick et al. (2007) suggest that peer interaction between children with disabilities and children without disabilities is improved when there is a chance to interact with children without disabilities.

Similarly, the school has to make sure that play materials are available and effectively utilized. Research on child play shows that play materials enhance child engagement in play and determine the duration of sustained play. When suitable and appropriate play materials are available children play longer and reap the benefits from the play (Antia et al., 2011). The amount of time children spend in play activities determines the extent of benefit they will gain from that play. Type of play, assistance from teachers or adults, availability of play materials and space available all contribute equally to child engagement in play.

### **3.2 Significance of inclusive education**

Various studies on IE (Agbenyenga, 2007; Armstrong et al., 2010; HakiElimu, 2008; Inclusion International, 1998; McLeskey et al., 2014; Mutzabaugh, 1995; Simpson & Warner, 2010; Thomas & Vaughan, 2004; Tungaraza, 2005; UNESCO, 1994, 2001, 2009b, 2010b; URT, 2007, 2008) have revealed that the approach benefits teachers, CWD and non-disabled children. Most important CWD benefit in academic, social and psychological spheres when they get the opportunity to participate in inclusive learning settings. Also, IE presumably has economic advantages in the overall education system when compared with previous approaches, such as special and integrative education.

Literature shows that IE, regardless of the level of education, has academic and social significances for CWD (Agbenyenga, 2007; McLeskey et al., 2014; Tungaraza, 2005). Teachers teaching in inclusive classrooms are required to use various teaching strategies to meet the

needs of all learners in the classroom. As a result learners including CWD benefit from the various teaching methods and learn more in inclusive settings. CWD could be motivated to improve their learning skills so that they can compete with other children in class; hence their academic achievement in inclusive settings will improve, compared with those in segregated settings (Tungaraza, 2005).

Also, IE leads to mutual understanding between CWD and their peers without disability, thus stimulating competitive spirit and social intimacy in the former. The fundamental arguments of those who subscribe to inclusive education for children with disabilities are not only based on educational issues but also on the social and moral factors relating to children with disability (Inclusion International, 1998; McLeskey et al., 2014). According to Mutzabaugh (1995) inclusive education is based on the tenet that by putting all children together children without disability learn to tolerate differences among children with disabilities and learn from them. Inclusive schools are a means of building harmony between CWD and those without disabilities, hence reducing discriminatory tendencies in society. Furthermore, the purpose of having inclusive education is to value everyone on an equal footing so that they participate more fully in society in adult life (Thomas & Vaughan, 2004).

Moreover, inclusion had been observed to reduce the negative attitudes and labeling of CWD by their peer children without disabilities in school. In inclusive education settings children without disabilities have the opportunity to interact with CWD, learn to live together, learn together and play together, assist their peers. Thus each learn to accept the individual differences of one another. As a result, children without disabilities reduce prejudice and remove negative attitudes towards their peers with disabilities as they continue to stay together (HakiElimu, 2008; McLeskey et al., 2014; Simpson & Warner, 2010; UNESCO, 2001). Inclusive education combats the effect of labeling on the part of CWD as they are not separated and labeled as CWD. Labeling can lead to stigmatization and social rejection, thus affecting the social and emotional condition of the CWD who is labeled, e.g. it may lower their self-esteem (Tungaraza, 2005). Seen in this context, inclusive education is therefore a tool for improving the psychological health of CWD.

IE is recognized to be less costly in terms of infrastructures and personnel resources when compared with the other approaches in the education of children with disabilities. In IS all children share school infrastructures and personnel resources. It is argued that it is less costly



to establish and maintain school infrastructures which educate all children together rather than set up a complex system of different types of schools specializing in different types of children (Armstrong et al., 2010; UNESCO, 2001, 2009b; 2010b). In a developing country like Tanzania, IE is the best option of providing education for all children including those with disabilities in one setting who are almost all excluded from school (HakiElimu, 2008; URT, 2007, 2008). Thus, CWD who are not in school due to a lack of special schools are given the opportunity to attend school in the already existing buildings in their community and be taught by the same teachers available in those schools (Tungaraza, 2005), hence providing a cost-efficient and cost-effective solution (Armstrong et al., 2010).

### **3.3 Barriers to inclusive/integration education**

Inclusive education as a new philosophy in education has been assumed to improve the education system worldwide. Nevertheless, studies on inclusive education from different countries show that different problems in interpretation and practice exist. Interpretation of the concept of IE is reported to be very important in guiding the implementation. Different interpretations affect implementations. Various countries fail to interpret the ideologies of IE in practice. The tenet of IE lies in the classroom environment where teaching and learning mainly take place in the school environment. Failure to translate the ideologies of IE hinder effective practice. Thus the translation of the concept and philosophy of IE itself remain a barrier to IE everywhere (Cologon, 2013). Most education practitioners interpret IE as the process and means of including the excluded in the education system without considering the needs of the child to be included (Armstrong, Armstrong & Spandagou, 2010). Misinterpretation leads to improper practice.

Resource limits is another major barrier facing inclusive education in many countries in the world. Studies show that most of the countries especially the developing countries face problems related to availability of resources. The financial status of many countries limit the provision of other resources required for IE practices. According to Dagneu (2013) lack of support personnel, unavailability of equipment and materials and lack of teacher training programs is related to financial problems. Additionally, inadequate budgets lead to a lack of quality and adequate early childhood development programs. It should be noted with consideration that early childhood education programs are crucial for early identification and assessment of children with special needs education (URT, 2009b). Early identification leads

to early intervention that has been proved to bring positive results in inclusive education (Callow-Hauser, 2011).

Environmental factors play a role in IE. Children with disabilities need sufficient support to enhance their learning in inclusive settings. Barriers due to large class size, lack of transport, inaccessible buildings for learners in wheel chairs, lack of playgrounds, standard toilets within the school, long distances from home to school are among infrastructure challenges facing inclusion of CWD in developing countries (Save the Children, 2002). Most of the schools are inaccessible and unsafe for CWD, especially children with visual impairment and physical disabilities.

Save the Children (2002) recommended that schools should provide ease of access so that all children, regardless of their abilities, can move independently around the school environment without any obstructions. The environment should provide children who have special needs with barrier-free access to offices, classrooms, library, toilets, playing fields, pathways and other facilities at the schools. When the facilities are barrier-free, it becomes easy for children with disabilities to interact with others academically and socially. Therefore, there should be ramps to allow wheelchair users to move freely to all doors. Modification and construction of new structures which are user friendly to CWD are urgently required to offset this challenge.

Inflexible curricula (Andrews & Frankel, 2010; Tungaraza, 2015) affects the success of IE. Most countries use curricula similar to regular class curricula. This means children with disabilities regardless of the category and severity of their disabilities are expected to use the same curriculum as children without disabilities (Tungaraza,1994). Teaching of students with special education needs should focus on the need and individual differences of the learner. Curricula should be flexible to allow for adaptation and individual teaching. In this context it is difficult for teachers to meet the needs of children with disabilities in inclusive classes.

Negative attitudes toward teaching children with disabilities is another major challenge facing inclusive education worldwide. The core of inclusive education embraces classroom activities where all children learn together. Literature shows that positive attitudes and acceptance of inclusive educational programs in regular classroom teachers are the key to implementation of IE (Bhatnagar & Das, 2014a; Hettiarachchi & Das, 2014). Teachers are responsible for creating warm and welcoming learning environments for all children in the regular classroom

situation. Classroom environment is crucial for children with disabilities who need special support in order to learn effectively. However, studies show that regular classroom teachers hold varied attitudes towards including children with disabilities in their regular classrooms depending on the type and nature of disability and the context (Bhatnagar & Das, 2014b; Westwood, 2013) as well as other factors.

Several factors contribute to the development of attitudes in teachers toward inclusive education, one of which being the lack of special training on how to handle inclusive education resulting in negative attitudes towards the inclusion of CWD on the part of the teacher. Attitudes are the greatest barriers, or the greatest asset, to the development of inclusion in education (Ajzen, 1988). They influence teachers' perceptions of challenges, choice of strategies and goals to be achieved. Another influence is the lack of administrative support and instructional materials. Third, is the lack of ability to manage children's behavior in inclusive classroom settings (Forlin, 2001, 2004). Fourth, more time is needed to design, plan and provide appropriate instruction to each child in the classroom (Campbell, Gilmore & Cuskelly, 2003).

The study by Eleweke and Rodda was conducted to show the challenge facing inclusive education in developing countries (Eleweke & Rodda, 2002). The study shows that in developing countries effective implementation of IE is hindered by various problems such as poor infrastructure, lack of support materials, lack of support personnel in regular schools and lack of resource centers as well as lack of supportive legislation. Thus due to the above factors implementation of IE in developing countries is ineffective.

Implementation of inclusive education requires adequate and appropriate facilities and materials to support teachers and CWD in inclusive settings. The government, school management and parents are supposed to provide such facilities to enable effective learning in CWD. A well-equipped school with basic teaching and learning materials makes the learning task easier, hence improving the performance of the CWD. In addition, CWD may need different facilities so as to participate in inclusive schools, for example, hearing aids for the hard of hearing students, braille reading or large print text for students with visual impairment.

The big concern raised in different studies is the ability of teachers to teach all children. Ferguson e.g., acknowledges the effort that has been invested to implement inclusive education in US and Europe. However, he points out that the process of including children with disabilities in regular education settings is still a challenge. Moreover, Ferguson states that it is a big challenge to make inclusive education available to “everyone, everywhere and all the time” (Ferguson, 2008). Additionally, studies revealed that the tendency to assess children and school performance by means of examination was a problem for CWD. Most teachers argued that CWD will lower the school standard because of their inability to pass the examination. For effective integration of CWD it is important to design a different method for the evaluation of CWD performance (Fuchs, 2010; Lomofsky & Lazarus, 2010; Sharma & Desai, 2002).

### **3.4 Early childhood inclusion of HH/D children**

Early childhood inclusion mainly concerns children who are excluded because they require special consideration. In this regard it is directly associated with special education in ECE. Both inclusive education and special education target the provision of ECE to CWD. Early childhood special education has emerged to be a topic of discussion for many ECE professionals in the world (Zhang & Hu, 2015). It is observed that inclusion of children with disabilities in early childhood education settings is a challenge (Batten et al., 2013). Teachers may react differently toward the challenge - some may accept the children in their classroom while others may not.

Basically, inclusion in a broader concept targets the inclusion of all children with special education needs in the same setting as children without special education needs. This could imply full inclusion whereby children share the same school environment and the same class for the whole day or partial inclusion where they stay together in the classrooms for some hours in the day. Most important is the feeling of belonging to the school community rather than mere placement. All CWD including HH/D are supposed to be educated in inclusive settings at all levels. However, inclusion of HH/D children in early childhood education has been challenged (Cohen, 1994; Guralnick & Bruder, 2016; Marschark, 2007). The challenge to educate HH/D children is related to the characteristics of HH/D children (see subsection 3.5.6). The loss of hearing causes many barriers to the inclusion of HH/D children.

### **3.4.1 An Overview of hard of hearing and deaf education issues**

Hearing impairment (HI) is a worldwide disability. According to WHO (2016a) there are about 278 million people with hearing impairment in the world. It is anticipated that in 68 million people with hearing impairment the problem began during their period of childhood. WHO reported that two thirds (2/3) of the hearing impaired population live in developing countries. Hearing loss in childhood can affect their communication skills, social skills and academic performance. If the HI in children is not identified earlier, it can lead to significant developmental delays in language/communication development, intellectual development and educational achievement. WHO passed a resolution in 1995 that every country shall develop methods for early identification of HI/L in children (Battle, 2012).

Hearing impairment is the most common sensory impairment, prevalent in early years of life. Worldwide hearing loss statistics include (5%) population of children with hearing loss (WHO, 2016a). In most children the hearing impairment is present at birth, either as hereditary or as a prenatal deformity. Hearing loss might also be acquired as a result of illness or injury (see subsection 3.6.4). The impairment can be identified earlier at an early age. Hearing impairment ranges from hard of hearing to total deafness.

### **3.4.2 Conceptualization of the terms hard of hearing and deaf**

The definition and classification of people with hearing loss vary from one context to another depending on the purpose and ideology of the society. Common terms used to describe a person with a condition of hearing loss include:

- hearing impairment
- hard of hearing and
- deaf

The term hearing impaired or persons with hearing impairment is one of the most commonly used terminologies worldwide (Marschark, 2007). It is a broad term indicating a hearing disability that may range in severity from mild to profound (Hallahan et al., 2012) in which individuals are partially or fully unable to detect or perceive sound. `Hard of hearing` is a term used to refer to individuals with hearing loss to the extent that he or she is unable to understand speech without hearing aids (Hallahan et al., 2012; Leonhardt, 2010). Deaf, on the other hand, refers to total loss of hearing so severe that the person is totally unable to perceive

sound even with the help of hearing aids (Hallahan et al., 2012). A deaf child needs to learn other means of communication for example sign language. According to the World Health Organization (WHO) impairment is any loss in one area of physiological or psychological function considered normal in normal human beings (Leonhardt, 2010; WHO, 2016a; WHO & WB, 2011). In this study hearing impairment, hard of hearing and deaf are used to refer to children with hearing loss who require special adaptations to process information. In most cases, hearing impairment occurs when there is a problem or difficulty with or damage to one or more parts of the ear or the auditory cortex part of the brain that affects the hearing.

The function of the ear is to harvest sound (acoustical energy) from the environment and to transform that energy into a form of neural energy that can be interpreted by the brain (Leonhardt, 2010). The ear consists of four parts; the outer ear, the middle ear, the inner ear and the central auditory nervous system. The outer ear channels sound waves into the auditory canal transmitting them to the middle ear. The sound wave transforms the acoustic energy into mechanical energy which is transferred to the inner ear. The inner ear is the most sensitive, critical and complex part in the entire hearing system. It consists of the cochlea, which is the main receptor organ for hearing and semicircular canal which controls the sense of balance. In the cochlea the sound energy is changed to neural impulses that are transmitted along the auditory nerve to the brain (Hallahan et al., 2012) for interpretation. Noticeably, dysfunction in any part of the hearing system causes hearing loss. The extent of hearing loss is determined by the part of the ear which is affected- hence different classifications and types of hearing loss.

### **3.4.3 Classification and types of hearing loss**

Deaf and hard of hearing are the most common classification terms of hearing loss although there is no legal definition (Marschark & Hauser, 2012). On the one hand, deaf is the person who may perceive some sound but unable to use hearing to understand speech with or without hearing aids. The degree of hearing loss for a deaf person is so great that a person is unable to register the spoken word by means of the ears only. On that basis a deaf person relies on vision for learning and understanding the spoken language. Hard of hearing, on the other hand, is a terminology used to describe a person who has a significant hearing loss that requires special adaptations for the person to understand speech. This means a person may access language with the help of hearing aids.

Moreover, hearing impairment can also be described on the basis of the degree of loss, the age at which the hearing loss occurs, and the type of loss. On the basis of degree of hearing loss, the severity of a hearing loss is ranked according to the loudness measured in decibels (dB) a sound must be present before a person detects it (Leonhardt, 2010). According to WHO, (2016b) hearing impairment may be ranked as slight, mild, moderate, severe or profound as defined below:

- slight : between 15-25dB,
- mild: for adults: between 27 and 40 dB, for children: between 20 and 40 dB,
- moderate: between 41 and 55 dB,
- moderately severe: between 56 and 70 dB,
- severe: between 71 and 90 dB, and
- profound: 90 dB or greater.

Hearing loss is directly associated with language development. Acquisition of the spoken language is determined by the age at which hearing loss occurs. The age of onset has an influence on the acquisition of language as well as language learning in children. More important is the congenital deafness that is present at birth, i.e. those who were born deaf. This can be caused by genetic factors, injury during fetal development or injuries that occur at birth (Hallahan et al., 2012; Marschark, 2007; WHO, 2016a, 2016b). Additionally, hearing loss can occur after birth in children who were born with normal hearing. The age of onset of hearing loss affects language acquisition and learning.

Hearing loss is defined in terms of language acquisition; pre-lingual and post-lingual deafness (Hallahan et al., 2012). Pre-lingual deafness involves hearing loss that exist sat birth before the child develops the spoken language. Congenital and non-congenital conditions can result in hearing loss in early childhood. The condition destroys the ability of a child to acquire spoken language. Most deaf children who become deaf before acquiring language have delays in language development, with the exception of children born into sign language families (Marschark, 2007). Hearing loss in a child after developing the spoken language is defined as post-lingual. Disease, trauma or ototoxic medicine can cause deafness to a child after acquiring the spoken language (WHO, 2016b). Children with hearing loss occurring after the acquisition of language can communicate through speech reading (reading lips) or by using hearing aids to amplify residual hearing (Hallahan et al., 2012, Leonhardt, 2010).

Moreover, types of hearing loss describe which part of the ear is affected, having a big influence on child development and learning. Hearing loss could be identified as conductive, sensorineural, and central or a combination of disorders. Conductive hearing loss is caused by an obstruction or barrier to the transmission of sounds through the outer or middle ear. It could be caused by abnormalities or complications of the outer or middle ear resulting from inflammation or infection of the middle ear (Hallahan et al., 2012; Leonhardt, 2010). Generally, a conductive hearing loss involves any interference of the process of transmitting sound waves through the outer ear, the eardrum or the bones of the middle ear.

Likewise, sensorineural hearing loss can result from either disorders of the inner ear, the auditory nerve that transmits impulses to the brain or both. Disorder of the inner ear can be congenital or can occur after birth due to diseases, illness or accidents. The disorder affects both hearing sensitivity and sound representation. Thus a child is unable to register the speech clearly (Hallahan et al., 2012; Leonhardt, 2010). Moreover, central hearing loss is caused by disorder or dysfunction in the central auditory nervous system. Important parts of the brain- the brain stem and the auditory cortex in the brain- are involved. Consequently, a child can hear the sound but is nonetheless unable to understand speech.

The last type of hearing impairment is the combined conductive and sensorineural hearing impairment. This means it evolves from problems in the outer ear as well as in the middle or inner ear. Hearing loss involving the conductive area can be treated through surgery; however the child needs hearing aids to process linguistic information (Bockova, Bytesnikova, Harakova & Kopecny, 2016; Hallahan et al., 2012; Leonhardt, 2010).

Apart from types of hearing loss that relate to the area in the brain or part of ear which is affected, literature reveals that there is another condition of hearing loss involving neither area of the brain nor part of the ear. This condition is known as functional or non-organic hearing loss; persons with this problem show a loss of hearing that cannot be proved by audiometric testing (Hallahan et al., 2012). In this case a child does not register speech whilst audiometric testing shows no organic hearing dysfunction. A hearing loss can occur in one ear only (unilateral) or in both ears (bilateral). A child with unilateral hearing loss can process language by using the other ear whilst bilateral hearing loss requires special adaptations depending on the degree of hearing loss. Significantly, most hearing loss to children can be prevented or cured, depending on the causes.



### **3.4.4 Causes of hearing loss**

Literature suggests that there are several causes of hearing loss (ASHA, 2015; Duthey, 2013; Emmet & West, 2015; Hallahan et al., 2012; Olusanya et al., 2014; WHO, 2006, 2016a, 2016b; WHO & WB, 2011). Hearing loss can be congenital resulting from genetic/hereditary or non-genetic factors. Hearing loss can be inherited. Dominant genes and recessive genes can cause mild to profound hearing loss (Hallahan et al., 2012; WHO, 2016b). Chromosomal abnormalities can also cause hearing impairment (WHO, 2016b). Non-genetic factors that cause congenital hearing loss are linked to pregnancy and conditions during delivery such as maternal diabetes, toxins taken by the mother during pregnancy, maternal infections, premature birth, low birth weight, birth injuries, complications due to jaundice and anoxia (Duthey, 2013). Developmental abnormalities can cause congenital hearing loss, involving abnormal development of the outer or inner ear structure. Malformation of the middle ear and reduction or closure of the external ear canal are among developmental abnormalities linked to hearing loss, affecting the fetus in the early period of pregnancy development (Hallahan et al., 2012; WHO, 2006).

Infections due to bacteria, virus or parasite which are not treated can cause hearing loss. The infections can occur before birth, around the time of birth and after birth, but children are more affected than adults (Duthey, 2013). Measles, meningitis, chicken pox, viral encephalitis, mumps, influenza, otitis media and HIV/AIDS may cause hearing loss to children (Hallahan et al., 2012; WHO, 2006, 216a, 2016b; WHO & WB, 2011). However, untreated infections during childhood lead to hard of hearing or deafness in children in developing countries (Duthey, 2013).

Environmental and traumatic factors like long-term exposure to environmental noise from airports, industries, amplified music cause hearing loss. Head injuries, brain tumors, acoustic trauma and ear tumors lead to hearing loss due to permanent damage of the sensorineural (Duthey, 2013). Nutritional deficiency such as lack of vitamin A, Iron, Zinc and Iodin is also linked to hearing loss (Duthey, 2013; Emmet & West, 2015; Olusanya et al., 2014).

Ototoxic medications and chemicals can cause irreversible damage to the ear (ASHA, 2015). The ototoxic medications and chemicals have an additive effect on a person's hearing loss. The effect may start slowly and the symptoms may be ringing in the ear or/and balance

disorder. The damage may be reversed when the medications are discontinued but may be permanent. Ototoxic medication damages the inner ear, the cochlea with lesions and degrades central portions of the auditory system. The following list provides an accurate catalogue of ototoxic chemicals; drugs like anti-malaria, antibiotics and anti-inflammatory drugs; metals like lead, mercury and pesticides/herbicides (Hallahan et al., 2012; WHO, 2006, 2016a, 2016b; WHO & WB, 2011). ASHA recommends a control of hearing and body balance whilst taking ototoxic medications in order to avoid such effects. Before starting to take medications the patient should consult the doctor about the possible side effects of the medicine (ASHA, 2015). However, in developing countries it is difficult due to lack of sufficient knowledge on the part of the patient as well as the small number of health facilities available. Unfortunately, it is too difficult to control the side effects of the medicines in young children since they cannot notice and communicate the difference.

Understanding the causes of hearing loss is important for teachers, parents, administrators and policy makers as well as researchers. In this study the knowledge of causes is vital as it is related to the implication of hearing loss in young children. It is noticed that some incidents of hearing loss can be prevented or cured if identified early, relying on the awareness of parents, teachers and health workers. For example the use of toxic medication, exposure to noise and infection could be avoided or minimized. Nevertheless, the prevalence of hearing loss influences development and learning in children.

### **3.4.5 The influence of hearing loss on child development and learning**

Hearing loss influences the development of the child in all developmental domains such as cognitive, speech and language and socio-emotional development. More significant is the impact of hearing loss occurring before the acquisition of language.

#### **Cognitive development**

Literature indicates that most children who are deaf or hard of hearing possess normal intelligence similar to their hearing counter parts (Marschark, 2007). Intellectual development for people with hearing impairment is related more to a function of a language development than cognitive ability. Intelligence tests used to test IQ (Intelligence Quotient) are often language biased. The ability to read, comprehend and respond accurately to the test questions depends on the language ability of the child. Most HH/D children score low in the IQ test not because of their low intellectual ability but on account of poor language. Therefore, any

difficulty in performance is closely associated with speaking, reading and writing the language but not the level of intelligence.

Reading deficit among HH/D individuals differs; children who are deaf and who have parents who are deaf have higher reading achievement than those with hearing parents. The reason lies in the fact that parents who are deaf are able to communicate better with their deaf children than their hearing peers by using sign language (Bockova et al., 2016; Marschack, 2007).

### **Language (speech) and communication development**

Speech and language development is the most severely affected area for HH/D children particularly for those who are born deaf (pre-lingual deaf). They have a very difficult time learning to use speech (Marschack, 2007; Vohr, 2003, 2012, 2017; Vohr, et al., 2008). Infants born deaf enter the babbling stage the same time as hearing infants but soon they abandon it at around eight months or earlier. This is because hearing infants are reinforced by hearing their own babbling and by hearing verbal responses of adults, whereas children who are unable to hear either themselves or others are not reinforced. Speech and language development are affected by the degree of hearing loss, presence or absence of other disability, age of hearing loss, social and family environment, early identification and early intervention (Bockova et al., 2016).

HH/D children who have family members sharing their hearing status learn language effectively in their early years compared to those who do not share the hearing status. Literature suggests that HH/D children of deaf parents or with deaf persons in the family can effectively communicate by using their common language. More than 90% of HH/D children are (in this context unfortunately) born to hearing parents (Presmann, Pipp-Siegel & Yoshinaga-Itano, 1998). In addition, in the era of modern technology, language and speech development is influenced by the use of hearing aids and cochlea implants (Hallahan et al., 2012; Leonhardt, 2010). The influence of family and the ability of the child to use the remaining auditory faculty affects speech and language development.

Language is regarded as a very important aspect of normal development for both children with hearing loss and those without. Although in the eyes of human rights all children are equal, the difference between HH/D and hearing peers is obvious. Their differences relate to

the early acquisition of language and communication (Marschark, 2007). Learning to speak may be easier for children with mild to moderate hearing loss. Literature shows that for HH and D children, learning and producing meaningful speech is a very difficult and frustrating task (Marschark, 2007). Furthermore, Marschark (2007) argues that early language stimulation affects linguistic, cognitive, social and emotional development. Systematic and effective strategies should be developed to assist HH/D children to have complete access to communication. Hence, early language stimulation is recommended.

Deaf children may communicate through spoken/speech language, sign language, gestures and symbols as well as by using interpreters. The parents should choose the language/mode of communication for development immediately following the detection of hearing loss in their children. Early interaction helps children to acquire communication skills as early as possible. Delay in language development has been associated with delay in other domains of development (Marschark, 2007; Sass-Lehrer, 2011; Yoshinaga-Itano, 2003).

Literature reveals that spoken and sign language are common in HH/D communication. A child may learn spoken language only, or sign language only or both. The combination of the two languages is reported to have highly positive results in the development of the HH/D child as well as in their education prospects. However, some parents and education institutions focus on one of the languages to the neglect of the other. For example, refusing HH/D children access to sign language on the basis that sign language affects the learning of spoken language has been challenged by different studies (Marschark, 2007). The effect of one language on another is not evident.

Nevertheless, studies show that both spoken and sign language are very important for every HH/D child influencing his/her entire life. There are circumstances in which one of the languages will be needed to facilitate communication of the HH/D child. In education evidence shows that HH/D children learning sign language in pre-school or post-lingual HH/D children born to hearing parents exhibit higher achievement at further education levels, and in social and emotional development. The lesson from literature is that early communication development is vital for every HH/D child in their early years. Communication is important for holistic child development. It should start as early as possible to ensure a normal development process.

By contrast, most HH/D children are identified late in their early years and as a result they lack early stimulation during the critical period of language learning. Literature suggests that from 0 to 4/5 years is a critical period for language learning for every human being. Bockova and co suggest 2 to 2.5 as the critical period reaching its climax but can be extended up to 6 years (Bockova et al., 2016). This means most HH/D especially those born to hearing parents suffer language development delays that impact other domains of child development. Additionally, learning starts early in the early years of humans where children learn basic tasks and activities from their parents. Unfortunately, most HH/D children lack the opportunity to learn at home until they go to school. In school they struggle to learn language and communication skills as well as trying to learn academic skills which is naturally very stressful and challenging. Kyle and Harris (2011) and Marschark, et al. (2011), reported that HH/D children graduate with below average in reading skills. The empirical research suggests that the lower reading achievement results from teachers' inability to teach HH/D reading skills (Marschark et al., 2011). HH/D children require special reading skills to enhance their reading skills development.

### **Social and emotional development**

Social and personality development depend heavily on communication. Communication difficulties resulting from deafness is identified to be the major source of emotional problems in deaf children (Bockova et al., 2016). Finding a person to communicate with is problematic for the Deaf. They are at risk of loneliness, depending on the inclusive setting and hearing status of the parents. In inclusive settings very little interaction occurs between children who are deaf and those who are not. Children who are deaf feel emotionally secure if they have other children who are deaf with whom they can communicate- a situation which is not possible in this setting.

Also a child who is deaf and who has hearing parents is likely to become more lonely than a deaf child with parents who are also deaf. This is because many hearing parents are unable to use sign language and other means of communication and thus are unable to communicate with their children easily and effectively (Bockova et al., 2016). HH/D children born to hearing parents experience frustration due to lack of interaction between them and their family. They rely largely on visual cues to socialize and learn within their home environment. Most hearing parents reportedly exclude their HH/D children in their daily activities that hearing children are normally included in. Empirical research shows that hearing parents

perform most of the tasks for their HH/D children (Bockova et al., 2016) as a result most HH/D become less active and responsive (Presmann et al., 1998). This type of exclusion thus leads to social problems for the HH/D child. As a result the lack of interaction sometimes leads to behavior problems.

Hearing is an essential sensory experience that helps the child perceive and understand the world. Hearing facilitates language, speech and communication development. Communication skills enable the child to interact with parents, other children, caregivers, teachers and other community members. It provides a child with an opportunity to participate in daily activities, experience different life events and acquire general information including awareness of danger (WHO, 2016a; Zie, Potmesil & Peters 2014). For children hearing is fundamental to spoken language and influences their engagement in social integration.

Children with hearing loss face challenges to engage in social integration as well as in education programs. Hearing loss hinders acquisition of the spoken language. The language deficiency affects other domains (Yoshinaga-Itano, 2003). Communication barriers are associated with emotional and psychological problems in children. Feelings of anger, loneliness, stress and low self-esteem characterizes HH/D children. The situation may affect the entire life of the child and his/her family. Without hearing signals HH/D children are exposed to high risks concerning danger. In order to ensure that HH/D children get access to education and opportunity to develop socially, early diagnosis is crucial. Early identification programs should go hand in hand with early intervention to foster child development and learning (Yoshinaga-Itano, 2014). Therefore, in order to facilitate cognitive, language, speech, communication and socio-emotional development of the HH/D, early identification and intervention is crucial.

### **3.5 Importance of early identification and early intervention of HH/D children**

The importance of early identification and early intervention is crucial to the unique characteristics of development and characteristics of children in the early childhood stage. The unique characteristics in early childhood are different to those of older children and adults. Practitioners should be aware of the uniqueness and develop early childhood education programs suited to the needs of the children. More important, children with disabilities are children. Their needs have to be considered in order to make sure that they develop and learn as other children do regardless of their special needs (NAEYC, 2002, 2017).

Teachers and other professionals dealing with children with disabilities have to be aware of the unique characteristics of development and learning of children in this phase and make sure that in providing services to children, they consider the kind of support required regarding their development and learning (NAEYC, 1991). Furthermore, NAEYC (1991) recommended that programs providing services for children with disabilities should comprehend the relationship between the development and the impact of disability on the development of young children as well as its implication in intervention.

Identification of hearing status is considered to be very important for the planning of early intervention and support to the child, parents, education and other services. For other programs to be effective the condition should be identified early in life. Parents of deaf children whose hearing condition is identified soon after birth can assist their children in developing linguistic, social, cognitive and emotional skills. Evidence shows that early identification and subsequent early intervention is crucial to the successful development of language in the deaf child. The deaf child can develop language in the same way as their hearing peers by the end of year one (Sass-Lehrer, 2011). The advantage of early identification lies in the early intervention program benefitting the child and the family. In USA for example early intervention programs provide parents of the deaf child with the information and support needed to improve the child's holistic development (Sass-Lehrer, 2011).

Moreover, early intervention is of lasting benefit in the entire life of the child (DfE/DH, 2011a, 2011b; Pugh & Duffy 2014). Economic benefit is of paramount importance for the child, parents, family and the entire community. Investing in the early years leads to a reduction of added expenses, specialist services in social care, health and education as well as in criminal justice. The question remains as to what kind of intervention can produce a positive outcome and also how the government can fund such intervention. Allen (2011) conducted a study showing which kind of programs have the most impact and how to raise funding to support the program. The study suggests that the first three years of life build the foundation in learning, emotional expression and understanding others' emotions. It is observed that experience in the early years has a huge and lasting effect on later life. Services and programs in the early years are crucial for the further development and learning of children. Early years' services, if high in quality, well designed and implemented according to

the needs of targeted children, will have a considerable potential influence on the child's chances in life (Allen, 2011; Young, 2002).

The timing of identification is potentially significant to the child's development. Research reveals that the unidentified hearing loss or late identification of hearing loss has a negative implication for the child (Davis & Carr, 2014). The late or non-identified hearing loss affects child development in many developmental domains such as language, communication, cognitive, social and emotional development. Also, it affects the accessibility of the child to quality education services that may bear repercussions in later life. The person with limited education is perceived to be dependent, unable to contribute to the economics of the family and society in general (Young, 2002). Early identification and intervention is directly related to development of the country/nation.

In developed countries identification of hearing loss in children is conducted early soon after birth and followed up with intervention programs. Evidence yielded from the programs shows that the programs play a major role in minimizing child developmental delays and improving child development (Davis & Carr, 2014; Eastin, 1999; Sass-Lehrer, 2011; Sirimanna & Olusanya, 2014; Yoshinaga-Itano, 2003; WHO, 2016a,2016b). The World Health Organisation estimates that around 60% of childhood hearing loss could be prevented. Most hearing loss in developing countries is caused by diseases such as rubella, measles, meningitis and ear infections, which can be prevented or cured. Complications at birth, prematurity, low birth weight, neonatal jaundice and birth asphyxia contribute about 17% of HL causes that can be prevented through improvement of maternal and child health practices. Expectant mothers could avoid ototoxic medicines which contribute about 4% of HL in children. However, the prevailing hearing loss identified requires early intervention to enable the full potential development of the HH/D child.

According to Sirimanna & Olusanya (2014) early identification and early intervention has the following outcome:

- the child can undergo habilitation before the age of six months,
- the child will attain better speech and language and educational success,
- the cause of hearing loss can be identified early and managed appropriately,
- associated medical conditions can be identified and managed early,

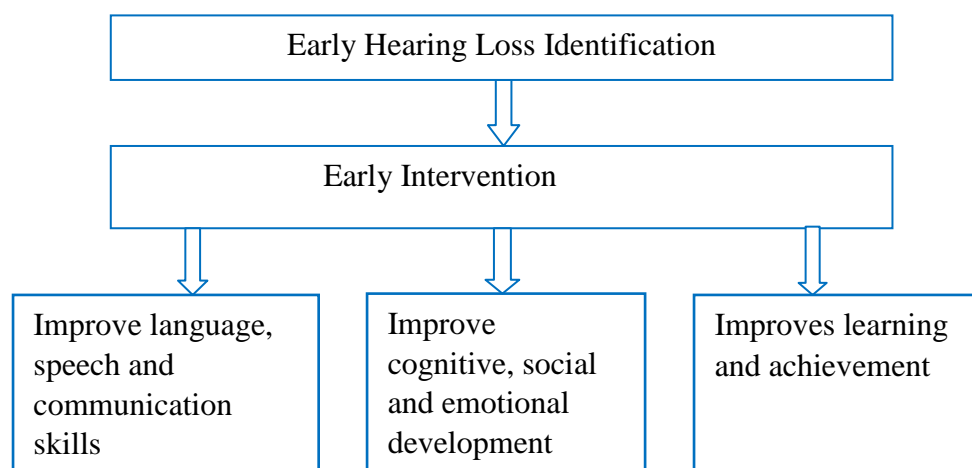


- the child’s auditory system will develop better,
- the burden of stress within the family will be reduced,
- parents can be offered genetic counselling, especially if they are planning for more children, and
- the child will continue to reap the benefits in the long term: social, psychological, educational and professional.

More important to early identification and intervention is the possibility to habilitate the child as well as to reduce or eliminate the possibility of developing other disabilities as a consequence of the prevailing disability. Hence, Eastin (1999) suggests the objectives of the identification and referral should be:

- mandatory universal screening of all new-borns for hearing loss,
- immediate parent referral to appropriate educational and non educational agencies serving deaf and hard of hearing children,
- information and support services for deaf and hard of hearing children upon identification,
- a formal and effective connection between the child and the family and individuals who have experience and knowledge concerning hearing loss and its communication consequences.

**Figure 3.1: Implication of early hearing loss identification and early intervention**



**Source:**Eastin, 1999

Empirical research suggests that HH/D children who are born deaf or acquire HL earlier in life, but receive proper intervention, have the possibility of acquiring language as their hearing peers at the age of 5 years (WHO, 2016a). Unfortunately the majority of children with hearing impairment prevails in developing countries (WHO, 2016a) where there is a lack of early identification programs. The limited programs available in the few developing countries reveal that early identification leads to an improvement in caring and parenting practices. Parent awareness of deafness in their children helps them to develop strategies of communication with the children. Language development plays a major role in overall child development.

