

*Effects of Early Childhood Education on Children with Hearing Impairments in Special Schools in Kiambu, Murang'A and Nyeri Counties, Kenya*

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*Abstract*

This study sought to find out the effects of Early Childhood Education on children with hearing impairment (HI). Vigotsky's theory of cognitive development guided the study. Descriptive survey method was used. Target population included children with HI between ages 3-6 years and their parents, teachers, head teachers all from special schools in selected districts. Purposive sampling was used to select schools, classes, children, teachers and head teachers while convenience sampling was used to select parents. Interview schedules were used for head teachers, pre-primary teachers and for parents. The instruments were pre-tested for validity and reliability. Split-half technique was used to assess the instruments' reliability while validity was determined after it was read through with the representative respondents. Findings revealed that teachers played their role effectively but delays by parents in enrolling their children for ECDE during the required early child years curtailed adequate effect of ECDE on children with HI.

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The early years of a child are quite important in laying the foundation of adulthood. During this time, children undergo fast growth changes in mental, physical, social, emotional and spiritual development (NACECE, 1999). Therefore, high quality early childhood development and education (ECDE) programs particularly for children at risk produce far reaching benefits not only to the individual but also to the society. According to Young and Richardson (2007), enhanced early childhood development leads to improved health and wellbeing population and prosperous society. They claim that ECDE has a great impact on the physical, mental health and wellbeing of the child in the later stages of life. They continue to argue that in the early years, the experienced brain and biological development sets, basic competence behavior, and learning that lasts throughout the life cycle. It also influences how individuals cope and contribute to the society in which they live and work. It is for this reason that every child needs to undergo effective ECDE to foster holistic development and hence become a useful member of the society.

The importance of education in the early years of a child has been further emphasized the world over and it is particularly outstanding in three documents, that is the Convention on the Rights of children (CRC) of 1989, which states that all children have a right to free education, Conference

on the Education for All (EFA) and world summit for children (KISE, 2007). This implies that every child should be provided with education regardless of who the child is in order to give them a firm foundation for their future lives.

A focus on the various parts of the world indicates that every culture has had and still does have the task of socializing and educating their young. Today, the nursery schools are considered essential for greater chances of success in schools (Cochran, 1993). Hence, schooling of all children from 2 - 6 years old takes place everywhere (UNESCO, 1997). Teachers' of children with Hearing Impairment (HI) are consulted on matters regarding curricula and assessment procedures (Gregory, 2002). The early enrolment of children in ECDE is recognized to have a great effect on the success of children in primary schooling.

Similarly in the United States of America (USA), educational progress for young children provided enrichment and socialization mainly for the middle and upper-middle income families. Then in the 1960s, the national head start program was established for economically disadvantaged children (Cochran, 1993) which concentrated on the development and education of children from birth to eight years (Denier, 2005). Gregory (2002) states that, the education goal in the USA for majority of children who are deaf is learning English. Teaching is done using pure auditory-oral methods and signs from the American Sign Language (ASL). Teachers are encouraged to provide appropriate language models and opportunities for learning language in working with pre-school children with HI. The enhancement of language for both teachers and children has a great effect of ECDE on the learners with HI. Although Vigotsky believes that language is crucial to the development of one's thought processes, concentrating on learning English alone blocks the children from benefiting in other learning areas.

In India, child caring was traditionally a family responsibility until the technological and social development in the 20th century which brought drastic changes to child rearing and education pattern as family members sought paid labor. This led to establishment of pre-schools which enroll children between 2½ - 5 years of age from middle and upper class families since those from low income groups lack awareness and place education as a low priority (Cochran, 1993). According to Chowdhury (2002), pre-school education in India is a neglected chapter as there is a great deal of confusion regarding pre-school programs. On the same, Gregory (2002) contends that many Asian children with HI suffer considerable frustration and confusion related to their identity leading to problems. She also asserts that hearing Asian parents experience difficulties in instilling values, behavior and knowledge in their children with HI.

In support, Chowdhury (2002) points out that 60% of children less than six years are left in each other's care in India and lose out on proper stimulation and educational opportunities. Thus, the underprivileged child such as the one with HI suffers insurmountable education handicap from the time he/she is born due to lack of Early Care and Education (ECE). The objective of the pre-schools in India is mainly to prepare children for primary education and provision of nutrition and care. Those with disabilities (below 5 years) are referred to district hospitals as there are no government programs at village level to meet the special needs of children with disabilities. Those above 5 years are referred to mainstream schools. Children with disability are thus not accepted in pre-school although identification and referral is one of the components in the training of the workers (UNESCO, 1997). This theory shows that the young children with HI are

not exposed to early childhood education and thus they are denied its benefits or effects such as instilling of various skills at the appropriate age.

Similarly, Australia's preschools are available only to children in the year before school entry. Most of them offer half-day sessions per week and are closed during the school holidays (Cochran, 1993). Chile on the other hand, aims to expand the coverage of pre-school education of children between 0-6 years. Her pre-school educational system plays a major role in integrating children with special needs (UNESCO, 1997).

