

**SCHOOL FACTORS INFLUENCING INCLUSION OF DEAF-BLIND
LEARNERS IN REGULAR SCHOOLS - A CASE STUDY OF KILIMANI
PRIMARY SCHOOL, NAIROBI COUNTY- KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university

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DEDICATION

This project is dedicated to the memory of my beloved father Gabriel Charo, my mother Rahel Jumwa , my beloved wife Florence Masha and my beloved daughter Riziki Masha.

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May God bless you all.

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LIST OF ABBREVIATIONS AND ACRONYMS

EFA	- Education for All
IDEA	- Individual with Disabilities Education Act
GOK	- Government of Kenya
IEP	- Individualized Educational Programme
KESSP	- Kenya Education Sector Support Programme
KNEC	- Kenya National Examinations Council
KICD	- Kenya Institute of Curriculum Development
KISE	- Kenya Institute of Special Education
MGD	- Millenium Development Goals
MoE	- Ministry of Education
NCST	- National Council for Science and Technology
PL 94-142	- Public Law 94-142
SNE	- Special Needs Education
SPSS	- Statistical Package for Social Science
TIQET	- Total integration Quality of Education and Technology
UK	- United Kingdom
UNESCO	- United Nations Education, Science and Cultural Organization
UNUDH	- United Nations Universal Declaration on Human Rights
USA	- United States of America

ABSTRACT

This study aimed at establishing the school factors influencing the inclusion of deaf-blind learners through a case study of Kilimani Primary School, Nairobi County. The study specifically sought to establish the teachers' and regular learners' attitudes towards deaf-blind learners, suitability of school physical environment in support of inclusion of deaf-blind learners, and teachers' professional qualifications to support deaf-blind learners.

The study used a case study design where both qualitative and quantitative data were collected. Questionnaires, interview schedule and lesson observation guide were used to collect data from the headteacher, teachers, regular learners and the school physical facilities. The target population for the study consisted of the headteacher, all the 20 teachers who teach in the class where the deaf-blind learners are included were purposively sampled and 250 regular learners. In addition, seven teachers teaching in the special unit were also purposively sampled.

The findings indicate that majority of teachers, (81%) had positive attitudes as shown by their appreciation of inclusion of deaf-blind learners in the regular classroom. On whether regular learners are friendly to deaf-blind learners, the findings showed that most of the regular learners, 88 percent, were in agreement that they were friendly to deaf-blind learners, which is an indication of positive attitude.

On whether teachers are willing to teach deaf-blind learners, the findings show that 90 percent of the teachers were willing to teach deaf-blind learners in the inclusive setting, however, 89 percent of the teachers indicated that they required specialized training to enable them to implement inclusion of deaf-blind learners. On teachers' use of varied teaching/learning strategies to cater for deaf-blind learners, 88 percent of the teachers indicated that they do not vary their teaching/learning strategies. Teachers should use varied teaching/learning strategies when teaching deaf-blind learners because their disabilities are not the same. Majority of the teachers (85%) suggest that there is need to adapt the curriculum to cater for the deaf-blind learners in an inclusive setting and 84 percent of the teachers indicate that the school has no enough teaching/learning resources to cater for deaf-blind learners hence hindering inclusion. The researcher also found that 89 percent of the regular learners support deaf-blind learners and that 84 percent indicate that they interact freely with deaf-blind learners, hence assign of acceptance and support to inclusion. 89 percent of the regular learners indicated that they assist deaf-blind learners while 86 percent indicate that deaf-blind learners take part in co-curriculum activities.

The study therefore concluded that there exists favourable attitude towards deaf-blind learners among teachers and regular learners despite a small percentage however still have a negative attitude. It is also evident that teachers lack necessary skills to implement inclusion of deaf-blind learners. The research also

found out that 98 percent the school physical environment does not support inclusion of deaf-blind learners.