Early screening has been found to be expensive in terms of resources but the expenses of raising dependant disabled persons in society is not considered (Davis & Carr, 2014). Screening requires availability of resources such as screening facilities and well trained personnel. Early identification and assessment is more effective when conducted in early years. It has an influence on the child development, the family and community at large. Therefore, the cost/benefit ratio of implementing early identification and assesment for young children should be challenged. The following section explains the emprical factors hindering the early identification and intervention in developing countries.

### **3.5.1 Factors affecting early identification in developing countries**

Most developing countries lack early identification programs for hearing loss. Reasons differ from country to country. According to (Santana-Hernandez, 2014; WHO, 2016a, 2016b) these highlight consideration of hearing loss in terms of low priority, lack of resources, lack of awareness, lack of supporting services.

#### **Hearing loss as a low priority**

According to WHO (2016a) hearing loss should be treated seriously because its prevalence is higher than 4% of world population. Currently the prevalence of hearing loss worldwide is estimated to be 5%. The problem lies with the respective decision makers in countries where hearing loss is considered to be a disability of low priority due to its low incidence (WHO, 2016a & Eastin, 1999). Hearing loss does not cause mortality and the stake holders lack awareness concerning the lives of HH/D persons and the impact on society and economy (Santana-Hernandez, 2014).

### **Lack of resources**

Lack of resources can be grouped into two major categories of resources such as financial and human resources that hinder the early identification and assessment services for hearing loss. Lack of resources are associated with lack of financial ability to facilitate neonatal and paediatric program services for testing hearing loss in new born children in developing countries. Second, lack of professional personnel to conduct the testing for newly borns and toddlers. Most countries have a shortage of professional audiologists dealing with the health of the ear and hearing (WHO, 2016a). Health professionals like doctors and nurses lack training in hearing tests for the new born and as a result most hearing conditions in newly borns-even those born in hospital-are not detected.

### **Lack of awareness**

Health workers, parents and the community lack knowledge (Marschark, 1998; WHO, 2016a) and awareness of hearing loss. Health workers are not aware of the advantages of early hearing tests and early intervention. Parents, the family and the community in general are not aware that early detection of hearing loss can lead to early intervention. Early intervention when properly designed and implemented can change and improve the life of the HH/D child (Yoshinaga-Itano, 2015). All stakeholders mentioned here are not aware of the rights of the HH/D person. Action groups should empower the parents, the family and community to demand the rights of HH/D children.

### **Lack of supporting services**

There is a lack of early childhood education services for HH/D. Special education in most countries is not offered for pre-school children until primary education (Santana-Hernandez, 2014). There is a lack of ear and hearing health personnel such as audiologists, medical officers and education professionals. Also a lack of efficient network for referral services and lack of supportive services to facilitate open accessibility and opportunity to all children- not only those recently pre-identified or at high risk.

### **3.5.2 Recommendations for solution**

Developing countries should find a solution to the current obstacles. Despite limited financial resources and personnel, something however small should be done to act as a stepping stone to further efforts. Santana-Hernandez (2014) suggested the following actions to consider:

- training primary ear and hearing care personnel to appeal to the community to raise awareness and identify possible hearing loss,
- training those who are already in the community,
- increasing awareness amongst parents and community members, and
- advocating for alternative strategies when universal screening is not possible.

### **3.6 Placement options for HH/D**

No single placement option is suitable for all children with HH/D (Barbara, 2006). In California for example, the task force suggested the following system for hard of hearing and deaf children (Eastin, 1999):

- inclusion or mainstreaming in the neighborhood schools,
- co-enrolment classes,
- special day classes,
- special state schools,
- regionalized programs providing the specialized services, staff, and communication access required for many deaf and hard of hearing children, and
- non-public programs.

Initially, during the beginning of education for HH/D people, pupils were educated separately in residential schools for the Deaf. Over the last four decades the number of HH/D children educated in residential schools has decreased. In the US for example a survey shows that only 27 percent of HH/D children attended special schools while 46 percent were enrolled in mainstream public schools (Marschark, 2007). The change in placement is the result of the changes in the education system that require all children to be included in the least restrictive setting including mainstream/inclusion setting. IDEA 1997 proposed factors to consider for the placement of HH/D children:

- communication needs including the mode of communication preferred by parents and the family,
- linguistic needs,
- the degree of hearing loss and ability to use residual hearing with or without amplification devices,
- the level of academic, and

- cultural, social and emotional needs including opportunity for interaction and communication with peers.

In US e.g., the placement option includes residential, separate special education, mainstreaming and inclusion (Marschark, 2007). In Sri Lanka there are four placement options for children with disabilities (Hettiarachchi & Das, 2014):

- specialized schools
- special education units within regular education schools
- inclusive regular education schools and
- special resource centers attached to regular education schools.

In Tanzania most learners with HI for primary and secondary education are receiving their education in regular/inclusive education settings while few are in special residential and day schools (URT, 2009b). However, information about placement of HH/D in ECE is not yet determined.

### **3.7 Parents and community involvement**

Parents of HH/D children are a fundamental source of help for their children (Hettiarachchi & Das, 2014). Parents and families in general provide the primary context necessary for the development and learning in their children. The relationship between parents and teachers is significant for the extension of child development from home to school learning. Parents are the key and central source of support for children's development and learning. They require access to training, supportive services and information in order to be able to assist their children effectively (Eastin, 1999). Parents need to be aware of the available service for HH/D children in their local area. It is the government and education stake holders' responsibility to make the service available to parents. There should be clear and open guidelines and procedures for appropriate information to parents on available services, communication development and hearing loss status.

### **3.8 Pre-Primary inclusive education**

Inclusive education is viewed as a method of establishing the capacity of the education system to reach out-of-school children including those with disabilities. In recent times early childhood inclusive education is growing as a mutual and promoted practice in ECE settings

(Odom et al., 2012; Simpson & Warner, 2010). It has been acknowledged as a tool to achieve EFA goals. Equally, pre-school and pre-primary schools/kindergartens provide children with disabilities with an opportunity to ensure optimal development and learning through participation, play, peer interaction and friendships development. Nevertheless, CWD at large are often denied early education in pre-primary education settings. Likewise, those enrolled often face challenges in learning due to education structure/system that induces failure or school drop outs.

Although inclusive education for all children is promoted by CRPD and EFA (UNESCO, 2000), many countries have separate schools for CWD. The separate schools in existence offer services for specific categories of disabilities such as schools for blind, deaf or intellectually impaired children. Additionally, these schools accommodate few children so large numbers remain at home. Some of these schools are residential schools resulting in separation of children from their family at an early age. This tendency promotes exclusion in the wider society. Literature shows that in some countries CWD attend pre-primary schools in regular/mainstream schools, but they are segregated into resource centers or special classrooms which are operated by teachers trained in special education (UNESCO, 2003; Save the Children, 2002; Stubbs, 2008). Education for CWD should focus on inclusion in the regular school setting.

Moreover, providing services for children with disabilities in their early years in inclusive settings is better for both children with disabilities and children without disabilities (Barton & Smith, 2015; Reichow et al., 2016; IDEA/Groove, 1990; NAEYC, 1990, 1993, 1995). IDEA/Groove (1990), advocates the principle of education of children with disabilities in natural and the least restrictive environments, urging the state to ensure the provision of such environments. The principle states:

“to the maximum extent appropriate, children with disabilities, including children in public or private institutions and other care facilities, are educated with children who are not disabled, and that special classes, separate schooling, or other removal of children with disabilities from the regular education environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids services cannot be achieved satisfactorily” (IDEA/Groove, 1990: 1412).

The significance of inclusion in early years is based on the authenticity that CWD are children (NAEYC, 2002, 2017). They have the same child characteristics as any other young child.

The differences due to disability should not be a reason to distinguish and discriminate them from their non-disabled children. All children regardless of their different needs benefit from each other in inclusive settings. On that basis teachers and other professionals providing education and intervention services for children with disabilities are required to possess the necessary expertise in order to meet the diverse needs of all children including CWD. Teachers should understand the needs of CWD as young children and treat them as such.

Teachers in early childhood education should possess adequate knowledge and skills concerning education of young children both with and without disabilities. DEC outlines the knowledge that includes:

- child development and learning,
- curriculum development and implementation,
- family and community relationships,
- assessment and evaluation, and
- professional qualifications with appropriate field experience in order to apply the knowledge.

Further, NAEYC, 1992 stipulated the role of early childhood educator as;

- early childhood subject area teacher,
- parent education coordinator,
- social service coordinator,
- education coordinator,
- program administrator, and
- early childhood unit administrator.

Moreover, Hu, (2010) added the role of teachers in inclusion. In the study Hu described the concept of inclusion as implying not only physical inclusion of CWD such as during lunch time and play. It is the responsibility of teachers to encourage CWD to participate in regular classroom instruction, small group activities and free play. However, teachers claimed that they lack the skills required to:

- stimulate CWD's interests to talk and play with other children,
- prompt their attention to actively participate in a variety of instructional activities and peer interactions and,

- modify the learning environment, schedule, curriculum, and materials to meet their individual needs.

In order to achieve full inclusion parents, teachers and other stakeholders should collaborate in service provision for CWD. Recruiting and training teachers and other personnel to teach and take care of children with disabilities in early years is a challenge that poses barriers to quality provision of early childhood services. Education and awareness of contemporary issues concerning children in early years is vital for stake holders such as government leaders and heads of ECE services as they are responsible for implementation. Likewise, parents play key roles in raising their children with disabilities. Parents need enough time to stay with their children, to develop a strong relationship for a positive emotional development of their children.

Most parents in both developed and developing countries face challenges concerning availability of time to raise their children. They invest most of the time in work and less time with their children. For quality provision of services in early years' programs, governments should consider the needs of both children and parents (Pugh & Duffy, 2014). Collaboration between key stake holders is assumed to improve the education provision as well as foster child development.

For the past three decades the concept of inclusion has been attracting the service providers of young children with disabilities (Odom & McEvoy, 1988). Notably, inclusion sought to integrate the fields of ECSE and ECE in order to meet the needs of all children (Smith & Bredekamp, 1998) in Reichow, et al. (2016). In US for example all sectors dealing with EC affairs have been working together trying to share the inclusion vision by training personnel and developing programs on how to teach all children together (Reichow et al., 2016). Further research shows that inclusion proved to have positive effects on belonging, participation and developing positive social relationships for children with disabilities (Odom, Buysse & Soukakou, 2012).

However, literature reveals that there has been a gap between theory and practice in the field of inclusion of CWD (Reichow et al., 2016). Most CWD are still receiving their education services in special education settings instead of being included in regular settings (Barton &



Smith, 2015). For example in US it was reported that the number of children with disabilities receiving services in inclusive setting is below 50%. There is a need for research, policy, regulation and advocacy for the field. Teachers and other practitioners in the field of ECE require training and preparation to handle CWD. Also integration of all sectors dealing with EC affairs need collaboration for effective delivery of services. The study by Hu realized that teachers emphasized the importance of collaboration between teachers, parents, school managers and other professionals working with CWD for effective inclusion (Hu, 2010). In Tanzania a study was conducted to examine adequacy of teacher training necessary for handling CWD in inclusive pre-primary classrooms (Nzima, 2009). The study found that the curricular content addressed ECE in the general sphere, whilst preparation to handle inclusive CWD in inclusive classrooms was inadequate. Hence, the situation of HH/D children in pre-primary schools in Tanzania should be given due attention.

This chapter discusses issues concerning education of young children with disabilities in pre-primary education. More specifically it examines the situation in inclusive and integrated educational settings. Integrated education involves placement of CWD in regular education settings with provision of special support. Literature reveals that most CWD are denied education in their early years. Only a few have access to early education, being educated in separate settings such as special schools, units or classes. Scholars suggest that the inclusive setting is the best in providing education in the early years so as to reduce discrimination in education and in society in general. Most of the empirical studies on inclusive early childhood education analysed in this chapter were conducted in developing countries (Buysse, 1993; Guralnick & Bruder, 2016); in Tanzania one single study (Nzima, 2009) has been accessed.

Moreover, HH/D children are the most segregated and excluded among other CWD in pre-primary education. This is not in keeping with the target of inclusive education to include all children with disability and their peers without disability in inclusive settings. Various options of inclusion for HH/D exist; full inclusion in which children share the same school and the same classroom for the entire day or partial inclusion where they stay together in the classrooms for some hours in the day. Both options are accepted as far as the needs of HH/D are considered; most important is the feeling of belonging in the school rather than placement. When they stay together in the classroom for the entire day, teachers should ensure that learning takes place effectively and they have equal chance to participate in all activities.

By contrast they can be in separate classrooms with special professional teachers where they can learn effectively. But, they should have an opportunity to integrate as much as possible with their non-disabled peers in other activities including playing together and forming friendships. However, inclusion of HH/D children in early childhood education has been challenged due to difficulties in educating HH/D children owing to the nature of disability. Loss of hearing causes many barriers to inclusion and as a result most practitioners and parents prefer a separate setting despite the relevance of inclusion.

Although, as literature shows, inclusion in early years is very important for improvement of HH/D children`s development in cognitive, physical, social and emotional domains, in most developing countries ECE is not available for HH/D children. HH/D early education is denied due to various factors including economic constraints resulting in shortage of resources, priorities (i.e.hearing loss is not a priority), lack of community awareness, and absence of supporting services. Research in the field is vital for gaining knowledge concerning the early education for HH/D as well as improving the prevailing situation. Most of the research is conducted in developed countries; few from developing countries. Analysis of literature observed that no single study has been conducted in Tanzania.

In studies on HH/D-EC findings on special education (Furuta, 2006, 2009), early identification and intervention (Gaffney et al., 2014; Guralnick, 1997), social interactions and friendships in inclusive settings (Antia, et al., 1994; Antia et al., 2011; Batu, 2010; Batten, et al., 2013) shed light on the present study. In this respect the situation in Tanzania is not yet determined since no single study concerning ECE for CWD specifically HH/D has been conducted. In Tanzania integrative education is an important stage toward inclusive education. Since the topic was new there was a need to conduct a study capturing key issues related to successful integration and inclusion of HH/D children in pre-primary education. Hence the rationale of the recent study to narrow the knowledge gap observed the integration and inclusion of HH/D in pre-primary schools in Tanzania.

## **CHAPTER FOUR**

### **RESEARCH METHODOLOGY**

#### **4.1 Introduction**

The purpose of this study was to explore inclusion of children with hard of hearing and deaf (HH/D) disability in Tanzanian pre-primary education. The specific objectives were first to examine the policy situation available concerning children with disabilities including HH/D in pre-primary education in Tanzania. Second, to examine methods used to identify, assess and place children with hard of hearing and deaf disability in pre-primary schools/streams in Tanzania. The third objective was to explore teaching and learning activities and interactions with peers as well as support provision concerning children with hearing impairment in pre-primary learning environments. And finally to explore and identify specific challenges facing inclusion and integration of HH/D in pre-primary education and consider strategies to rectify the situation.

This chapter presents a detailed account of the choice of research approach and design, choice of study area and target population. It also includes samples and sampling techniques in which sample and selection of sample schools and children are clearly described. Additionally, this chapter explains the choice of tools employed in data collection, administration of tools and data analysis procedures. Also, it describes issues governing validity and reliability as well as ethical considerations.

#### **4.2 Research approach and design**

The research design is the overall method and strategy of the research work (Coolican, 2004). It is a plan that guides the researcher on how to conduct research; it enables the researcher to convert the study topic into projects that can be investigated (Hayes, 2001) and provides specific direction for the research procedures (Creswell, 2014). Punch (2014) suggested four basic components of the research design including the research questions, conceptual framework, data collection tools and analysis. Selection of research design depends on the nature of the study and information required. In education, as in other social science research, there are three types of research design: quantitative, qualitative and mixed methods design.

Quantitative research focuses on tests theory; it is oriented towards the cause and effect relationship of study variables. The mixed methods research approach is a procedure that allows the researcher to mix quantitative and qualitative methods for collecting and analyzing data in a single study. It is suggested that the combination of quantitative and qualitative methods facilitate the better understanding of the research as compared to the single method (Creswell, 2014). The researcher is required to show how the research design would be combined in order to meet the goal of the study that could not be met by either qualitative or quantitative methods (Morgan, 2014).

Qualitative research approach criticizes quantitative approach in that it stresses measurement and standardizations. The qualitative approach focuses on personal experiences in one's life history. It is rooted in sociology, anthropology and humanities. Some common qualitative research designs include grounded theory, phenomenology and ethnography. Flick (2015) proposed that qualitative design allows the researcher to use flexible tools of data collection as well as to present the research findings in a comprehensive form.

The study employed the qualitative research approach. It is not easy to define qualitative research clearly because it does not have its own theory and methods of data collection (Denzin & Lincoln, 2011; Ritchie et al., 2013). However, scholars describe qualitative research as a naturalistic, interpretive approach which focuses on exploration of phenomena from within and considers the researcher's perspectives as a starting point (Ritchie et al., 2013; Flick, 2015). Specifically, the qualitative research unique description found in various qualitative literatures includes interpretive practices that transform and make the world visible through representation materials like interviews, field notes, conversations, memos, videos and audio records and photographs. More important is its ability to allow the researcher to conduct investigation in natural settings aiming to derive sense and interpret events and experiences according to meanings attached to them by the research participants (Cohen et al., 2001; Creswell, 2014; Denzin & Lincoln, 2011; Litchman, 2013).

Qualitative research seeks to answer the what, why and how questions. It is flexible in nature and focuses on processes in the field of study. Silverman (2011) added that in qualitative research hypotheses are usually the product of data analysis rather than study guidance. Ritchie (2013) suggested the common characteristics of qualitative research to be:

- the aims and objectives that are directed at providing an in-depth and interpreted understanding of the social world of the participants by learning about the sense they make of their social and material circumstances, their experiences, perspectives and histories,
- the use of non-standardized, adaptable methods of data generation that are sensitive to the social context of the study and can be adapted for each participant or case to allow the exploration of emergent issues,
- data that are detailed, rich and complex,
- analysis that retains complexity and nuance and respects the uniqueness of each participant or case as well as recurrent, cross-cutting themes,
- openness to emergent categories and theories at the analysis and interpretation stage,
- output that includes detailed descriptions of the phenomena being researched, grounded in the perspectives and accounts of participants,
- a reflexive approach, where the role and perspective of the researcher in the research process is acknowledged. For some researchers, reflexivity also means reporting their personal experiences of the field.

Qualitative research is concerned with narratives of the life history of the individual. Qualitative research was observed to suit this study due to its ability to provide descriptions of phenomena that occur naturally in the real world through interviews and observations (Patton, 2002). Moreover, the qualitative research approach is considered to suit the recent study due to the nature of information required. Also, it allowed the researcher to capture the real situation through observation in the learning setting, as it employs more open and flexible tools of data collection and provides opportunity for presentation of results that are more comprehensive (Flick, 2015; Ritchie et al., 2013). Under this approach it was easy to describe the teaching and learning practices and challenges facing inclusion at pre-primary education level.

Additionally, it enabled direct quotations capturing individuals' personal perspectives and experiences to be included (Bogdan & Binklen, 2003; Patton, 2002). The qualitative approach is possible with several research designs e.g. ethnography and case studies. Multiple case study design (Yin, 2016) was employed in this study. The design allowed for the integration of different information from multiple units of data analysis. The design examines several

cases to understand similarities and differences between cases (Yin, 2003). Since the present study set out to investigate inclusion in pre-primary education in four pre-primary schools, multiple case designs were considered appropriate in the context of similarities and differences between children with hearing impairments in the four pre-primary schools. Case study design is criticised for being time consuming, but this shortcoming did not affect the study as the researcher was allocated enough time for collecting data.

### **4.3 Area of study**

The study was conducted in two regions, namely Dar-es-Salaam and Shinyanga. These regions were purposefully selected. Kothari (2004) argued that purposive sampling is a deliberate selection of particular units of the universe which can provide information required. Thus the regions were selected because of the likelihood that there would be pre-primary schools with the anticipated children with hearing impairment, with easy access to the information needed for this study.

#### **4.3.1 Dar es Salaam region**

Dar es Salaam is one of 31 regions in the United Republic of Tanzania. The United Republic of Tanzania evolved from the union of the 26 regions of Tanzania Mainland with the 5 regions of Zanzibar. The area of the Dar-es-Salaam region covers 1,397 square kilometers. Dar-es-Salaam is a famous business city with a high population compared to other regions. The region experiences a modified type of equatorial climate with an average temperature of 29 degrees centigrade. It is bounded by the Indian Ocean on the east and by Coast Region in the northern, southern and western sides (URT, 2008).

Administratively, the Dar es Salaam region currently comprises the five districts of Kinondoni, Ilala, Temeke, Ubungo and Kigamboni, formerly three districts of Kinondoni, Ilala which were involved during field work. The region is the largest in Tanzania and most important industrial and commercial center with a population of 4,364,541 according to 2012 Population and Housing Census. The annual population growth rate is 5.6 and population density is 3,133 per square kilometer. Dar es Salaam is among the fastest growing cities in Africa, according to the World Bank (URT, 2015, 2014d).

It is said that the Dar es Salaam region makes up for about 10% of Tanzania's population and contributes 16.9% of total National GDP (URT, 2014d). Dar es Salaam (Dar es Salaam City)

is the country's trade center and focal center for industries and shipping center for East and Central Africa. The six landlocked neighboring countries of Malawi, Zambia, Burundi, Rwanda, Uganda and Democratic Republic of Congo depend much on the port of Dar es Salaam for their import and export requirements.

**Figure 4.1 Map of Dar es Salaam region**



**Source:** URT, 2015

According to URT (2013), the population of Dar es Salaam stood at 4,364,541 with a population increase of 5.6 percent per year from 2002 to 2012. The Dar es Salaam city/region is the third fastest growing in Africa (ninth fastest in the world), after Bamako of Mali and Lagos of Nigeria. The metro population is expected to reach 5.12 million by 2020. Like most regions in Tanzania mainland, the population of Dar es Salaam Region has experienced a significant growth. Statistics shows that the region had 4,364,541 people in 2012 compared to 2,487,288 inhabitants counted in the 2002 Population Census, resulting in a significant

increase of 1,877,253 people (75.5 percent) during the intercensal period. The region accounts for 10.0 percent of the total population of Tanzania Mainland with the highest average annual growth rate of 5.6%. When compared with other regions in the mainland, the Dar es Salaam region emerges as the highest populous region in the country.

Population and Housing Census Reports for 2012 indicate that the population of Dar es Salaam region reached 4,364,541 in 2012 from 2,487,288 in 2002 and 1,360,865 in 1988. This is an increase of about 75.5 percent in ten years. Kinondoni district continues to lead followed by Temeke district while Ilala district remains the least populous district throughout the 2002 to 2012 period (URT, 2013).

Furthermore, the report indicated that the population of the Dar es Salaam region is considered as a young population: 1,648,653 children under (792,617 18 males and 856,036 females) forming 37.8 percent of the total population, followed by the young population aged between 18-29 years accounting for 1,269,695 persons (577,519 males and 692,176 females) or 29.1 percent of total population. Persons aged 61 years and above amounted to 128,245 (67,144 males and 61,101 females) only or 2.9 percent of the total population. Although there is limited data concerning children with disabilities in the country, it is estimated that the child population includes CWD.

The report shows that the Dar es Salaam region had a total population of about 4,364,541 and therefore a density of 3,133 people per square kilometer compared to a population density of 1,786 persons per sq.km in 2002. According to that report, the Dar es Salaam region reflects a very big land pressure compared to other regions which range from 13 to 142 persons per sq.km. In 2002 as well as in 2012 in terms of population density the Dar es Salaam region ranked first compared with other regions of Tanzania Mainland. Population density has an influence on child development and learning. Children need enough space to grow and explore their environment freely. Likewise, the community surrounding the child impacts the family and children`s life in the specific society.

Moreover, the Poverty and Human Development Report of 2005 indicates that about 20 percent of Dare-es-Salaam residents were living below the poverty line. According to the report, Temeke 29 percent, Kinondoni 18 percent and Ilala 14 percent (URT, 2008) are below the breadline. Since poverty has a direct influence on the development and learning of



children, specifically CWD are likely to be more affected. When there is a scarcity of resources, parents are likely to provide for the children without disabilities, leaving out the child with disability.

Dar es Salaam City is identified as a city with sustainable social and economic development through participatory resource mobilization and utilization, enhancing the quality of social and economic services by using the existing resources and opportunities. The major economic activities in Dar es Salaam include a number of industries such as textiles, breweries, distilleries, beverages, cigarettes, cement, paints, pharmaceuticals, plastic, metal products, steel, grain milling, wood products, food products, petroleum products, printing and publishing and electricity generation. In terms of ownership of those industries, 77% are privately owned, 19% publically owned and 14% are joint ventures. Being located along the Indian Ocean, fishing is one of the major economic activities. Although the fishing industry has not been commercially developed, traditional fishing is predominant and hence there is considerable opportunity for investment.

Dar es Salaam City has attractive beaches with a diversity of cultural and archeological sites with potential for investments and tourism. It has a coastal belt of about 100 kilometers with some developed tourist attractions and hotels. The major recreational activities include games, arts and theatre, traditional dances and music. Tourist attraction areas include archeological and historical sites, handicraft, weaving, painting and hair braiding. Several multinational financial institutions have established financial services in the City. Other financial services are Dar es Salaam Stock Exchange, Servings and Credit Cooperative Societies, bureau de changes and credit facilities. Efforts are being made to energize and mainstream the employment generation, enhance opportunities for the development of entrepreneurship and improve the living conditions of economically marginalized groups (URT, 2015). However, inadequate capital hinders the establishment and management of the private investment sector including the education sector.

In the year 2009 the region had only 428 pre-primary schools (URT, 2014d). The number increased significantly to 499 in 2013 with an increase of 14.2 percent in the number of schools compared to 2009. Primary schools increased to 473 by the end of 2010 which increased to a total of 536 by 2013. Among other factors, private sector participation has improved the development of pre-primary education in the region. Challenges facing the

development of the education sector include inadequacy of pre-primary schools as well as school facilities like classrooms, textbooks, laboratories, toilets, learning and teaching materials and inadequacy of teachers (URT, 2014d).

The region was purposively selected because of the likelihood of children with disabilities in pre- primary classes, as anticipated. In the Dar es Salaam region the study was conducted at Kinondoni and Temeke Municipal Councils. Two schools were selected-one from each municipal; school A in Kinondoni and school D in Temeke. Dar es Salaam was selected purposively as it is the leading district after Shinyanga enrolling large numbers of children with hearing impairment in pre-primary education (URT, 2014c).

As indicated in the Basic Educational Statistics of Tanzania, it was anticipated that, since the region is among regions in this country initiating the practice of inclusive education, it would be possible to obtain a sufficient number of children with hearing impairment in pre-primary education since parents here are highly motivated to send their children to schools, including children with hearing impairment. Therefore, it was predicted that the area would be reliable for harvesting valuable information for the study which can stand as a springboard for further investigation.

#### **4.3.2 Shinyanga region**

The Shinyanga region is located in the North Western part of Tanzania at the South of Lake Victoria and is thus part of Lake Zone regions. Despite its wealth, the Shinyanga region is one of the relatively least developed regions in Tanzania. It lies between latitude 30 15" and 40 30" South of the Equator and between longitudes 310 30" and 340 15" East of the Greenwich Meridian. The average rainfall in the region is 600-1,000 mm. per annum. The Shinyanga region is surrounded by six other regions which are Geita, Simiyu, Singida, Tabora, Kigoma and Mwanza. The region has a developed transport network system connected to these regions and neighboring countries. These roads connect the region with the landlocked countries: Democratic Republic of Congo, Burundi, Rwanda and even Uganda (URT, 2014e).

The Shinyanga region has a total surface area of 18,555 square kilometers. Administratively, the region is divided into three (3) districts of Kahama, Kishapu and Shinyanga. The region is composed of six local government authorities which are: Shinyanga Municipal Council, Kahama Town Council, four District Councils of Kishapu, Msalala, Shinyanga and Ushetu.

The lower administrative structures include 14 divisions, 126 wards, 513 villages, 2,760 hamlets and 87 streets.

According to URT (2013), the region had a population of 1,534,808. Average annual growth rate is 2.2 percent, as a result the Shinyanga region in the year 2017 was estimated to have 1,745,956 people. Shinyanga Municipal Council with a total of 161,391 people has the least population compared to other local governments. Shinyanga District Council with the highest population of 334,417, also has the highest number of authorities. The other four councils vary between 242,208 to 273,075 people.

Despite the recent mushrooming of activities within the mining industry, agriculture has continued to dominate the livelihood and economic performance of the Shinyanga region. The sector contributes about 75 percent to the district economy and employs more than 90 percent of the working population. Farming is the predominant subsistence. Main cash crops are cotton and tobacco, while the main food crops include maize, sorghum, paddy, sweet potatoes, millet and cassava. Besides farming, livestock keeping- cattle, goats and sheep- are major activities in Shinyanga. This means in terms of productive sectors, agriculture is the leading sector in the region (URT, 2014e).

Shinyanga has a number of tourist attractions among which is the Uzogole Natural Spring Water that discharges hot natural water (hot natural spring water) which is also active in the dry season. This site is located in the Shinyanga Municipal Council about 16 km. from the town centre on the way to Mwanza. The hot spring water is believed to have some kind of spring power, a phenomenon that attracts a number of traditional healers to visit the spring to collect water for healing practices. Other tourist sites include the historical and cultural centres of Usanda/Tinde Slave Trade caves; a Footmark on a stone by Chief Ngw'anamalundi; Iboja Slave trade caves (URT, 2014e).

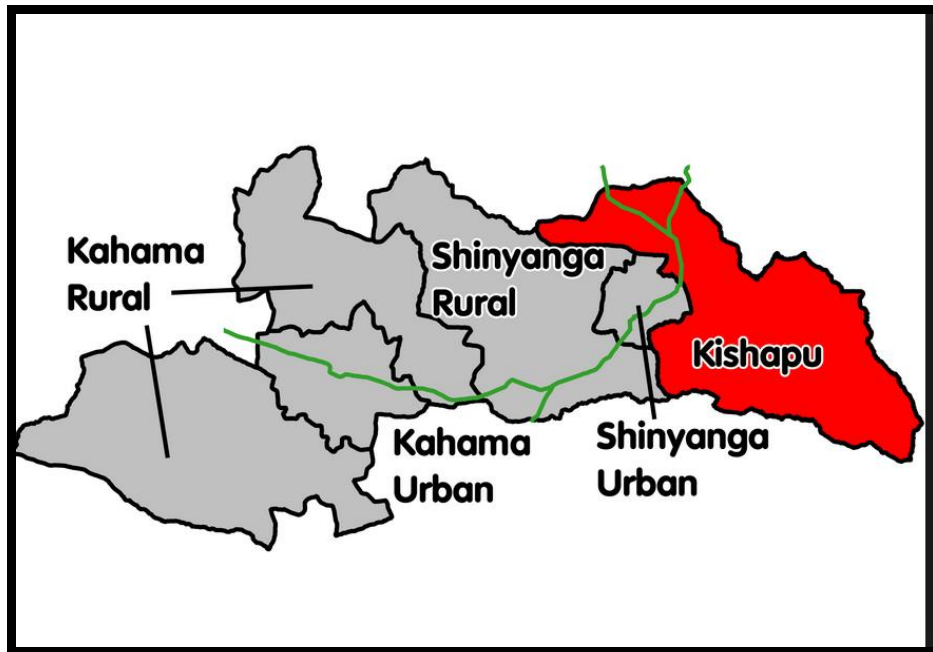
Further, the Shinyanga region has a total of 609 Primary Schools of which 563 Schools are public/government owned and 46 owned by either private or community/religious organisations. With regard to Early Childhood Education, the region has a total of 609 classrooms of which 563 classrooms are located at public primary schools as in accordance with the Education and Training Policy (URT, 2014a) that stipulates that each primary school

includes early childhood education classrooms. Other 46 early childhood education classrooms are located in primary schools owned by private/religious organisations.

According to the data as submitted at the end of the year 2017, all 609 classrooms for early childhood education have a total of 43,407 children: in terms of government owned schools these represent a total of 41,379 of which, 20,309 were boys and 21,070 girls. Private schools, on the other hand, account for 2,028 pupils of which 986 were boys and 1,042 girls (URT, 2017). However, the main challenge is the availability of teachers, classrooms, teachers' houses, books, and in-service training for teachers. Likewise health services have similar problems including inadequate health facilities, insufficient number of qualified nurses and doctors ratio per patient as well as availability of drugs and medicine in public hospitals, i.e. very important facilities for ECED (URT, 2014e).

The region was purposively selected because of the likelihood of the anticipated children with disabilities present in pre- primary classes. In the Shinyanga region the study was conducted at Shinyanga Municipal and Kahama Town Councils. Two schools were involved- one from each municipal-school B in Shinyanga Municipal and school C in Kahama Urban. Shinyanga was selected purposively as the leading region in the country to enroll large numbers of children with hearing impairment in pre-primary education (URT, 2014c). For example, the data showed that according to education statistics, the Shinyanga region was reported to have the largest number over 30 (35) children with hearing impairment enrolled in pre-primary education (URT, 2014c).

**Figure 4.2: Map of Shinyanga region**



**Source:** URT, 2014e

#### **4.4 Target population**

The recent study set out to involve all children with hearing impairment in pre-primary schools in selected regions. However, since it was not necessary for this study to obtain information from the whole population, only few children from pre-primary schools/streams were selected in this study; the number depended on the wealth of information to be obtained as best suited to the study (Best & Khan, 2006; Cohen, Manion & Morrison, 2013).

#### **4.5 Sample and sampling techniques**

##### **4.5.1 Sample**

In this study, purposive sampling methods (Fraenkelin & Wallen 2000; Shaughnessy et al., 2000) was applied to obtain the sample of schools and children to participate in the studies. The sampling also included officers from the Ministry of Education, Science, Technology and Vocational Training, district education officers, head teachers and teachers teaching children with hearing impairment in selected schools as well as parents of those children.

#### 4.5.2 Selection of sample schools and children

In selecting sample schools, the purposive sampling method was employed to obtain four (04) schools from the two regions; Dar es Salaam and Shinyanga. The schools were selected on account of the likelihood of the inclusion of children with hearing impairment in pre-primary classes. The study involved all pre-primary HH/D children in the selected schools. HH/D were selected because they were easier to identify than other children with some degree of hearing loss; hence their experience would be useful in yielding the required information (Cohen et al., 2013; Fraenkel & Wallen, 2000). In collaboration with class teachers, the researcher used the class attendance registers and enrolment particulars to obtain a list of all HH/D children from each sampled school. In order to ensure a good representation of the respondents, the study involved all children present on the day when the researcher was collecting data. This was possible as the number of HH/D children in the selected schools was reasonably small. Thus the entire classes with HH/D were included in the sample.

**Table 4.1: Study participants**

Category	Ministry Official	District Officials	Head Schools/Units	Teachers	Children	Parents	Total
Female	01	04	02	05	12	03	<b>27</b>
Male		01	04	03	14	01	<b>23</b>
<b>Total</b>	<b>01</b>	<b>05</b>	<b>06</b>	<b>08</b>	<b>26</b>	<b>04</b>	<b>50</b>

**Source:** Field Data, 2016

#### 4.6 Instrumentations

Data was obtained with use of various methods to ensure reliability (Martella, Nelson, Morgan & Marchand-Martella, 2013) and quality (Yin, 2016) of this study. The use of different techniques in collecting information was useful for gathering more information and it helped in cross-checking the authenticity of the information collected (Yin, 2016). Also, different techniques helped in triangulation of the information (Cohen et al., 2001, 2011; Yin, 2016). Denscombe (1998) suggests that the use of different techniques helps to substantiate the authenticity of the data collected, as well as exhaust the possibilities of the validity and reliability of the study. In this study three common methods in social research were employed such as documentary review, interview and observation method (Flick, 2015; Litchman, 2013;

Schwandt, 2007) in the collection of data to acquire information on inclusion in pre-primary education in Tanzania.

#### **4.6.1 Documentary review**

Documentary review was used to collect information concerning the study from various written documents. The researcher went through the various documents to collect the required information. Regions with large numbers of HH/D children enrolled in pre-primary education were identified through scrutiny of statistics from the Basic Educational Statistics of Tanzania. For example, the list of primary schools which practice with HH/D pre-primary children was obtained from the District/Municipal offices-special education unit. Class registers and attendances of children were obtained from head teachers and academic masters/mistresses, who provided information about the number of children with disabilities and type of disability in each class and in each school respectively. Review of education of public documents such as policy in Tanzania, pre-primary education policy, inclusive and special needs education policy, Basic Education Statistics in Tanzania and other available documents were involved (Creswell, 2012; Litchman, 2013; Ritchie et al., 2013).