In the past in the African community set up education of children was paramount and a community affair. This was done at an early age through stories, riddles, tongue twisters, proverbs and on-job training. Currently this order has been interrupted by socio-economic and socio-cultural changes, children being born and growing under extremely difficult conditions due to rapid social and environmental transformation which has given rise to socio-cultural disintegration, increased number of women in labor force and households headed by women (NACECE, 2000). Similarly, men have moved to urban areas, mines or large-scale farms for wage employment thus dumping their traditional roles of overseeing family duties. These factors among others have led to broken extended family systems, with dire consequences on the positive development of the child and education.

Africans have also been affected by wars, population growth and rapid urbanization adding to problems of provision for children, childcare and informal education practices making the condition of children pathetic. For instance, Ethiopia and Sudan have had years of drought, which have taken toll on the children. These interruptions made it necessary to equip the children with formal education and care in central institutions leading to establishment of the ECDE centers (NACECE, 2000). In Zimbabwe, education of children with HI started in 1940s and this education is on the rise (Gregory, 2002).

In Kenya, education and socialization of the young took a natural process carried out by members of the extended family who lived together and thus monitored the growth of children, enforced rules, and discipline and apprenticed them in what they would be occupied in as adults. However, the introduction of the cash economy and changed settlement patterns, have eroded the stable and secure environment within which the child grew up. Disintegration was further quickened by the emergency in the 1950s which resulted to detention of men. Women had to shoulder the roles of men as breadwinners and mothers. This led to the emergence of ECDE institutions in the agricultural plantations prior to 1940. The ECDE institution for the African children with hearing impairments in Kenya was first started in Mombasa in 1958, that is, Aga Khan Special School (Ndurumo, 1993). Today, child-rearing, socialization and education have been replaced by paid classroom ECDE teachers and untrained child minders. This is due to established formal education and other factors such as rural-urban migration (NACECE, 2000). This is an indication that most parents are busy in paid employment and have no time for child-rearing. Therefore, if children are not enrolled for ECDE, their opportunities for learning important skills are blocked. Thus, the study assessed the enrollment trend of children with HI in Kiambu, Murang'a and Nyeri counties, Kenya.

ECDE in Kenya caters for holistic development of children between the ages of 0-6 years. The relevant services are offered in institutions such as nursery schools, kindergartens, crèches, pre-units, pre-schools, pre-primary schools and other out-of-school settings (NACECE, 2000). Pre-school education for children with HI takes place in units in some regular public schools and ECDE classes in public schools for children with HI. According to Ndurumo (1993), traditionally, children with HI spent their first 3-4 years in oral designated communication schools if they fail to develop oral skills. This study sought to find out whether this is the case to date. Ndurumo argues that children with HI should be allowed to follow the regular school curriculum.

Despite the fact that ECDE plays a major role in the holistic development of children in Kenya, it is not compulsory, nor is it subsidized hence attendance in pre-school is not a prerequisite for joining standard one. Some parents lack awareness on the importance of the ECDE curriculum and hence keep their children at home until they attain the age of 6 years when they join standard one. This denies the children an opportunity to be exposed to enriched environments in pre-school during their critical stage (3-6 years) of development when they are most receptive to learning new experiences. The lack of exposure to ECDE leads to limitation of the intended ECDE effect on the children with HI. The introduction of free primary education (FPE) and prohibition of conducting interviews on children to join standard one have made unwilling parents to view ECDE as redundant especially because they have to pay levies for ECDE unlike the primary school education. While it may be easy for children without hearing impairments to catch up with their peers to undergo ECDE, the situation can be quite harmful to children with hearing impairments. This study exposed the effect of ECDE on children of ages 3-6 years with hearing impairments in special primary schools in Kiambu, Murang'a and Nyeri counties, Kenya.

### *Theoretical Framework*

The study was based on Lev Vygotsky's theory of cognitive development which shows that children learn through interactions with their surrounding culture. He stresses the importance of guidance from adults or more competent individuals in enhancing the children's cognitive development. He propose the concept of Zone of Proximal Development (ZPD) in which he believes most sensitive instruction or guidance can help children to attain higher levels of thinking. The theory posits that children have innate basic abilities that are developed into most sophisticated and effective mental process through social interaction with other people and with a skillful tutor. According to Vygotsky language is crucial to the development of a child's thought process since thoughts are displayed through words. The young child needs to be actively involved in his or her own learning.

This theory shows that, a good education stresses on what children can do as their capability begins to emerge with the appropriate help. According to Vigosky, the merging of thought and language takes place between 3-7 years of age and involves talking to oneself. He claims that children must use language and communicate with others before they focus inward to their own mental processes. He points out that the chronological age is not an indicator of potential. On disabilities such as hearing impairments, he states that social interaction is essential to a child's social development. The influence of child impairment on his/her ability to engage in social interactions affects their development. He argues that the social consequences of the disability

have more impact on the child than the disability itself. Therefore, full potential development can be acquired with the help of social interaction with adults and the peers. He supports consistent and effective guidance by an instructor to help a child progress to his/her their potential level and be able to carry out the learnt skills on their own in future. This shows that children with HI need an early exposure to environments that provide social interactions with teachers and peers in order to realize full potential development. They also need skilled instructors i.e. the teachers for an adequate effect to their learning.