The study recommended further studies to be done on the other disabilities and the Ministry of Education to urgently organize for in-service courses in every county to equip teachers with skills of teaching deaf-blind learners in an inclusive setting. The study also recommended that the Ministry of Education should give study leave with pay to all practicing teachers who want to study special education in all the levels as an incentive to encourage more teachers to join special education.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Globally, education is recognized as one of the basic human rights (United Nations Universal Declaration on Human Rights, 1948). This commitment was reiterated during the two major world conferences on education: The Jomtien conference held in 1990 and the Dakar conference held in 2000. The Jomtien conference advocated for a right based approach to education. It stressed the principle that every child including those with special needs have a right to education.

According to the Individuals with Disability Education Act [IDEA] (1990), deaf-blindness is a condition in which there is a combination of visual and hearing impairment that causes such a severe communication and other developmental and learning needs that the persons cannot be appropriately educated in special education programs solely for children and youth with hearing impairments, visual impairments or severe disabilities, without supplementary assistance to address their educational needs due to these dual concurrent disabilities. Statics indicate that the basic rights of many children disabilities to access education are not being met, thus contributing to the cycle of poverty (MoE, 2001).

The needs of the students who are deaf-blind are varied hence the instructions and school environment. The curriculum should be modified to reflect individual

needs. An appraisal exercise on Special Needs Education (Kochung, 2003) report, noted that learners with special needs and disabilities require a barrier free environment to maximize their functional potentials. The physical environment where learners with special needs and disabilities operate should be accessible and/or be disability friendly (United Nations Educational, Science and Cultural Organization [UNESCO], 1997).

Worldwide, the idea of inclusion has become the most important topic in the field of special education. In the most developed countries there has been a significant trend towards the placement of students with special educational needs in mainstream schools rather than in segregated special school classes. This move has been referred to variously as integration, mainstreaming and recently, inclusion. Inclusion is about making sure that each and every student feels welcome and that their unique needs and learning styles are attended to and valued (Block and Volger, 1994). It is an approach where students with disabilities become part of the general education classroom, receiving a meaningful curriculum with necessary support and being taught with effective strategies (Smith, 2004). According to Chesire (2007), inclusive education is primarily about restructuring school systems, strategic plans, policies, teaching and learning strategies, school physical structures and facilities to make them accessible to all children including those with special needs. It ensures that all

eligible school going children get equal opportunities to access quality education within their neighbourhood schools.

The history of inclusive education may be traced back to the early 1900s, and the welfare pioneers who believed in a non-segregated schooling systems (O'Brien, 2002). In 1967, a land- mark conference sponsored by the United States Office of Education was held at the University of Maryland where educators, psychologists, sociologists and representatives from a number of related professionals met to discuss variables and categories of learners with special educational needs. The conference resolved that there was need to involve regular educators more effectively in developing programmes for children with special needs in the regular classrooms Cope and Anderson (1977).

Services for learners who are deaf-blind have evolved in three distinct phases: relative isolation, integration or mainstreaming and inclusion. In the isolation phase, pupils were either denied access to public schools or permitted to attend isolated settings. In the integration phase, which started in the twentieth century, pupils who were deaf-blind were mainstreamed, or integrated into general education programmes when that is deemed appropriate. Finally the inclusion

phase, which started in the mid 1980s emphasized that pupils who are deaf-blind were to be fully included in school regular programmes and activities (Baldwin and Kent, 1994).

In 1975, the United States of America (U.S.A) legislation passed The Education for All Handicapped Children Act which is now referred to as Public Law 94-142, which gave all children regardless of disability to right to a free education. The 1990 version of this law, The Individual with Disability Education Act (IDEA), started an “Inclusive Movement” which recommended that no child be assigned to a special classroom or be segregated into another part of the school. The ruling in the historical Brown vs Board of Education, Chief Justice Warren indicated that separate is not equal. That court decision had an everlasting impact on the philosophy of segregation.