In this study documentary review was employed due to its strength; first, it is a method that is quick and cheap, makes best use of the researcher's time, broadens the base from which scientific generalizations could be made and it can enable the researcher to verify the findings based on primary data (Krishnaswami & Ranganatham, 2006). Second, documents are a permanent channel of data collection, can be accessed by different researchers in different periods. Third, in documents there is no possibility of participant reactivity. Researchers can obtain information which may be difficult to access elsewhere.

However, document analysis, as with other research data collection methods, has its weakness. First, incompleteness- documents may contain information that is incomplete. Second, inaccuracy of the information obtained from the documents, due to bias of reporting, selective information, may contain only positive information (Martela et al., 2013) depending on the objective of the document (Yin, 2016). In order to minimize the effect of this weakness the researcher critically analysed the different information obtained in different documents while continuously attempting to recognize the purposes of the reviewed documents (Yin, 2016).

#### **4.6.2 Interview method**

The recent study employed interviewing as one of the major sources in obtaining relevant data. Interviews are a widely used method of collecting qualitative data. It is a purposeful interaction in which the researcher tries to acquire information from study respondents (Angrosino, 2007; Cohen, 2001, Gay, Mills & Airasian, 2006). To obtain the required information the researcher conducted direct conversations with the study respondents in semi-structured interviews.

Semi-structured interviews were employed to obtain information from ministry officers, education district officers, head teachers, teachers of HH/D children in regular schools and parents. Semi structured interviewing was employed due to its strength in collecting qualitative data in case studies (Yin, 2016). First of all it is recommended to be the best source of data collection suited to a qualitative study as-compared to structured and unstructured interviews -both are focused and time effective (Patton, 2002). Structured interviews are rigid in format and procedure thus possibly ignoring the right of respondents to give their opinions or views. Unstructured interviews are more flexible but not focused; therefore it is difficult to obtain targeted information.

Moreover, the interviewing technique was used in this study to enable the researcher to discuss with the respondents the interpretation of inclusion in the Tanzanian context (Cohen et al., 2011). It was used as it has ability to encourage the respondents to give their own opinion and views (Yin, 2016) concerning the inclusion. It also enables the researcher to use multi-sensory channels to capture verbal, nonverbal, spoken and heard information. During the interview session the researcher was able to control the order of the interview and to interrogate and seek more information for more critical issues (Cohen et al., 2011).

However, data yielded from interviewing can be limited due to the human factor such as respondent bias, communication ability and forgetfulness; (Yin, 2016). To be more systematic the interview guide approach as suggested by Cohen et al. (2014) was used. The topics and issues concerning the study objectives of the study were outlined in the interview guide. The questions to guide the interview were arranged sequentially; however, flexibility was allowed to increase the comparability of responses whenever needed. Moreover, to avoid omission of important information the researcher provided an opportunity to the respondents to add other related information which was not included in the questions.



The questions were used to guide the interview process but not limit the conversation. The questions were open-ended to allow flexibility. Kelinger (1970) pointed out that open-ended questions have the following advantages; they are flexible, they allow the researcher to probe and hence obtain more valuable information, they encourage cooperation among the researcher and participant and they allow the researcher to examine the respondent's beliefs. Rubin (2004) added that open ended interviews allow the researcher to learn more about the respondents' beliefs, opinions, preferences and expectations that trigger their externally visible behavior. Open ended interviews are the best tool in qualitative research to achieve the purpose of inductive-subjective-contextual information. In this study open-ended questions were largely used to harvest in-depth information concerning the education of children with disabilities in inclusive settings.

The researcher used several strategies to make conversations effective whilst avoiding being too directive or not directive enough. The main goal was to make sure that issues concerning the research topic were thoroughly addressed whilst avoiding being side-tracked or drying up before the end of the session. Likewise, it was important for a researcher to avoid boredom and raise interviewee motivation. Cohen commented that the researcher is not limited concerning the degree of direction; confrontation is convenient (Cohen et al., 2011). Whyte 1982 cited in Cohen, Manion & Morrison (2014) described the 6 scales of interview directives from least to most directive:

- making encouraging noises,
- reflecting on remarks made by the interviewee,
- probing the last remark made by the interviewee,
- probing an idea preceding the last remark by the interviewee,
- probing an idea expressed earlier in the interview,
- introducing a new topic.

For instance the researcher used the technique of introducing a new topic when she noted that the proffered information was saturated or the interviewee went off the point.

The interview was conducted with five categories of research participants. The first category included ministry officers from the early childhood education unit who were interviewed to outline the general situation of inclusion of children with disabilities in Tanzanian pre-

primary education, teachers' preparation and supports, and identification and screening of HH/D children. The second category involved district education officers' special needs education who were interviewed to provide information concerning situation and experience in inclusive education at pre-primary education level in their districts. The third category included head teachers from each selected school who were interviewed to provide information about the situation of inclusion in their schools, identification, assessment and placement of HH/D children, teachers training and motivation, support provision, challenges, suggestions and opinion concerning inclusive education. The fourth category was teachers teaching HH/D pre-primary children who were interviewed to provide the required information and key issues raised to support the observation.

The discussion was based on the teaching and learning practice inside the classroom and the involvement of children at play during break time. The teaching profession and experience, training in special needs/inclusive education, teaching strategies, child play and friendship, interactions, support provisions, challenges, recommendations for placement of HH/D children, opinion concerning inclusive pre-primary education were included. The last category embraces the available parents in the school community who were interviewed to provide information about inclusion of their children, supports provisions, history of hearing loss of their children, treatment and early intervention services, early childhood programs, language development, play and friendship, situation in pre-primary education, challenges facing parents and children, suggestions for education of their children and opinions concerning pre-primary inclusive education.

All interviews were conducted in Kiswahili, the national language and medium of instruction for most pre-primary education levels. The interview was tape recorded throughout the interview session; no respondent refused to be recorded or was noted to be uncomfortable with the recording (Yin, 2016). The length of the interview session was shortened for each respondent and estimated to range between 20-60 minutes (Yin, 2016), depending on the interview situation. The actual interview session lasted from forty (40m) minutes to one hour and half (1:30).

The interview session took place in the office of the officers and head teachers while for teachers the interview took place in the classroom or outside under a tree (calm place) after the teaching session. Interviews for parents; three parents at home and one parent in school

(under the tree). The location for the interview was selected according to the most comfortable situation for the interviewee; i.e. free from external interruptions and distractions (Cohen et al., 2014).

The interview observed ethical issues such as informed consent, confidentiality and the consequences of the interview. The researcher sought the participant's informed consent before embarking on the interview. The consent document was provided which was read and signed by the respondent. The issue of confidentiality and anonymity were granted to the participant by the use of codes instead of names, thus concealing personal identities. The researcher provided enough information about the study to update the interviewee on the possible impact of the interview. They secured personal contact details of each respondent in case further clarification was needed as well as to maintain the interviewee-interviewer relationship. The researcher further asked the respondent permission to record his/her voice and encouraged the respondent to ask for the tape recorder to be switched off in the event of private issues he/she did not wish to be recorded.

The researcher also used the note book to note down key issues raised during the interview session especially those which needed clarification. The open-ended questions were used to guide the interview session but did not limit the interviewee to share his/her ideas/experiences concerning the topic (Cohen et al., 2007, 2014; Creswell, 2012; Rubin, 2004). The researcher applied techniques to ensure the interviewee did not sway from the topic. During the interview session when the researcher was not clear about what the interviewee was talking about, prompt questions and clarification followed. For example, "Sorry, could you explain more..., Could you give an example..., You said ..., what do you mean..." More importantly, no interpretations were made during the interview session until the analysis stage. The participant data was recorded to validate the participants' views, ideas, experiences and opinions.

#### **4.6.3 Observation method/direct observation**

Observation as a central method of data collection in a qualitative study in early childhood education was used as one of the methods of data collection in the recent study. It allows the researcher to use all senses to understand the situation under investigation. The research observation as a scientific method involves the systematic process of recording the individuals' behavior as they are viewed. Observation in this study was used to gather primary qualitative

data (Angrosino, 2007; Mukherji & Albon, 2015; Ritchie et al., 2013) directly from a natural social setting (Cohen et al., 2011; DeWalt & DeWalt, 2011; Fetterman, 2009; Marshall & Rossman, 1995; Taylor, Bodgan & Vault, 2015; Yin, 2016). This allows the researcher to observe directly from the social situation and see what was taking place instead of relying on second hand information (Cohen et al., 2011); he/she can thus access unexpected information (Martella et al., 2013), as what people say they do may differ from what they actually say they do (Robson, 2002). The observation method provides the researcher with an opportunity to observe behavior which cannot be captured by other methods.

Bearing in mind that direct observation is a strong research method that gives the researcher more valid and reliable data, the researcher thus organised different observation sessions on teaching and learning activities inside and outside the classroom to capture learning experiences and challenges facing participants. Inside the classroom the researcher observed the teaching-learning strategies, the support provided to the individual child, supportive materials used by the teacher and children during teaching and learning, and the interaction between the teacher and children, child and child as well as the direction of interaction. Also, the researcher observed the rate to which children were involved and participated in learning activities. Outside the classroom observation concentrated on the type of play, duration of play, playmate, materials, and support provision.

Observation as a method of data collection is, however, criticized for having several limitations. First, the possibility of observer bias, i.e. what the researcher sees does not match the information in the documents. In this study the researcher avoided researcher bias by making sure that the report covered all expected and unexpected experiences, behavior and information as it was directly observed. Second, the possibility of reactivity in the observations, as a result of the participant being aware that they are being observed may result in the participant altering their everyday behavior (Martella et al., 2013). To minimize the effect of reactivity, the researcher conducted several observations on different days in order to access the consistent behavior. The acted behavior is temporal and never persists; similarly, the acted behavior is not far away from the real one. Third, another reported weakness of observation is its ability to capture only observable behavior that is external; the internal behavior cannot be observed (Martella et al., 2013). The researcher employed interviews to elicit the internal behavior such as teacher's beliefs, views and opinions concerning inclusion of young children in regular pre-primary classes.

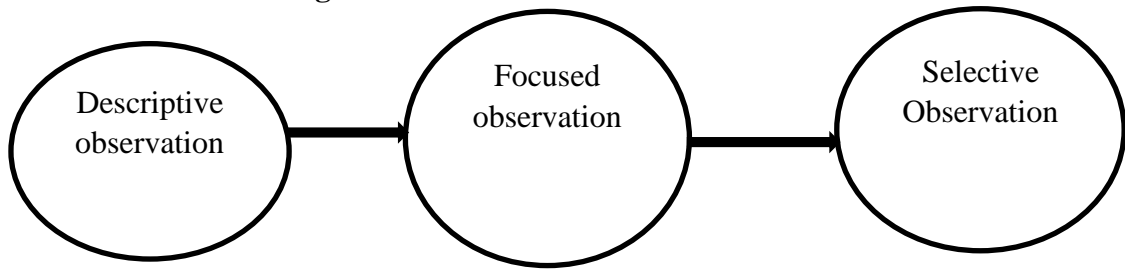
In addition, there are three stages of observation processes depending on the purposes of conducting the observation (Spradley, 1980); first category/stage is descriptive observation-the descriptive observation conducted at the beginning of the study in order to provide the researcher with an orientation to the field of the study. It is used when the researcher is not familiar with what is going on in the field so that the researcher can highlight behavior to concentrate on or develop more concrete research questions. It cannot provide specific descriptions; rather it assists the researcher in developing more focused observation plans.

The second category/stage is focused observation- focused observation tends to narrow down the researcher's perspective and research problems which are important to provide answers to research questions (Ritchie et al., 2013). It helps the researcher to avoid irrelevant information by concentrating on specific activities or interactions like classroom interaction (Angrosino & Perez, 2003). Despite the strength of focused observation to concentrate on relevant information, there is a possibility that other relevant and important information might be omitted.

The third category/stage is selective observation-selective observation is conducted towards the end of data collection. It aims at finding further confirmation and illustrations of procedures or practices found in the second stage (Spradley, 1980). It is worthy for explaining variations among participants' behavior. However, it is difficult to collect more valuable information required in descriptive observation. In consideration of the strengths and weaknesses of each observational process, none could stand alone but they complement each other. More important is for the researcher to use video or field notes to record as much data as possible. In this study the researcher used field notes to record data.

All three stages of observations were used in this study. The researcher used two sessions in each school for descriptive and focused observations while selective observation was conducted in the real data collection stage. Meanwhile in each stage the relevant information for the research study was noted.

**Figure 4.3: Observation Stages**



**Source:** Spradley (1980:73)

Equally important, the researcher considered the school timetable in order to avoid disturbances to the teacher's timetable and school activities. Observation gave the researcher an opportunity to look at what was taking place in the classroom situation and out of classroom play instead of depending on second-hand information (Patton, 1990). In this study an observational checklist form (Appendix VI) was used to guide the researcher to be consistent and guarantee that all significant information is noted. The checklist facilitated the observation to concentrate on information relating to teaching-learning strategies, the support provided to the individual child, supportive materials used by the teacher and children during teaching and learning, and the interaction between the teacher and children, child and child as well as the direction of interaction.

#### **4.7 Validity and reliability of study**

The interview questions were originally written in English but later translated into Kiswahili, the national language, which is the medium of instruction in pre-primary schools in Tanzania. The translation was necessary to increase the validity of the translated version but meanwhile translation back from Kiswahili to English in order to ensure the ecological validity of the instruments for the quality of data which was obtained (Martella et al., 2013). The translation was done by the researcher, who possesses the knowledge and skills required in the translation process in a qualification obtained from Institute of Kiswahili Studies at the University of Dar-es-Salaam.

Content validity of the instruments was considered in developing initial drafts and the final instruments before the researcher embarked on the fieldwork. Content validity of the data collection instrument refers to the extent to which a measurement instrument is a representative sample of the content area (domain) being measured (Leedy & Ormrod, 2001).

A pilot test study was conducted by involving colleagues who read the questions thoroughly. The comments from the pilot study helped in assessing the clarity of language, quality of the instruments and precision of responses expected in relation to the objectives of the study, in order to eliminate ambiguity before embarking on the data collection process (Best & Khan, 2006). The input obtained from the pilot study enabled the researcher to improve the items by eliminating the ambiguity or modifying some of the instruments and to plan adequate time which could be needed for completing the interview and observation. The researcher and her supervisor, who is an expert in special education, reviewed the instruments. All comments for modifications and refinement were subsequently incorporated before embarking on the fieldwork.

#### **4.8 Ethical considerations**

The researcher ensured that the current study abides by ethical research principles specifically the ethical principles when working with children, human rights as well as national policies. Research ethics involves the research process from planning, conducting, communication and follow up research (Punch, 2014). In the research process each stage embraces some ethical issues (Cohen et al., 2011). Equally important, Flick (2015) emphasized that the goal of research ethics is to guarantee transparency and to remove any dishonesty for participants, also the handling and protection of data. Basic ethical issues governing social science research focus on obtaining the research permit, informed consent, confidentiality, privacy, anonymity, and risk of harm, (Bell, 1991; Cohen et al., 2011; Hammersley & Trainaou, 2012; Hatch, 1995; Krishnaswami & Ranganatham, 2006; Kumar, 1999; Punch, 2014).

The process of research in the field was guided by rules and regulations, which the researcher paid attention to. Foremost, the researcher settled all ethical matters with the Ludwig Maximillian University in Germany before leaving for data collection in Tanzania. After arriving in Tanzania the researcher reported to the host institution -the University of Dar es Salaam responsible for research clearance. This was followed up with a request for financial support and a clearance letter for field work. The researcher obtained a research clearance letter from the Vice Chancellor of the University of Dar-es-Salaam to go to Regional Administrative Secretaries of the respective regions. From the regional office the researcher secured a letter for approval of accessing schools and other education officials at the Local Government Authorities (LGA's). At LGA level the researcher obtained a letter to present to the head of schools where data collection was conducted.

Another ethical issue involved introducing the researcher to pre-primary teachers, who in turn introduced the researcher to the children and their parents - those who were available. The purpose of the study was briefly and clearly described to heads of schools and units as well as to pre-primary teachers. Objectives and benefits the school would reap from the study were described. The main goal was to allow the participant to understand the study so that they could willingly participate in the study (Krishnaswami & Ranganatham, 2006; Cohen et al., 2001).

To this end, the researcher sought to attain participants' informed consent. Participant informed consent is the agreement of the respondent to participate in the study freely, by their choice and comfort (Berg, 2006). Diener and Crandall cited in Cohen et al. (2001) defined informed consent:

‘as the procedures in which individuals choose whether to participate in an investigation after being informed of facts that would be likely to influence their decision It is the process that involves the respondent's decision to participate or not to participate in the study’ (Cohen et al. 2001: 51).

Cohen et al. (2011) proposed that informed consent values the right of respondent determination as well as provisions of some accountabilities. Cohen further stipulates that researchers are required to inform participants that they have freedom to join in the study as well as to withdraw at any time or stage of the study. To confirm respondents' informed consents, informed consent forms were used. Teachers were provided with informed consent forms that required them to read, understand and sign if they accepted to participate in the study. Children were orally requested to participate. Some parents were provided with the written document while others were requested orally, depending on the situation.

The confidentiality issue is also very important in the research enterprise. Respondents were assured that the information provided would be handled with confidentiality. In this study the issue of confidentiality was absolutely crucial as people with disability are very sensitive. In addition, teachers might worry about revealing the actual situation in their schools, fearing the reaction of the education officials, their bosses. The researcher assured the respondents that the information they provided would be handled with confidentiality and would be used only for the purpose of research. Confidentiality involves protection of participant anonymity and privacy. To ensure participant anonymity, codes replaced participant names; a code which was already developed before data collection, but also the data excluded all information that



may reveal the identity of the participant (Cohen et al., 2011). In this study there was no risk of harm to be expected; hence participants were free of harm. Careful arrangements were made to conduct the interviews, observations and meeting with parents. Permission was granted to access the required documents in the school which would help in obtaining the required information. All activities were done transparently under the consent of the participant. Lastly, the researcher consulted other scholars' work, by acknowledging all scholarly works which were referred to in this study.

#### **4.9 Data management and analysis procedures control**

Data which was collected through observation, semi-structured open ended questionnaires and documentary review methods was analyzed according to the objectives of the study. Analysis commenced as the field work started (Maxwell, 2013). The data was transcribed before analysis. Data from interviews and observations was coded by content, reduced, and interpreted, together with an additional inference. The analysis was done scientifically, based on the conceptual framework that guided the study. Data were coded into themes and sub themes before being interpreted. The findings were presented in the form of text, tables, figures and detailed description was provided depending on the nature of information obtained (Cohen et al., 2011; Creswell, 2012; Maxwell, 2013).

#### **Documentary data**

Data from documents was subjected to content analysis to discern information relevant to the study. Documents reviewed were:

- pre-primary education policy and inclusive and special needs education policy,
- school children registers,
- text books and children`s exercises books used in class work,
- guidelines for quality assurance of pre-primary schools.

The documents concerned early childhood education and inclusive and special education. Key ideas were noted and analytical statements were provided showing the strengths and gaps revealed in the document (Table 5.1). In this study documentary data were used to provide insight into the theoretical conception and condition set for early childhood inclusive education as well as to explain and enlarge on data from observation and interview.

### **Observational data**

Direct observation was the method used to obtain information in the natural environment settings (Cohen et al., 2007, 2011) either in classrooms during teaching and learning processes or outside the classroom during play. Structured and semi-structured observations were employed (Cohen et al., 2007, 2011) both inside the classroom and outside the classroom activities. Structured observation was employed to identify the nature of the environment and teaching-learning materials. The researcher used an observational schedule form to record the information. Semi-structured observation was used to capture interactions during teaching and learning and during play sessions.

The researcher was the observer writing down key elements of the interactions. They sat at the back observing what was going on in the class from the beginning of the class session to the closure. Each session took 30 minutes to 2 hours. Special education needs classrooms accommodate more than one class, therefore, in order to avoid distraction the researcher stayed in the classroom from the beginning of class sessions to the end. The researcher used that time to expand and reflect on the field notes while waiting for another pre-primary session. Spradley (1980) proposed the following aspects to be considered in writing the field notes:

- space, the physical setting,
- actors, individuals in the situation,
- activities, the sets of related acts that are taking place,
- acts, the specific actions participants are involved in,
- objects, things that are there such as artifacts and physical objects
- events, the sets of activities that are taking place,
- time, the sequence of acts, activities and events,
- goals, what people are trying to achieve,
- feelings, how people feel and how they express these feelings.

The researcher noted all behavioral factors involving teacher-child, child-child and child teacher interactions during teaching and learning processes. This was a brief overview of the activity followed up with an expanded version after the observation. Areas that needed more attention or clarification from teachers were highlighted (Bogdan & Binklen, 2003). The transcript from the observation was read clearly and several times to obtain the emerging

categories. The categories were listed; classroom interactions, teacher and child characteristics, teaching and learning materials and facilities, communication and language development, teaching and learning interactions, classroom behavior management, child participation, support provision, play activities, play environment and materials, free and teacher guided play and teacher support. The notes were re-read to identify information related to each category. Definitions and description of each category were provided.

### **Interview data**

The analysis of interview data was done through listening and clear transcription of the audiotapes. As all interviews were conducted in Kiswahili, the national language and medium of instruction in most pre-primary education levels, the first transcriptions were in Kiswahili. The Kiswahili version was translated into English. The data were saved in different files according to the category of participant. Each participant information was kept separately. The researcher used codes for each participant of the study. The codes were chronologically arranged from the first district and schools to the last districts and schools visited. Each participant was assigned a number from the district officials to parents under the same code. The codes were A, B, C, D; respectively in each code every respondent had its own number A1, A2 to A4. A1 being assigned to district officials, A2 for head of school/unit, A3 and A4 for teachers. Parents were given different codes P1-P4, P1 for parent one, P2 parent two, P3 parent 3 and P4 parent 4.

The notes taken during interviews were in Kiswahili, the language used by the majority, which was then translated into English. The translation and coding were done carefully to ensure that the content from the participant was not changed. The English version data was then analyzed. Phenomenological consideration was applied in analyzing interview data, involving the reduction of long texts to statements. Themes were organized according to study questions and conceptual framework.

In summary, the chapter focuses on the methodological issues of the study. It includes the introduction, the choice of research design, choice of study area, population, sample and sampling techniques, choice of respondents, choice of instruments of data collection, administration of instruments, validity and reliability issues and data analysis procedures. The chapter presents the detailed procedures on data collection and analysis employed in qualitative studies.

## **CHAPTER FIVE**

### **POLICY CONTEXT**

#### **5.1 Introduction**

This chapter presents the findings on policy concerning the education of children with disabilities in Tanzania. The major research question was “What is the policy concerning children with impairment (disabilities) in pre-primary schools in Tanzania?” Presentation and discussion of findings in this chapter is divided into sub headings such as; overview of political context with sub headings: the Constitution of the United Republic of Tanzania; the Law of the Child Act; Pre-primary Education Policy, the National Education Act; National Strategy on Inclusive Education; Early Childhood Development, Care and Development Guideline for Quality Service Provision; National Policy on Disability; Persons with Disabilities Act and the National Five Year Development Plan.

#### **5.2 Policy overview**

In order to capture the macro environment of the child with impairment in development and learning, policies and legislations that guide the education system and provision of education services in the country were reviewed. Policy is regarded as a blueprint document that should be implemented in a well-designed framework or guideline (Souto-Otero, 2011). The study adapted the following policy definition that refers to policy as an official published document containing a course of action adopted by the Government in order to achieve short and long-term goals for national development (online/web dictionary). In the context of Tanzania, a policy is prepared or adopted by the government; the government has to submit it to the parliament of Tanzania for approval and the President must sign it as part of the Legislature as stated in the constitution of the United Republic of Tanzania, which signifies the authenticity of the document. Tanzania has developed several policies and legislations as guidelines for provision of education for marginalized groups including children with disabilities. Also, the government has ratified several international policies and proclamations on education for people with disabilities.

Available basic documents concerning the policy statements supporting education of children with disabilities in general are included in the study. Both national and international policies were considered important in the study. National policy was crucial as it nurtures the

provision of education service for children with disabilities. The national policy documents included the Constitution of the United Republic of Tanzania, 1977; the Law of the Child Act, 2009; Pre-primary Education Policy, 2014, the National Education Act, 1978; National Strategy on Inclusive Education, 2009-2017; Early Childhood Development, Care and Development Guideline for Quality Service Provision, 2014; National Policy on Disability, 2004; Person with Disabilities Act (2010) and the National Five Year Development Plan (2016/17). Adapted International policies also were considered such as UN Conventions on Education for all/Jomtien Declaration on Education for All (1990), Dakar Framework for Action (2000) Education for Children with Disabilities, inclusive education (Salamanca Declaration, 1994), the Millennium Development Goals (MDG) (2002).

**Table 5.1: Summary of reviewed policy**

Document	Statement	Observation
The Constitution of the Republic of Tanzania 1977	Education is a fundamental basic need of every person Every person has the right to access education	No legal power to control
Education and Training Policy (URT, 1995/2014)	<ul style="list-style-type: none"> <li>• All children including CWD are eligible to be enrolled in pre-primary</li> <li>• Training of teachers teaching children with special needs</li> <li>• The objectives of pre-primary education:               <ul style="list-style-type: none"> <li>○ Promotes overall development of the child</li> <li>○ Moulds the character of the child and prepares for education</li> </ul> </li> </ul>	No control mechanism
Quality Assurance ECDCE	<ul style="list-style-type: none"> <li>• All children have a right to be registered and enrolled in school</li> <li>• Availability of teaching and learning (T-L) materials for ratio 1:1</li> <li>• Availability of facilities and equipment considering the age and child's need</li> <li>• Teaching strategies should be child centered, involving the child, plays and proper utilization of play facilities, early stimulation and consideration of children with special needs</li> </ul>	Mechanism to meet the child's needs not provided
Child Rights	Law of the Child Act <ul style="list-style-type: none"> <li>• Right to education-every child</li> <li>• Equal opportunity to education to children with disabilities</li> </ul> Prohibits discrimination against children	Provides opportunities for children with disabilities to enjoy the rights
The National Education Act 1978	<ul style="list-style-type: none"> <li>• Every child is eligible for enrolment</li> </ul>	Children with disabilities included
PEDP III 2012	Increase equitable access to pre-primary education	Children with disabilities included

Document	Statement	Observation
Inclusive National Strategy for Inclusive Education 2009-2017	<ul style="list-style-type: none"> <li>• All children have equitable and accessible quality education in inclusive settings</li> <li>• Inclusive education recognized as a means to make education accessible to children with disabilities</li> <li>• Schools/education programs involved in identifying barriers facing teachers and children to presence, participation and learning</li> </ul>	Important for children with disabilities if applied
Persons with Disability Act, 2010	<ul style="list-style-type: none"> <li>• Accessible health information</li> <li>• Right to education</li> </ul>	Children with disabilities included

**Source:** Field Data, 2016

### 5.2.1 The Constitution of the Republic of Tanzania

The current National Constitution of 1977 serves as a basic policy document governing education service provision of the country. The constitution of Tanzania recognizes education as an important service for all citizens. It is clearly stated that education is a fundamental basic need of every citizen; everyone is free to receive education to the level of his or her potential. The constitution of the united Republic of Tanzania (URT) 1977 article 11.1 states that every individual in the country has the right to access education and every individual shall be free to choose and pursue education in any field up to his merit and capacity (URT, 1977).

According to the statement education is considered as a basic need for every person regardless of nature and status. This means even children with special needs education/disabilities are entitled to access the service. However, the statement is neutral about the education of vulnerable and marginalized citizens including children with disabilities (CWD); they are not directly mentioned in the document. It is not stated how this service should be made available to every citizen. It also does not state any legal action which may be taken if someone is denied this education right.

### 5.2.2 The Law of the Child Act

The Law of the Child Act 2009 is Tanzania's legal document that incorporates all international and national laws pertaining to the child (URT, 2009a). Significantly the law plays a significant role by describing 'who the child is'. The child is defined as a person below the age of eighteen (4.1). The law establishes a framework for the protection of children from abuse, violence and neglect at local and national levels and sets standards for

juvenile justice. It also extends the provisions for children who need care outside their own homes for example in centers that provide residential care for orphans and street children. More important is part two of the act that concerns the rights and welfare of a child; it indicates that the child has:

- the right to non-discrimination: a child shall have a right to live free from any form of discrimination (5.1),
- right to education-every child has a right to education,
- equal opportunity to education for children with disabilities,
- the child has the right to grow up with parents or guardians; a child shall be entitled to live with his parents or guardians (7.1),
- the right to play and leisure (8.1. g).

Moreover the child act states that,

- a person shall not treat a child with disabilities in an undignified manner (6),
- a child with disabilities shall be entitled to special care, treatment, affordable facilities for rehabilitation and equal opportunities to education and training wherever possible to develop the child maximum potential and self-reliance (6),
- it is the parents' duty and responsibility to protect the child from neglect, discrimination, violence, abuse, exposure to physical and moral hazards and oppression. (9.3. a),
- children rights
- survival rights
- development
- development of the child is related to physical, intellectual, social and moral growth. The child needs to be cared for in order to grow normally.
- establishment of pre-schools and day care centers and improvement of their services promotes a child's development. Educating parents about the importance of pre-school education and assisting in developing a conducive learning environment for the child. The Ministry of Education is responsible for making sure that all school age children are enrolled.
- protection
- Children with disabilities should be protected against deprivation, oppression, abandonment, and neglect. The community is responsible for child protection.

Identifying and recognizing children with disability needs and providing appropriate services. Provision of adequate resources, services and expertise enhance their protection.

- participation
- right not to be discriminated against
- factors affecting the provision of child rights in Tanzania (URT, 2009a)

### **5.2.3 Pre-Primary Education Policy**

The pre-primary education policy (2014a) describes that:

- all children including children with disabilities have a right to education.
- pre-primary education is intended to promote the overall personality development of the child, physical, mental, moral and social characteristics and capabilities.
- the pre-primary education level is imperative in moulding the character of the child (including CWD) and enables acquisition of acceptable school culture before joining the world of education.

Pre-primary education is a significant preparation stage in the education cycle. The government of Tanzania has formalized pre-primary education and integrated it into the formal education system. Specifically, the government requires each primary school-public/government pre-primary schools-to attach a pre-primary class in its school grounds. The schools admit children aged 5 to 6 years. The pre-primary education cycle lasts for 2 years (ETP 1995 which has been replaced by ETP 2014 requiring a duration of 1 year only) (URT, 1995, 2014a).

The policy shows that the government has responsibilities to facilitate the proper training of teachers for pre-primary schools. Furthermore, the policy highlights a need for training teachers for children with special needs.

### **5.2.4 The National Education Act**

The National Education Act (1978) is Tanzanian's primary law on education (URT, 1978). The Act initially targeted primary education, hence stipulating primary education for children of age 7 to 13 years as being a human right. Primary education was made compulsory for all children of the age mentioned. However, the Act does not include pre-primary education as



well as education for children with disabilities. A new amendment was made that included pre-primary education and provision for special needs education. The Act added provision for children eligible for pre-primary education. The National Education Act provides an education opportunity for all young children for pre-primary education. Article 35 states that:

“..... every child of not less than five years of age shall be eligible for enrolment for pre-primary education for a period of 2 years” (URT, 1978).

### **5.2.5 National Strategy on Inclusive Education**

The National Strategy on Inclusive Education (2009-2017), an action planned by the Ministry of Education in Tanzania, summaries strategic areas that require action in implementing education for all in the country (URT, 2009b). Specifically it shows programs from the national education policies that need to be strengthened and merged so as to provide access to quality education to all children-the target group being children with disabilities among other disadvantaged groups observed to be lagging behind in education. Tanzania has tried to make basic education services available for all children. The education sector experienced achievement in school infrastructure, child enrollment and provision of teaching and learning materials.

Despite the achievement made the government has realized that children with disabilities are still not enjoying the services as their peers without disabilities. The intention to meet the international goals of Education for All will be fulfilled only when children with disabilities have equal opportunity and access to quality basic education. In order to meet the millennium goal Tanzania had to review the education policies and programs to ensure that all marginalized groups of children are included. Inclusive education has been proposed and accepted worldwide as a means of reaching children with disabilities among other disadvantaged groups. It is suggested that for inclusive education to be effective, it should be indoctrinated in education policies, practices and culture in education and schools. The strategy explored factors that hinder disabled children’s presence, participation and learning.

More important the strategy provides a definition of inclusive education in the context of Tanzania in order to provide a common understanding of the term for all stake holders. Inclusive education has been defined as:

“a system of education in which all children, youths and adults are enrolled, actively participate and achieve in regular schools and other educational programs regardless

of their diverse backgrounds and abilities, without discrimination, through minimisation of barriers and maximisation of resources” (URT, 2009b: 2).

The strategy further describes the perceived barriers that hinder presence, participation and learning among children with disabilities. The barriers are grouped into two areas:

- barriers within the learner, identified barriers including impairment, psychosocial disturbances and life experience.
- barriers surrounding the learner include environment, curriculum and teaching and education system.

The prime goal of the strategy stated that all children, youths and adults in Tanzania have equitable access to quality education in inclusive settings. In order to achieve the stated goal the following specific objectives were formulated (URT, 2009b: 3):

- “education policies and programs concern inclusive values and practices
- teaching and learning respond to the diverse needs of learners
- educational support is available to all learners
- professional capabilities for inclusive education are widened and strengthened
- community ownership of and participation in inclusive education is enhanced”.

Moreover, the strategy outlined fourteen strategic areas which require modification so as to improve implementation of inclusive education:

- i. reinforce presence, participation and learning of all learners in inclusive settings through legislation and policies. Although the right to education for all children was mentioned in education policies and legislations, guarantee of presence, participation and learning for all children was observed to be limited/missing.
- ii. strengthen institutional arrangements for effective implementation of inclusive education.
- iii. review and redesign resourcing and financing of inclusion and educational support. Different funding sources are recommended to merge in order to make implementation of inclusive education effective.
- iv. develop curricula and learning materials that promote differentiation and support learning. The existing curriculum suggested for use of all children is accompanied with differentiated strategies to meet the needs and potential of the child. Provision and improvement of assistive devices, utilization of ICT facilities for schools and use of universal design.
- v. develop an inclusive assessment and evaluation system for learners and teachers. The competence-based curriculum used in the country requires continuous assessment and

- examinations. The curriculum is suggested to be developed further to include learning and teaching process assessment.
- vi. develop institution-based educational support. The strategy proposed the education institutions to establish support teams within the institution that will explore obstacles to presence, participation and learning in the education institution and the community. The team should find solutions to overcome the identified difficulties.
  - vii. introduce educational support. Here there is a need for assessment and effective intervention mechanisms for increasing participation of vulnerable learners. The strategy proposed for early identification followed by appropriate interventions to foster health and development of the child. Most difficulties are associated with health, development and impairments, which appropriate intervention can minimize. The interventions may include treatment, early stimulation and rehabilitation services. Thus the strategy suggests the need for the establishment of screening for health and development.
  - viii. establish educational support resource centers. The strategy proposed the establishment of new resource centers in each district, transforming the special school into resource centers. The special resources used in special schools and special units will be used to support teachers and children in other schools in the district. Schools for the Deaf remain for deaf children to develop sign language as the first language of communication to build a sign language community in the country.
  - ix. revise teacher education curricula and diversify teacher education provision to promote inclusive education. All teacher education curricula should incorporate the principles and practice of inclusive education to ensure the effective implementation of inclusive education. Teaching education has responsibility to prepare resource teachers for primary and secondary school (pre-primary not mentioned). More opportunities for professional development should be available. Several programs include open/distance and e-learning to promote in service training.
  - x. strengthen capacities of teacher training colleges to provide training in inclusive education. Inclusive teacher education should be taught in all teachers' colleges. The strategy proposed for each primary school to have at least one teacher trained in inclusive education.
  - xi. to provide opportunities for professional development for education administrators. All education administrators need to be supported in terms of knowledge and skills in inclusive education to foster education system change.

- xii. carry out awareness raising in inclusive education. The strategy proposed workshops to be conducted in the ministry, regions, districts and communities to raise awareness in inclusive education.
- xiii. use whole school development planning approach to inculcate inclusive education in school communities. The school community should identify difficulties to presence, participation and learning of children in the school, find solutions and ask for support.
- xiv. identify and mobilise community resources for inclusive education. Schools and communities should be encouraged to mobilise resources within the community that may foster implementation of inclusive education.