This study sought to assess the effects of ECDE services on children aged 3-6 years with hearing impairment and its effect on their learning. The major objectives of the study were to: (a) investigate the enrolment trend of children with HI in primary schools for the deaf in Kiambu, Murang'a and Nyeri, counties, Kenya, (b) assess the type of Educational ECDE services provided to children with HI and its effects to their learning, (c) investigate the role played by the parents and teachers of the children with HI in ECDE in enhancing the effects of ECDE, (d) identify the constraints experienced by teachers of the children with HI in ECDE.

### *Methodology*

The study adopted survey research design to investigate the effect of ECDE on children with HI. This is an un-experimental design which is characterized by the collection of data using interview schedules.

#### **Target Population**

Three (3) schools were identified representing the 3 counties, Kiambu' Murang'a and Nyeri. 2 ECDE classes were selected from each of the 3 schools, total of 6 classes in number. The total number of children was 67. Information was gathered from 6 pre-school teachers, i.e. 2 from each school, 3 head teachers. The parents of 67 children were targeted to provide data about their children.

#### **Sampling**

Purposive sampling was used to identify special schools for children with HI in the 3 counties. These schools are the only ones of their kind in the selected counties. Purposive sampling was also used to collect data from head teachers and pre-primary teachers in selected schools. Convenient sampling was done on the parents. In this case, data were collected from those parents of pre-primary school children with HI who were easily available during the parent's visiting days.

Data was collected from the 3 special schools for the deaf. 2 Pre-primary classes were sampled from each of the 3 special schools, making them a total of 6. Each school had 2 pre-primary teachers whereby both were sampled making them a total of 6. The head teachers were 3, 1 (one) from each school, while 5 parents were interviewed from each school hence 15 of them. These also represented 15 children. The total number of respondents was 24.

#### **Research Instruments**

Interview schedules were the main instrument used. However, where the enrolment of children was required information was derived from the class and admission registers.

## **Interview Schedule**

These were interview schedules for the head teachers, teachers and parents. The schedules for the head teachers had 7 leading questions which focused on the number of pre-school classes, the number of teachers, the age at which the children are enrolled for ECDE, the enrolment trend and constraints experienced in enrolment and teaching.

The schedule for the teachers had 9 questions in which data collected were mainly on educational services that expose children to ECDE activity areas, methods used, professional records, the constraints that the teachers experience in teaching/learning process and the notable effects of ECDE on the children. The parents schedule had 9 questions which dwelt on the age at identification of HI in their children, intervention and enrolment for ECDE. It also focused on the notable effects of ECDE on their children.

## **Registers**

Admission and attendance registers were used to support the data collected from the head teachers and the teachers. The admission registers were useful in gathering data of the age at which the children were admitted in the schools as well as the enrolment trend from 2003-2009. The attendance registers helped to get data on the number of children in each class as well as to identify the classes in which the sampled children were.

## **Pilot Study**

Pre-testing was done at Racecourse Primary school's unit for learners with HI, Nairobi. The school was selected through convenient sampling, that is, familiarity and manageable distance. The head teachers, pre-school teachers and parents of children with hearing impairments were interviewed. These subjects did not participate in the main study.

## **Data Collection**

The researcher held face-face interviews with the head teachers, ECDE teachers and parents of children with HI and recorded the information given manually on the spot. In each of the three special schools selected for the study, the researcher took three different days in each school. The first day data was collected first from the school head teacher's in their school respective offices and secondly, from the two selected pre-school teachers individually in the school's deputy head teacher's office in each of the three schools. On the second day, using the deputy head teacher's school office the researcher spent a day collecting data from admission and attendance registers on age at which the children were admitted in the schools as well as the enrollment trend from 2003-2009, and also checked on number of children in each of the identified ECD classes. On the third day the researcher carried out interviews with each of the five parents who were easily available during the parent's visiting day from each of the three selected schools. Parents could only be available during the parent's visiting days which was on a Saturday and were therefore interviewed on particular selected school parents' visiting day. This was successfully achieved due to the cooperation of the head teachers.

## **Data Analysis**

Data were analyzed quantitatively and qualitatively. The quantitative analysis was done by computing the numerical data in tables, pie charts, graphs and percentages manually and by excel. These were useful in quantifying the percentage of children with HI who had managed to

access ECDE services. Qualitative analysis was employed to complement quantitative analysis by giving a descriptive report on the findings based on the themes, that is, in form of text. It was also used to give a descriptive report generated from the interviews and other data from the school records, such as those for enrolment. Data interpretations were also made and analyzed quantitatively.

### **Ethical Considerations**

Clearance to carry out the research was given by the Ministry of Education, Science and Technology (MoEST) where a research permit was granted to the researcher. Consent of the respondents was also sought through letters of introduction and description of the study. Decency, politeness, punctuality, and confidentiality were observed.