In Kenya, the government has passed legislations that support inclusion, some of which include: Education Act - Cap211 (Revised edition - 1980), Children’s Act (2001), the Kenya (2010) Constitution, the Persons with Disability Act (2003), which provides for the education of persons with disabilities, the Sessional Paper No. 1 of 2005, the Special Needs Education Policy (2010), among other pronouncements. All these documents emphasize the right to free and compulsory basic education for all. The Kenya Institute of Curriculum

Development (KICD) has also re-examined its curricular to cater for learners with special needs and disabilities. In a move to support inclusion, Kenya Institute of Special Education (KISE), started the Module 2 Certificate and Diploma programmes in 2002 to train teachers teaching in regular schools on special needs education.

The benefits of inclusive education are many both for students and parents with children with and without disabilities. According to Kachhar, West, and Tayman (2000), inclusion gives students with disabilities a feeling that they are performing more successfully, contributing more, increasing their ability to work well with different instructions and increasing their ability to work to higher levels. For example, studies done in the United States of America, by Hendrikson, Shokoohi, Yekta, Hamre and Gable (1997) found that students with severe disabilities develop social networks, positive interpersonal relationships and friendships with students without disabilities. Shapiro (1999) points out that inclusion can also benefit students with disabilities by giving them more focused career and vocational instructions that they may not otherwise have in the special classroom by participating in career and vocational discussions, students with disabilities will learn a wider range of educational and vocational opportunity that they have and will not be limited as they might be in a segregated classroom.

Inclusive education gives the opportunity for the development of positive attitudes of students without disability towards peers with disabilities and special needs in education (Hall, 1994; Salsbury, Callucci, Palombaro and Perk, 1995; Mrug and Wallander, 2002). Children who grow up with children with special needs are likely to be more tolerant in later years. They tend to mature into adults with greater understanding and respect for those who have diverse abilities in our society (Kisi and Meyer, 1994). Students without disability develop empathy and acceptance of individual children's differences (Lieber, Capell, Sandal, Wolfberg, Horn and Bechman, 1998). Parents and guardians also benefit from inclusion. According to Kochhar, West and Taymans (2000), parents and guardians with children of disabilities get more support from inclusion because there is more interaction with school staff and other parents and guardians of students with disabilities. This additional support network increases the knowledge that parents and guardians have about community resources and agencies that can assist them.

School is more than the academic instructions that occurs in the classrooms. The impact of school environment on learners cannot be ignored. Physical school factors refers to those school-level variables that relate directly to the school environment, teachers, curriculum coordinators/ principals, policies created at the school, county/ or community level, parents, and students (Dyson and Slee,

2001). Children spend most of their time in school and therefore, the physical school environment has great effect in their academic achievement.

Studies conducted in different countries have shown that physical school environment has great effect on learners' academic achievement. For example, a study done by Lovin (1972) in Middle Georgia explored the academic achievement of elementary deaf-blind learners who had moved from a traditional school where movement was restricted to an open-space school. It was found that the children were happy in the new environment with free movement and fresh air. They responded positively to their teachers' class work as they enjoyed the comfortable surroundings hence the teacher reported great improvement in their academic work.

Chain (1982), in his study compared students' academic achievement in an inclusive school opened in 1980 and that of another school opened in 1936 towards the physical school environment and the students' academic achievement.

The findings of the study indicated that the students housed in a modern school buildings with enough space to move around with modern facilities have significantly great academic achievement than do students in a much older building where physical facilities are old and no enough space to allow free

movement in classroom. In another study conducted by McGuffey in 1972 in an inclusive school investigating pupils' academic achievement and the physical school facilities, the findings were that, pupils housed in newer school buildings with adapted school facilities showed great academic achievement than pupils housed in older buildings with older facilities. In another study done in an inclusive school with deaf-blind learners in India 1973, where the physical school environment was not adapted. It was found out that most of the deaf-blind learners left schooling because they could not cope with the situation at the school.

In another research findings by Lee (1980) in an inclusive school in Hong Kong on the relationships of learning environment and students' learning process and academic achievement was that, learning environment plays a significant role in shaping students' learning process. It has been determined that the surroundings in which the students function can greatly impact moods, satisfaction and improve self-esteem (Ma and MacMillan, 1990). Oliver citing Erthman and Lemasters (1996) have pointed out that, students with proper school environment that is conducive for their learning experiences has a positive effect on their academic achievement.