The strategy defines presence as physical, social and economic access to education and retention in educational programs and schools until completion of the study programs at all education levels. Participation refers to active involvement of children in the process of education. Learning refers to complex interaction between the child, environment, and curricula (URT, 2009b).

#### **5.2.6 Early Childhood Development, Care and Development (ECDCE) guideline for quality service provision**

The ECDCE document (URT, 2014b) provides an explanation concerning rules, regulation and quality of service provision for children aged 3 to 8 years in Tanzania. The book includes a section in each age group concerning vulnerable children. The section states that the government and other stakeholders should collaborate to encourage the community to take responsibility for vulnerable children. They should develop programs for attaining vulnerable children services. In Tanzania children with disabilities are among the group of vulnerable children. Despite this positive statement in the policy there are no specific strategies as to how to reach and serve the vulnerable children. The most affected group of vulnerable children was children with disabilities as most day care centers and pre-primary schools fail to include them in the program due to –among other factors- lack of knowledge on how to handle them properly.

The observation made in this study concurs with UNESCO 2011 report showing the status of ECD service provision in the country. The report noted that:

“... mechanisms for identification and provision of ECD services to the most susceptible groups of children are not indicated in recent ECD policy and program approach”(UNESCO, 2011).

### **5.2.7 Persons with Disabilities Act**

The Persons with Disabilities Act 2010 (UNESCO, 2010a) stipulates the following:

- every child with disability shall have equal rights to admission to the public or private schools (27.2).
- individuals with disabilities of all ages and gender shall have equal rights to education, training in inclusive settings and the profits of research as other residents (27.1).
- requires all CWD to attend a regular public or private school; special education setting is acceptable only if there is a need for special services (27.3).
- CWD provided for in subsection (3) shall be provided with appropriate disability related support services or other necessary learning services by a qualified teacher or teacher assigned for that purpose (29.4).

Prohibition of discrimination in learning institutions provided in the act includes:

- Institutions are obliged not to discriminate children with disabilities
- Discrimination shall be implied where an institution
  - refuses or fails to accept to admit such persons on the grounds of his disability,
  - states terms and conditions on which it is prepared to admit such persons on the grounds of their disability,
  - denies or limits any person with disabilities access to any benefits provided by the learning institution,
  - expels a student or pupil with disability on the grounds of his disability,
  - discriminates against the person in any other way because of his disability,
  - constructs or adapts a school environment that is not user friendly.

Facilities for special schools:

- school managers should take account of special needs of people with disabilities,
- any person who owns or establishes a special school for persons with disabilities shall provide adequate facilities for such purposes,
- notwithstanding the provisions for subsection (2) special schools shall be for a transitional period leading towards inclusive schools.

### **5.3 Special early childhood education development plan**

The Tanzanian government has been using periodic development plans since independence. All development plans include education as a tool and goal of national development. The development plan contains ideas from international conventions such as Education for All (EFA) 1990, Convention on the Rights of the Child (UNESCO, 1990), the Convention on the Right of People with Disabilities 2006 and millennium goals. Several programs have been established to ensure the provision of education service to all children in the country. Prominent programs including phase I and II Primary Education Development Plan (PEDP 1 and 2) (Tungaraza, 2015). The PEDP 1 and 2 made contributions to education of children with disabilities at primary education level.

However, early childhood education as well as education of young children with disabilities are a new field in Tanzania, appearing in recent development plans. The second National Strategy for Growth and Reduction of Poverty (NSGRP II 2010/11-2014/15) recognizes the importance of early childhood education; ensuring equitable access to quality early childhood development (ECD) programs. It further stipulates that, in order to achieve that educational goal, ECD facilities and the number of young children prepared for schools should be increased. The strategy aims at ensuring that children including children with disabilities effectively access education in child friendly environments.

Most development programs lay emphasis on education of children with disabilities in primary and secondary schools. Very few focused on pre-primary school children. Inclusive education settings had been prioritized as a necessary education setting for all children in the country including children with disabilities. However, there was limited information on programs targeting the inclusion of children with disabilities at pre-primary education level. Lack of policy and legislation regarding pre-primary education for children with disabilities may imply the lack of awareness and priority concerning education for children with disabilities.

**Table 5.2 Other documents reviewed**

S/N	Document reviewed	Status	Comment
1.	Selected Text books	In good condition	For teachers use only
2.	Registration log books	Available in two schools only	Some vital information missing
3.	Other relevant books	Available	For teacher's interest and use only
4	Children's exercise books	Available	Children access them only when needed

**Source:** Field Data, 2016

### **Discussion**

Theoretically, inclusive education has been defined and interpreted differently in different contexts. Despite the differences in interpretation, the key component of IE is to make education opportunities available for children in minority groups who have been denied the service in regular education settings. UNESCO (2005) defines inclusive education as a dynamic approach that responds to individual diversities. It recognizes the differences within children and recommends that educationists consider the differences as an opportunity and not a problem. Inclusive education calls for all children including children with disabilities to be enrolled and participate in learning activities together with their peers without disabilities in regular classrooms and to be taught by regular teachers (Ainscow, 2007; UNESCO, 2005, 2010b; Peters & Besley, 2014). Inclusive education as an education system that promotes equal access to education is rooted in human right values. In the human right lense, every child is unique and equal despite their differences. The human right perspective recognizes education as an essential human right and recommends the elimination of discrimination in education. All nations are required to recognize education as a human right and in the implementation, education policy and legislations should provide equal opportunities to all children.

In the Tanzanian context inclusive education has its root in the nature of the social values and norms, in that each individual has equal opportunity, dignity and respect despite the differences (Tungaraza, 1994, 2015). The country has ratified several international policies and legislations that call for the provision of education services to all children. The education

policy and legislation has incorporated the international agenda on the right to education. More importantly it is endorsed in the Constitution of Tanzania, United Republic (URT, 1977) as human rights. In order to ensure that the right to education is attainable for children with disabilities, the government is developing several policies and legislations to guide the nation towards achieving the EFA goal. Inclusive education has been accepted in Tanzania as an educational approach that can facilitate the mission of education for children with disabilities.

According to URT (2009b) in the Tanzanian context, key elements of inclusive education definition include:

- a system of education in which all individuals are enrolled,
- active participation and achievement in regular schools and other educational programs,
- no discrimination of individuals from different experiences and capacities,
- reduction of obstacles and,
- expansion of resources.

Tanzania recognized that children with disabilities have been denied the right to education despite the introduction of inclusive education in 1998. In dealing with the problem the government struggles to identify barriers to education. Inclusive education was viewed as a developing process that requires changes in policy, practices, cultures so as to make educational environment accessible to all children. More important is to work on barriers to presence, participation and learning that are observed to embrace children with disabilities. It was suggested that in addressing the barriers several continua of educational support should be provided.

Reviewed documents revealed that generally the government of Tanzania has exhorted efforts to provide education services for children with disabilities. Education was realized as a basic human right for every child regardless of the status of the child. The review of the policy shows that the emphasis is on primary education. Very few of the most available data and facts concerning children in primary education level target pre-primary children.



Possibly, the observed situation could be due to the nature and structure of the education system in which pre-primary education is part of basic education and pre-primary classes are attached in primary school complexes and the majority of pre-primary teachers are professionally trained primary teachers. Equally important, children with disabilities are often omitted in pre-primary education planning. However, a lot has to be done to ensure that the right is fully realized. It is not enough merely to make statements, e.g., that all children are eligible for access to education, without developing strategies and measurable mechanisms for delivery of the service.

The chapter presents the research findings and a discussion about policy context regarding education of CWD in Tanzanian pre-primary education. Findings revealed that as the government struggles to ensure provision of education for CWD, several international policies and legislations concerning CWD education have been signed and ratified. More important several policies and guidelines were developed to facilitate the move toward educating all children in the country regardless of their differences and needs. Generally, the country values education as a basic human right which every child should exercise.

## **CHAPTER SIX**

### **IDENTIFICATION, ASSESSMENT AND PLACEMENT OF CHILDREN WITH HEARING IMPAIRMENT IN TANZANIA**

#### **6.1 Introduction**

This chapter presents the finding on identification, assessment and placement of children with disabilities in Tanzania. The major research question focused on the methods and ways used to identify, assess and place children with disabilities/hearing impairment in pre-schools in Tanzania. The chapter is divided into sub headings such as; identification and assessment of disability techniques/instruments, placement options, early identification and early intervention, types and causes of hearing loss.

#### **6.2 Identification and assessment of disability**

Assessment and identification of children with impairment was considered to be imperative for the development and learning to take place. The identification of CWD is considered to be an important step for the provision of education service. The study revealed that the country lacks guidelines at the national level to guide the identification and assessment of CWD. The country lacks screening procedures to be followed in order to identify CWD. Most CWD are identified at home by their parents or/and at school by their teachers and or peers observation except for those with severe disabilities identified at birth or identified a few months after birth. Most of them were detected by their parents after showing abnormal behavior in responding to the stimuli in their environment when compared to their peers. The following table shows methods and procedures used in the schools involved in this study.

**Figure 6.1: Summary of identification methods**

School/ Method/ assessment procedures	School A	School B	School C	School D
Information from parents	✓	✓	✓	✓
Verbal/behavior assessment	✓	✓		✓
Use of play method	✓			
Use of audiometer to assess the degree of hearing loss	✓			✓
Referral to National hospital for further assessment and physiological advice (treatment)	✓			
Dully form to be filled by parents(provide background information of the child)				✓
Dully form to be filled by ENT specialist from recognized hospital/health center or screening center				✓
Teachers use their working experience by observing the child who may have hearing loss or other deficiency requiring special attention			✓	

**Source:** Field Data, 2016

## Discussion

### 6.2.1 Information from parents

Information from the parents of the child reported to be the first source of identifying the child with hearing impairment. All four schools involved in this study reportedly used information supplied by the parents. The unit of special needs children receives children who have already been identified by their parents as having hearing impairment. The unit served only children with significant hearing impairment easily detected by the parents at home during the child's early days of life. Two schools among four schools that educate young children with hearing impairment rely only on the information from the parents. School B and school C receive children already identified by their parents as having hearing impairment. After accepting the child no further assessment or procedure takes place. The child is thereafter enrolled to start school (intervention). Teachers may try to assess them again locally but there were no advanced assessment techniques or use of audiometric devices. There was no other procedure or screening or testing assessment.

However, relying on information from the parents only, without medical confirmation as in some cases, raises doubt concerning the status of the deaf child and the education service delivered. The study observed that the intervention prior to the teaching of academic skills took the form of language and communication skills training to all children registered in special education units for the Deaf as comprehensively discussed in chapter seven. All schools teach children sign language- the language of communication for the Deaf. But it is possible that other children were not totally deaf and that they had the opportunity to use spoken language when proper identification occurred. One teacher declared that:

“...other children seem to have some residual hearing,... maybe if specific assessment takes place... they can be provided with hearing aids to amplify the sound therefore they are be able to access direct verbal information from the teacher instead of relying on sign language only” (B3, field note).

School B observed to have many children in pre-primary class (11 children), specific screening and assessment assumed to be mandatory for valid and proper intervention (Hallahan et al., 2012).

### **6.2.2 Verbal/behavior assessment**

In school after accepting the HH/D child, further assessment occurred in the form of verbal/behavior assessment to identify the hearing loss of the child. The teacher spoke to the child in different positions to test the hearing ability of the child as well as the affected ear. Teachers from school A and B gave similar response concerning methods which can be used to detect hearing loss in the child. Their statements indicated that the procedure requires the teacher to stand at the back, left side and right side calling the name loudly or clapping hands to assess which ear is affected (A2 & B3, field note).

The procedure was reported in school A as a must, in school B optional; the teacher may further assess the child or not depend on the background information as to how and when the disability was acquired. School C did not use this method because there was no teacher specialized in deaf education.

### **6.2.3 Use of the play method**

The play method was reportedly used only in school A as one among methods of hearing assessment- the method used for young children who could not respond well to audiological testing (ndcs, 2016). The head of the unit said:

“For young children between one to five (1 to 5) they cannot follow instruction to measure dB therefore we use play methods for example clapping the hands, playing flute, bang/beating the iron and other instruments that can produce sound in order to test hearing status of the child” (A1, field note).

#### **6.2.4 Use of audiometer to assess the degree of hearing loss**

Audiometry assessment involves the use of an audiometer to assess the degree of hearing loss to the child identified to have hearing loss prior to enrollment and commencement of any kind of service. School A and school D reported the use of this method. In school A audiometry assessment could be done in school in the school audiology room and conducted by teachers who specialized in audiology. Also the child can be referred to hospital for assessment. The school works together with audiologists and ear, nose and throat specialists. School D provides a special form requesting audiology testing at other schools with audiology facilities or the hospital.

The findings of the study supported the literature that audiometry is commonly used to measure the hearing of children who can follow the instructions accurately. In most cases the pure tone audiometry is used in adults and older children only while play tone audiometry is used for young children. The findings show that pure tone audiometry was used to test the hearing capacity of the child (ndcs, 2016). In this method a range of test tones from low to high frequencies was transmitted through earphones placed in the ear. The test relies on the basic frequencies important for hearing and understanding speech and other sounds from the environment. Each ear was tested independently. Children were asked to raise a hand when they heard the sound. The louder the sound the greater degree of hearing loss detected.

#### **6.2.5 The use of background information of the child**

The parents are provided with a form/sheet to be filled in and returned to the unit/school before the child is accepted and enrolled in the school. The form needs the parents to fill the space provided by answering questions concerning the child`s history and the hearing loss status. Teachers use the information in planning learning activities and care. The finding was in line with Ciccantelli & Vakil (2015) who stated that information about the background of the child is needed to enable teachers to plan and start to help the child to become successful learners.

### **6.2.6 Information from hospital**

The study finds that parents were provided with another form in which she/he was required to attend hospital or other center or institution with specialists (Ear Nose and Throat-ENT specialists) to assess the degree of hearing loss. The assessment was done to detect which ear was affected or whether both ears were affected. Following assessment it is customary for the audiologist/ETN specialist to provide parents with advice for further assessment and treatment if the child is observed to have other complications for example symptoms of infection of the ear. More significantly, the specialist provides advice on educational considerations such as the education placement option suited to the state of the disability status. All children in the study were found to have total deaf and/or hard of hearing disability whereby schools for the Deaf had been recommended. The parents were requested to return after assessment.

- Examination is done at recognized hospitals or other schools with audiologists.
- Medical doctors and health workers lack information about inclusive education. Advice to parents relies on the deficiency or disability of the child. Lack of hearing does not mean that the child has to learn sign language, taught by teachers of the Deaf, in separate settings, the special unit or special schools for the Deaf.

### **6.2.7 Teachers' working experience**

Regular teachers' experience in teaching reported to be used as one of the reliable sources for identification of children with disabilities in school C. In this school there were two children with hearing impairment aged 4 and 5 years. The study finds that there was no teacher specialized in education of children with hearing impairment in the school; therefore they have to rely on information from the parent and their own teachers' experiences. Information from the parents embraced only those children who started school while they were already experiencing the disability. For cases that may happen during school, the teachers' experiences mentioned were thus commented on by the head teacher:

“...teachers use their psychology of teaching which they learnt during teacher training to identify children with disabilities. We do not have any special testing or examination or assessment in place. Teachers use their working experience by observing the child who may have hearing loss or other deficiencies which require special attention” (C1, field note).

The reports from parents of these children are paradoxical and really need to be verified through thorough and specific advances in hearing loss assessment. The findings suggest that, although detection of disability is important for education planning and other services, there

were no common methods and procedures for hearing assessment in the country. Each school did what they were capable of and assumed it was appropriate. In most cases information from parents is a key source of identification. Only two (2) schools among four (4) involve other assessments, for instance in school A the head of the unit stated:

“The first source of information we obtain is from the parents of children with hard of hearing or deaf impairment. Obviously large percentages of parents know the status of their children`s hearing ability. They bring their children to the unit after recognizing that they have hearing impairment, after asking the school that can accommodate children with hearing impairment. But we do not rely only on the parents` information, we go further. After receiving children recognized by their parents as having hearing impairment we conduct scientific assessment as follows; ...there are three stages of assessment procedure in the school, one we assess the child by using verbal and observation assessment..., second we use the audiometer machine for young children using play method and third we refer the child to the national hospital for further investigation...” (A2, field note).

### **6.3 Placement options**

Placement continuum option for children with HH/D follows the option that considers the least restrictive placement. Children receive education in the environment that suits the learning and living needs of the child. The IDEA requires individuals with disabilities to be provided with education services in the least restrictive environment (IDEA, 2009). The emphasis is on inclusion where children with disabilities receive education together with children without disabilities. The IDEA suggested that a special education setting should be opted for only if the nature and severity of the disability hinders education in regular settings despite the use of supplementary aids and services. Accordingly HH/D children are found in various education settings including residential or separate day schools, separate classrooms in regular schools and in regular classrooms with hearing peers (Kauffman, Hallahan & Pullen, 2017; Stinson & Kluwin, 2003).

The IDEA states that pre-school children aged 3 to 5 should receive education in the least restrictive environment where children can participate effectively in activities. The objective of placement is to meet the unique needs of the child with disabilities. In Tanzania also the placement of children with disabilities considers the needs of the child. The study found that the continuum of service ranges from instruction in regular classrooms, special classes, special schools to home instruction, hospital and institution instructions. In Tanzania depending on the severity of the disability and service available, HH/D children receive

education in the following settings from most restrictive to least restrictive environment (URT, 2009b):

- residential special school on its own campus,
- special day school,
- residential/day special school on the same campus with regular schools,
- special unit/classes in regular schools,
- inclusive schools-all children in regular classrooms

Further, placement for children in pre-primary education was in special unit/classes in regular schools. Residential/day special school in the regular school complex is currently observed to be the most preferred option in the country. It provides special needs education for the whole school day programs. Children with disabilities in this setting have an opportunity to integrate and participate in nonacademic activities with their peers without disabilities. For effective participation CWD needs support depending on the type of disabilities. Young children with HH/D mostly need support due to communication barriers as observed in the recent study.

## **Discussion**

In Tanzania pre-primary education does not recognise special education for the Deaf -as in the rest of Africa-and does not offer special education at pre-primary education level (Santana-Hernandez, 2014). Special schools do not register younger children in Tanzania. A possible explanation for denying pre-primary education was based on the following factors:

### **(i) Age limit**

Age limit is observed to cause barriers to pre-primary education for HH/D children in the country. The pre-primary education policy fixes the age limit for a child to be registered in pre-primary schools. By the time of data collection both EPT of 1995 and 2014 were used to guide the provision of education. The former education policy used was that of 1995 (URT, 1995) which stated the age for pre-primary children to be 5 and 6 years. The ETP of 1995 was amended and replaced by ETP 2014 (URT, 2014a) which officially started to be utilized from 2016. The current ETP reduced the entrance age from 5 to 4 years, thus today pre-primary age is 4 and 5 years. Most children with disabilities are reported to start school late when compared to their peers. HH/D children as observed in the study were older than their peers. Their age ranged from 4-10 years old (see table 7.1).



(ii) Few schools for the Deaf

Available data shows that there are few schools for the Deaf when compared to the number of deaf children. The few schools register few children; each classroom should not exceed 10 children. Parents have to seize the opportunity and wait for the chance. Moreover, very few schools register pre-primary children with HH/D.

(iii) Communication barriers

Communication has been reported to pose obstacles for the entire life of HH/D children. Regular teachers do not accept HH/D children in their pre-primary classes due to communication problems. Parents also hesitated to send their children to school due to communication barriers. One head of school said:

“regular teachers cannot accept HH/D children in their classes because they do not know what to do with the HH/D child. They do not know sign language, the children also do not know sign language so communication is a big problem, and this is why they are in the special class with a special teacher” (B2, filed note).

(iv) Lack of pre-primary teachers for the Deaf

Teachers are important resources in the education process; no teachers no education. The study observed that the country suffers from a shortage of specialized pre-primary teachers for deaf education. Lack of professional teachers hinder early education of HH/D; the finding concurs with the study by (Mohay, 2006) who reported that lack of staff with skills to handle diversity needs in early childhood centers impede inclusion. Special education teaching for the Deaf trains teachers for primary education level and above; for those schools that register pre-primary children, volunteer primary teachers opted to act as their teachers.

(v) Lack of parents, teachers and the community awareness of the importance of early education for HH/D children.

Most parents do not believe that their deaf children could go to school and learn like hearing children. Staying with their children at home, they come to realise that their children could be missing out in learning. One parent stated:

“...my child is deaf as you see, I did not believe that she can go to school and learn like other children. She is deaf, her intelligence also is low, she cannot do anything... Fortunately one of my neighbors is a teacher, she told me that my child can go to school and learn...” (C5, field note).

Teachers and other members of the society are also not aware of the early education for HH/D children. One of the teachers said:

“I think deaf children should start school at age 10 and not 4, 5 or 6 years. When they are still young their understanding is too limited, you know deaf children do not understand things earlier due to their deafness, they should grow and at least when they are mature they can start school”(B3, field note).

Therefore all factors mentioned contribute to exclusion of HH/D children in early education. The finding shows that their education right was denied although it was stipulated in the basic policy and legislations. HH/D children have the same right to early education as their hearing peers.

Literature suggests that despite the current emphasis on inclusive education in early education and care the confusion about the meaning of inclusion remains (Ainscow, 2007; Petriwskyj, 2010). Teachers and other stakeholders believe that inclusion is to place children with special needs in the regular classroom. In addition literature suggests that it is wrong to believe that all children with disabilities can be in regular classrooms and taught effectively by regular teachers (Kauffman & Badar, 2014a, 2014b; Kauffman, Anastasiou & Maag, 2016). More important is to consider the instruction and not the placement (Kauffman et al., 2016). Emphasis should be on the quality of service the child with disability receives regardless of the education setting in order to maximize the learning and development of the child. In order to achieve the education goal for CWD more support services are required, which will then result in their inclusion in education and social domains (Anastasiou & Kauffman, 2012, 2013). The study found that in Tanzania the confusion between place and instruction still exists, thus more is to be done to maximize HH/D children’s learning and capabilities for them to enjoy their human rights as discussed in detail in chapter seven.

#### **6.4 Early identification and early intervention**

Identification of children who may need intervention is reported as an important factor for early intervention in the early years (Batu, 2010; Ciccantelli & Vakil, 2015; Ho, 2010; 2016; Underwood, Valeo & Wood, 2012). The essence of early intervention relies on the possibility for remediating a child with disability. Specialists in the fields of education, medicine and mental health recommend that early identification and assessment of children with academic and behavioral problems should guide and assist in interventions in order to diminish the severity of the problem. Literature suggests that children with deafness do not have learning disabilities; they can learn as children without hearing impairment. However, as most

teaching and learning involve the main senses including hearing, deafness presents deaf children with specific challenges in accessing teaching and learning (ndcs, 2016).

Further literature reveals that identification in early years followed by early intervention programs lead to better language development (Gaffney, Eichwald, Gaffney & Alam, 2014; Sininger, Doyle & Moore, 1999; Sirimanna & Olusanya, 2014). The first three to five years of life are considered to be the most important for language development (Sininger et al., 1999; Sirimanna & Olusanya, 2014). Children identified later as having hearing loss, have lost the sensitive period of language learning in their lives. The study observed that, although most children were identified by their parents, they face language challenges. Identification is regarded as an important step in improving the life of children with hearing loss only if followed up by proper intervention. The country lacks systematic intervention programs in the early years for children identified as HH/D.

Early identification of children with special needs that may hinder their development and learning should lead to interventions that support the holistic development of the child and learning. Although HH/D children involved in the recent study were identified earlier as having hearing difficulties there was no reported intervention program. Intervention could take place at home, day care center or at pre-primary schools. The study suggests that there is a need for ministries responsible for child affairs to develop screening programs in the country and collaborate with parents in providing intervention services.

Involvement of parents and the family in early intervention is reported to be vital for child development. Parents have close and frequent interactions with the child since birth which plays a major role for the child development for instance language acquisition. Parents could be actors in providing early intervention services for their children before they start pre-school, and they can continue to support intervention in collaboration with teachers when children start school. Equally important is that parents of children with disabilities need first and foremost support to cope with the challenges they face in raising children with disabilities. They may need social, emotional, financial and information support.

Early identification and early intervention is reported to be very important for young children with disabilities. Sirimanna & Olusanya (2014) suggest that for children with HH/D early identification and early intervention result in:

- possibility for the child to undergo habilitation in early months/years,
- better speech and language achievement,
- better child education achievement,
- greater chance for the early detection of the causes of hearing loss and early management of the causes,
- the possibility of the child's auditory system to develop well,
- early identification of associated medical causes and early management of the causes,
- possible reduction in or management of the family stress and burden  
long term benefits in the child's life.

Thus, the situation observed in the recent study shows that Tanzania lacks systematic early identification and early intervention for HH/D necessitating action.

### **6.5 Types and causes of hearing loss**

Information about the causes and types of disabilities as well as the treatment of disability remains a big challenge in Tanzania. The nation lacks proper and statistical data concerning the causes, types and treatment of impairment. The recent study investigated the type, causes and treatment of hearing impairment among pre-primary children. There are three basic types of hearing loss based on which part of the ear is affected such as conductive hearing loss, sensorineural hearing loss and combined hearing loss (Stach, 2010; WHO, 2016b). Conductive hearing loss involves the destruction of sound waves through the external ear canal to the ear drum and ossicles of the middle ear. This type of hearing loss can be corrected by means of medication or surgery. The sensorineural hearing loss occurs when the inner ear or the nerve that transmits the sound wave to the brain is damaged. Sensorineural hearing loss cannot be corrected by using medication or surgery. The study found that there was a limitation of information concerning the type of hearing loss for children involved in the study. The severity of the hearing loss was also not known. Lack of screening programs leads to all children with some hearing loss to be placed in one category and in a single education setting.

Moreover, the findings of this study show that the majority of children acquired hearing loss by the time of birth while others acquired the disability within the first three years of life. They were born normal but lost their hearing in the first few months or later during the infancy stage. Literature suggests that hearing loss may be acquired at any time during the life

span, from conception to death (Stach, 2010). Several causes of hearing loss have been mentioned in the study. Diseases and infections during infancy have been mentioned as a leading source of hearing loss among most children involved in the study. High fever during infancy causes deafness in many children in Tanzania as is the case in other developing countries (Duthey, 2013; WHO 2016a, 2016b) due to the presence of barriers to access health services. Maternal illness and birth complication mentioned previously affect a small number of children. Worldwide maternal conditions such as maternal infections, low birth weight, prematurity, birth injuries, toxin consumption by pregnant women, lack of oxygen (anoxia) and maternal diabetes are major causes of deafness in children. The table below presents a summary showing the causes of hard of hearing or/and deafness in children.

**Figure 6.2: Causes of HH/D**

S/N	CAUSES OF HARD OF HEARING OR DEAFNESS	FREQ.	PERC.
1.	Congenital hearing loss	9	39
2.	Medications	1	4.4
3.	Diseases and infections	4	17.4
4.	Unknown	8	34.8
5	Maternal conditions	1	4.4
	<b>Total</b>	<b>23</b>	<b>100</b>

**Source:** Field Data, 2016

### **Congenital hearing loss**

The table shows that thirty nine percent (39%) of children involved in this study acquired the deafness during birth. It was the leading cause of HH/D among the children. Only one child (4.4 %) born with HH/D was reported to be associated with maternal infections. The mother suffered from chicken pox and that was assumed to cause HH/D to the child. Maternal infections during pregnancy lead to HH/D (WHO, 2006, 2015).

### **Medications**

Medications was another cause of HH/D to children in the study. Information available concerning the causes of HH/D show that one child became HH/D as a result of medication toxins. The damage was caused by toxins administered to the child suffering from malaria who was injected with quinine, the anti-malaria drug that damaged the ear of the child.

Quinine is used to treat malaria as it kills the malaria parasite. Literature shows that quinine may cause HH/D, the damage may be reversed or permanent depending on the dosage and duration of the dosage (ASHA, 2015; Duthey, 2013). For the child in question, hearing examination concluded that the damage was permanent.

### **Diseases and infections**

Seventeen percent (17%) of children with hearing impairments is associated with infants' diseases and infections such as malaria and high fever. Malaria affects a lot of children in Tanzania; it causes death and for some who survive hearing loss. One child in the study acquired hearing impairment after suffering from malaria when he was three years old. High fever is mentioned as a cause of hearing impairment in one of the children at the age of 18 months. One of the challenges to Tanzania concerning the care and health of children is reported to be poor health facilities. As it is in other developing countries (Ciccantelli & Vakil, 2015; Duthey, 2013) health facilities for infants are lacking, thus causing damage at this stage of life.

Moreover, there was limited information concerning the degree of hearing loss to children involved in the study. Available data shows that eleven (11) children were deaf while only two (2) were recognized as being hard of hearing. The status of the rest was not documented and is therefore not known. Additionally, the findings for determining whether one ear or both ears were affected show that two (2) children suffered hearing loss in one ear (unilateral) while six (6) were confirmed to have bilateral hearing loss and the rest not known. Lack of proper documentation on the status of hearing loss indicates the limitation in assessment that has a direct impact on the service delivered to children.

Therefore, the finding suggests that; (1) screening at birth before the child leaves the hospital is important in order to detect congenital deafness. (2) Parents should be educated about the sources of hearing loss so they can prevent their children from ear damage but also they should learn to observe the child and understand the status of hearing of their children. Parents should report on perceived changes or abnormalities in their children as soon as possible. (3) There should be screening center facilities and professionals for the parents to go to, either nearby hospital units or health centers. (4) Screening should also be done for those identified as having hearing loss at the time the child starts school

## Discussion

Factors hindering early identification and assessment of hearing loss among children in Tanzania included the following:

- lack of national screening programs  
lack of formal and universal screening services as confirmed by the finding. The screening of babies in the country is scarce due to several barriers;
- difficulty in accessing medical facilities (Ciccantelli & Vakil, 2015; Duthey, 2013).
- lack of screening facilities.  
The study observed that the country lacks screening facilities due to limited financial resources to support neonatal and pediatric services for hearing loss.
- few professional personnel  
The country lacks hearing loss detection personnel. The available health workers lack training in hearing health.
- lack of knowledge concerning the benefit of screening programs and cost of screening programs
- poor or lack of information for parents and the community on the availability of the service.

The majority of parents of children with special needs lack proper information about intervention programs. They hear from other people about schools or centers where they can get support for their children. Once the child is diagnosed as having a significant disability at hospital they go back home and bide time until school age so they can send their children to school. The study found that it was not easy for parents interviewed in the study to find a school for their children. Most schools were reluctant to accept children with disabilities that require special education services.

The country lacks a proper screening and intervention services system. Information on where to get service at what time and who is eligible for the services was reported to be a major challenge in the context of early special education and/early intervention in the country. The challenge could be minimized if the information was available to pediatricians or hospital nurses monitoring regular health progress checks for the child as in other countries for example Belgium, Turkey, Austria (Detraux & Thirion, 2010; Er-Sabuncoglu, 2010; Pretis, 2009). In Belgium another source of information comes from the parent association (Ciccantelli & Vakil, 2015; Detraux & Thirion, 2010) whereby parents of children with

disabilities have their own organization. The team from the association visits the mother in hospital during the postnatal period before she goes home. They discuss feelings concerning how it feels to have a disabled child, early intervention services/availability and the parent association.

Parents report that the information/announcement concerning disability in their children is greeted as bad news producing confusion and stress. Some of them are in a state of denial and it takes much time for them to accept that they have disabled children. After accepting the real situation they begin to struggle as to where they should send the children for education. Sometimes they do not believe that their children could learn like other non-disabled children. Therefore, existence and availability of proper information soon after birth /acquisition disability is fundamentally important for the child's early intervention and the parent's psychological status. Time is of the essence, the earlier the information is provided, the better the chance for parents to digest the information and decide to work on the advice.

The ECI (Early Childhood Intervention) services should serve as a source of proper information about the disability and opportunities available for early intervention services. The study reported that parents invested a lot of time and resources seeking medication and treatment for their children. They did not know the state of the disability; had the information been available they could have accepted and looked for other remedial and rehabilitation services. For example for HH/D children, the parents could have made an effort to learn sign language, speech therapy and communication strategies for learning. Parents struggle to obtain information about interaction with their children on a day to day basis. They need to know what they can do for their children. Parents can share their questions and experience with professionals and other parents in ECI service centers. Parents also need emotional support when they encounter stress situations; ECI centers could serve as a source of emotional support. For instance the study reported incidents of outcast and neglect from society; affected parents need skills to handle the situation (Akdogan, 2016; Findler, 2016).

Universal screening is recommended to be most effective although it is expensive. However, the cost of screening cannot be equated to the cost of medical, educational and social neglect the child and parents are subjected to in the case of late detection of hearing loss. According to Ciccantelli & Vakil (2015) early screening, assessment and intervention yield a greater



potential to enhance a child's long term achievement, independence and social/ emotional behavior challenges.

Assessment provides potential information about the child. Information about the strength and weakness of the child promotes the provision of special education that leads to enhanced child development. The finding suggests the need for early detection and intervention similar to the needs in US (Ciccantelli & Vakil, 2015) to enhance the learning opportunities for young children with special needs. The relevance of universal screening is a result from the research done in developing countries. For example previously in US only children with indicators of hearing loss such as:

- frequent or recurrent ear infections
  - language development delay
  - a family history of hearing impairment
  - signs of syndromes associated with hearing loss such as Down syndrome, the Alport syndrome, and Crouzon syndrome
  - results of infectious diseases that cause hearing loss such as meningitis, measles, and cytomegalovirus
  - diagnosis of a learning disability or autism
  - low birth weight
  - assisted ventilation
  - severe jaundice after birth
  - maternal illness during pregnancy(German measles/rubella)
  - hydrocephalus.
- were screened.

Only half of the children diagnosed as having hearing loss have known indicators that cause hearing loss. That means half of the children identified with hearing loss do not have any indicators of hearing loss; the causes are unknown. As a result, in US all children are recommended to be screened at hospital soon after birth before being discharged. However, in developing countries where most births take place at home, and those who experience a healthy delivery are discharged from hospital soon after, screening is impossible. Literature suggests that, in such circumstances, screening may take place in community health centers which children attend for immunization. For example in South Africa immunization clinics

seemed suitable places for screening because they are well attended, and the first immunization visit takes place six weeks after birth (Kock, 2014), whereby the detection of hearing loss can be made as early as possible.

Moreover, a child with hearing loss which is not identified may not be able to develop normal speech and language. Late identification of hearing loss leads to permanent speech, language and learning impairment. Early identification leads to early intervention that could be treated or/and rehabilitated. More important is that hearing loss is easily detected when it is hard of hearing or total deafness. Moderate and mild hearing loss cannot easily be detected as children may develop language normally. However, if not identified and managed, the child will suffer the consequences later on in his/her development. Often the degree of hearing loss determines the consequences for the child's life. Nevertheless, early identification and early intervention can minimize the consequences.

In a nutshell, hearing loss is measured in two ways; the loudness of sound measured in decibels that the child can hear and the pitch or frequencies measured in hertz the child can/cannot hear (ndcs, 2016). Deafness in children differs depending on which frequencies are affected and the loudness of a sound a child hears. Research shows that few children are deaf while most other children have some residual hearing that they can hear at a certain pitch and volume (ndcs, 2016). The finding of the study shows that most children are categorized as HH/D children in the absence of audiometric testing. Some of the children may have residual hearing hence they can hear by means of available modification devices for example hearing aids or surgery.

Equally important is that the special education unit service is only for children with significant hearing loss. It should be understood that children with mild hearing loss may not easily be identified as they can develop and acquire language as normally as their peers without hearing loss. However, the hearing loss may cause problems as they grow and advance up the educational scale. In education, mild hearing loss can mean significant loss (ndcs, 2016). Children with mild hearing loss can hear everything in a quiet environment but they cannot hear if there is background noise or if the speaker is whispering. Therefore, they should be identified, and recognized as children who require special intervention in order to make sure that they develop and learn normally. It should be noted that hearing loss at

whatever level may pose a significant challenge to children in accessing environment, teaching and learning; thus intervention is imperative.