### **Results**

The research was done in three special schools for children with hearing impairments (HI) from the sampled districts. The schools are hereby coded schools A, B and C that is Tumutumu (A), Muran'ga (B) and Kambui (C). In these schools, data were obtained from the head teachers, 2 ECDE teachers from each school and 5 parents from each school. This was done by conducting interviews to each one of them. Thus, the respondents were all 24 in number.

#### *Enrollment Trend of Children with HI in Special Primary Schools for the Deaf*

Table 1  
Children's enrolment trend from 2003-2009 in schools A, B and C

Year	School A			School B			School C		
	Total	<6yrs	%	Total	<6yrs	%	Total	<6yrs	%
2003	13	6	46.2	6	2	33.3	13	4	30.8
2004	12	5	41.7	13	6	46.2	23	7	30.4
2005	11	5	45.5	14	9	64.3	16	2	12.5
2006	12	2	16.7	11	9	81.8	33	7	21.2
2007	11	4	34.4	12	2	16.7	31	3	9.7
2008	11	5	45.5	14	5	14.7	23	6	26.1
2009	12	5	41.7	19	2	10.5	16	1	6.25
Total	82	32	39	89	35	39.3	155	30	19.4

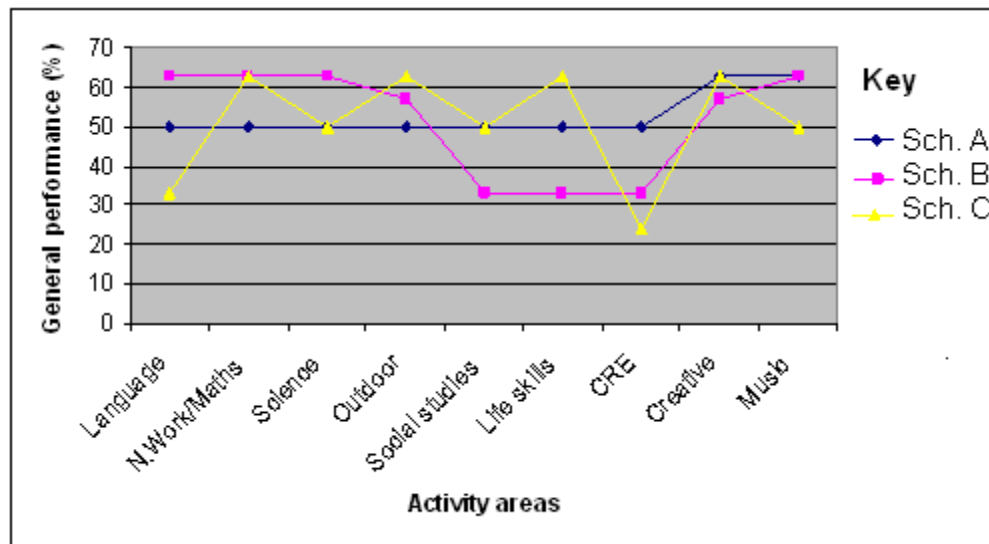
Table 2 (on page 17) shows the number of children who accessed ECDE education during the years 2003-2009, those in the pre-school years that is 6 years and below was less than half the total number. School B enrolled the highest percentage with 39.3% followed by school A with 39% while school C had 30%. Only 30 % of the children were enrolled at age of 6 years and below. In the duration of 7 years, only school B was able to enroll more than half of children of 6 years and below out of the total number of children in 2005 with 64.3% and 2006, that is, 81.8%.

### **Type of ECDE Educational Services Provided to Children with HI and the Effect on Their Learning**

Although there are various services provided to children with HI, the researcher was mainly interested in the educational activity areas that make up the curriculum in ECDE. These include

language, number work, outdoor, CRE, Science, social studies, life skills, creative arts and music.

*A. Educational services provided*



*Figure 2: ECDE activity areas*

Figure 2 shows the findings of the research on how the children in schools A,B and C were performing in the various ECDE curriculum activity areas. The findings show that all the three schools (A, B and C) were offering all the activity areas as per the ECDE curriculum and involved children in relevant activities.

*B. Effects of ECDE Services on Children with HI.*

The study sought to establish the effect of the ECDE services to children with HI. Five parents from each school were interviewed making them a total of 15. Results are indicated in Table 2

Table 2  
Impact of ECDE services on the children with HI

Skills	Total number of respondents	Frequency	%
Sign language	15	9	60
Writing	15	9	60
Reading	15	6	40
Social skills	15	12	80
Life skills	15	8	53
Discipline	15	9	60

Table 2 shows the various benefits that children get from the ECDE services as reported by their parents. Out of the skills identified, acquisition of social skills seemed to be the most outstanding. 80% of the respondents who were interviewed had noticed it in their children. However, 60% identified acquisition of sign language, writing, and improved discipline. 53%



identified life skills in the children. Therefore, ECDE has a positive impact on the children with HI. On the other hand, only 40% of them had identified reading skills in their children.

### **The Role Played by the Parents and Teachers of Children with HI in ECDE**

Data were gathered on the role of two major stakeholders, i.e. parents and the teachers of children with HI who were interviewed separately. That is, 5 parents from each school making them a total of 15 parents and 6 teachers, that is, two from each school.