In Kenya, modification of these facilities in the learning institutions to suit learners with disabilities has remained a challenge despite strong advocacy in

sensitization meetings, regional workshops, professional training for educational managers for all institutions and financial support to adapt the school physical facilities (MoE, 2005).

The findings from the studies on the effect on physical school environment on learners' academic achievement conducted in Georgia, Hong Kong and India show that the physical school environment has great influence on the learners' academic achievement. Studies on factors influencing inclusion of deaf-blind learners in regular schools has not been done in Kenya and that is why the researcher wants to do a study on the school physical factors influencing inclusion of deaf-blind learners in Kilimani primary school, Nairobi County, Kenya.

1.2 Statement of the problem

Kenya has embraced inclusive education as one of the strategies towards achievement of the Millennium Development Goals (MGD) and Education for All (EFA) Goals. Inclusive education ensures that all eligible school going children get equal opportunities to access quality education within their neighbourhood schools (MoE, 2008). The government in 1998 gave all public primary schools Kshs. 20,000 for physical school adaptations to allow for easy access to different areas in the school compound for learners with disabilities and

special needs. It also gives Kenya shillings two thousand per pupil per year in addition to the capitation grant of one thousand and twenty shillings per pupil per year under the Free Primary Education Policy in all special schools and special units to cater for their learning and teaching resources (Kenya Education Sector Support Programme (2005- 2010)).

However, despite all these efforts by the government to support inclusive education, majority of the deaf-blind children in Kenya still access their education services in special schools, special units or are kept at home (MoE, 2008). The study sought to identify school factors that impede inclusion of deaf-blind learners through a case study at Kilimani primary school, Nairobi County.

1.3 Purpose of the study

The purpose of the study was to investigate school factors influencing implementation of inclusion of deaf-blind learners in Kilimani primary school- Nairobi County.

1.4 Objectives of the study

The study was guided by the following objectives:

1. To determine the attitudes of teachers towards inclusion of deaf-blind learners in Kilimani primary school.

2. To determine the attitudes of regular towards inclusion of deaf-blind learners in Kilimani primary school.
3. To determine if the physical school environment supports inclusion of deaf-blind learners in Kilimani primary school.
4. To establish whether teachers are professionally qualified to support inclusion of deaf-blind learners in Kilimani primary school.

1.5 Research questions

The study sought to find answers to the following research questions:

1. What is the attitude of teachers towards inclusion of deaf-blind learners in Kilimani primary school?
2. What is the attitude of regular learners towards inclusion of deaf-blind learners in Kilimani primary school?
3. To what extent does the physical school environment support inclusion of deaf-blind learners in Kilimani primary school?
4. To what extent are the teachers' professional qualifications to support inclusion of deaf-blind learners in Kilimani primary school?

1.6 Significant of the study

The findings of this study forms a basis for educational planners to plan on how they will add more finances to regular schools for adaptations of the physical school facilities in the regular schools to make them accessible to learners with

disabilities and special needs, add more finances to training institutions to train more special education teachers to cater for learners with disabilities and special needs. The finding also helps Kenya Institute of Curriculum Development (KICD) to re-examine their curricular to make them flexible to suit learners with different disabilities. The findings help the Ministry of Education induct its officers on matters related to special needs especially those in Quality Assurance and Standard at the both headquarters and the County level.

1.7 Limitations of the study

Due to the sensitivity of the group of learners the researcher was dealing with, he sought for permission from the parents/ or guardians of the learners. Deaf-blind learners are always shy and not ready to talk to strangers, the researcher must therefore develop rapport with these learners to enable him get information from them. Most of the learners have not mastered the hand-on method of communication hence the researcher communicated with them through a sign language interpreter to get any useful information.