## **CHAPTER SEVEN**

### **TEACHING AND LEARNING ACTIVITY IN PRE-PRIMARY LEARNING ENVIRONMENTS**

#### **7.1 Introduction**

This chapter presents the finding on the characteristics of activities and support during the teaching and learning process in pre-primary learning environments providing education for hard of hearing and deaf (HH/D) children in Tanzania. Teaching and learning in pre-schools may take place in both classroom and outside the classroom. Children learn not only in the classroom but also through play during outdoor time. They learn academic skills as well as social skills. The objective of pre-primary education is to orient children in a social context while preparing them for primary education by providing basic learning skills like reading, writing and arithmetic (URT, 2014a). This chapter focuses on interactions in classroom and outside classroom during break time.

The major research question focused on the characteristics of activities and support during the teaching and learning process in a pre-primary learning environment. Presentation and discussion of findings in this chapter is categorized in two major parts. Part one is concerned with classroom interactions during teaching and learning. Part two is concerned with play outside the classroom during break time in which play activities and teacher support during play are presented and discussed.

## **Part One: Classroom interactions**

Part one of the chapter concerns the information yielded through teacher interviewing and information obtained through observations. The intention was to identify how teachers engage children in learning activities. This part is divided into sub headings such as; classroom and school environment nature, teacher characteristics, children/class nature/characteristics, learning materials and facilities, communication and language development, teaching and learning interactions, child participation, support provision.

### **7.2 Classroom and school environment situation**

This sub section presents the study finding on classroom and school environment nature. Pre-primary special needs education classes are attached to primary school complexes (environment). It is enforced in compliance with the policy that every primary school should have pre-primary classes (URT, 1995, 2014a). In the process of implementing inclusive education it was agreed that any regular school can establish special education units to accommodate children with disability (CWD) or the special disability pending specialist teacher availability in that school. Almost all primary schools in Tanzania had pre-primary classes. These classes accommodate all children including children with disability but only mild disability like poor vision, albinism, mild hearing loss and physical disabilities.

### **Discussion**

Children with severe to profound disabilities including hard of hearing and deaf (HH/D), children with severe visual impairment, children with intellectual impairment, and children with severe multiple disabilities were enrolled in special classes under special education units. However, very few schools had special education units. Among those schools with special education units only few primary schools have classrooms for pre-primary special education needs children. The study finds that within the regions included in the recent study there were only four (4) schools with special education units considering the needs of pre-primary HH/D children. The environment was prepared for regular primary school children, with no provision for either for pre-school children or those with special needs.

#### **7.2.1 School environment**

School surroundings were not conducive for free movement and play. Open space available within the school premises was too small and full of obstacles like stones and trees. There were no special playgrounds with play facilities. Among the four visited schools three were

observed to lack fences hence children can leave the school premises freely. Children were sharing toilets with older children; there were no special toilets for children with special needs (disabilities). The observation was supported by the respondents' responses about their observation and comments on the environment. All respondents claimed that the environment was not conducive for children with disabilities including HH/D. One of the respondents claimed that:

“...in reality our environment is not user friendly. You know this school was not designed for children with disabilities, as you can see ...in my view a lot of modification is required to make it user friendly for children with disabilities” (A3, field note).

### **7.2.2 Classroom structure, size and space**

The study observed poor infrastructure, classrooms, desks, play environment, toilets, and fences unsuitable for young children with special needs education. Classrooms were small compared to the number of children accommodated. They lack decorations and structure that can motivate young children's learning. In most schools CWD were accommodated in old and run down classrooms. For example in school A deaf children were given classrooms along the valley which became flooded after rain. As a result they had to shift to the dining hall where they share all classes.

In school B the classroom for deaf children was very rough, full of pits as the floor was worn down. All visited schools were observed to use large desks, tables and chairs which were not designed for children; hence children were not comfortable. The finding suggests that there were no special classes designed for HH/D pre-primary children.

### **7.3 Teacher characteristics**

Teacher characteristics presented in this sub section include gender, age, academic qualification, teaching experience, professional qualification, training in special education needs and their motivation to teach pre-primary children with HH/D.

#### **7.3.1 Gender and age of teachers**

Among six teachers involved in the study five were female while only one was male. The finding shows that female teachers represent 83% while male teachers account for 17% only. Teachers teaching HH/D age ranged from 35- 58 years. The finding reveals that all special education teachers in this study were mature adults. Explanation of the age may be due to the

criteria used to acquire special education teachers; a teacher must be a professional teacher with working experience of not less than three years. Also public workers service regulations require a civil servant to have at least three years' working experience before being requested to attend other training.

### **7.3.2 Academic and professional qualification**

Among six (6) teachers interviewed in this study all had attended secondary school. They had ordinary secondary certificates as a requirement for primary and pre-primary teachers in Tanzania according to Education and Training Policy (EPT, 1995). Regarding professional qualifications, all six (6) teachers were teachers by profession. One teacher among the six was a diploma holder while the other four had certificates in teacher education grade 3A. In Tanzania the required certificate level for a primary school teacher qualification is 3A. In addition all five teachers had a certificate in special education. The training for a certificate in special education takes one (1) year including theoretical and practical parts. Five among them specialized in deaf education while one specialized in intellectual impairment education. All six (100%) teachers lack training in pre-primary education teaching. No one had any training in the teaching of pre-primary children generally or specifically for pre-primary children with HH/D.

The finding suggests that four teachers had training in the teaching of HH/D in primary schools. However they lacked knowledge and skills in how to teach pre-primary classes. All teachers claimed to lack the skills and experience for handling HH/D in pre-primary classes. As a result they encountered much difficulty during the teaching and learning process. They simply used the experience of primary teaching and some innovation.

All six teachers had a certificate in special education needs; 5 of them specialized in HH/D education and 1 specialized in intellectual impairment education. The training for the certificate in special education takes one (1) year including theoretical and practical aspects.

Three teachers had attended in service training for 10 days. The training was geared towards equipping teachers with new updated skills on how to teach children with HH/D. The other three teachers had had no opportunity to attend any in service training since the special education needs training. Lack of opportunity to attend in service training was observed to be a challenge for teachers. All including those attending an in service training claimed that they

needed several and regular in service trainings due to changes which were not addressed in their field.

### **7.3.3 Teaching experience**

Teaching experience was explored in three dimensions; experience as a teacher in general, experience in teaching pre-primary children and experience in teaching pre-primary children with hearing impairment. All six (6) teachers interviewed had more than three years teaching experience. Experience in teaching children with HH/D varied from eight months to six years. Experience in teaching pre-primary children with HH/D varied between 8 months to 2 years. The findings suggest that all teachers teaching pre-primary children with special needs education in special classes had experience in teaching primary children. According to the training guidelines in special education training, the teacher must be a teacher by profession with teaching experience of not less than three years before opting to pursue a certificate in special education depending on the interest of the teacher.

### **Discussion**

The result indicates that pre-primary special education was a new experience in units attached to regular primary schools. The interview results suggest that in the past provision of education for HH/D was available from primary education onwards. Although the pre-primary education in Tanzania was formalized in 2005, HH/D children had no access to the service. Among the reasons raised by the interviewee were; few teachers, age of enrolment, facilities and materials availability for early childhood education (ECE).

The consequences of the teachers experience teaching primary children affect their teaching orientation that is not suited to early childhood education (ECE) teaching, which is supposed to focus on caring and nurturing rather than merely imparting knowledge and skills. The observation in the field portrayed that all teachers concentrated on imparting the three learning skills (3Rs) such as reading, writing and arithmetic to the children. Children were observed to be more passive than active participants in the process of learning in the classrooms.

### **7.3.4 Motivation to teach HH/D pre-primary**

The theme arose from the teachers' narration of their teaching HH/D children experience and situation. All of them (6) were facing difficult situations including communication barriers



and poor working conditions to the extent that some regretted their decision to opt for special education needs (SEN). Apart from the difficult situation they were still continuing with their job. Some SEN teachers quit the SEN unit to teach regular classes, as confirmed by one teacher:

“Some of our college colleagues are not teaching children with SEN, they teach in regular schools where there is no SEN unit...” (A3, field note).

The study findings show that there was no response from the appropriate authority concerning retention of specialized teachers. No mechanism was observed to encourage and motivate teachers holding certificates in SEN to teach SEN children. Generally, teaching CWD was considered as a calling, that not every teacher can teach CWD. The concern was raised by education officials while responding to questions about training and shortage of teachers to teach and handle SEN children. One such response was:

“This is more than a volunteer position, we cannot force a person to teach SEN children, if she/he does not want to do so, and the work requires willingness to do it” (B1, field note).

The narration further emphasized that there was no encouragement to make SEN an attractive option for teachers; therefore the question remains unanswered as to why training for SEN did not encourage practice:

“... but, if the teacher has SEN training, why did she/he go for the training if she/he did not intend to assist children with SEN?” (B1, field note).

These statements were few but strongly significant concerning teachers' option to work with CWD/SEN. The study found that all teachers were willing to teach HH/D children as part of serving the needs. They had compassion with deaf people, they felt that they needed help thus they were ready to offer the service. Teaching CWD in general was considered as a provision of service. It was equated to a sacrifice a person provided. It was a charitable work in which someone volunteered to do something without expecting reward, profit or pay back. Teachers teaching HH/D believed that they were assisting this group of deaf people who needed to function like others. One of the teachers said:

“...I just feel I want to help the deaf so they can get education like normal children, I do not have a deaf person in my family but I volunteered to take a course in SEN specialized on HH/D education...all my family members wonder about my decision...I do not get anything by doing the job, even the Deaf themselves do not appreciate my volunteering, the working condition is not conducive, no extra income even for extra work after class (tuition) but I am satisfied to offer the service, God will reward me” (A4, field note).

## **Discussion**

It was revealed that teaching CWD was connected directly to the motivation of the respective teacher. All statements and reports reflect the intrinsic motivation as the source of teachers' option to teach HH/D children in this case. They were intrinsically motivated to opt for training in SEN (one year teacher certificate on SEN). The analysis of the education policy revealed that there were no special criteria for teachers wishing to enroll for special education needs teaching. The door is open to anyone who wishes to enroll for the training.

They were ready to accept transfer from regular school to special education school or to regular school with special education units. Moreover, they were willing to work in this field. Apart from all challenges associated with this field these teachers managed to provide a service for HH/D. Intrinsic motivation was considered to be a strong factor affecting human action. However, in some cases external motivation is considered to be important at the outset in order to introduce a new situation in which self-motivation could develop later.

The study noted that subjective feelings threatened the advancement of special education needs in the country. Allowing charitable feelings to guide teachers' option to engage in SEN training could be a threat to the education of HH/D children in future. Several questions arose from the findings that remained unanswered. For example what will happen if no one will volunteer to become a teacher of special education needs? What if there is no teacher wishing to opt for SEN training in future? What if current teachers withdraw their decision to teach HH/D like others who had left the field? If education officials think that teaching HH/D is a calling/voluntary job would they struggle to improve the situation in the delivery of the service observed? More specifically, will the challenges facing SEN receive equal attention if teaching children with SEN is associated with the intrinsic motivation of the teachers?

### **7.4 Children and class characteristics**

The study observed that the pre-primary classes included children of different ages. Children were between 4 to 10 years of age. Apart from their difference in age, they differed in degree of special education needs due to the nature of their impairment. Some were born deaf while others acquired deafness later in childhood. The timing of impairment influences their communication. The influence in communication had a big impact in interactions with teachers and peers generally. Further, some children were observed to have multiple impairment, for example one child had hard of hearing, mild visual and mild intellectual

impairment. There was no class suitable for children with multiple disabilities so they were accommodated in one of the classes in where the ratio of disabled children was high.

#### 7.4.1 Classroom and pre-primary class nature

The study observed that the pre-primary classes were accommodated in single classroom settings with older children. In three classes pre-primary children (pre-primary classes) shared the same room with older children who were in grade 1, 2, 3, and 4. In school A and B pre-primary children shared a single classroom setting with grade one children. Pre-primary and grade one primary children were regarded as beginners requiring early intervention. The intervention included sign language and learning skills. In School A the total number of children in a single classroom was 11 while in school B there were 24 children. In school C HH/D (4, 5 years) children were surprisingly together in one classroom with sixteen children/youths with intellectual impairment (II) (up to 30 years of age). Also the class comprises deaf children from grade one (1), two (2) and three (1) in a single setting totaling twenty two (22) learners. In school D five classes were accommodated in a single room. Pre-primary, grade one, grade two, grade three and grade four primary children were taught together in a single classroom. The total number of children in the classroom was; pre-school 4, grade one 9, grade two 8, grade three 11 and grade four 4 up to 36 children. The following is a table summarizing the age and sex of the children involved in the study;

**Table 7.1 Age distribution and sex of children in pre-primary classes**

S/N	Age Distribution	Frequency	Percentage (%)
1	3-4	01	4.5
2	5-6	07	31.8
3	7-8	06	27.3
4	9-10	08	36.4
	<b>Total</b>	<b>22</b>	<b>100</b>
S/N	Sex	Frequency	Percentage (%)
1	Male	11	50
2	Female	11	50
	<b>Total</b>	<b>22</b>	<b>100</b>

**Source:** Field Data, 2016

## **Discussion**

The class composition was observed to raise a big challenge for the provision of education and care services to HH/D children. The variation of age from age four (4) to age ten (10) was unusual to say the least. Even in the regular education system, according to the recent amended Education Policy (URT, 2014a) these ages cut across five classes; 4 to 5 years pre-primary class, 6 years primary class standard one, 7 years primary class standard two, 8 years primary class standard three, 9 years primary class standard four and 10 years primary class standard five. According to previous education policy under which the observed education processes operated (URT, 1995) these ages cut across five classes; a 4 year-old child within the 3 to 4 year-olds who were supposed to be in day care unit/centers, 5 -6 years pre-primary class, 7 years primary class standard one, 8 years primary class standard two, 9 years primary class standard three, and 10 years primary class standard four.

The wide range of ages was associated with three factors. First was registration irregularity. There was no specific time framework that stipulates when HH/D children should start pre-primary education. It was observed that any time during the year children were coming for registration in the school. Head teachers reported that this was a problem affecting the teaching-learning process but they did not have the option to deny/reject the child:

“It is real a problem that affects the school management as well as class teaching but we do not have another option. We must accept the child because first of all it is a privilege to have the child brought to school. Most of them are hidden at home, second there is no guideline known nationwide when these children should start school...” (B2, filed note).

Second, parents and the community at large lacked awareness about the importance of early childhood education for HH/D children. Parents cast doubt on their HH/D children`s cognitive ability. They thought that their children could not learn and understand at school due to language barrier. Language difficulties had be associated with cognitive abilities, possibly because most tests for measuring academic skills use language as a media of communication (Marschark et al., 2011).

Third, accessibility of education service is a challenge. There were few schools which enrolled young HH/D children. Most of them are located in cities and urban centers which posed problems for the child living on the outskirts. For example one of the parents asserted that:

“It was not easy to get a chance for my son, I wanted him to start school earlier than now, but it was not possible, no chance” (P3, field note). Another one stated that; “I struggled a lot without success to get a school that can accept my child here in my place, until I got information from a friend about this school” (P4, field note). Moreover, one district officer added that; “Most parents informed that their children are disabled get confused. Struggling for treatment and care, when they realize that the child has to go to school is already too late which is why we receive older children commencing school....and we cannot refuse to accommodate them...” (A1, field note).

The age differences were reported to influence teachers’ actions and selection of specific teaching strategies. Below is an example of statements showing the challenge teachers are facing with due to the children`s age differences:

“I know that pre-primary teaching is best with songs and play, but despite communication barriers and other problems, their ages also is a challenge. Some are already old you cannot treat them like young children. For example those with ten years behave differently to younger ones” (B3, field note).

Young children can learn different experiences from older children, however, the wide range of age differences was reported to be unhealthy in class learning for young children specifically for HH/D. Moreover, space in the class is important in that it allows free movement and interaction within the classroom, important for learning. The class should be big enough to accommodate children. At least 6.0 by 8.0 meters for a classroom of 25 children and the space between one child and another should be 1.9 square meters (URT, 2014b). Findings of the study revealed that three classrooms among four classrooms observed were congested, the space between one child and another as well as open space were limited. Only one classroom was big with a large open space but the space was not utilized, however. Also the children were squashed into the few available desks.

### **7.5 Teaching-learning materials and facilities**

Materials availability was observed to be a big concern in this study. Teaching HH/D requires special visual materials in order to facilitate the teaching-learning process as well as to increase their participation during classroom interactions. The policy indicates that materials should be provided by the school owner. All schools involved in the study are owned by the government, public government owned schools. Therefore, it was anticipated that the government should provide materials needed. The response from district special education officers revealed that it was the responsibility of the respective school to present to the district office the list of required materials. However, they declared that the provision of materials

will depend on the funding availability. The burden was shifted to the heads of schools who were expected to apply for funding on time:

“The municipal is responsible for financing special education in our schools, but head teachers should apply earlier for the capitation to be disbursed on time in their school accounts” (B1, filed note).

However, head teachers claimed to have a shortage of funds allocated for teaching-learning materials. The allocated budget was general with no consideration for children with special needs education. They added that materials for CWD were very expensive to the extent that no single school could afford them. The only possible materials included manila sheets and marker pens for drawings:

“Only manila cards and marker pens for drawing are available in the school. Special materials and equipment for CWD are very expensive, the individual school cannot afford to buy them and the capitation we get from the government is very limited” (B2, field note).

## **Discussion**

For effective teaching HH/D children require language and speech development. Speech learning needs a special training room equipped for speech training. All schools participated in the study observed to lack speech training rooms as well as other equipment needed for speech training and development. Lack of the special facilities was associated with three factors; priority, registration and lack of or insufficient funding (Sirimanna & Olusanya; 2014). As regards priority, it was observed that special education is not a first priority for the government, parents and the community in general. Planning and budgeting depend largely on priorities. In the case of registration, for the school to get special funding for special needs children, the school should be registered as a ‘special school’. Concerning lack of funding, the government suffers from fund limitation to meet the needs of all sectors including special needs education. Therefore, the little amount available is not enough to meet the needs of children with special needs; it is used for the majority labeled ‘normal’.

### **7.6 Communication and language development**

Communication was observed to be a key element for success in learning and development of HH/D children. All children involved in the study were observed to face communication barriers. Most of the time during observation, children were quietly performing their activities. Very little communication was observed, however, whereby they used non formal sign language, with gestures and body language. Teachers tried to teach sign language

together with speech reading and academic skills simultaneously. The study found that all were children of hearing parents; hence they lacked effective means of communication.

## **Discussion**

The finding tallied with literature, confirming that 90% of deaf children are born to hearing parents (Marschark & Spencer, 2003). The hearing parents did not have any knowledge of sign language. They did not teach the children spoken language; they communicated less by using informal signs and gestures. They lack experience and knowledge in handling a deaf child hence early professional intervention is inevitable for social development success. The HH/D came to school without any formal language- neither spoken nor sign language. Thus there was no communication between HH/D and their peers, no communication between HH/D and their teachers. According to literature, language plays a major role in the holistic development of the child (Marschark & Spencer, 2003; NAEYC, 2009). Likewise it should be developed earlier in the early period of the child. Sininger et al. (1999) and Sirimanna & Olusanya (2014) argued that language development starts in early childhood and has an influence on the entire life of the child.

The study observed that communication barriers hindered children's participation and involvement in the learning process as well as in social interactions and activities. One of the parents stated that:

“I cannot even ask my child to do anything for example to send her to the shop to buy something or any other activities because I do not know how to tell her, and she will not be able to communicate with the shopkeeper. Although when she is aware of what to do she did it perfectly for example she can wash dishes very nicely” (P1, field note).

During classroom observation in all four schools the child interaction was minimal. Teaching and learning activities were carried out through activities. The teacher did a lot of demonstrating while children were supposed to respond by producing the task assigned. Therefore, classroom interactions were more activity oriented with little verbal communication. Communication barriers were found to affect social interaction between HH/D children with their hearing peers. One study found that HH/D children in mainstream education settings are not rejected but they are likely to feel isolated (Nunes et al., 2013). The study suggested the schools have a proactive role in helping hearing children learn how to communicate with HH/D.

## 7.7 Teaching and learning interactions

Teaching style and strategies were investigated in this study as important aspects during teaching and learning in school. Teachers were asked what strategies they used in teaching HH/D pre-primary children. The responses include:

- participatory methods
- using real objects
- use colored pictures
- painting pictures
- drawings on the blackboard
- play-use of play
- individual teaching
- talking(activity oriented)
- using different techniques.

**Table 7.2 Teaching strategies and comments**

Strategy	Comments
Participatory Methods	By using teaching aids
Using real objects	Local materials used
Using colored pictures	Mentioned but not used
Using painted pictures	Mentioned but not used
Using drawings on the chalkboard	Observed
Play	Mentioned but not used
Individual teaching	Observed-teacher provided support
Involve more activities and less talking	Writings and number of works observed
Using different techniques	Observed

**Source:** Field Data, 2016

Most teachers mentioned play as a good and effective method of teaching children in pre-primary education. However, they confessed that they do not use play due to institution and environment barriers. More discussion about play is included in part two of this chapter concerning play. The findings also show the interaction between teacher and children and child-child in the classroom. Different teaching and learning activities were observed in



selected classes. The observation took place when teachers were teaching and children learning. The interaction identified was based on delivery of information where the teacher tried to impart knowledge and skills to children. Teachers were the main provider in the interaction while children were the receivers. The main activity in the interaction involved the teacher guiding the children in what to do and the children's responses. Teachers instructed the children in daily activities on a daily step by step basis. Children observed teachers and did what they were supposed to do. Methods of interaction in all four classes observed included:

- writing the subject name on the chalkboard,
- writing the task on the chalk board,
- describing the task,
- demonstrating the official sign of alphabet,
- words and numbers,
- demonstrating to the children how to perform the task ,
- ordering children to do the task in their exercise books and
- marking children's work and provided feedback,
- correcting the mistake (responded to teachers 'feedback).

Interaction in the classroom mainly involved the teaching of basic academic skills. The teaching could be divided in two categories; individual teaching and group teaching.

### **7.7.1 Individual teaching**

Individual teaching was observed as one of the major teaching situations used in one school. The teacher taught every child separately. Each child had his or her own learning theme. Everyone was taught according to the need focusing on what the child already knows and where it is going. For example in one observation from school D, all three children present at school that day were learning to write the alphabet. One child was taught how to write letter 'a'. The teacher taught the child how to hold a pencil and write /sound/ the letter 'a'. The teacher supported the child how to hold the pencil and write 'a' then left the child alone. For this child the aim was to help him to learn and practice how to hold a pencil. The child did not manage to write 'a' instead he sketched 'o'. The second child was taught how to write 'g'. The teacher demonstrated by writing 'g' on the chalkboard and asked the child to rewrite on the chalkboard. After several trials with assistance of the teacher on how to hold the chalk the

teacher then instructed the child to write in the exercise book. The teacher supported the child in showing him how to hold the pencil and marked the work of the child. Child two-letter 'h'- how to pronounce and write it- was supported in holding the pencil then wrote alone. In general the lesson for that particular day was to learn how to write. The observation shows that the writing activity was a struggle for the children.

### **7.7.2 Group teaching**

Most teaching was group teaching. Group teaching in this study means the process whereby the teachers addressed the children as a group in the classroom. They were taught the same material or task; every child should perform the provided task. The individual differences and needs were not considered important in these teaching sessions. Regardless of the gap due to their irregular admission as well as irregular attendance all children were taught the same skill and knowledge. So it was up to the child to struggle to keep up with the others. For example in one observation from school A' class the teacher was teaching the sound 'a' to the class of five children. Four steps were observed as an effort and strategy of the teacher to involve children in the learning task; every child participated in learning.

Four steps:

1. How it is written
  - a. the teacher writes the sound/letter 'a' on the chalk board
  - b. explains to children that this is sound 'a'
2. How to pronounce

the teacher uses her hand to touch the throat (voice box) to demonstrate how the air is moving and how the sound is produced.

  - a. she takes the hand of the child, allows him to touch the teacher's throat when she produces sound 'a'
  - b. then she uses her hand to touch the child's throat while the child produces the sound
  - c. then she directs the child to touch his/her throat when producing the sound
  - d. the exercise continues for some time
  - e. the teacher keeps on supporting every child to produce the sound
  - f. the one who succeeded was reinforced by waving hands.

3. How to sign it
  - a. the teacher showed children how to sign sound 'a' - its symbol is by closing all fingers.
  - b. the activity to sign accompanied the assignment to pronounce it.
  - c. the teacher asked every individual to pronounce the sound and sign it
4. How to write it
  - a. the teacher asked every child to write the sound on the blackboard
  - b. then she assigned them to write each in his/her exercise book
  - c. the teacher supervised the children's work individually
  - d. encouraging every child to finish the exercise

The teacher used spoken language (Kiswahili being the language of communication/ interactions in public pre-primary education) simultaneously with sign language. The study observed that sound production was a big challenge to children; new comers produced noise instead of the desired sound. Group teaching could be most favored due to:

- large class size
- lack of teacher's knowledge on how to handle SEN children's learning
- environmental factor, no space to reach every child personally
- lack of materials.

Furthermore, the interaction was from the teacher to the children, i.e. one way interaction. Children have no opportunity to initiate interactions. In school B class children were trying to initiate their own activities after finishing the exercise provided by the teacher. Two boys stood up, went to the back to the open space in the classroom and started to play. Unfortunately the teacher commanded them to stop playing and go back to their seats, instructing them to be quite.

### **Discussion**

The discussion is based on the findings concerning teaching and learning interaction presented in subsection 7.7. The tendency of teachers observed in these four classes as knowledge and skills transmitters/providers attract several explanations. First, it could be associated with the challenge of communication between children and teachers. Children experienced poor communication skills due to lack of knowledge in sign language and spoken

language. Possibly they have something to ask or to contribute but they did not know how to express themselves. Language plays a major role in the teaching and learning process as the medium of instruction (Marschark, 2007; Marschark et al., 2011). Poor communication could be associated with quantity and quality of interaction during teaching and learning.

Second, lack of training in how to teach pre-primary HH/D children could be related to the poor classroom interaction observed. Teacher training would provide teachers with skills and techniques in how to motivate and engage children fully in the interaction. They could provide freedom for children to decide on their learning. Third, lack of teaching and learning materials could be the reason for poor interaction during the teaching and learning process in pre-primary HH/D classes. HH/D children like other children may interact and learn better when learning materials are available. Moreover, due to hearing deficit visual materials could help the teacher to express clearly what children are required to do and children could be more actively engaged in learning activities. Last, could be the teachers' belief that HH/D children were demotivated to learn. Negative evaluation of teachers towards their children affect the way they treat them.

### **7.8 Teacher-child ratio**

The findings yielded from interviews and observation show that the class size was a vital factor affecting teaching-learning interactions in the classroom. Teachers were not contented with the situation. They felt that they were overloaded and overworked. Responses from teachers:

- the number of children in my class is too big, just imagine how can I help each child to acquire the knowledge expected?
- Actually I use a lot of energy to teach all these children, I always go back home too tired; I have no chance to be with my family. It could be better if we were more than one teacher or if we had several classes with fewer children.
- eleven children in one class is too much which is why I cannot tend to every individual in his/her place. Instead I let them come to my table for marking; pre-primary classes should be less than ten.
- the work is too much for me; I cannot teach more than one lesson per day; when I finish the first round it is enough for the day. I become tired, I cannot concentrate on providing individual support.

The information obtained from these statements discloses the unusual circumstances where teaching-learning for the Deaf took place. From the statements the hidden information delivered included;

- the class size was over estimated.
- the class size negatively affected the teaching and learning interaction between the individual child and the teacher in the classrooms.
- education of young HH/D was not favorably considered which is why the number of children per class was not considered.
- combining more than one class in one classroom was a huge challenge to teachers; it affects the teaching of each group; the pre-primary children concerning this study were equally or even more affected.

## **Discussion**

The large class size was observed to affect teaching-learning interaction. The standard child-ratio provided by the Ministry of Education and quality guideline indicated the ratio for the deaf child to be one to one (1:1) (URT, 2014b). That means in pre-primary education for the deaf child there should be one child to one teacher. The reason for the proposed child-teacher or service provider could be to ensure maximum support. According to Lundqvist and co. (2015) children with special education needs require maximum support for their learning to proceed effectively. It was observed that HH/D children required much individual attention from the teacher so that they can engage in the learning activity effectively. The class size affected both the teacher and the child concerning class teaching-learning experiences. Teachers suggested the government should consider the situation and improve the early learning situation of HH/D children. The statement e.g.:

“It could be better if we were more than one teacher or we had several classes with fewer children” (B3, field note),

denotes the desire of teachers to be supported in their duties. The issue raised here was the need to have few children; either having more than one teacher per class or to have more classes with few children in each class. The statement highlighted the fact that there were few teachers compared to the number of children attended. Second there was lack of classroom facilities in all four schools. Therefore, the recommendations could not be realized unless suitable conditions were provided. Although teachers had ideas on how to solve the problem, they were unable to implement them owing to the situation that prevailed.

## **7.9 Classroom behavior management**

Children's behavior management in the classroom was one of the criteria observed in the classroom. In all four observed classrooms teachers made an effort to control and manage children's behavior to ensure a good classroom teaching-learning atmosphere. Deaf children as other children in the world are not static. They could not sit down quietly for long periods of time as adults, as their teachers assumed. On several occasions when teachers were engaged in other activities they engaged in their own play and storytelling. Quarreling with one another was observed. Teachers were forever reprimanding children and asking them to sit still and keep quiet. Commanding words were uttered together with the corresponding sign in all four schools:

- No
- Wrong
- sit down
- keep quiet
- give some space to your neighbor
- go back to your space
- go back to your seat
- I will punish you
- do your work
- what is the problem?

## **Discussion**

From the observation teachers expected deaf children to sit down calmly and do the tasks assigned to them. When they finished they were expected to sit still waiting for the session. One of the teachers resorted to threats like "I will punish you" several times to different children who misbehaved according to teachers' perception. The class was the one observed to have a high degree of undesirable behavior like screaming, fighting each other, spasmodic movements and unauthorized play in the classroom.

## **7.10 Childrens' participation**

The participation and involvement of HH/D children during the teaching and learning process was observed to be too limited and discouraging. Teachers were more active than learners; talking, writing on the blackboard, signing and marking children's work. The researcher's

observation was supported by the opinion of the teachers raised during interview. The interview guide was what one observed about the children's participation during the teaching and learning process. All of them commented that the participation of HH/D children during teaching-learning process was low. The reasons for their opinions centered around the HH/D children's special characteristics/nature and weaknesses.

#### **7.10.1 Statements provided**

- it is very difficult to teach deaf children
- very slow to understand,
- I have to repeat myself constantly
- they are too forgetful
- their memory is poor because of their deafness; especially in young children
- extra effort is required
- child participation is a challenge
- when they begin they lack official sign language for communication
- they differ in terms of their understanding (cognitive ability)
- they do not like to study/learn
- it requires too much concentration
- you must be very careful and systematic
- teachers must provide individual support
- they are slow learners
- they like to see and touch
- they do not know how to read and write

In summary, themes raised from child participation show that there was a problem for both children and teachers. Three themes were directly related to children while two were about teachers' weaknesses:

- lack/poor communication skills (sign language),
- lack of learning skills,
- low motivation (children),
- lack of specific strategies for teaching deaf children,
- challenging and demanding task,

## **Discussion**

Child participation in the teaching and learning process was reported to be limited due to various perceptions including; communication, learning skills, children`s motivation, teaching strategies for H/DD and tough tasks.

### **Lack/poor communication skills / language limitation**

Participation and interaction during the teaching and learning process relies largely on communication between the child and teacher and among children themselves. Communication depends on the media of communication such as language. The media of communication for deaf children could be sign language or total communication. The observed children lack any kind of language that can facilitate their communication. Since all of the children participating in the study were born to hearing parents and they did not have deaf siblings, they lack sign language as well as spoken language. Teachers claimed that it was very difficult to communicate with children since they lacked language. Therefore, they should teach language first before embarking on teaching other skills, but it took too much time for children to master the language.

The communication aspect was observed to be a very important aspect in ensuring child learning. Communication is vital for effective learning in the deaf child. A few tips to consider include:

- looking at the child directly when speaking to the child,
- the teacher should speak clearly,
- the teacher should control his/her lip movement when speaking to allow lip reading,
- the teacher may use facial expression, body language and gestures in order to facilitate communication,
- the teacher should teach social skills to children.

Factors associated with communication development include the following (Harris, 2014; Sininger, Grimes & Christensen, 2010; Vohr, 2012):

- the age of hearing loss onset,
- the degree of hearing loss,
- the age of identification,
- the presence of other disabilities,
- the timing and quality of intervention.



Research concerning reading strategies for HH/D children show that the level of performance in reading skills for HH/D learners is below average when compared to their hearing peers (Kyle & Harris, 2011). Despite all effort to support HH/D children in accessing language still the problem remains. Marschark declares that, when teachers provide support to HH/D together with improvement of environment rich in language materials, HH/D children can acquire literacy skills but still their performance in reading remains low. Reading difficulty is not associated with the ability of deaf children to learn language but it is rooted in the lack of teaching strategies to teach HH/D (Marschark et al., 2011).

### **Lack of learning skills**

Interaction between children and teachers during the teaching and learning process required children to have learning skills. The learning skills for pre-primary children mentioned by their teachers included reading, counting and writing skills. However, the study found that these skills should be developed during that period of pre-primary education. Children were not expected to enter the class with the skills, otherwise they should be enrolled in primary education. One objective of pre-primary education is to develop reading, writing and arithmetic. (3Rs) as preparation for primary education. The study realized that the key skill deaf children lacked was play; play was observed to be a fundamental skill necessary for the pre-primary child to engage in learning activities (Vygostky, 1978). Teachers were aware of the skill as it was mentioned as one of the effective methods of teaching and learning for young children but they did not use it due to different reasons, e.g. lack of play facilities, limited time, poor communication and lack of time to prepare for the play.

### **Low Motivation (children)**

Teachers blamed children for lack of interest in learning e.g.:

“... these children do not like to learn, ... they do not have hope for their future, they have despaired...” (B3, filed note).

The finding suggests that the low motivation could be the result of communication limitation, poor support from the teachers and parents and unattractive learning environments as well as teaching strategies. Regarding communication limitation, HH/D children face problems in communicating with their teachers and peers. They have not yet developed any language whether sign or spoken language. They did not know how to read or write. Therefore, most of the time they remain puzzled without having enough insight into what was going on. Teachers

are supposed to provide maximum support for HH/D children right from the start so they can get used to learning tasks.

However, due to several factors including lack of training, overload and lack of teaching and learning materials teachers failed to support children's learning effectively. Learning environments were observed as unsuitable for learning. Children learn best in the environment full of stimulation. To sit still at the desk, wait for a teacher to write on the chalk board and then copy the task in the exercise book was observed as boring. Teaching strategies involved imparting academic skills to children. Children's involvement in exploring the knowledge was limited, thus demotivating the children's learning behavior.

### **Lack of specific strategies for teaching deaf children**

For children to participate fully in learning processes, teachers must employ various and specific strategies to attract children to engage in learning activities. Teachers complained that they lack skills concerning pre-primary deaf teaching. They had training in how to teach deaf primary children and not deaf pre-primary children. None of them have experience in teaching pre-primary classes. They were primary teachers teaching grade one to seven. They were struggling in their jobs teaching pre-primary children. The study suggests that lack of teacher training in pre-primary education is associated with a lack of proper and specific skills and strategies to handle pre-primary children with HH/D. The study further suggests that the poor teaching strategies affect child participation and involvement in learning tasks.

### **Challenging and demanding task**

Teachers complained that teaching deaf children was too difficult and challenging. It took too much time to make children understand what the teacher wanted to teach them. Children claimed there was a lack of cooperation during teaching-learning activities. Teachers lacked strategies to motivate them to engage in the activity. They were expected to cover the syllabus and as a result, they struggled to teach them sign language simultaneously to the learning skills required. Therefore, the tasks were regarded as too demanding as they had to learn sign language themselves before teaching it.

## **7.11 Support provision**

Support in this study is used to refer to any additional assistance and attention the teachers, parents and other children provided to children with disabilities who require special assistance in order to participate and enjoy learning in pre-primary education.

### **7.11.1 Teacher's support during teaching and learning**

Teacher's support during teaching and learning activities was observed to be crucial for HH/D children learning. The study found that teachers provided assistance to children's learning by directing what they were required to do. In one school (school D) observed where the individual teaching strategies took place, the teacher assisted each child to learn his/her own skills on that day. However the support given was observed to make the child more passive than active in exploring the knowledge during class learning. The teacher introduced the number for example number 6 and asked the child to rewrite the number.