#### *A. Role Played by Parents*

The role played by parents of children with HI, in ECDE was investigated. Those interviewed cited roles such as identification of HI in their children, taking intervention measures developing sign language, enrolment, socialization and seeking medical attention.

Of major concern in this study were the ages at identification of HI, intervention and enrolment in ECDE. The researcher gathered data in connection to the same by interviewing parents from schools A, B and C. The findings are as shown in Table 3.

Table 3  
Roles of parents

Roles	Ages of children								Total No. of respondents
	Below 1 yr	1yr	2yrs	3yrs	4yrs	5yrs	6yrs	Above 6 yrs	
Identification	2	2	4	4	3	-	-	-	15
Intervention	1	2	4	4	1	2	-	1	15
Enrolment	-	-	-	-	2	1	6	6	15
Total number of children	3	4	8	8	6	3	6	7	

Table 3 above shows that most parents were not able to identify their children's HI before the onset of language development. Only 4 out of 15( 27% ) of those interviewed were able to identify HI in their children before the age of 2 years.

#### *B. The Role Played by Teachers in Teaching and Learning in ECDE*

The roles carried out were coverage of ECDE syllabus, development of teaching and learning resources, using relevant methods of teaching plus developing and keeping relevant records. Results are indicated in Table 4.

Table 4  
Teacher's roles

<i>Roles</i>	<i>School A</i>	<i>School B</i>	<i>School C</i>
Coverage of syllabus	Satisfactory	Satisfactory	Inadequate
Development of teaching and	Adequate	Adequate	Adequate

learning resources			
Use of relevant methods of teaching	Adequate	Adequate	Adequate
Keeping of relevant records	Adequate	Adequate	Adequate

Table 4 above shows that the teachers in schools A, B and C carried out their roles in the development of resources, the use of relevant methods of teaching and the keeping of relevant records. For instance in development of resources, school A had material such as charts, real objects, flash cards and pictures. School C had charts learning corners and outdoor materials. The findings also showed that there was adequate use of relevant methods of teaching in all the three schools which included taking children for nature walk and play. They also used demonstration and participatory methods. There was also adequate keeping of relevant records by the teachers in the three schools however; the coverage of the syllabus in schools A and B was satisfactory but inadequate in school C. Thus, the teachers were found to be devoted to their roles in enhancing a positive effect of ECDE on the children with HI.

**Constraints experienced by teachers’ of the children with HI in teaching and learning in ECDE**

Constraints experienced by the teachers of the children with HI in ECDE were identified by the researcher. This aimed at finding out whether there were hindrances or limitations to adequate effect of ECDE on children with HI. During the research, study the teachers complained of various constraints relating to provision of quality education to children with HI. Figure 3 below shows the findings:

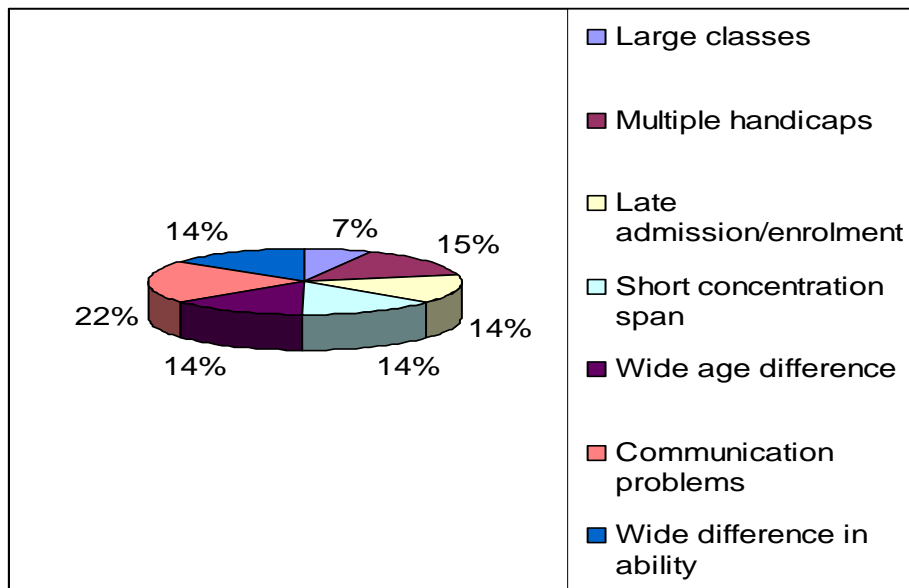


Figure 3: Constraints experienced by teachers of children with HI in ECDE

Out of the 7 constraints, communication problems were found to be the leading constraints in the three schools with 22%. Multiple handicaps were identified in schools A and B while late

enrolment of children, short concentration span, wide age differences and children's abilities were identified in schools B and C taking 14% each. Large classes were a constraint in teaching and learning only in school B which was 7%.