## **Discussion**

The findings suggest that teachers supported children by way of imparting the knowledge they thought useful; children had no chance to decide or discover their environment. Teachers operated under traditional education practice that focused on the transmission of selected academic skills. The skills were entrenched in class tasks and activities that are often repetitious and boring (Mallory & New, 2013). Children were assigned tasks to perform and they were expected to complete and repeat until the teacher was satisfied with their performance.

In one school the teacher showed the children how to hold a pencil and write symbols and numbers. The exercise was considered valuable but the strategies poor; no consideration was given to appropriate child/teacher positioning in this task. Literature suggests that the teachers stand to the side and a little behind the child holding the hand directing how to write instead of sitting/standing behind the child so that the teacher's hand could be directed behind the child's hand (Lundqvist et al., 2015). In the case of young children, it has been suggested that the child sits on the teacher's lap and the teacher holds the child's hand when assisting the child how to write (Lundqvist et al., 2015). However, children in this study were subjected to the first method described above.

### **7.11.2 Parents' involvement**

Parents' support was observed to be important to ensure children's effective learning and development (GOA, 2011; Mahoney, 2009; Mahoney, Wheeden & Perales, 2004; NAEYC, 2009). The recent study explored parents' participation in their children's learning. The findings show that most parents provided no support to their children's learning. Teachers reported that parents of HH/D were not cooperative at all:

“Parents of these children are so in different, they do not bother about their children's learning. They do not care about the progress the children make in school” (D3, filed note).

In general all teachers, head teachers and district special education officers blamed parents for not helping their children in matters pertaining to school learning and achievement. The following are some of the teachers' statements concerning parents' involvement:

#### **Statements**

- parents are not cooperative
- they are not concerned with their children's learning
- they do not bother whether their children are learning at school or not
- even when they were provided with homework they did not do it
- when we call them for the meeting in order to discuss issues concerning their children's learning they do not appear
- no parent had come to school to ask about his/her child's progress.

#### **Discussion**

The researcher wanted to hear the voice of parents concerning their participation in their children's learning and school development. Among four parents available for interview only one parent declared to support the child while the other three claimed that they did not provide support. Parents reported that they were not able to support their children's learning due to various reasons. First reason mentioned was poor communication. Parents do not know sign language; they communicate by use of local gestures and signs; there is no language communication. So they cannot teach or even ask the child what they were taught at school. Second reason was time available for teaching the children. Most parents are earning their living working very hard in order to earn the daily bread for their family. They spent most of their time working and performing household chores; there was no time to spend with the

children for learning. Parents claimed that they cannot be involved because they are too busy earning a living; there is no time for teaching skills (language).

The finding suggests that most children lack parents' support during their school life and life in general. Most of the children were living in hostels; spending day and night away from their parents. So there was no opportunity for direct interaction between children and parents. Moreover, the study suggests that despite the lack of parental support, they lack warmth and emotional support. Bonding is reported to be very important for child development (Bowlby, 1958). According to Bowlby emotional bonding with a key person over a long period of time can elicit pleasure and relaxation during times of stress. The quality of attachment plays a major role in child development. Loss of hearing for children causes poor communication and is very stressful, needing intervention on the part of the parents. Parents are important not only for academic support but also for emotional support; thus they should be involved.

The National Association for Education of Young Children (NAEYC) issued a statement (2009) encouraging the involvement of parents of children with disabilities to be educated in regular schools. Education of HH/D children needs the collaboration of school teachers, parents and other specialists involved in child development and learning. Effective learning cannot be experienced if parents are not involved. Parents should know what their children are learning in school so that they can reinforce learning at home. Teachers have to communicate with the parents about the topic or skill learnt in school so parents can know how to assist the child.

The finding of the study revealing that parents are reluctant to support their child's learning is against the principle suggested by the study, in that it is urgently required. Parents need to understand that their involvement would improve their children's condition. They should be willing to assist, seek means and opportunities to provide assistance. Teachers have to look for strategies to communicate with parents so that they can know what to do. For example one simple and common strategy is to use a child diary. In the diary the teacher writes works which the child did during the school day, new words or numbers are written so that the parents know what was taught. Parents have to reinforce the new learning by providing opportunities for the child to practice it. The diary should be carried by the child from home to school and from school to home every day.

### **7.11.3 Other teachers and children support**

The study examined the support HH/D children receive from other teachers apart from the specialist, as well as support from other children; the hearing peer in the school. The results show that there was limited support from other teachers and other hearing children. Other teachers were reported to be reluctant to assist children with disabilities in general including hard of hearing/deaf (CWD/HH/D).

Other teachers and children failed to support HH/D children. The reason presented was lack of knowledge on how to handle HH/D including communication barriers with deaf children. Communication difficulties were reported to hinder interaction between non expert teachers and HH/D as well as between hearing peers and HH/D children. Teachers were supposed to work as a team in helping children to learn in the school environment, but that was not the case. Only in schools with more than one teacher specialized in that area did staff work together as a team. Other children provide support but limited perhaps due to the segregation setting. In one school the observed hearing children supported HH/D only by assisting/escorting them to the hostel where they were locked up. The hostel operated as a jail for children with disabilities.

HH/D children were alone in special classrooms. Each school with special education units had separate classes for HH/D children. They had their own timetable which was not the same as the regular school timetable. As a result there was no opportunity to interact during break time because they did not share free intervals. When HH/D children had their breaks, hearing children were involved in classroom activities and vice versa.

### **Discussion**

Integration of HH/D children in regular school settings was considered to be important for the inclusion of children with disabilities in the regular schools. Other teachers teaching regular classes and hearing children should have the opportunity to interact with HH/D children. The interaction assumed to have many benefits; other teachers and children should interact and provide assistance to both HH/D and teachers teaching them. Integration should build steps to inclusion within the regular settings by welcoming HH/D who had a history of segregation in education.

However, the findings in this study suggest that HH/D children were excluded from the regular school education system. Each school with special education units for deaf children had separate classes for HH/D children. The unit functioned independently as a separate and independent school although they were sharing the compound. All mandates and responsibilities were given to teachers in the unit. There were no interactions with the regular school timetable. In reality the system was opposed to the ideal of including special education in the regular school system.

The purpose of integration is to provide inclusion opportunity for HH/D in the school community. Teachers teaching regular classes should learn the basics of deaf education from specialized teachers for HH/D. Conversely teachers of HH/D should receive support from teachers of regular classes in areas which do not need much specialty. But the situation was observed to be different and more difficult as well as more challenging. Every party blamed the other as the source of barriers. Special teachers reported that they feared for the security of their HH/D children when sharing timetables. Lack of hearing may cause HH/D to be bullied and hurt when interacting with the majority in regular school break time. It would be possible for them to allow children to integrate if other teachers and children in schools provided supervision support. On the other hand, head teachers who were overall overseers of the school, including the special education unit, blamed special teachers of overprotecting HH/D children by confining them in the unit.

Furthermore, another reason was related to the general timetable for the school, that break time lasted 30 minutes; HH/D children used this time for breakfast (tea/porridge) while other children were free play with each other. The observation from the study shows that even in the school where they shared a timetable HH/D were alone hanging around their classes; they did not interact with other children. The study suggests that more effort is required to support children so that they become part and parcel of the entire school community.

## **Part two: Play outside the classroom during break time**

Part two of the chapter concerns the information obtained through observations and from interviews. The intention was to identify how children used their free time in schools. The study concentrated on engagement in games. The findings are presented in detail and discussed in this part. This part is divided into sub headings such as; play activities in pre-primary schools, play activities to support cognitive development, play activities to foster social-emotional development, play activities involving communication, play activities to support physical development, play environment and play materials, and free and teacher guided play, teacher support during play.

### **7.12 Play activities in pre-primary schools**

Learning in schools is not limited to classroom teaching and learning activities, but also takes place in outdoor activities. According to Tippet, 2008 cited in White, 2011 play refers to all that is done freely for its own sake, yielding pleasure and joy, and leads to another stage of mastery. Miller & Almon, 2009 cited in White, 2011 described play as including activities that are freely chosen and directed by children and arise from intrinsic motivation. Children should be free to choose and engage in whatever play they enjoy. The emphasis on children's freedom to choose their play activities depends on the meaning and perception the child attaches to the play. Studies confirm that when children are forced to engage themselves in a certain play activity they consider that situation as an activity and not a play (White, 2011) although free play is involved in activities. For the child to call a certain activity a play it should be child centered/directed.

In education free and directed play exists as part of leisure and recreation for children but also for learning purposes. The study investigated the aspect of play children were involved in during break time. The findings show that in all observed schools HH/D children had a limited opportunity to engage themselves in play activities. Neither teacher organized play nor child initiated play were included in HH/D children school programs. Play was perceived as an extra activity that was not considered as an important component of the time table in education for the HH/D. That means HH/D children would engage in play if the opportunity was available. It was an optional activity occurring by chance rather than a core activity. HH/D children were observed to involve themselves in play in isolated moments only. The finding further shows that in school A children rarely played under teacher supervision whilst in school B, and D most of the time children played alone at any given opportunity. Teachers



were not around to observe and or/direct children play. Some play activities observed in this study included the following:

The first activity observed was climbing trees. The play was very popular in one school which seemed to attract many children. The play was initiated by one girl who climbed the tree while others were engaged in another play, then other children followed her the second time she climbed. As time went on other children attracted by the activity joined their playmates on the tree, which meant that occasionally the tree was full of children. The tree was within the school premises nearby the rubbish pit. It was not too high but moderately high and strong enough to bear large numbers of children.

Another play activity was climbing up the iron shute and sliding down it. In the school B complex there was one old iron shute which children could slide on. The slide was fixed close to HH/D children`s classroom. Children climbed up the steps and then slid down it. Climbing the tree proved to be more enjoyable however. The slide was the only manmade piece of playground equipment. The finding shows that when more than one child wanted to play on it, conflict occurred. The finding suggests that teachers` presence would help to supervise the play and use of the equipment, although free play has its own advantages over controlled play. Fortunately, children solved the conflict by themselves.

The third play activity was going inside the hole and coming out from the pit. The pit/hole was used for keeping rubbish from the school. Children were observed to play around and inside the rubbish pit. During observation of the play the pit was clean and free of rubbish. Children went inside and came out, jumped inside and climbed up out of the pit. Few children were engaged in the play and the play did not last long.

The fourth play activity was car driving, a pretend play where children imagined they were driving a car. The play was male dominated. They used the unfinished window (the class window on construction) and a piece of wood/stick. They sat on the window ledge, one leg outside another leg inside and used the stick as a car`s steering gear. One boy initiated the game, sitting on the window ledge with a stick, handling the stick and moving the leg as if he was driving a car and/ or paddling a bicycle. Another boy climbed to the window and did the same as the first. The finding suggests that in a cultural context it is normal for boys to drive

cars especially upcountry where there are few cars and very few females driving cars. Children learn by observation and imitation (Bandura, 1977).

The fifth play activity observed in the study was making airplanes. Using tree leaves fixed to a small stick, the children (male) blew it through the air where it glided like a plane. This play demonstrated the children's ability in creativity and exploration. The ability to imagine how to make an airplane is important for the development of logical thinking and creativity.

Chasing one another was the sixth activity involving physical and social interaction. The children sat in a circle on the ground in the open space available in the school. The place was small but big enough to accommodate the children. One child stood up, running and touching another child who chased him until he/she reached him. The game was interesting and the children seemed to enjoy it. The teacher initiated and guided the play. The finding shows that teacher's presence and support was important as it makes children active and participate in the game. No child was left out, they were together in the circle, singing and observing the chasing pairs. However time was too short and they could not play this game every day. Observation suggests that children were often alone, played alone, and quietly inactive, a signal teachers need to respond to and intervene to help the children to enjoy play. For example in school B one boy was sleeping, something abnormal for children of his age. That denotes boredom. Stimulation was observed necessary to make him active as compared to school A where teacher supports aroused children's interest to engage in play.

## **Discussion**

Out of classroom time provides children with the opportunity to engage themselves in play. (Waller et al., 2010) When children play they internalize the role responsibilities in society. Literature suggests that playing together is important for all children including children with disabilities ([raisingchildren.net.au](http://raisingchildren.net.au)). Moreover, child development scholars believe that children learn almost everything through play. For children play is everything in their daily lives. The recent study observed that since the children were confined in the classroom, they needed an opportunity to play. They were not settled at their desks and they tried to engage themselves in various play activities. Children's games help them to get together with other children as well as make friends. However, engaging in play with other children was observed to be difficult especially for HH/D children; teachers, parents and other adults are instrumental in helping their children to learn how to play together and make friends. Play and

friendship for children with disabilities enhance their development in all developmental domains (Bergen, 2002; Guralnick et al., 2007; Musyoka, 2015; raisingchildren.net.au). The study observed several activities that are associated with the development of each domain.

### **7.12.1 Play activities to support cognitive development**

Play supports the cognitive process necessary for learning. During play children need to be attentive in order to register what others are doing. In doing so they develop attention skills which is very important for learning. During play children increase their exploration and creative capacities involved in manipulation of games and game materials like blocks and cards. Piaget portrayed children as little scientists, performing experiments in everyday life in searching to understand the nature of their environment (White, 2011) e.g. the boys who played at pretending to drive a car and ride a bicycle. However, pretended play should be well organized and supervised in order to ensure that children acquire rules and principles governing the pretended role. These include motoric activities, productive activities, games with rules, and pre-academic activities (Bodrova & Leong, 2007). Play was considered important for child development. It facilitates the child self-regulation development, decentralisation, and it creates a zone of proximal development for many areas of intellectual development (Bodrova & Leong, 2007).

Pretend play boosts the child's readiness to engage in activities related to school and creative work. Fisher et al.(2011) contended that necessary mathematics skills are acquired during play in early childhood when children engage in manipulating play materials. Perception of volume, size, manipulation of numbers like counting, adding, deducting, multiplying, division, measurement and the like are likely to develop through child play. Moreover, Theodoru & Nind (2010) commented that play and learning are inseparable. Play results in children acquiring basic learning skills; in childhood individual learning is accomplished almost exclusively through play. Play is very important during early childhood education as it promotes learning motivation, desire, and mastery essential for future learning. Further, White, 2011 found that through play children develop language, problem solving, and creativity and self-regulation skills.

The findings of the recent study show that children were active in creative and exploratory work. For instance the airplane game was one of the most creative activities observed. Children had to think how to make the airplane, the components, as well as consider the

structure and state of flying. The piece of leaf pierced with a stick and blown in the air resembled the structure and shape of the airplane which flies through the air. Another example was creating different shapes and figures by using blocks. The ability to create a house, car and other figures by using blocks revealed the art and creativity among children involved in the play. The study suggests that availability of play materials and a well prepared environment may enhance creativity among young children including HH/D children.

### **7.12.2 Play activities to foster social-emotional development**

During play, children learn several skills including sharing and team work. In the process of sharing, cooperating and working together children build friendships. Friends can help and share emotions such as empathy and compassion. Peer interaction is very essential for the social development of all children (Goldstein, 2012; Spencer, 2012). The study found that HH/D children interacted with one another. The pattern of interaction observed between boys and girls was minimal, always girls to girls and boys to boys. The finding suggests that the gender pattern of interaction was a pattern for children of their age in the Tanzanian cultural context. Playing together provides children with an opportunity to develop relationships and attachments. Also play enhances positive emotions such as joy and self-esteem while developing basic strategies to cope and reduces negative emotions like anxiety, fear, anger, frustration and stress (White, 2011).

Moreover, playing together helps children to learn and to understand each other as well as to respect another child's feelings. In the recent study conflict resolution was observed when children showed their ability in resolving the conflict among themselves. The study observed that when children were left alone they played and enjoyed the freedom. However, due to scarcity of play facilities they quarreled; for example competing for the iron slide. They competed to sit on the stairs, but they resolved the conflict themselves after the one who was pushed screamed bitterly and was then left alone. And that was the end of the conflict. The finding highlights the ability of children to understand and respect each other; an important aspect of socialization in society.

Nevertheless, the essence of integrating special needs education within regular schools is to engender interaction between children with special needs education and children without special needs. The study found very limited interaction among HH/D and hearing children. The reasons for segregation given by teachers were concerns about security as well as poor

communication among children. Those reasons cannot justify segregation; HH/D children need to interact with other children and benefit from the interactions. Guralnick et al.(2007) suggest that peer interaction between children with disabilities and children without disabilities is improved when there is a chance to interact with children without disabilities. HH/D and hearing children can learn how to communicate and live together as one community through interaction. Schools should make sure they modify the school system to accommodate interaction among all children.

### **7.12.3 Play activities involving communication**

Interaction during play involves communication in terms of talking and exchanging ideas. The child has an opportunity to learn language skills such as listening and talking for the purpose of communicating. Children learn new vocabulary from other children by observing what they say in relation to the object. Conversation was identified to take place during break time. HH/D children were segregated in the regular school compound; they were alone while other hearing children played alone in another side of the school compound. HH/D children were observed to chat/talk to one another.

The conversation was with their HH/D peers. The conversation was observed to take place between two or more children. The interaction was identified as class/group peer interaction in each group/level, for example pre-primary to pre-primary children; standard one to standard one; the older to older children. Very little cross group interaction was observed. The finding is in line with Lederberg study findings that hard of hearing and deaf children preferred to play with other children of the same sex and age (Kluwin et al., 2002). Children used informal sign language together with signs and gestures in which they understood each other. However, the conversation did not last long. The study observed that communication was a big challenge among HH/D children. Playing together can help them to learn communication skills and overcome the challenge (Janvey, 2013).

### **7.12.4 Play activities to foster physical development**

Children are naturally active, engaging in different movements that promote body growth and physical maturity. Play is very important for the development of the body and gross motor skills in children. Play activities like building blocks or making objects, drawing, jumping, climbing, running, walking and throwing objects contribute to physical development by improving both fine and gross motor skills (White, 2011). Joy and pleasure experienced

during play raises the efficiency of the body's immune, endocrine and cardiovascular system. Play is very important for HH/D as it improves body balance, coordination and movement.

### **7.13 Play environment and play materials**

Availability and utilization of play materials to facilitate play in children is very important. White (2011) suggested that play materials influence the child to engage in play and sustain the play. When suitable and appropriate play materials are available children would play longer and reap the benefits from the play. In the study children were struggling to find local materials which can support them in play, an example of which being the sticks formed from pieces of wood to represent a bicycle or used for driving a car in the absence of real play materials. Notwithstanding in the situation where play materials were available play was seen to improve. For example, at the school where children were provided with building blocks with pictures of various shapes and structures which could be made from the blocks, children's participation in play improved and lasted longer. Manipulation of play materials stimulated experience in the exploration of the environment as well as arousing the joy of accomplishment and discovery.

Another important issue arising from the observation is the space for play within the school compound. Space available for play plays vital roles in outdoor child play. In Tanzania as in other countries schools and child centers in urban areas are challenged with the availability of open space to accommodate child free play areas. Waller and co. claimed that nowadays children's opportunities for outdoor play, specifically outside schools and childcare facilities have experienced significant decline (Waller et al., 2010).

The recent study in Tanzania observed that urban setting pose barriers for children to interact freely within their environments. Urban infrastructures create lonely environments for children where they cannot move freely and play in the environment. Teachers were sensitive about the security of HH/D children around the school environment. Schools and other settings where children live have turned to 'islands' isolating children from the neighborhood community. The finding from the recent study observed the fear of teachers to allow children to be free, go outside and play because of security issues. One of the teachers said:

“We do not allow HH/D children to go outside to play without teacher's supervision because we fear that they can get lost, bullied, or involved in car and motorbike accidents because they do not hear. Therefore, it is better to let them stay in the classroom even during break time (B3, field note). Although security is important for

teachers and parents to ensure that children are safe (Waller et al., 2010) overprotection has its own consequences. Teachers and parents should try to organize the school environment and school program to include children's outdoor activities.

#### **7.14 Free and teacher guided play**

Teachers can intervene in children's play by facilitating and guiding the play (Fisher et al., 2011). The important issue in guided play is the arrangement of play environment and engagement of teachers in the play with children. The objective of play and the age or level of child development determine the role of teachers in the play (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009). Fisher et al., (2011) suggested two forms of guided play. One form of guided play involves adult input by enriching the child's environment by providing play materials that reinforce aspects of the curriculum. The second form of guided play is when adults, parents, teachers or other adults engage directly in child play. In this situation adults become co-players, asking questions that stimulate the children's thinking, provide comments on children's discoveries, or promote further exploration or new facets to children's activities. However, in order for play to be effective in the sense that the children are fully and happily engaged, it should be child centered.

Both teacher organized play and free child initiated play are important approaches to children's play in learning. When play is teacher guided it is more focused on children's structured learning experiences. Child initiated play is more free, intrinsically giving the child full autonomy over the play activity. Moreover, for the child to engage actively and fully in the play, the play should be fun (enjoyable) and child-directed.

#### **7.15 Teacher's support during play**

The findings show that play was not recognized as an important learning activity or method of teaching and learning for beginners. Almost all schools visited were observed not to value play for HH/D pre-primary children. Only in one school did the teacher use the play as entertainment for children. The teacher initiated the play and almost dominated the play. Children played the game initiated by the teacher. According to Goldstein (2012) teachers should support children to initiate their own play and continue in play for their development rather than imitate teacher's play.

Therefore in most cases where children get the chance to play they lacked support from teachers and other peers which meant that they lacked endurance for the play. Play

intervention is found to be very important for social interaction among HH/D children; hence healthy social development (Goldstein, 2012; Mallory & New, 2013; Spencer, 2012).

## **Discussion**

HH/D children as it is for children with disabilities in general may require assistance in order for them to engage successfully in play with their peers (Lundqvist et al., 2015; Mallory & New, 2013). As HH/D children lack communication skills, peers are required to be taught communication skills such as how to read and understand cues, gestures and signs used by HH/D children. Additionally, HH/D children need to be taught play skills as well as communication strategies with their peers. The study observed that HH/D not only lacked communication skills but also play skills especially in play with other children. Teachers' involvement is thought to be vital to enhance children's engagement and participation in peer play. Mallory & New (2013) suggested that, for those children whose sensory characteristics hinder their ability to participate in peer-initiated play, intensive forms of scaffolding and direct instruction of play may be required.

Environment and play materials need to be well arranged and placed to enable easy accessibility for the child. The role of teachers or other adults and peers is important to HH/D children. Play plays a key role for the HH/D children's cognitive and social-emotional development. They should be well designed and supervised to support children's competence and social inclusion. Children learn the social skills through play. Play with their HH/D peers and hearing peers is reported to be the starting point for children's social inclusion. Isolation in schools especially during play may impair children's ability and opportunity to learn the social skills for socialization in the society.

The essence of integrating special education units within the mainstream setting is to combat social exclusion and encourage social inclusion (Peters & Besley, 2014). Studies show that teachers' intervention has an impact on the quality and quantity of social interactions among HH/D children. A study conducted by Antia et al. (1994) observed the effects of interventions on the social interaction of 51 HH/D children in 13 different pre-schools, kindergartens, and first grade programs. Integrated activities and social skills training were involved in these interventions. The result revealed that peer interaction was positively increased during intervention but declined in the absence of intervention (Antia et al., 1994). The findings of



these studies concluded that both integrative activities and social skills training influence interactions among children.

The study finds that pre-primary HH/D children were reluctant to engage in play which was more designed for children below their ages. The observation suggested that perhaps they needed a well-designed and organized play suited to their age. Literature supported the researcher assumption that:

*“Children not only need an opportunity to play with one another, but they also need tasks worthy of their attention, motivating collaborative effort”* (Mallory & New, 2013:332).

Moreover, the study finds that the limitations existing in peer interaction between HH/D children and their hearing peers is worth reconsidering. Studies suggested that peer interaction between HH/D and hearing peers is important for not only social development but also for cognitive development. The Antia et al., (1994) study examined the interaction in groups of HH/D and hearing children during free play. They found that HH/D children displayed the highest level of cognitive play when they played together with hearing peers. The study also suggests that the HH/D children profit somewhat from mixed peer group interaction although they did not interact as much with hearing peers. Thus both quantity and quality of interaction should be considered in regular school settings where HH/D children are integrated. This would be possible if teachers are available to provide sufficient time and appropriate support to foster children’s play.

## **CHAPTER EIGHT**

### **CHALLENGE AND THE WAY FORWARD**

#### **8.1 Introduction**

This chapter presents the findings concerning the challenges facing integration/inclusion of children with hearing impairment in Tanzanian pre-primary education. The major research question focused on the challenges facing integration/inclusion of children with hearing impairment in Tanzania pre-primary education. Presentation and discussion of findings in this chapter is divided into sub headings such as; policy challenges, school management challenges, teachers teaching HH/D challenges, challenge facing parents and the family of HH/D, challenges facing HH/D children.

#### **8.2 Challenge and the way forward**

The study sought to explore specific challenges facing integration/inclusion of children with hearing impairment in Tanzanian pre-primary education. Information was gathered by using all three methods of data collection such as observation, interview and document review. The information obtained concerning challenges investigated was categorized under five important areas: policy challenge, school management challenge, teachers teaching HH/D challenge, challenge facing parents and the family of HH/D, challenge facing HH/D children.

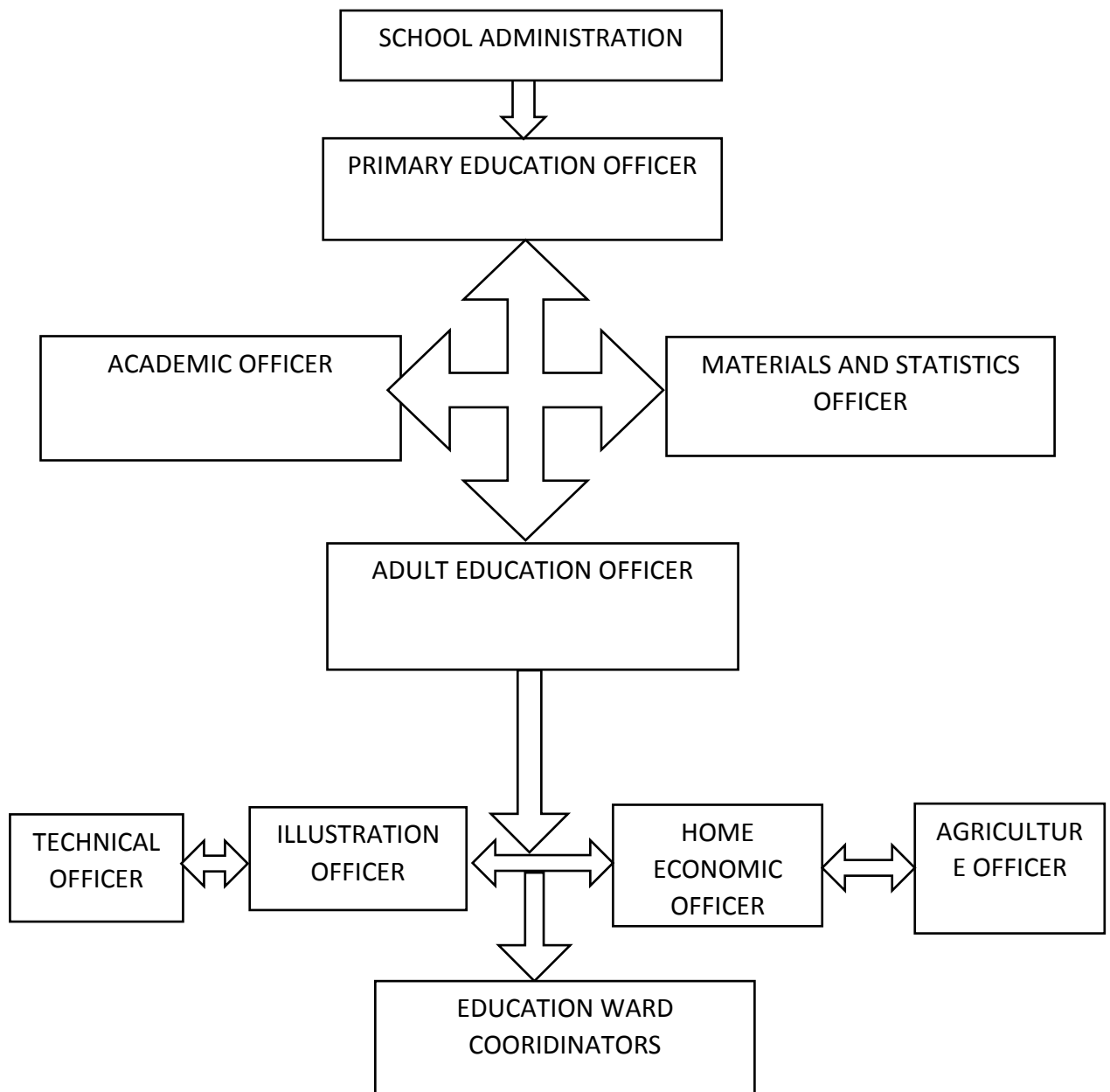
##### **8.2.1 Challenge concerning policy**

The data analysis from the interviewee revealed critical challenges facing pre-primary education policy specifically regarding education for children with special needs education (SNE). Policy in general is crucial for the implementation of education programs for children with disabilities. It provides the direction and role of practitioners. From the district level to school level special education officers and teachers were not comfortable with the policy. They claimed that most challenges facing SNE in the country arose from the nature of education policy. The critics were grouped into three categories; teacher training, management of SNE and strategies for implementation. A gap concerning the teacher recruitment was observed. Four statements (21.5%) revealed that the lack of teachers for children with SNE- (HH/D) children included - was due to policy clarity. The policy was not clear about the recruitment of teachers. It was left to the decision of individual teacher's

desire to train in SNE. As a result there was a shortage of SNE teachers and there was no mechanism to control the situation.

Additionally, SNE was thought to lack attention at the management level. There was no directory for SNE as with the other education departments. At the ministry level directors dealt with specific issues relating to particular departments. In addition each category of learners has its own directory but there was no directory for SEN although SEN Officers exist. Also, respondents assume that the lack of directory at ministry level affects the managerial structure at district level. Although there were special education needs officers (SENO) dealing with matters concerning children with SEN, regrettably the managerial structure at district level did not reveal the position of SNE Officer (SNEO). The administrative and managerial structure at district level is presented in the diagram showing administration, management, power flow and interaction.

**Figure 8.1 Educational administrative and managerial structure at district level in Tanzania**



**Source:** Field Data 2016

The structure of education management includes the primary education officer, academic officer, materials and statistics officer, adult education officer, technical officer, illustrations officer, home economy officer and agriculture officer as well as the ward education officers. The number of ward education officers depends on the number of wards in that district. SNEO did not appear in the managerial structure. The absence of the SNEO in the management structure influences their degree of contribution and decision on provision of

education to HH/D children as well to all CWD. They reported that they have limited authority regarding issues concerning SNE in their districts. In addition their absence in the administration structure may affect their confidence and lower their self-esteem.

Moreover, the study revealed that strategies designed for implementation of IE were not clear to everyone responsible for action. Strategies for implementation are assumed to be very important for successful inclusive education. There should be clear strategies to show how to implement the inclusive education specifically in pre-primary education as presented in the study. Respondents claimed that, apart from other barriers hindering inclusion of children with disabilities in pre-primary education, lack of strategies on inclusion is a never ending major challenge.

**Table 8.1 Themes concerning policy challenge data raised at interview (DEO-SNEO)**

Statements	Freq.	Perc.
Lack of guideline and strategies on how to acquire specialist teachers	4	21.5
No directory of SNE at ministry level	3	15.78
SNE officer at ward level is not part of management structure	1	5.26
There is no policy implementation guidance of IE	1	5.26
The Policy states that all children should be enrolled ...is it practical	1	5.26
No preparation to implement IE	1	5.26
Policy makers do not know what is going on in the real situation	1	5.26
SNE officers at municipal level have no mandate to decide on SNE, rather he/she is advisor only	3	15.78
Lack of transparency as there is no arrangement for training educational officers in all levels concerning SNE/IE	4	21.05
<b>Total</b>	<b>19</b>	<b>100</b>

**Source:** Field Data, 2016

The table shows that the policy faces several barriers as confirmed by respondents statements such as; lack of guideline and strategies on how to obtain specialist teachers (21.5%), no directory of SNE at ministry level (15.78%), SNE officer at ward level is not part of management structure (5.26%), the policy states that all children should be enrolled (5.26%), there is no policy to guide how IE should be implemented (5.26%), no preparation for implementation IE (5.26%), policy makers do not know what is going on in the real situation (5.26%), the SNE officer at municipal level has no mandate to make decisions concerning

SNE, rather he/she is advisor only (15.78), lack of transparency as there is no arrangement for training educational officers in all levels of SNE/IE (21.5%).

## **Discussion**

Inclusion and integration of HH/D children as with other CWD is reinforced by international and national policies which require all children to be educated together with their peers without disabilities. In Tanzania, the inclusion of HH/D is very new as previously they were educated in segregated settings; either at day or residential special schools. However, inclusion of children with disabilities in education worldwide is a challenge in the education system and its implementation is difficult (Ainscow & Sandill, 2010; Armstrong et al., 2010). The problem in implementation depends largely on policy issues. Policy issues influence the management of children with disabilities in school learning, training of personnel, provision of supportive equipment and environment modification. The limitation is largely a result of a lack of official documents concerning the education of children with disabilities. Provision of special education to children with disabilities in regular schools, special schools, inclusive schools that ensure access, participation and learning, require clear and formal national guidelines which the country lacks (Muyungu, 2015; Okkolin, Lehtomäki & Bhalalusesa, 2010; URT, 2009b).

Although the government of Tanzania tries to promote IE in all levels of the education system in the country, the guideline is not clear and as a result the implementation faces a number of barriers. Okkolin and co. carried out investigations concerning gender balance in inclusive education in Tanzania. They found that, although a good policy in general, the lack of identifiable strategies employed in the implementation of inclusive education hinder the implementation of inclusive education in the country. The recent study observed that despite the fact that Tanzania has a good policy in general, it does not show how to implement IE. Further, the majority supposed to implement the policy were not aware of it. Thus it could be the reason for exclusion of children with disabilities as it was revealed that the majority of HH/D were estimated to be excluded from the school system as a result of the policy limitation/barrier.

Moreover, further studies observed that in addressing diversity needs of learners and supporting inclusive education the country there was a lack of adequate policy and regulatory frameworks (Muyungu, 2015; URT, 2009b). Policy and regulatory framework was reported to be a very important guide for practice. The international framework for IE considers policy and

regulatory measures as key components of the framework that should be considered in any country.

In addition, policy as a theoretical explanation requires interpretation for effective implementation. Nevertheless, the interpretation of inclusive education was reported to be a problem. The findings show that teachers cast doubt on the demand of the government to enroll all children in school regardless of their disabilities or special needs. The concern is based on the reality of the situation in that it is considered impracticable in the education setting. Some of them interpret inclusion as the inclusion of children in the regular school only. One respondent said:

“Yes, this is inclusion because HH/D children are here in school together with other children without disabilities and not in their special school. This school is inclusive.”  
(B2, field note).

Studies on inclusive education from different countries show that different problems in interpretation affect implementation. Various countries fail to interpret the ideologies of IE in practice. The tenet of IE lies in the classroom environment where teaching and learning mainly take place in the school environment. Failure to translate the ideologies of IE hinder effective practice. Thus the translation of the concept and philosophy of IE itself remain a barrier to IE everywhere (Cologon, 2013). Most education practitioners translate IE as a process and means of including the excluded in the education system without considering the needs of the child to be included (Armstrong et al., 2010). Misinterpretations lead to improper practice. Thus, there is a need to translate the IE in the country in a practicable manner so that CWD including HH/D children would benefit from inclusion.