### *Discussion*

The study shows that majority of the children do not access ECDE services during the critical early childhood years, that is, six years and below. According to Bala and Rao (2004), early childhood education helps to increase self-confidence and creates a clear, cut avenue for successful integration into regular schools. However the findings show that 70% children with HI are enrolled for ECDE when they are over 6 years. This indicates that children do not get opportunities for social interaction with teachers and their peers early enough to benefit adequately in cognitive development, as recommended by Vigotsky. This is also confirmed by an earlier observation by MoE (2009) that access to special education for those with special needs remains limited. MoE (2006) on the other hand claims that a report by the Global monitoring Education for all showed that only 35% of children aged 3 years to 5.11 years have been accessing ECDE services since 1990. Thus, going by this research study, the situation for children with HI is even worse with only 30% accessing ECDE services at pre-school level.

This limits the children's opportunities which they need to have the intended effect of ECDE considering that out of all the children who were enrolled for ECDE services at pre-school level between year 2003 – 2009, only 30 % were 6 years and below.

It was noted with a lot of concern that majority of the children lack early educational intervention. In all these parents bear the largest part of the blame considering their role in the enrolment of their children with HI. For example, MoE 2006 states that some parents keep their children at home until they attain age 6 years to join standard one avoiding payment of levies in pre-school and prefer the privilege of enjoying free primary education in standard one. In this study, the parents of children with HI had problems in identifying HI in their children. For instance, the fact that only 27% of the parents could identify HI in their children before age 2 years shows that majority of the parents lack awareness of identification skills. The problem cascades down to lack of seeking early intervention help and eventually to late enrolment of their children for ECDE services.

### **Educational ECDE Services provided to Children with Hi and Its Effect On their Learning**

#### *A. Educational ECDE Services*

The study findings showed that children in the three schools were exposed to the relevant activity areas in ECDE. That is language, number work, outdoor, science, social studies, creative, music, life skills and Christian Religious Education (CRE). The teachers rated the general performance of the children in 6 of the activity areas as slightly above average. That is, with the exception of social studies and life skills in which the children's performance was below average in one school. CRE, on the other hand, seemed to pose a major problem as the children performance in two of the schools was below average. The teachers had a problem in the mode of helping the children to understand some concepts such as the term "spirit". This shows the need for the learners to have an early start with their teachers in order to instill such concepts. The children were exposed to the relevant activity areas but had problems in grasping some concepts especially those that were not locally available or familiar to them.

According to the data in Figure 1 the general performance of the children can be said to be fairly good. Only four areas basically; language in schools C, Social Studies and Life Skills in school B and Christian Religious Education (CRE) in school B and C were reported to be below average in performance. Teachers in the schools reported that activities in these areas were poorly done due to problems of teaching some concepts especially in CRE. Children in three schools appreciated and performed well in creative activities a while Science on the other hand was fairly done in the three schools.

According to Ndurumo (1993), children with HI should be allowed to follow the regular school curriculum. This shows that exposure to a stimulating environment at an early age can help them improve their performance in the various activity areas effectively. The fact that the learners were able to perform fairly in most of the areas shows that if given an early start in pre-school, they can perform better. Otherwise as long as they are exposed to ECDE when over age, it may not have the intended effect on the children with HI.

### *B. Effect of Educational ECDE Services*

Findings of the study revealed that educational ECDE services have a relatively positive effect on children with HI who benefit particularly in acquisition of social skills, sign language, writing and good discipline. However, only 40% of the parents could identify acquisition of reading in their children. According to Kirk (1972), at the age of 5 years old, a child begins to respond to words and phrases written on flash cards or on the board. He adds that this should be initiated earlier for a child with HI than those without HI since the former relies heavily on vision thus the need for the emphasis on beginning to read at an early age.

Garwood (1983) claims that children in early childhood education receive relevant attention from the professionals in special education. In the case of the children with HI, Bala and Rao (2004) claim that early childhood education helps them to increase self-confidence. Similarly, Kirk (1972) concurs with this by arguing that the schools for children with HI provide opportunities to practice socialization and to develop communication skills and reading.

The parents who were interviewed reported that ECDE had helped their children to acquire various skills which included sign language, writing, reading, social skills, life skills and discipline. These findings have been supported by Vigotsky who points out that instruction helps to bring consciousness and deliberate mastery of the child's abilities. Acquisition of skills that is cited here shows a positive effect of ECDE on children with HI. This indicates that if they can get enrolled early, the effect can be higher. Vigotsky recognizes parents and teachers as tutors of young children. However, an earlier observation shows that parents are usually engaged in paid up job hence they have no time for tutoring the learners and that is why they need to enroll their children at the appropriate time to get tutored by the teachers.

Delay in identification, intervention and consequently in enrolment of some children seems to be affecting their acquisition in reading negatively. In all, apart from social skills where 80% were reported to have benefited greatly, the acquisition of skills in the other areas was average. This implies that given an early start of educational ECDE services, they would be in a better position in the acquisition of major skills in life.