### **8.2.2 Challenges facing school management**

School play plays a vital role in promoting HH/D children’s education and development. Schools are supposed to be arranged in such a way as to support teaching and learning. School management plays a role to ensure availability of teachers and admission of children as well as availability of materials, infrastructure and environment modification. Respondents in the recent study revealed the following challenges facing the school management:

**Table 8.2: Themes concerning challenges facing school management, data raised from interview**

Statements	Freq.	Percent.
Lack of trained teachers to handle SNE children	5	8.20
Lack of T-L materials suited to the needs of children with SNE	5	8.20
Poor cooperation between SNE teachers and ordinary teachers	5	8.20
Distance from school to home for children	2	3.20
Importance of early education to CWD not yet determined (delay)	4	6.55
Poor parent participation	3	4.91
Lack of special classrooms to meet the needs of SNE children	4	6.55
No special funds (capitation) for SNE	3	4.91
School capitation is general with no guideline on the distribution	1	1.63
Funds allocated for facilities is general and too few	3	4.91
Lack of transport for CWD	3	4.91
Lack of/ poor accommodation	5	8.20
CWD are nasty; they bully other children(without disabilities)	1	1.63
Lack of kitchen	1	1.63
Lack of dining room	4	6.55
Not enough classrooms to accommodate CWD(CR/C ratio)	3	4.91
No conducive classrooms	5	8.20
Teacher-children ratio is a problem	3	4.91
No budget for pre-primary education	1	1.63
<b>Total</b>	<b>61</b>	<b>100</b>

**Source:** Field Data, 2016

As shown in the table the various barriers mentioned as affecting school management such as: lack of trained teachers to handle SNE children (8.20%), lack of T-L materials suit needs of children with SNE (8.20%), poor cooperation between SNE teachers and ordinary teachers (8.20%), distance from school to home for children (3.20%) and importance of early education to CWD not yet determined (delay) (6.55%). Moreover, poor parent participation (4.91%), lack of special classrooms to meet the needs of SNE children (6.55%), no special funding (capitation) for SNE (4.99%), school capitation is general with no guideline on the distribution (1.63%), funding allocated for facilities is general and too little (4.91%) and lack of transport for CWD were among other constraints mentioned (4.91%). In addition, other barriers facing school management include; lack of/poor accommodation (8.20%), pre-perceived nastiness of CWD with potential to bullying (children without disabilities) (1.63%),lack of kitchen (1.63%), lack of dining room (6.55%), not enough classrooms to



accommodate CWD(4.91%), no conducive classrooms (8.20%), and teacher-children ratio (4.91%) as well as no budget for pre-primary education (1.63%).

### **Discussion**

School management plays an important role in education of HH/D in schools. School management is responsible for:

- provision of teachers' responsibilities,
- provision of teaching -learning materials,
- construction and modification of school environment,
- arrangement and planning for teachers' training
- plan for collaboration.

Thus the role of school management was observed to be hampered by different obstacles. In the study, challenges facing school management could be divided into four categories; first, constraints of infrastructure and lack of materials and equipment; second, lack of professionals to handle CWD; third, poor collaboration among schools, parents and teachers themselves and fourth, lack of knowledge and negative attitude.

Constraints of infrastructure and lack of materials and equipment have been a long-standing problem since the establishment of SNE in the country. Teaching HH/D children requires special materials and equipment regardless of the setting of special education or inclusive setting. The classroom should be free from noise and provide a comfortable environment for HH/D children to learn. They need a lot of visual materials to enhance conceptions of ideas and learning issues. As most of them live far away from the school, transport is indispensable to ensure a smooth journey from home to school and from school to home. Lack of transport undermines the school management as children are supposed to be in school on time as well as at home on time. All these become possible with the availability of funding. The big challenge facing education is lack of fund allocation. As a result, the study could observe poor infrastructure, lack of teaching and learning materials, lack of school transport, lack of specialized equipment in all schools visited.

Lack of professionals to handle CWD specifically HH/D children was observed to be an obstacle to pre-primary special needs education in the country. HH/D children need specialized teachers and other professionals so that they can learn and develop well in all domains. The study observed that communication was a big problem in HH/D children. They need language in order to communicate; there were few teachers who could communicate with them. They need language specialists to teach them how to communicate. School management declared that they lacked specialized teachers for HH/D. In one school only one teacher was responsible for all HH/D children from pre-primary class to standard seven in the school.

Poor collaboration among the school, parents and teachers themselves was raised as another barrier facing school management. Specialized teachers and teachers of regular classes did not work together. Parents and school management also did not collaborate in the education of HH/D. School head teachers blamed parents for lack of participation in the education of their children. School managers observed that regular teachers and specialized teachers were not working together and as a result the teaching and learning of HH/D children suffered. Lack of collaboration among these key participants of HH/D pre-primary education hinders the school management. Due to limited participation there was little progress.

There was a lack of knowledge and negative attitudes on behalf of the school heads (HoS) and the community in general. HoS claimed that the community lacked awareness of the importance of pre-primary education for CWD thus they do not enroll their children at school or they bring them too late (age). Age was the big issue observed in the study. Admission of children with disabilities in schools involved in the study was a challenge. Although the school was overtly prepared to enroll HH/D children, heads of schools/units claimed that they only receive children who are older than the age required for pre-primary education. The age for pre-primary education should be 5 and 6 (URT, 1995). Most HH/D 's ages ranged from 8 to 10 years. Moreover, HH/D children were not coming on time. Irregularities in admission affect management in terms of planning and distribution of resources.

Apart from that, the study found that some HoS had negative perceptions towards CWD. For example in one school the HoS stated that CWD were nasty bullies and therefore they should not be included in regular schools but rather in special settings. Further, all HoS were lacking in special education knowledge in general. No one knew anything about CWD education.

Lack of knowledge could be one of the reasons that limits their innovation and planning for pre-primary education for HH/D. The negative perception was reported to interfere with the practice. It will be difficult for such a HoS to be motivated, invest time and energy into promoting inclusive education. Training and awareness programs were supposed to be priorities for HoS before including HH/D in regular schools.

Moreover, the study observed that the school management was indifferent concerning issues relating to special education needs. One of the concerns raised by DSEO was the blame level led at the school management for being irresponsible. DSEO argued that it was the responsibility of the school management to plan a budget for special education in their respective schools and then submit it to the district for funding provision. Despite the blame, school managements claimed that the school lacked financial support to facilitate pre-primary education. Although pre-primary education was recognized as important for every child in the country, until the time of data collection pre-primary education was largely financed by the parents of the children. The government provided space and teachers for some schools only, whilst in other schools parents made their own arrangement to acquire teachers.

Special needs education generally lacks priorities. The study observed most classrooms were not conducive. HH/D children were given the worst classroom, like a dumping ground. For example in school A, one of the classrooms was located alongside the valley and when it rained the room was flooded. Another example was in school D where there were good classrooms constructed by donors which were nevertheless allocated to other classes by the schools management instead of to HH/D children as requested by the donors. As a result, HH/D children were squashed into a single room.

Prioritizing in SNE may be influenced by attitudes of the community towards CWD education. Attitudes were reported to be among the major barriers affecting education of CWD worldwide (Ajzen, 2005). The school management reflected the beliefs held by the community that CWD have no learning ability. They are merely accepted, only to respond to the requirement of the government. They believe that CWD are simply biding time and not learning. One of the heads of school declared that some of the issues could be solved by themselves instead of looking for government support; it was just matter of decision. The analysis went further in that the decision depends on priority. First priority of most school

management is to make sure that children perform well in the final examinations rather than making sure all children learn.

### 8.2.3 Challenge facing teachers

Teachers play key roles in the implementation of integration and inclusive education. They are expected to teach all children regardless of their unique individual needs. Apart from teaching the academic skills, teachers are responsible for the social and emotional development of their learners as well as the cultural aspect. Rose (2010) argued that teachers in inclusive settings are supposed to meet the diverse needs of all children.

The aim of establishing pre-primary special education units in Tanzanian schools is to enable CWD an opportunity and access to pre-primary education. They are supposed to enjoy the enrichment of pre-primary education as their peers without disabilities while preparing them for inclusive education at primary education level. Teachers are required to meet the needs of these children (Loreman, Deppeler & Harvey, 2010). Teachers teaching HH/D children were asked to discuss the challenge facing them in teaching HH/D pre-primary children in regular schools. The following are themes raised from the discussion with teachers concerning the challenge.

**Table 8.3 Themes concerning the challenge facing teachers teaching HH/D, data raised from interviews**

Statements	Freq.	Perc.
They are very young , they should start at the age of 10	2	2.5
Very difficult to teach them	6	7.5
Slow learners	6	7.5
Lack of classrooms	2	2.5
Size and design of the classroom not suitable for SNE	4	5
Lack of T-L materials	5	6.25
Poor cooperation with other teachers	2	2.5
Too much work load C/T ratio( Class size)	5	6.25
Lack of proper hearing screening	3	3.75
Irregular admission	6	7.5

Statements	Freq.	Perc.
Poor attendances	4	5
Lack of hearing aids	2	2.5
Lack of speech training room and facilities	4	5
It takes time for them to understand	3	3.75
Lack of motivation (task/salary ratio)	6	7.5
Lack of training	1	1.25
Children do not arrive at school on time	5	6.25
Poor classroom infrastructure (flood )	3	3.75
No teacher's table	4	5
Children lack official sign language-in the beginning	5	6.25
Children lack 3Rs skills	2	2.5
<b>Total</b>	<b>79</b>	<b>100</b>

**Source:** Field Data 2016

The table shows that there were various barriers hindering teachers of HH/D children. Common barriers included age of children, difficulty in teaching HH/D, HH/D were regarded as slow learners, poor infrastructure, lack of teaching-learning materials, lack of supportive equipment, irregular admission and school attendance, lack of teacher motivation and training and communication barriers between teacher and HH/D children.

### **Discussion**

The role of the teacher as a facilitator in overall education is determined by other factors like attitude, motivation/readiness, expectations as well as perceived knowledge and skills to handle CWD. Literature reveals that teachers are key elements for successful inclusion of children with special education needs. Horn & Timmons (2007) in Petriwskyj (2010) outlined several key elements for successful implementation of inclusive education such as preparation for professional teachers, school support, family support and extra time for consultation.

Teachers in the recent study reported to lack special training on how to handle and teach pre-primary HH/D children. This situation is similar to what was observed in other studies as a major challenge for inclusion in early years (Mohay, 2006; Sharma, Forlin, Deppeler &

Guang-Xue, 2013). In the study they revealed that teachers teaching children with special education needs in early education settings lack confidence in how to provide quality education programs to meet the needs of children.

Although in the recent study HH/D children were alone in a separate class the teachers teaching them were not confident to teach them. They were prepared to teach primary children and not pre-primary children. The situation would have been impossible had the children been taught in inclusive classrooms. Moreover, it should be borne in mind that these children in regular schools were prepared to join regular classrooms in primary education; thus the study found that it was very important to prepare them well to be ready for inclusive primary education by developing essential skills required for effective learning in inclusive settings. Although IE does not mean accommodating CWD in regular classrooms, the situation of regular classrooms where regular teachers are not prepared to handle CWD demands special education units to prepare CWD to manage the general classroom. In Tanzania integration is a process to achieve inclusive education (Tungaraza, 2010). For HH/D children, the emphasis is placed on developing reading and writing skills necessary for school learning and communication in a general classroom setting.

According to (Petriwskyj, 2010) challenges facing teachers in implementing inclusive education should be considered in order to make inclusive education reality. More important, inclusion in pre-primary education is more sensitive than in other ECE settings. Guralink (2001) claimed that early education settings require careful arrangement to ensure successful inclusion. In addition the teacher of the HH/D children is very important for effective inclusion (Stinson, 2013). Availability of suitable teaching and learning materials, professional teachers and specialized services are paramount for inclusion. Therefore, the need of professional teachers was of paramount importance.

Moreover, teachers were faced by the challenge of limited access to support services. Environment, training, collaboration with parents and other professionals dealing with children's issues are important for teachers to achieve the teaching-learning goals. In the study, school and particularly classroom environment did not support the teaching of HH/D pre-primary children. The classrooms were not prepared for HH/D pre-primary children's learning. Teachers were not comfortable; they felt segregated like their children and hence demoralized.

The teachers perceived that they did not have enough knowledge and skills to handle HH/D pre-primary education. Perceived ability affects the self-esteem of the teacher which in turn influences their teaching. Teachers require training support so they can be confident to teach HH/D children in pre-primary classrooms. The teacher of HH/D needs training in how to teach pre-primary HH/D children.

Collaboration with parents of HH/D children and their families was observed to be important for teachers to carry out their daily duties easily and successfully. Teachers and parents need to work together in order to ensure that HH/D learning takes place successfully. Teachers are responsible for teaching and guiding children during school hours, while parents should take responsibility of supervising children's homework (NAEYC, 2009; Stinson, 2013). Teachers and parents require effective and organized communication to ensure the success of the children's learning and development. They should collaborate on the strengths and weaknesses of children and agree on support. Not only should teachers and parents work together, but they should also collaborate with other specialist individuals providing services to children. Stinson (2013) suggested strategies for coordination of services that teachers may use in US:

- create monthly activities and post to all professionals
- recording video for sessions they want to be observed by other practitioners
- communication book may be developed and used to record communication advancement.
- Arrange for regular meetings for discussion and sharing experiences.

The strategies are good but it depends on the context. In the case of Tanzania, regular meetings may be employed successfully. Another strategy which can be used is the creation of monthly activities and sharing to all practitioners. These two strategies may work for parents and other individuals willing to support children. In Tanzania, school meetings involving the parents are a common method used to share and discuss the children's progress as well as school programs.

#### **8.2.4 Challenge facing parents of HH/D children**

Raising HH/D children is not an easy job. Most parents are flustered when they are told by the physician that their children are deaf. The challenge is mainly the communication barrier;

how they will communicate with each other. Communication is vital for relationship building, thus parents fail to build warm relationships with their HH/D children (Bockova et al., 2016; Griffin, 2013; Marschark, 1998, 2007; Marschark & Spencer, 2003; Marschark et al., 2011). More important is the concern of parents of HH/D children regarding their learning potential. The recent study conducted interviews to determine the challenges facing parents of HH/D children enrolled in pre-primary schools. The analysis of data obtained from interviews with parents of HH/D children at regular schools shows that most of them were facing difficulties in raising their children.

**Table 8.4: Statements raised by parents**

<b>Themes</b>	<b>Freq.</b>	<b>Percent.</b>
Marriage breakup (couple separation)	2	6.25
Family separation	1	3.13
Heavy work load	3	9.37
Financial problems-lack of sufficient funds to support the lives and education of children	4	12.5
Limited time for work/employment	3	9.37
Dissatisfaction with the education service received by the children	4	12.5
Challenge in finding schools that offer services for HH/D	4	12.5
Lack of support in raising the child	4	12.5
Communication barrier (lack sign language)	4	12.5
Stigmatization –mother of disabled	1	3.13
Discrimination from society	2	6.25
<b>Total</b>	<b>32</b>	<b>100</b>

**Source:** Field Data, 2016

The table shows that marriage breakup/couple/family separation, heavy duty, financial constraints, unemployment, dissatisfaction with the education service available, difficulty in finding schools, lack of support, communication barriers, stigmatization and discrimination in society are major challenges facing parents of HH/D children.

#### **Marriage breakup (couple separation)**

The analysis of data regarding challenges and experience of parents with HH/D children revealed that most children were living with one parent only. The interview with parents shows that among four parents interviewed three were female. All three females were not



living with the father of the child. According to the mothers, husbands abandoned the wives once they bore a disabled child:

“...my husband abandoned me after recognizing that our child is deaf” (P3, field note)

“...we separated after deaf children were born” (P1, field note)

Data from documentary review and interview with teachers all show that most of the HH/D children were living with one parent; the mother or with other people who were not their biological parents.

“Most of these children you see here are not living with their parents, they live with other people who are not their parents, and others are even not relatives, just people who volunteered to live with them. For example child X is living with an old man who is his grandfather because the mother was married to another man. The old man himself needs someone to take care of him... ” (A4, field note).

In another school the teacher said:

“some of these children are not living with their parents for example Y her mother lives in another region far away from here, the child is living with just good people who volunteered to stay with her so that she can come to the school ...they do not know even the background of the child” (D3, field note).

### **Family separation**

The theme raised after analysis of the data is worthy of discussion. Family separation was observed to exist among the majority of children. It was caused by several reasons; one, marriage separation automatically leads to family separation as one parent will be missing in the family. Second, most children were separated from their family and staying with people who were not their parents. Third, most children were living in hostels and not with their parents. Among HH/D children involved in the study eleven (11) were accommodated in hostels while three (3) lived with other people.

### **Heavy workload/overburden**

Mothers of HH/D children were observed to be overburdened in the study. The responsibility to take care of the child was left to them. Being responsible for finding all basic needs for the child and the whole family, making sure that the child attended school as well as doing the household chores was reportedly more than a task one person can do.

“...I am alone in the house, I have to work so that we can get food and other needs, at the same time I have to escort my child to school and bring him back after school. All home activities are my duty, I become tired. It is too much for me...” (P1, field note).

Generally, most parents experience hardship in their daily lives. They need support to overcome the situation.

### **Financial problems**

The study observed that all HH/D children were from poor families. All parents involved in the interview complained that financial support was inadequate. Financial support was needed to meet the cost of meals, accommodation and transport, journeys from home to school and back.

### **Limited time for work/employment**

The situation requiring parents to spend much time with their children limited their opportunity to work. Most of the time was used to care for the child; hence there was no time for productive work. School time for pre-primary education in Tanzanian public school ranges between 3 to 4 hours. The school timetable begins at 08 am and ends at 11:30 am. Consequently the parent cannot bring the child and return home and then come again to pick up the child when they live far away from the school. The parent is thus required to stay at the school compound waiting for the child to finish the school session after which they can return home together. This was reportedly the case for most parents of HH/D children in the lower classes. One of the district officials reported that the parents suffered in that their whole day was taken up with the care of their children.

### **Quality of the education service for the children**

Parents wanted to see their children acquire some skills and knowledge from school. The expectation for interviewed parents was to see their children develop reading, writing and number skills. They wanted to see their children able to read, write and count. These skills were observed as important in pre-primary education level as a foundation of education for life.

“...my children are not learning at school, I wish I could get a good school with specialised teachers so that my children can learn as non HH/D children” (C4, field note).

### **Challenges in finding HH/D school**

Finding a school for HH/D children is a critical problem to parents throughout the world, and the situation is worse in developing countries, Tanzania included. Very few schools accept HH/D children due to language and communication barriers. In Tanzania only a few schools

enroll young children with hearing loss. The analysis of data regarding challenges and experience of parents with HH/D children revealed that most of the parents experienced hardship finding schools for their children. It was not easy to find a school with an HH/D unit that provides pre-primary education.

### **Lack of support in raising the child**

Marriage and family separation resulted in minimizing support for raising the HH/D child. The parent who was left alone lacked support from the partner and other members of the family. Most of the HH/D children were living with their mothers. Women were most affected as they were left alone with their children with disabilities. The study found that society believes that to have a child with a disability is a bad luck or curse to the family, and the bad luck and curse were related directly to the mother not the father. Men left their wives and married another one or lived alone. Relatives and siblings of the man also neglected the divorced woman. Most women claimed that they received no support from either their partner or the family and entire community.

### **Communication barrier**

All parents involved in the study are hearing parents. They did not have any knowledge about sign language. They failed to teach their children spoken language and/or sign language. As a result there was a communication breakdown. All parents claimed to face communication problems. They wanted to talk with their children, involve them in various activities but they failed because of language deficiency.

### **Stigmatization and discrimination from the society**

The findings revealed that parents of HH/D children felt discriminated/excluded in society. Discrimination of wives by their husband for having a disabled child was frequently observed. Discrimination by relatives and discrimination by the community in general prevailed. Divorce as a result of bearing a deaf child was observed in this study as stigmatization in society. Parents and relatives of the man supported the divorce, hence in keeping with attitudes of society. Having a disabled child was observed to be the fault of the woman and not the man.

## **Discussion**

Experience from elsewhere shows that raising a child with disability exposes parents to all kinds of difficult situations (Marschark, 2007). The findings of the recent study show that divorce and family separation create immense problems for parents of HH/D children. Not only the parents but also the children suffer under such circumstances. Literature highlights the fact that children need to be with their parents for emotional and social development. Attachment was observed to be fundamental for normal social emotional development of the child (Bowlby, 1958; Isabella, 1993; Leigh, 2004; Marschark, 2007). According to Bowlby, 1958 children needed to be attached to a person who would be close and attend to the needs of the child positively, timely and consistently. Parents- especially mothers- play a major role in their children's development as a result of the strong bond between mother and child. Research (Isabella, 1993; Mahoney, 2009) shows that mothers who respond effectively to their children have a positive influence on the development of their children in:

- socio-emotional functioning,
- friendship and easy interaction with peers,
- communication development,
- cognitive development.

In the hostel children were supervised by matrons and patrons who were not their parents or guardians. The number of children under one caregiver was not optimal; care givers were few compared to the number of children they should care for. As a result the social development of young HH/D children is hindered. The hostel was considered to be the best option to serve CWD in the light of the current situation where there is a scarcity of schools and centers that provide special education services. However, the target of any child service provision including pre-primary education should focus on the holistic development of the child rather than one or two aspects.

Generally, the recent study observed that in Tanzania raising a child with disabilities presents unique challenges to parents when compared to parents of children without disabilities as it was reported in other countries. For example, Bailey & Simeonson (1992) cited in Odom & Wolery (2003) study observed that parents often stress the need for information concerning their children with disabilities. They ask about the status of their children, the services available, availability of facilities, resources and support, as parents in Tanzania claimed.

In addition, it was observed that parents of CWD, HH/D included, experience different problems. Some problems include education and health of their children as well as social prejudices (Akdogan, 2016; Griffin, 2013).

Owing to the difficulties parents face, participation in education of their children with disabilities is reported to be a challenge. Poor participation of parents affects the educational success of their children. In Israel for example, studies observed that when parents are less involved in educational programs of their children, the programs are not so assistive (Hebel, 2014). Little assistance leads to problems in planning individual education programs for the child; also it hinders the inclusion of the child in the community.

In Tanzania, participation of parents in the education of their children with disabilities is a big challenge as reported in the recent study. Parents are required to be part of the education program of their children to ensure that learning takes place. Teachers claimed that parents were reluctant while parents declared that they have several reasons for their reluctance. The study suggests that the government and the school in particular should find ways to support parents and enable them to participate fully in the delivery of education of their children for effective learning as well as the development of the children. In Israel it was reported that barriers to parent involvement include:

- minimal communication between parents and teachers
- insufficient knowledge of parents concerning special education practices
- poor participation of parents in meetings discussing IEP of their children.

The barriers affect parent's participation in the implementation of the IEP. The IEP investigated in Israel is different from the education program in the recent study; however they share similar obstacles and consequences in the education of HH/D children.

Despite difficulties and obstacles parents face they are required to understand that they are key participants for their children's education and development. They should learn how to participate and make sure that they are available for collaboration. The degree of health in the child depends on how strong the parent is and amount of time and effort devoted in supporting the child. Griffin (2013) commented that in US parents are the ones most

enlightened, informed and dedicated to supporting their children. They are the ones who know the most about their children.

Generally, parents play a very important role in the education of their children. The recent study was in line with other studies (Evangelou & Sylva, 2003; Rodgers & Wilmot, 2011) to show that children perform better if:

- there is a close relationship between home, early year settings and school,
- everyone involved in the child's successful development share the information about children's learning,
- parents show interest in their children's education and make learning a part of everyday life,
- children are actively involved in the decision making on their own learning.

The study revealing the situation of parents of HH/D children in Tanzania showed that parents suffer from the very idea of having a child with disability. The sufferings of the parent directly affect the HH/D child but also affect the participation in school learning. Parents are needed to be part of the education program of their children to ensure that learning takes place. Therefore, intervention is needed to help parents to overcome the challenges to ensure successful integration of their children in pre-primary school learning.

### **8.2.5 Challenges facing children**

Being a HH/D person is regarded as a condition that may cause personal and interpersonal concerns (Akdogan, 2016). The loss of hearing makes HH/D children different from their hearing peer children. The tenet of their differences lies in the ability and ways used to obtain information as well as to communicate. Lack of communication causes under-functioning in their daily environment. Hearing loss poses barriers in communication which impairs interaction among HH/D and hearing children. Moreover, even when HH/D children want to interact with other children sometimes they may face discrimination. As a result the HH/D children lead difficult lives (Akdogan, 2016). The recent study set out to explore general challenges facing pre-primary HH/D children in Tanzania. The observation from the study revealed that the children's lives were fraught with challenges. For the HH/D child, hearing loss means a lack of opportunity to acquire vital important information e.g. announcements, news and basic knowledge.

### **Limitation in registering announcements**

All announcements in the school, public meeting and transport means were provided by audio media only. Children missed the message and information contained in announcements unless there was an interpreter. For example in public buses ‘*daladala*’ the conductor announced important information for the passenger, the bus route and all stops. The HH/D child has to rely on the visual cues for example looking outside to recognize the stops, but if the bus was crowded there was a huge chance of the child missing the stop where she/he should get out.

### **News-TV and radio media**

All news on TV and radio were broadcast with sound. No single TV in Tanzania at the time of the field study was observed to accompany the news with sign language. Therefore, HH/D have no access to any news information delivered through the media. The concern was raised by an interviewee that HH/D children in the country were living exceptionally segregated lives in most part of their lives.

### **Basic knowledge – health, reproduction, safety, HIV/AIDS**

Learning does not happen exclusively in a rigid formal setting like in regular or special education classrooms. Children learn from various sources in different ways and by using their senses. Most health, reproduction and safety education are acquired through the media. HH/D are deprived of the knowledge not only because parents and teachers did not teach them but also through lack of access to the media due to hearing loss. One of the participants declared that:

“You know these children lack information about ... health education for example education on HIV/AIDS. Observation from experience in this field and from a certain study conducted to examine risk behavior for deaf children and youths show that they start to engage themselves in relationships very early in life therefore they are at high risk for HIV/AIDS infection.” (A1, field note).

### **Discussion**

Children with hard of hearing impairment or deafness are unique compared to other children with disabilities (Marschark & Hauser, 2012). The uniqueness of HH/D children is by and large based on the communication barriers. Communication is vital for everything an individual does in everyday life. Communication helps a person to define and give meaning to his/her life experience and emotions. Language helps children in exploration and understanding of their environment as well as to express themselves. Language is important

for educational learning for all children specifically for HH/D children. HH/D children need an environment full of language experiences to enable them to develop language and communication skills necessary for learning and development (Bockova et al., 2016). The study shows that too often HH/D children sit alone in the classroom; they are not able to communicate with their fellow children and their teachers (Eastin, 1999).

HH/D children need an opportunity for natural language development as early as possible during their early years. Absence of early language learning hinders their development that results in deficits in school learning. Literature recommends extensive intervention for such children to enhance language development (Eastin, 1999). Schools must have enriched language environments, opportunity to interact with children of their age and should be taught by teachers and other professionals competent in language. Also, the school management should be competent and knowledgeable in HH/D education; more importantly availability of appropriate support services should be a priority.

Children with disabilities faced several challenges including school related challenges. The study conducted in Uganda (David, 2014) reported similar challenges including:

- lack of effective participation
- community misconceptions and stigmas
- inferiority complex
- hunger
- school related challenges, including
  - financial problems to manage the school and education services
  - unfriendly school infrastructure
  - teachers and other children with negative attitudes towards children with disabilities
  - lack of teaching and learning materials
  - limited involvement and participation of CWD in sports and games related to the specific disability
  - Too few teachers with sign language training
  - long distance from home to school.



Moreover, the study revealed that the country currently lacks real inclusive educational structures that facilitate the inclusion of HH/D children in the regular classroom together with their peers without hearing impairment. This situation is similar to the observation made by (Hettiarachchi & Das, 2014) in Sri Lanka, in that the country also lacks real inclusive educational resources where all children learn together in the regular classroom.

Also, among the challenges facing HH/D children's education is the lack of special education units particularly in rural areas. A similar challenge reportedly affects the education of children requiring special needs education in Sri Lanka (Muttiah, Drager & O'Connor, 2016). Furuta (2006, 2009) listed the following problems hindering the provision of special education in Sri Lanka; inadequate number of rural schools having special education units, children with disabilities denied the admission to schools by school administrators, limited qualified teachers, parents lacking awareness concerning educational facilities, as well as communities unaware of the advantages of educating children with disabilities.

### **8.3 The way forward**

Pre-primary education for HH/D children as well as education of all children with disabilities in Tanzania faces challenges. First of all pre-primary education for children with disabilities as a part of early childhood special education is a new field. In Tanzania experience shows that enrollment for HH/D children formal pre-primary education started less than ten years ago. It is a really new field. Teachers, parents and other education practitioners struggle how to deliver the best services. Second, lack of specialized teachers, lack of parents and community awareness and general environmental barriers hinder effective pre-primary education for children with disabilities. Despite the many obstacles, a few HH/D were enrolled and receiving their education in separate classrooms in integrated/inclusive schools. The study investigated how teachers overcame the barriers, their opinions and suggestions concerning the education of HH/D children in special education units as well as their concern about inclusive education.

#### **8.3.1 Special education units as a strategy toward inclusive education**

Special education units were established in 2003 to meet the demands of the HH/D. Earlier, HH/D children were enrolled in special schools. The initial idea to meet the needs of these children was the idea of inclusive education which was adopted in 1998. Initially the idea was to have thirty five (35) children in each class where 30 should be normal and 5 with different

disabilities. The program basically targeted primary education while pre-primary education was excluded. The plan failed due to lack of specialist teachers to handle the needs of children with special education needs in those inclusive classes. Regular teachers were ready to include children with SEN but they lacked knowledge and experience on how to handle them. There were no programs for special training; therefore the project proved to be a failure. One of the participants stated that:

“...When we visited the pilot schools we observed that it was very difficult to implement inclusive education and in other schools it was observed to fail completely. Teachers declared that they face challenges as they did not know how to deal with children with SEN” (A2, field note).

From that observation it was suggested that the government policy of adopting inclusive education first considered including CWD in the playground. Therefore the special education schools were discouraged as they reflected segregation in education while encouraging the integration perspective. The idea was to include all children regardless of their disabilities in the same school compound. As a result of this option children with special education needs had the opportunity to integrate with other children during out-door activities including play and other extra-curricular activities. The respondent claimed that:

“...it seemed that there is no means, as far as the government had decided to opt for inclusive education, let us see now if we can start even by including them in play in the same school compound, that is to say special school as it is in school...we again segregate children. Despite their disabilities that hinder them to be included with others in the same classroom but even in outside environment, to engage in activities, to play together and so on, we realized that this also was some kind of inclusion. It will aid inclusion of these children with disabilities and without disabilities” (A2, filed note).

Moreover, inclusive education was observed to work better with teachers trained in handling children with special needs education. The absence of trained teachers resulted in exclusion instead of inclusion. Without specialist teachers special education schools still remained the best option for children with severe to profound disabilities whereby special education needs provision was urgently needed; for example in the case of HH/D and visually impaired/blind (VI/B) where sign language and Braille were needed. Without specialist teachers, inclusive education turned into exclusive education. As one of the respondents stated:

“...otherwise let us leave them in special classes with specialist teachers so that they can get what others get” (A2, field note).

### **8.3.2 Pre-primary special education needs**

Most children with SEN start school at an older age than their peers. Parents' lack of awareness was observed to be the major source of the delay, as they lack the knowledge as to whether their children can attend school in earlier years and learn like other children. Another reason could be the scarcity of teachers specialized to teach them for example teachers for the Deaf. As a result the concentration of SEN children was with older children in other grades rather than pre-primary classes. Most schools with special education units for the Deaf had no class for pre-primary education; they were mixed with grade one and two and taught at grade one level. Lack of special teaching and learning facilities for pre-primary children was another reason raised to justify the absence of pre-primary classes for CWSNE. Lack of desks, mats, mattresses and other materials required for early childhood education were observed to hinder pre-primary education for children with SNE. One of the respondents commented that:

“Just imagine, they start school with eight to ten years then they stay in school for ten years, they finish grade seven when they are older than average”(A2, field note).

Moreover, some of the teachers felt that it is possible to accommodate children in their early years for intervention programs in pre-primary education. The aim is to provide the basic skills required as a foundation for later education/learning. Commitment of one of the special education units was thus expressed:

“I want to change this situation, we start with them in pre-primary class, build their language and communication skills, then they should start at seven years like other hearing children and not ten years” (A2, field note).

### **8.3.3 Strategies to overcome the above challenges**

Teaching children with special education needs was reported to be a big challenge to all teachers regardless of their background. All interviewed teachers commented that persistence and love are the only means to overcome the challenges facing them. Persistence and love lead them to be innovative, to find their own means on how to care for the children and make sure that they get at least what was recommended. Buying the materials out of their own money, making use of local available materials and learning how to handle them, especially using sign language, most teachers took the initiative to acquire skills, learning sign language privately from children (older) and from other sources.

### **8.3.4 Opinions concerning inclusive education in Tanzania**

Inclusive Education (IE) is considered to be effective to minimize or to eradicate segregation in education and in society in general. Most teachers support IE; however they raised concern that the existing situation of modified IE is not working for children with severe impairment, including hearing impairment (HI/deaf), visual impairment (VI/blind) and severe intellectual impairment (II). These children require early intervention before being included in inclusive classrooms. HH/D children need to acquire basic skills like sign language and communication skills. Braille skills and mobility training were observed to be crucial for blind children. Special classes are inevitable for pre-primary children with special education needs.

### **8.3.5 Improvement of IE**

Implementation of IE in the country requires major changes and modifications. It should start with teachers, who must be trained first in how to handle the inclusive classroom. All teachers must possess at least the basic knowledge concerning children with special education needs. The practice of IE without trained teachers was identified to be extremely difficult. Teachers struggle and children do not learn. Infrastructure and curriculum modification seemed to be urgently required to meet the special needs of children with disabilities in the classroom and in the school in general. Creating awareness for parents and the community at large was a challenge since most people still do not accept the fact that children with disabilities can go to school and learn.

Voices concerning inclusive education:

“If you ask me personally about inclusive education I can say that if it is practiced is only too little. Its direction is not successful to a high degree, because it requires major and many modifications. For example for me, my idea was that inclusion should not be started in the classroom for children, it will fail, ...it should be tabled in teachers colleges....after five years we should have enough trained teachers in every school ...” (A2, field note).

“When donors bring their money we rush to implement programs in classrooms, you gather a few teachers for training in a few days ..., there are head teachers, education inspectors, education officers who are not aware, in the end the trained teachers despair...” (A2, field note).

“I can say that the government has the intention to implement inclusive education but is not yet prepared and organized.” (A2, field note).

“When you decide to include deaf child in inclusive classes you deceive yourself, which means you isolate the child from the regular academic skills which she or he will not access, (A2, field note).

“Inclusive education is a better option for all children but not HH/D pre-primary children. It is impossible to teach them in regular classrooms. They need language and communication training first before inclusion.” (B3, field note).

“Inclusion yes, it is applicable for primary education but not at pre-primary level” (D2, field note).

## **Discussion**

Provision of services for children with disabilities in their early years in an inclusive setting is better for both children with disabilities and children without disabilities (Barton & Smith, 2015). For the past three decades the concept of inclusion has been attracting the service providers of young children with disabilities (Odom & McEvoy, 1988). Ideal inclusion seeks to integrate the fields of ECSE and ECE in order to meet the needs of all children (Reichow et al., 2016). Literature shows that in US, for example, all sectors dealing with EC affairs have been working together trying to share the inclusion vision by training personnel and developing programs on how to teach all children together (Reichow et al., 2016). Advocates for inclusion focus on the importance of inclusion in early years. Research shows that inclusion proved to have a positive effect on the feeling of belonging, participation and developing positive social relationships for children with disabilities (Odom et al., 2012). However, literature reveals that there has been a gap between theory and practice in the field of inclusion of ECSE (Reichow et al., 2016). ECSE in inclusive settings, regardless of the level of inclusion, faces various challenges.

Inclusion of pre-primary education in Tanzania faces a lot of challenges governing various aspects. It requires the commitment of all stakeholders- the policy makers, school management, regular and special education teachers, parents and other community members- to collaborate and work together. Currently there is no special program for pre-primary education and early childhood education for children with special needs in the country. As a result most HH/D children, as other children with disabilities, are still receiving their education services in special education settings instead of being included in regular settings. The result shows a similar situation is reported to prevail in other countries, for example in US it was reported that the number of children with disabilities receiving services in inclusive settings is way below 50%. ECSE is a new field that started in the last half of the 20<sup>th</sup> century (Barton & Smith, 2015). Despite the challenge inclusion still receives attention in the context of providing education to all children in society. In Tanzania, to date, the emphasis has been on inclusive education at all levels of education to meet the EFA goal. Research shows that without well planned preparations to meet the needs of all children in the classroom including

the needs of children with disabilities who require special education, the EFA goal cannot be realized.

Thus, there is a need for research, policy, regulation and advocacy for the field. Teachers and other practitioners in the field of ECE require training and preparation to handle CWD. Teachers play key roles in the implementation of inclusive education. Teachers require training to meet the needs of all learners in the classroom. Training is reported to facilitate teachers by adding knowledge and skills, and more importantly, training changes the attitude of teachers towards CWD. The sense of being skilled and knowledgeable as well as possessing positive attitudes all facilitate IE. The findings of this study show that teachers were not trained in how to handle inclusive classrooms; rather they were prepared to teach only one category of disability. The special education situation prevails, despite the fact that the school is supposed to be inclusive.