## **The Role of Parents and Teachers of Children with HI in ECDE**

### *A. Role of parents*

The findings show that delays in identification of children with HI spills over to more delays in intervention and linking them to various services such as ECDE. Table 3 shows that only 3 parents, (20%) sought intervention measures for their children with HI before they were 2 years. Out of the 15 parents 8 of them 53% sought intervention measures when their children with HI were age 2-3 years while 1% delayed until the child was over 6 years old. Evidently, Parents are the key role players in their children's welfare. They ensure that their children receive appropriate care and enhanced holistic development (KISE, 2003). However in this study, the role parents' played in identification, intervention and enrolment lacked the urgency they deserve. The findings show that the earliest enrolment was at age 4 years. Delays in identification and intervention were also noted. This implies that majority of children with HI may not be accessing educational ECDE services during the appropriate or developmentally sensitive and critical periods due to delays in identification, intervention and eventually for relevant enrolment or placement. Parental delay in seeking professional help for their children interferes with the teaching and learning process when the children access ECDE when passed the stage appropriate for pre-schooling. The learner's abilities of acquisition of skills are also affected by the delays. This leads to inadequate effect of ECDE.

Findings of this study reveals that , the earliest enrollment for ECDE services was done at age 4 years by only 2 (13%) participants, followed by 1 (7%) at age 5 years . The others, 80% were enrolled at age 6 years and above. Delays in identification and intervention may be as a result of ignorance and denial of parents that their children had HI. However, the children's major delay for appropriate enrolment for ECDE was a result of spending time in regular schools of the hearing children. That is, in school A, 3 out of the 5 respondents had taken their children to regular schools of the hearing, school B also had 3 of them and all of the 5 in school C, meaning 73% of the children spent part of their early childhood years in inappropriate placement, that is, the regular ECDE centres. In these schools, they wasted crucial time that could have been otherwise fruitful in development if they spent it in special schools for the children with HI. According to Hegarty and Alur (2002), pupils with HI in regular classes struggle with social and learning problems which are often overlooked by the teachers in the regular class. Garwood (1983) also points out that, these children may not benefit from regular pre-school educational experiences unlike in relevant special schools where they receive relevant attention from professionals.

Findings about the delays are supported by MoE (2009) which states that one of the challenges that hinder quality services at ECDE level is parental attitude. That some parents view the ECDE programme as unimportant and only meant for children to pass time and grow prior to joining standard one. On the same, MoE (2006) reports that, some parents keep their children at home until they attain the age of 6 years when they join standard one.

On intervention, MoE (2006) report that parents have a major role in early identification for the purpose of assessment and intervention but the findings showed that most of the parents are not keen on identifying the HI in their children early enough to take the necessary action. Various authors have expressed the importance of early identification of disabilities in children by

parents. For instance, Sifuna (1988) declares that a child whose hearing impairment is identified early may experience fewer difficulties in language development. Vigotsky, on the other hand, declares that language is crucial for cognitive development. He also argues that children are capable of higher levels of functioning when given the right help than when they are left without assistance. Thus, parents should take immediate action as soon as they identify HI in their children in order to acquire language before the onset of language development age, i.e. 2 years and consequently help them to benefit from ECDE. Therefore, if delayed to acquire language, this development is limited and hence ECDE may not have the intended effect on children with HI.

Kirk (1972) states that schools for children with HI admit them when they are as young as 2 ½ to 3 years of age. This he says helps to offer various services as a means of intervention. Bloom (1964) concurs with this by claiming that 3 years old children profit more from enriching experiences than 7 or 8 years old children. He adds that 2/3 of a child's ultimate cognitive ability is formed by the time he/she is 6 years old, this is the age when children enter school. Thus, an early exposure to ECDE can produce more benefits or adequate effect on children with HI.

#### *B. Roles of Teachers*

Findings revealed that adequate coverage of the syllabus was a challenge in all the three schools. This not only hinders the teacher's efforts but also limits enhancement of skills in children. Although Ndurumo (1993) argues that children with HI should be allowed to follow the regular school curriculum, implementation on the ground seems to be challenging to the teachers.

The teachers reported that the inadequate coverage of the syllabus observed was mainly caused by the status of children's auditory abilities, and their being in different levels of ability though in the same classes due to late enrolment while others were overage.

For ECDE to have the intended effect such as laying a firm foundation for the children, it is important to have an adequate coverage of the syllabus. This can only be possible when the learners have adequate time with their teachers during their critical (3-6) early childhood years. Exposure of children to ECDE activities late in the term when over age interferes with teaching, learning process and lack of acquisition of skills at the appropriate time in their lives. This is in line with Vigotsky's theory which shows that a good education stresses on what children can do with the appropriate help as their capability begins to emerge. It states that concentrating on what children can do without help under values the emerging competencies. Therefore, children need to be provided with early stimulation in schools by their teachers in order to have a rewarding effect of ECDE.

Teachers on the other hand, played the role of teaching, developing materials, keeping records, monitoring behavior and taking case history of children with HI. All the teachers in the special schools were trained in SNE. Hence, they carried their roles effectively. This indicated that if given adequate time with the children, these teachers were professionally equipped and could play their roles effectively.