The study also revealed that regular teachers were not trained to handle the inclusive classroom situation which is why they refused to include CWD in their classroom; they simply did not know how to deal with them. Training is very important for teachers to attain their role; it should be based on practical and not only theoretical concepts to ensure suitable skills are learnt (Forlin, 2012). Although the current teacher education curriculum includes teaching in inclusive classrooms, a lot has to be done specifically in the planning for in service training for teachers who are already in schools where they are expected to teach in inclusive classrooms.

Teachers need support from other sectors to implement IE. The Ecological system comprises several systems that should work together to promote development and education of CWD. Integration of all sectors dealing with EC affairs need collaboration for effective delivery of services. Studies from different countries highlighted the emphasis teachers placed on the importance of collaboration between teachers, parents, school managers and other professionals working with CWD for effective inclusion (Detraux & Thirion, 2010; Hu, 2010; Pretis, 2009).

In Tanzania pre-primary education is an important educational stage to prepare children for school life. As the country advocates for inclusive education in regular settings, pre-primary education for CWD including HH/D children is not only important for preparing them for

primary education but, more importantly, it is the movement through intervention to foster inclusive education (Tungaraza, 2010). In that regard, it must be well planned and organized to ensure the attainment of the targeted goal. Guralnick (2001) recommended that the quality of inclusive or specialized early childhood education service impacts the expected outcome.

Moreover Guralnick raised concern that access of education services for CWD, regardless of the type of disability, is problematic. Recently, as in other countries, in Tanzania due to lack of resources and trained personnel to provide service for CWD in pre-primary education level, there is no guarantee for opportunities to access and participate in free public education. Unlike in other developed countries, private organizations provide pre-primary education for normal developing children; there are no special facilities for CWD except hospital services for rehabilitation. Parents of CWD are responsible for the health, education and intervention services of their young children.

Moreover, most of the parents are poor and lack awareness of the need of early intervention. More importantly, there are limited intervention facilities in the country, the few available are more for the rehabilitation of children with physical disabilities. Thus with regard to the above finding, the research suggests that it is high time for the government to intervene to attain the EFA goal.

Although situations differ, the main ideas could be modified and adapted to be used in another context. For example in US practitioners consider the following in order to achieve success in early childhood inclusive pre-primary education (NAEYC, 2009); the study suggests that the strategies could be modified to suit the context of the recent study:

- create high expectations for every child to reach his or her full potential,
- develop a program philosophy on inclusion,
- establish a system of services and support,
- revise programs and professional standards,
- achieve an integrated professional development system, and
- influence federal and state (government) accountability.

Parents and teachers are very important facilitators for inclusion of children with disabilities. Parents are responsible for caring and teaching their children in their early years before they

go to school. Most early learning takes place unconsciously during early life. From the finding HH/D children lack early learning experience due to poor communication resulting from deafness. Parents expect teachers to teach their children everything. It should be noted that effective inclusion relies on the collaboration of parents and teachers.

Nevertheless, teachers teaching pre-primary children with disabilities need to be prepared in order to facilitate inclusion in pre-primary education for children with disabilities. For example the study findings suggest that regular teachers teaching in regular classrooms were not cooperative in assisting HH/D children. One major reason mentioned was communication barriers. HH/D children were not able to communicate by using spoken language; they were learning sign language and simultaneously, regular teachers had no knowledge of sign language. Further, even teachers of HH/D children claimed that they find it difficult to communicate and teach HH/D and they were not comfortable teaching HH/D. They stated that they struggled to learn the sign language through other HH/D in the school. There was no collective arrangement to train teachers in sign language. Therefore the study recommend for a purposively collective arrangement at ministry level to enable teachers and parents to acquire the skills and knowledge required for intervention of HH/D for successful inclusion in early life. Tanzania needs to learn from the experience of other countries concerning the process of inclusion of young children.

Additionally, observation from the study revealed that pre-primary education as a part of early childhood education, care and development rely on previous skills, knowledge and experience of the child. Thus, there is a need for planning for an early intervention program to enhance early childhood development and learning. Moreover, it is necessary to establish service centers that will provide support for parents, teachers and children. Although the Government is ready to implement inclusive education for all educational levels, the many challenges observed signal that much has to be done to achieve the EFA goal at pre-primary education level in Tanzania.

In summary, the chapter presents the presentation and discussion of findings concerning challenges facing HH/D pre-primary education in Tanzania and the way forward. The study found that provision of pre-primary education for children with disabilities including HH/D children was a challenge. All elements including the policy, school management, teachers, parents and children faced numerous challenges. HH/D children experienced hardship



situations throughout the entire system. Parents and teachers lack knowledge and skills on how to teach them. School environment did not support their inclusion in school. The government advocates for inclusion but schools and teachers were not prepared to handle children with diverse needs, HH/D included. Teachers and parents suggested the need for improvement to foster the inclusion of HH/D and other children with disabilities in pre-primary education in Tanzania.

## **CHAPTER NINE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **9.1 Introduction**

The recent study employed a multiple case study design under the umbrella of the Ecology System of Development. The aim was to investigate in depth information about integration and inclusion of CWD particularly HH/D children in pre-primary education in Tanzania. The study did not intend to make a comparison or generalization in a worldwide context. Therefore, the findings are confined to the Tanzanian context and particularly to the area of research and category of impairment involved.

#### **9.2 Summary**

The study focused on the inclusion/integration of HH/D children in pre-primary education in Tanzania. It was guided by four research questions; the first question concerned the policy situation governing children with impairment in both government and private pre-primary schools. The second focused on the methods and ways used to identify, assess and place children with hearing impairment in schools in Tanzania. The third embraced the nature of activities and support provided during the teaching and learning process in pre-primary learning environment and the fourth examined the challenges facing integration/inclusion of children with hearing impairment in Tanzanian education. The policy situation concerning children with disabilities in pre-primary schools was investigated by mean of the various documents made available for the purpose of investigation in CWD education.

Tanzania adopted an international policy advocating for the education for CWD, as documented in the Law of the Child Act 2009, UN Conventions on education for all/Jomtien Declaration on Education for All (1990), Dakar Framework for Action (2000) education for children with disabilities, inclusive education (Salamanca Declaration, 1994), the Millennium Development Goals (2002) Also, at a national level, the Tanzanian Government has endorsed several policies and regulations such as a national constitution, education policy, operational guideline, quality for child care and early development service provision in Tanzania, National Education Act and Primary Education Development Plan (PEDP, 2012). More important, education for PWD is laid down in the National Constitution.

Moreover, the reviewed documents revealed that in general the government of Tanzania has made an effort to provide an education service for children with disabilities. Education was realized as a basic human right for every child regardless of the status of the child. However, a lot has to be done to make sure that the right is fully realized. Furthermore, the Government has promoted access to education by providing free education and meals to CWD in registered special education units. Methods and ways used to identify, assess and place children with hearing impairment in schools in Tanzania were a challenge. The study revealed that there was neither guideline at national level to guide the identification and assessment of CWD nor screening procedures in order to identify CWD. Most CHH/D were identified at home by their parents or/and at school by their teachers and or peer observation.

Despite the lack of formal national guidelines to guide identification and assessment, few schools conduct hearing tests. Hearing loss tests involved behavior response testing and audiology tests. Audiology tests were observed in two schools only. In these two schools they use audiology to confirm the prevalence of hearing loss to children whose hearing loss was detected by their parents. The test was conducted at schools or hospitals by teachers and audiologists respectively. However, only the school age children with symptoms of HH/D were examined.

Placement of CWD in schools depends on the type and severity of disability. Placement included: residential special schools, day special schools, integrated special school/units and inclusive schools. HH/D children and other children with severe disabilities were educated in segregated settings such as special schools and special units/classes in integrated settings.

Activities observed that knowledge was essentially imparted by the teacher to the child. Several factors and characteristics influenced the interaction during both the classroom learning process and out-door play activities. Those factors could be grouped into three main categories such as environmental, personal and other factors that equally affect the teaching and learning. Environmental factors include classroom and school environment nature, classroom structure, size and space. Personal factors observed were gender, age of respondent teachers, academic qualification, teaching experience, professional qualification, training in special education needs and motivation to teach pre-primary children with HH/D. Other factors included children/class characteristics.

Support provision was observed to affect inclusion and integration of HH/D children. The children and their parents, as well as their teachers lack support. Children lack teacher's support during teaching and learning and play, parents' involvement in education matters, other teacher and children support in school. There was no mechanism to identify the kind of support the child needs and how to deliver it. The teacher tried to help children to acquire key academic skills- reading, writing and counting. Parents struggle with caring for their children adequately; they need support. Provision of support is important for effective integration and inclusion of HH/D children in pre-primary education in Tanzania. The finding alerts a need to develop a support mechanism for children, teachers and parents.

Information obtained concerning the challenges investigated was categorized under five important areas; policy, school management, teachers teaching HH/D, parents of HH/D and HH/D children challenges. Each party was faced with several difficulties that have a direct and indirect effect on the provision of education services for children with disabilities in general and specifically for HH/D children as the study findings revealed. The whole HH/D ecological system was surrounded by various difficulties that affect the child at the center of the circle.

### **9.3 Conclusions**

From the recent research findings the following conclusions were made:

With regard to the policy situation concerning children with impairment in pre-primary education, Tanzania recognizes the right of education to CWD. This was revealed by adopting international policies and formulating a national policy to promote education for CWD in the country. However, the study suggests more improvement at policy level is needed in order to thoroughly address the education issues governing CWD. There is a need for a special policy addressing education of all categories of disabilities at all levels of education including pre-primary level.

Generally the government of Tanzania has good intentions concerning the provision of an education service for children with disabilities. Education was realized as a basic human right for every child regardless of the status of the child. All children including HH/D have equal right to access education. However, a lot has to be done to make sure that the right is fully realized. It is not enough merely to state in the policy that all children are eligible for access to

education without developing implementation and evaluation strategies as to how the service shall be delivered.

Identification, assessment and placement of HH/D in Tanzania were a challenge. The absence of guidelines at national level to guide the identification and assessment of CWD results in the use of different methods varying from one school to another. There is a need for a basic international guideline in order to ensure the accuracy of assessment that will lead to proper intervention. Moreover, absence of screening resulted in delayed identification affecting the appropriate age for enrolment at school.

The study included teaching and learning activities to highlight the characteristics of the activities as well as interaction between children and children, children and teachers. The study concludes that the main activities in the classroom involved the imparting of knowledge and skills. Teachers concentrated on teaching basic academic skills. The interactions were mainly teacher-directed. Children responded according to the teacher's instruction. The main cause of poor interaction was reported to be poor communication resulting from poor spoken and sign language development in the HH/D children. The study highlights the need for improved development of child learning.

The study has concluded that there is a lack of support provision to promote inclusion and integration of HH/D in Tanzania. HH/D requires systematic and regular support to promote development and specific learning. Teachers teaching HH/D need support in training, provision of special materials and collaboration with schools, support of other teachers, parents and the community. Parents also lack support from the government and the community. The available support such as free tuition, meals and books are acknowledged but the respondents reported that this is not the only requirement of these parents.

The study also concluded that despite the effort of the Tanzanian government to provide education for all citizens including HH/D children in inclusive settings, there are still numerous challenges governing the inclusion of HH/D at pre-primary education level. These challenges were reflected in the whole educational spectrum of policy makers, school management, teachers teaching HH/D, as well as for parents of HH/D and HH/D children. Each party was faced by several difficulties having a direct and indirect effect on the

provision of education services for HH/D children. The whole HH/D ecological system was surrounded by various difficulties that affect the child at the center of the circle.

#### **9.4 Recommendations**

The recommendations provided in the study are based on the conclusions resulting from the findings. The recommendations focused on three clusters: short term recommendations, long-term recommendations and further research recommendations.

##### **A. Short term recommendations**

The government had good intentions to implement inclusive education by developing an inclusive and integrated education system in regular schools except for pre-primary children with special needs. However, realization of the desired goals implies a long journey ahead. Therefore, concerning the HH/D present in the schools the government and the respective school authorities should consider the following:

- i. there was a need for a brief training for the available pre-primary teachers for the HH/D in how to teach pre-primary deaf children. Pre-primary children are children. They have unique characteristics as other children during childhood, thus specific teaching strategies are urgently required.
- ii. there was a need for workshops which would include tutors, teachers, district and ministry officials, head teachers and school inspectors concerning the integration experience of HH/D children. The sharing of experience and knowledge would facilitate mutual understanding among those key education stakeholders for the amelioration of HH/D early education. The existing situation where only a few teachers were involved proved inadequate for attaining the desired target.
- iii. the available assessment/screening centers should be equipped with adequate modern technology as well as specialists to conduct the assessment. It should be open for all children and not only for school age children.
- iv. all schools with HH/D education units should be equipped with screening and assessment facilities for easy service delivery.
- v. urgent language training should be conducted for children and their families to enhance their communication development and learning. Communication is very important for children's growth, development and learning. Language is a key channel of communication. The lack of language hinders communication that directly impacts development and learning.

- vi. the government should make sure that all HH/D teachers are located in the schools with HH/D children to remedy the shortage of specialist teachers.
- vii. all schools with HH/D units should work together with teachers of HH/D to provide an integrated school timetable in order to make social activities such as play and out-door accessible for HH/D children.

### **B. Long term recommendations**

Early childhood special education in Tanzania was new for everyone. Therefore, it should be made known to people, especially the key education stake holders:

- i. **Policy clarity:** the policy should be clearly stated and the right of education for children with special education needs should be openly stated in terms of each category of special needs.
- ii. **Strategies:** the government should make sure that there are clear strategies on how to implement the policy. The existing silence was observed to impact the decision and service delivery to HH/D.
- iii. **Training:** training for teachers should be guided by specific principles rather than relying on the desire and willingness of the teacher only. There should be guidelines and principles to govern the teacher training and teacher preparation for teachers to teach pre-primary children with special education needs.
- iv. **Professional development:** a professional teacher program should be available for all levels of training. There should be an open door for the in service teacher to pursue a higher level of training and education in the area of specialty. The certificate, diploma and degree should focus on early childhood special education in order to recruit experts in the field.
- v. **Accessibility:** more schools must be supported to accept children with special education needs. Every district, for example, should have at least one school offering early childhood special education service for pre-primary children.
- vi. **Assessment:** the government should seriously consider the issue of early screening and assessment of children to identify children with special needs earlier in life. The earlier the identification, the earlier the intervention.
- vii. **Assessment centers:** the available assessment centers should be equipped with adequate and modern technology as well as specialists to conduct the assessment. More centers should be established alongside schools in every ward.

- viii. **Availability of resources and materials:** the ministry of education, science, higher learning should make sure that the resources are available on time. The capitation for resources should be increased to include the cost of materials for children with special education needs. The money should be given to the school to purchase the materials they want.
- ix. **School environment and classrooms:** old schools should be thoroughly renovated to accommodate all children regardless of their special needs.
- x. **Infrastructure:** all plans for new school buildings should consider the needs for young children with special needs. The plan should not place emphasis on children with physical disabilities only but also consider HH/D children. They need a classroom that will inhibit noise from outside and enhance listening and communication among HH/D.
- xi. **Parents and community involvement:** the ministry and the school in particular should make the opportunity available for parents and members of the community to take part in the education provision for CWD/HH/D. Parents can be part of the school and the class providing support for children together with the professional teacher. Parents and community involvement may improve teacher-child ratio and the need for supportive personnel.
- xii. **Enrollment period:** pre-primary children with special needs should be enrolled at the same time as other children. The beginning of the year could be a better time for all children to start school in order to avoid irregularity in admissions which affect teaching and learning in the classroom.
- xiii. **Nutrition:** the ministry of education should make sure that the meal capitation is adequate to meet the balanced diet needed by the children. A balanced diet plays a major role in child development and learning. The government should make sure that safe water is available in schools for children's consumption as young children are unable to get through the day without water. Food and water are survival needs requiring attention.
- xiv. **Teacher motivations:** good salaries, hardship allowances and other remunerations could motivate teachers to engage fully in teaching children with special needs. Teaching HH/D and other children with disabilities is not an easy job. Teachers face unique hardships and challenges compared to teachers teaching children without disabilities. They need more time for preparation and teaching the children so that they can achieve the learning goals. The situation where teachers teaching children with



special needs receive the same benefit lead to demotivation. Teachers volunteering to take up training in special education and engage in teaching accordingly need to be motivated.

- xv. **Age mixture in the class:** the study recommends the age for pre-primary children with special needs to be the same as other pre-primary children; according to the policy this means 4/5 to 6 years. The earlier the better in ECE; if children are identified earlier, they get access to school earlier and can develop the language earlier as well as facilitate their further learning.
- xvi. **Support extended to family:** the government should find sustainable programs to support parents of HH/D children. They need financial support, language training support and emotional support. Raising a child with disability is not an easy task. It creates a lot of challenges to parents. The current situations where the parents struggle alone without organized programs to support them need improvement.
- xvii. **Awareness creation:** there is a need for creating awareness from family level to the whole community on the need and right of education for children with disabilities. Parents and the family should understand the importance of early education for their children with disabilities. Teachers and the school should be ready to accept those children in their early years as recommended in the policy. Awareness will help society to advertise and promote early childhood inclusive education in the country.

### **C. Further research recommendations**

Pre-primary education for children with disabilities is a new area in education in Tanzania that requires research for quality provision of education. The recent study made the following suggestions for further research:

- i. The recent study was conducted in two regions only. It would be better to conduct a survey including as many regions and schools as possible in order to get a broader picture of the inclusion and integration of HH/D in the country for planning purposes.
- ii. The study was conducted in government pre-primary schools only; the situation in private pre-primary schools was not known, indicating that a similar study could be conducted in private pre-primary schools.
- iii. The study explored the experience of HH/D children, other studies should be conducted to disclose the experience concerning children with other disabilities such as visual impairment, physical and multiple impairment.

- iv. Teaching and learning practices were observed whereas the outcome of the practices in children was not determined. Other studies should be conducted to evaluate the impact of teachers and children's practices on child development. The results may help the educational planner what to consider for ECSEN with a view to improving pre-primary education for HH/D.
- v. Since pre-primary education prepares children for primary education, other studies should be conducted to explore the transition from pre-primary to primary education in order to enhance effective inclusion of HH/D in primary education.
- vi. The study investigated integration and inclusion at pre-primary level; other studies should be conducted in day care centers to study how HH/D children are integrated.
- vii. Case study is limited to study cause- effect relationships of inclusion of HH/D; a longitudinal study should be conducted to trace the impact of early identification and assessment on the inclusion of HH/D children in Tanzania.

## Abbreviations

AIDS	-	Acquired Immune Syndrome
BEST	-	Basic Education Statistics in Tanzania
CHH/D	-	Children with Hard of Hearing/ Deaf
CWD	-	Children with Disabilities
CWSEN	-	Children with Special Education Needs
CRC	-	Convention on the Rights of Children
CR/C	-	Classroom Ratio/Class
CRPD	-	Convention on the Rights of Persons with Disability
C/T	-	Class/ Teacher
DAP	-	Developmental Appropriate Practices
Db	-	Decibels
DEC	-	Division for Early Childhood
DEO	-	District Education Officer
ECCE	-	Early Childhood Care and Education
ECE	-	Early Childhood Education
ECD	-	Early Childhood Development
ECDC	-	Early Childhood Development Care and Education
ECI	-	Early Childhood Inclusion
ECI	-	Early Childhood Intervention
ECSE	-	Early Childhood Special Education
EFA	-	Education for All
ETP	-	Education and Training Policy
HH/D	-	Hard Of Hearing/Deaf
HI	-	Hearing Impairment
HL	-	Hearing Loss
HIV	-	Human Infectious Virus
HoS	-	Head of Schools
IDEA	-	Individual with Disabilities Education Act
IE	-	Inclusive Education
IEP	-	Individual Education Plan
ENT	-	Ear Nose and Throat
IQ	-	Intelligence Quotient

LGA	-	Local Government Authority
MDGs	-	Millennium Development Goals
MoEVT	-	Ministry of Education and Vocation Training
NAEYC	-	National Association for Education of Young Children
NSGRP	-	National Strategy for Growth and Reduction of Poverty
PEDP	-	Primary Education Development Plan
PWD	-	People/Persons with Disabilities
SEN	-	Special Education Needs
SNE	-	Special Needs Education
SNEO	-	Special Needs Education Officer
TDS	-	Tanzania Deaf Society
TIDA	-	Tanzania Intellectual Deaf Association
T-L	-	Teaching-Learning
UN	-	United Nations
UNCRC	-	United Nations Convention of Rights of Children
UNESCO	-	The United Nations Educational and Science and Culture Organization
UNICEF	-	United Nations Children Fund
URT	-	United Republic of Tanzania
UPE	-	Universal Primary Education
US	-	United States
WB	-	World Bank
WHO	-	World Health Organisation

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## Appendices

### I. Officer Ministry of Education

An interview schedule for Officer Ministry of Education, Science, Technology and  
Vocational Training

Unit: Special Education Needs ( ), Early Childhood Education ( )

Code of Respondent.....

Designation of the Interviewee.....

Sex: Male ( ) Female ( )

Date interviewed.....

1. What is the current situation of inclusion of children with disabilities in public and private pre-primary schools/streams?
  - a) Enrolment status of children with disabilities in
    - Government schools
    - Private schools
  - b) Enrolment status of children with hearing impairment in
    - Government schools
    - Private schools
2. How is the situation regarding teachers training to handle inclusive classes for young children specifically for pre-primary classes? How should it be?
3. What is your opinion/comment concerning the inclusion in early childhood (pre-primary) education in the country?
4. What is your comment concerning the accessibility of education service for CWD/HI in public and private pre-primary schools?
5. What supports does the government provide to the schools, teachers, parents and children with disabilities/HI in inclusive schools/ classroom?
6. What are your comments regarding the budget, facilities availability and distribution, allocation of funds, equipment and materials to support inclusive education?
7. What are your comments/opinion/views concerning the school infrastructures in regular schools with pre-primary children with disabilities?

8. What are your comments concerning school inspection, are there any special guidelines or experts to assess and evaluate teaching-learning in inclusive pre-primary setting?
9. Is there any other written documents/guideline apart from the Education and Training Policy (ETP, 1995) to guide the provision of education service to CWD/ HI in the country?
10. How would you describe the following:
  - i) How are children with hearing impairment identified?
  - ii) Are there any specific steps and /or guidelines to follow for assessing the child's hearing loss?
  - iii) Where do the hearing loss assessments take place?
  - iv) Which types of assessment tools are used?
  - v) Do you have specially training persons to conduct the tests?
    - a) Who are they? Teachers or technical staff?
    - b) What are their minimum education and professional qualifications?
11. What is the situation concerning placement options of children with hearing impairment (HH/D) in pre-primary education (schools as well as in classes)?
12. What factors do you consider as challenges of inclusive education for young children in our country? (Challenges concerning Policy, schools, parents/family and children?)
13. Are there any planned strategies in place in order to overcome the above challenges in the policy level, schools, family and for the children?
14. What is your suggestion for future improvement of Early Childhood Inclusive Education in Tanzania?

*Thank you very much for your willingness to participate in this interview.*

## II. District Education Officers

An interview schedule for District Education Officers

Code of Respondent.....

Designation of the Respondent.....

Sex: Male ( ) Female ( )

Unit: Special Education Needs ( ), Early Childhood Education ( )

Date interviewed.....

1. What is the current situation of inclusion of children with disabilities in public and private pre-primary schools/streams in your district?
  - a) Enrolment status of children with disabilities in
    - Government schools.....
    - Private schools.....
  - b) Enrolment status of children with hearing impairment in
    - Government schools.....
    - Private schools.....
2. How many children with hearing impairment are in schools? :
  - i) Regular schools/streams.....
  - ii) Integrated setting.....and
  - iii) Special schools.....?
3. What factors do you consider in allocating teachers for inclusive pre-primary schools in your district?
4. How is the situation regarding teachers training to handle inclusive classes/ needs of children with disabilities for young children specifically for pre-primary classes? How should it be?
5. How does the district support the schools, teachers, parents and children with disabilities/HI in inclusive schools?
6. What is your opinion concerning inclusive education in public and private pre-primary education in your district?
7. In your view do you think is it possible to include CHI in regular pre-primary classes? Yes or No.
8. If yes how is it possible?

9. If No why is it not possible?
10. What is your comment concerning the education accessibility for CWD/HI in public and private pre-primary schools?
11. What are factors to consider for proper placement of children with hearing impairment in schools as well as in classes?
12. In your view do you think it is practical to include all children with disabilities in regular pre-primary classes? How about children with hearing impairment if not mentioned.
13. What factors do you consider as challenges of inclusive education for young children in your district? (Challenges facing Policy, schools, parents/family and children)?
14. Are there any planned strategies in place in order to overcome the above challenges in the policy level, schools, family and for the children in your district?
15. What is your suggestion for future improvement of Pre-primary Inclusive Education in your district and in Tanzania in general?

*Thank you very much for your willingness to participate in this interview.*

### III. Head Teachers Inclusive/Regular Schools

An interview schedule for Head Teacher – Regular/Inclusive School with CHI

Code of Respondent.....

Name of the school.....

Sex: Male ( ) Female ( )

Head Teacher's academic qualification.....

Teaching professional qualification.....

Teaching experience.....

Leadership experience.....

Age of Respondent.....

Date interviewed.....

1. What is the current situation of inclusion/integration of children with disabilities in your pre-primary schools/streams?
2. How many children with disabilities in pre-school classes/streams are there in your school?  
Please can you provide the categories and numbers in each category?
3. What factors do you consider in allocating teachers for inclusive/ special pre-primary classes?
4. How is the situation regarding teacher training to handle inclusive classes for young children specifically for pre-primary classes? How should it be?
5. How does the school support teachers, parents and children with disabilities/HI in inclusive schools?
6. What are your sentiments regarding the following:
  - a. How are children with hearing impairment identified?
  - b. Are there any specific steps and /or guidelines to follow for assessing child's hearing loss in this school?
  - c. Where do the hearing loss assessments take place?
7. What support does the government provide to the schools, teachers, parents and children with disabilities/HI in inclusive schools/ classroom (in your school)?
8. What is your opinion concerning inclusive education in pre-primary education in your school?



9. What are your comments regarding the budget, facilities availability and distribution, allocation of funds, equipment and materials to support inclusive/special needs education in this school?
10. What are your comments/opinion/views concerning the school infrastructures for example the class size, desks, chairs, tables, playground and toilets?
11. What are your comments regarding the communication between the school management, teachers, the children with hearing impairment?
12. What support do you get from the government and non -government organization?
13. What further support do you need from the government and other organizations or individuals?
14. What challenges do you face managing pre-primary children with special education needs (disabilities) in your school?
15. What is your opinion concerning inclusion in the context of Tanzanian pre-primary education
  - a. Can inclusion work?
  - b. Can all children with disabilities learn together with children without disabilities in one class? Yes or No.
  - c. If the response is No, Which categories of disability do not fit?
  - d. How about children with hearing impairment (if not mentioned)?
  - e. Why? Can you give your reasons?
16. What are your suggestions for future improvement of inclusive education in your school and in Tanzania in general?

*Thank you very much for your willingness to participate in this interview*

#### IV. Teachers Teaching Pre Primary Classes

An interview schedule for Teachers teaching children with hearing impairment/ visual impairment in Regular pre-primary classes/school

Code of Respondent.....

Name of the school.....

Sex: Male ( ) Female ( )

Teachers academic qualification: Standard 7 ( ), Form IV ( ), Form VI ( )

Teaching professional qualification.....

Date interviewed.....

Respondent's Age.....

Teaching Experience .....Months/Years

1. For how long have you been teaching pre-primary classes?\_\_\_\_\_
2. For how long have you been teaching deaf/ blind children?\_\_\_\_\_
3. Do you have special training in how to handle deaf/ blind children in pre –primary classes? Yes ( ), No ( ) If yes, what kind of training ( ) and how long ( ) was the training?
4. What strategies and teaching methods do you use to handle the needs of children with hearing impairment in your class?
5. If not mentioned in number 4, do you use play? What are your comments concerning the participation of children with hearing impairment in your class during play activities both in classroom and outside the classroom?
  - a. Do they play with hearing children or? ( Outside)
  - b. Children with hearing impairments
6. What is your observation regarding participation of children with hearing impairment during teaching and learning process in general?
7. Do children with hearing impairment have friends within the school:
  - a. Hearing friends
  - b. Children with hearing impairments friends
8. What are your comments regarding the communication/interaction between you the teacher, the child/children with hearing impairment, their parents and school management/leaders?
9. What support do you get from the government, school, parents and other children?

10. What further support do you need from the government, school, parents and other children?
11. What challenges do you face teaching children with special education needs in the class and in this school?
12. What is your opinion concerning inclusion in the context of Tanzanian pre-primary education
  - a. Can inclusion work?
  - b. Can all children with disabilities learn together with children without disabilities in one class? Yes or No.
  - c. If the response is No, Which categories of disability do not fit?
  - d. How about children with hearing impairment (if not mentioned)?
  - e. Why? Can you give your reasons?
13. What are your suggestions for future improvement of inclusive education in your class and in Tanzania generally?

*Thank you very much for your willingness to participate in this interview.*

## V. Parent of the Child with Hearing Impairment

An interview schedule for parents of children with hearing impairment in Regular classes

Code of Respondent.....

Name of the school.....

Sex: Male ( ) Female ( )

Name of the child (optional).....

Age.....

Date interviewed.....

1. Child's particulars
  - a. Birth date \_\_\_\_\_ Years \_\_\_\_\_
  - b. Birth position \_\_\_\_\_ Number of relatives \_\_\_\_\_ brothers \_\_\_\_\_ sisters \_\_\_\_\_
2. When did you recognize that your child is having hearing difficulties?
3. Do you know the reason or causes for the hearing impairment?
4. How severe do you estimate the hearing impairment to be? Deaf/hard of hearing?
5. Which ear is affected? Left? Right? Both sides?
6. Have any medical assessments taken place or still going on?
7. Which treatments have been provided or are still being provided? E.g. hearing aid? Medication?
8. How do you and the family communicate with the child? (Which language...spoken or sign language)
9. When did the child begin pre-primary school? (Where)?
10. Did she or he attend any other early childhood program before starting pre-primary school? Where? How long?
11. What factors led you to choose the recent school?
12. Does the child have friends? Yes or No
13. If yes, are they hearing or hearing impaired?
14. With whom does the child play?
15. How do you support the child so that he/she can learn effectively?
16. What further support do you need from the school and government?
17. What challenges are you faced with as a parent of the child?
18. How do you manage to overcome the above challenges?
19. What are your suggestions for the improvement of education service for young children with hearing impairment in school and Tanzania in general?

Thank you very much for your willingness to participate in this interview

## VI. Observational Schedule

**NAME OF THE SCHOOL**.....

**CODE OF THE SCHOOL**.....

**DATE** .....

**DURATION OF OBSERVATION**.....

### 1. CLASSROOM OBSERVATION

#### a. Teaching –learning facilities

S/N	FACILITIES	CHILDREN WITH HEARING IMPAIRMENT	COMMENTS
1.	Text books		
2.	Print books/texts /sign language		
4.	Hearing aids (HI)		
5.	Teaching aids		
6	Swivel chairs		
7.	Other available supportive materials		

#### b. Classroom arrangement and teaching strategies

S/N	ARRANGEMENT AND STRATEGIES FOR CHILDREN WITH HEARING IMPAIRMENT	REMARKS
1.	Note the seating arrangement for children with hearing impairment and children without hearing impairment	
2.	Note the arrangement of desks, tables, chairs and space	
3.	Note the teaching method	
4.	Note the position of the teacher during teaching (speaking)	
5.	Note how the teacher respond to children questions or problems	
6	Note if the teacher provides individual assistance to the child during the teaching-learning process	
7.	Note the teacher’s ability to communicate with	

S/N	ARRANGEMENT AND STRATEGIES FOR CHILDREN WITH HEARING IMPAIRMENT	REMARKS
	the child with during teaching-learning process.	
8.	Note the speed of the teacher during presentation of the lesson	a. Moderate b. High c. Low
9.	Note the teacher's voice during teaching – learning process	a. Recommendable b. High c. Low
10.	Note the teacher's knowledge of the children names/ symbols	
11.	Note if the teacher uses multi-sensory materials and approach	

## II. Observation outside the classroom/ Outdoor activities observation

### a. The environment and play facilities

S/N	FACILITIES	REMARKS
1.	Size of the playground where children play during outdoor time	
2.	Safety	
4.	Availability of play facilities	a. b. c. d.
5.	Moving objects	
6.	Objects with colors	

**b. Children interaction during play**

S/N	PLAY AND INTERACTION FOR CHILDREN WITH HEARING IMPAIRMENT	REMARKS
1.	Note if the child / children with hearing impairment are involved in the play	
2.	Note which type of play children with hearing impairment play	
3.	Note if the child / children with hearing impairment play with children without hearing impairment	
4.	Note who initiates the play	
5.	Note the communication style	
6.	Note if the teacher provides individual assistance to the child with hearing impairment during the play process	
7.	Note the teacher's ability to communicate with the child with hearing impairment during the play process.	
8.	Note how the child with hearing impairment reacts or solves the conflict if any.	d. Moderate e. High f. Low
9.	Note how long the child with hearing impairment stays in the play activity.	d. Recommendable e. High f. Low
10.	Note if the child with hearing engages in story/conversation with the hearing impaired child	a. CWHI b. CoHI
11.	Note if the child with hearing impairment plays alone	
12.	Note if the child with hearing impairment sits quietly (without doing anything)	

## VII. Declaration of Consent

Dear Sir/Madam,

My name is Joyce Mkongo, a PhD student at the university of Ludwig Maximillian Munich-Germany. Currently I am conducting my study on Inclusion of Children with Hearing Impairment in Pre-Primary School/Streams in Tanzania. In this study inclusion means educating all children of the same age group, with and without disabilities or special education needs in their neighborhood regular schools or streams. The aim of this interview is to find information concerning issues pertaining to inclusion in pre-primary education in Tanzania. Findings from this study will help in the development of appropriate policy and improvement of inclusion for pre-primary education.

Therefore, you are kindly asked to participate in giving your opinions. You are at liberty to participate or not to participate in the discussion in this interview. However, I would be pleased if you are willing to respond to interview questions. All information you provide in this interview are your own views so there is no correct or wrong answer. Information you provide will be treated as strictly confidential and anonymity of identity is guaranteed.

Respondent signature

Researcher signature

.....

.....

Date.....

Date.....



# UNIVERSITY OF DAR-ES-SALAAM

## OFFICE OF THE VICE CHANCELLOR

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Ref. No: AB3/12(B)

Date: 3<sup>rd</sup> May 2016

Regional Administrative Secretary  
**Shinyanga Region**

### RE: REQUEST FOR RESEARCH CLEARANCE

The purpose of this letter is to introduce to you **Ms. Joyce Mkongo** who is a bonafide staff member of the University of Dar es Salaam who is currently pursuing PhD studies at the Ludwig Maximilian University, Munich, Germany. Our students and staff members undertake research activities as part of their studies and core functions, respectively.

In accordance with government circular letter Ref. No. MPEC/R/10/1 dated 4<sup>th</sup> July 1980, the Vice Chancellor of the University of Dar es Salaam is empowered to issue research clearances to staff members and students of the University of Dar es Salaam on behalf of the government and the Tanzania Commission for Science and Technology (COSTECH). I am pleased to inform you that I have granted a research clearance to **Ms. Mkongo**.

I therefore, kindly request you to grant her any help that may enable her achieve her research objectives. Specifically we request your permission for her to meet and talk to the leaders and other relevant stakeholders in your region in connection with her research.

The title of his research is "**Inclusion of Children with Disabilities in Pre-Primary Schools in Tanzania**".

The period of his research is from **May to September 2016** and the research will cover **Shinyanga Region**.

Should there be any restrictions, you are kindly requested to advise us accordingly. In case you require further information, please do not hesitate to contact us through the Directorate of Research, Tel. +255 22 2410500-8 Ext. 2084 or +255 22 2410727 and E-mail: [research@udsm.ac.tz](mailto:research@udsm.ac.tz).

Yours sincerely,

VICE CHANCELLOR  
UNIVERSITY OF DAR-ES-SALAAM  
P.O. Box 35091  
DAR-ES-SALAAM

PROF. RWENZAZA S. MUKAMUGA  
**VICE CHANCELLOR**

QUOTATION OF REF. NO. IS ESSENTIAL

(S)

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Yours sincerely,

  
Prof. Rwekaza S. Mukandala  
**VICE CHANCELLOR**

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