### **Constraints Experienced by Teachers of the Children with HI in ECDE**

A closer look at constraints in fig 3 shows that, 4 out of 7 were related to delays in early identification, early intervention and enrolment. Hence, if children with HI can be identified and placed early enough over half of the constraints would be done away with. This would in turn lead to greater effects of ECDE services to the children with HI. Vigotsky points out that language is crucial to the development of one's thought process as children learn through social interaction with a skillful tutor. This shows that children need to access ECDE early in order to be introduced to a common sign language to curb these constraints which can cause hindrances in effective ECDE.

The study shows that there were some constraints that are a hindrance to the teachers' efforts in teaching. These included large classes, children with multiple disabilities, late enrolment, short concentration span, wide age differences, language/communication problems and wide differences in ability. Out of these constraints communication/language problem was the leading. This constraint was experienced by the teachers in all the three schools. This implies that the effect of ECDE on children is hindered by communication problems since effective learning can only be realized through interaction between the teachers and the learners.

### ***Conclusion***

Findings of this study have highlighted various issues concerning the effect of ECDE in schools for children with HI. From findings of the study it was clear that most children with HI are enrolled for ECDE services when they attain the age of 6 years and above. According to MoE (2006) standard guidelines pre-school years are from 3 - 6 years of age. This study showed that majority (73%) of children with HI spent part of their early childhood years in regular pre-schools/ECDE centres. Then these same children are later placed in the special schools for HI and enrolled for ECDE services at age 6 years and above. Therefore, most children with HI are missing ECDE services during the appropriate/ crucial (3-6) years of development.

The research study also portrayed that children with HI were being offered the required educational ECDE services as recommended by MoE in conjunction with KIE. However, social studies, life skills and religious education posed challenges due to lack of well-defined concepts, for instance, the concept of the term "spirit" in religious education. The children are exposed to the appropriate activities in ECDE but unfortunately, this is done when most of them are well past the age of ECDE level. Thus, lack of exposure to the learning activities at the appropriate time, denies them enough experience and hence limits their general performance. This indicates that if enrolled for ECDE activities in the appropriate schools at the appropriate time they would benefit much more.

ECDE was also found to be of great importance to the development of children with HI. The learners acquired skills in various areas that included sign language, writing readiness, reading readiness, social skills, life skills and good discipline. Most children benefit a lot in acquisition of social skills. However, less than half acquire reading skills at ECDE level. Kirk (1972) points out that at age 5 years, the child begins to respond to words or phrases written on flash cards or on the board. This kind of reading he says is initiated earlier with children who have HI than those without, since the former rely heavily on vision. Therefore, acquisition of reading skills

may be hampered by lack of initiating reading to the children at an early age. A focus on the roles played by the parents and teachers showed that the teachers were trained for SNE and had done a unit on ECDE in their SNE course. They played their roles effectively but had problems in the use of one of the recommended teaching/learning methods that is thematic approach.

Adequate coverage of the syllabus was challenging to the teachers due to various constraints among which language/communication problem was the major one. This confirms an earlier observation by Allen (2002) that a child with hearing impairment may never acquire adequate communication skills if the hearing loss is not treated prior to the critical period for language development. This indicates that acquisition of adequate communication skills by the children was being hampered by the delayed intervention.

Majority of the parents had not played their roles effectively. Major delays in identification of their children's HI, seeking for intervention and enrolment for ECDE services were noted. Majority of children were enrolled for ECDE services at age 6 and above when they should be joining standard one.

Although the government and the teachers are playing their parts effectively in offering educational ECDE services to children with HI, the intended effect is yet to be felt. The parental participation and support are not adequate which leads to children lacking crucial preparation at ECDE level. Precious time when the children's critical periods of intellectual development are at the peak is spent by majority of the children in regular pre-schools. In these schools, they struggle with social and learning problems. Eventually, the children are enrolled for ECDE educational services in special schools when over age and this interferes with their access of ECDE services during the required (3-6) early childhood years. Consequently adequate and appropriate preparation of the children is curtailed. Although the teachers expose the children with HI to the relevant ECDE service, the effect on the children is limited.

### ***Recommendations***

To realize a positive effect of ECDE on children with HI, various stakeholders need to play their roles effectively. These include the Ministry of Education, teachers, the parents, the non-governmental organizations, the health service providers and assessment officers.

#### ***Ministry of Education (MoE)***

- Owing to the large number of children with HI who do not access ECDE services during the early childhood years, the MoE needs to make ECDE compulsory for all children between 3-6 years. This is to ensure that all the children access ECDE services at the developmentally appropriate time.
- Organize ECDE in-service courses for the teachers of children with HI. This will equip them with teaching methods in ECDE such as thematic approach which is still elusive to them.
- Deploy teachers trained in SNE to regular schools to help identify and cater for children with HI.



### *Head-Teachers and Teachers'*

- The school management committees should focus on ways to help the learners to acquire a common sign language.
- Programme on seminars for parents should be organized to learn sign language.
- Teachers can also organize opportunities for remedial teaching of sign language in order to reduce the problem of communication in learning and teaching.
- Organize and create awareness to parents on how to identify a child with HI early and the importance of early intervention/placement.

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