1.8 Delimitations of the study

Although there are many factors that may influence inclusion of deaf-blind learners, the researcher restricted himself specifically to physical school factors influencing inclusion of deaf-blind learners in regular schools because physical school factors are very important in the education of deaf-blind learners and their

academic achievement. The study is also limited to one category of disability the deaf-blind, because there is very little information about deaf-blind education in Kenya. Not many researchers in Kenya have ventured into this disability, the deaf-blind. The study is also confined to one school, Kilimani primary school in Nairobi County, because it is the only one practicing inclusion of deaf-blind learners in Nairobi County.

1.9 Basic assumptions of the study

The study was based on the following assumptions:

1. Respondents would provide truthful and honest responses to the instrument items.
2. The respondents would be knowledgeable about factors influencing inclusion of deaf-blind learners in regular schools.
3. The respondents would be knowledgeable on issues related to inclusion of deaf-blind learners.

1.10 Definition of terms

The following terms were defined in the context of the study.

Attitudes refers to mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects and situations with which it is related, it can positive or negative, (Allport, 1935).

Curriculum refers to all the organized experiences that schools provide to help children learn and develop, (MoE, 2009).

Curriculum adaptation refers to modification of content, instructions and learning outcomes to cater for diverse learning needs.

Deaf-blind refers to person with a combined sight and hearing impairment and has difficulties with communication, access to information and mobility.

Disability refers to lack or restriction of ability to perform an activity in the manner within the range considered normal for children of similar, age or age groups as a result of physical, mental, emotional or other health conditions or environmental factor (GoK- Ministry of Public Health & Sanitation, 2010).

Inclusion refers to the process where students with disabilities are educated in the regular education classroom full-time Quill, (1995).

Inclusive Education refers to an educational procedure in which students learn together in regular settings regardless of their disabilities.

Integration refers to a process through which learners with and or without special needs are taught together to the maximum extent possible in a least restrictive environment (MoE, 2008).

School environmental barriers refers to any obstacles such as attitude, unsuitable teaching and learning resources, accessibility, expenses (funding), teachers, inappropriate teaching strategies, rigidity of the curriculum among others.

Special Needs Education refers to education which provides appropriate modification in curriculum delivery methods, educational resources, medium of communication or the learning environment in order to cater for individual differences in learning (MoE, 2008).

Special School refers to a school set aside to offer education to children with special needs in education, based on their respective disability (MoE, 2008).

Special Units/Special Classes refers to classes set aside either in regular or special schools to cater for needs of learners with special needs (MoE, 2008).

Mainstream refers to the system of educating pupils with special needs in regular school settings alongside their non-handicapped peers.

Persons with disability refers to any person who is unable to secure and ensure by himself/herself wholly or partly the necessities of a 'normal' individual and/or social life as a result of certain difficulties in his/her physical, mental or sensory capabilities.

1.11 Organization of the study

The study is organized in five chapters. Chapter one comprises of the introduction, the background information of the study, statement of the problem, purpose of the study, objectives of the study, research questions, and significance of the study, limitations and delimitations of the study, assumptions of the study, definition of significant terms and organization of the study. Chapter two is on the review of the related literature. The chapter comprises of an introduction, an

overview of deaf-blind, attitudes of teachers and learners towards inclusion of deaf-blind learners, physical school factors to support inclusion of deaf-blind learners, teachers' professional qualifications to support inclusion of deaf-blind learners, theoretical framework and conceptual framework. Chapter three is on research methodology, which consists of introduction, research design, target population, sample size and sampling procedures, research instruments, instruments validity and reliability, data collection procedures, data analysis techniques and ethical consideration. Chapter four contains the introduction, instrument return rate, data analysis and discussion of findings, and finally, chapter five is composed of introduction, summary of the study, key findings, discussions, conclusion and recommendations, suggestion areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter deals with literature review of the physical school factors influencing inclusion of deaf-blind learners. These factors include school environmental, teacher's qualifications, teachers and regular learners' attitudes towards deaf-blind learners among others. The section also includes an overview of deaf-blindness, summary of literature review, theoretical framework and conceptual framework.

2.2 Overview of Inclusive Education

The development of inclusive policy can be traced back in the 1960s when the idea of normalization came to the forefront in Western societies and in 1990s when the traditional segregation of learners with special needs in separate schools was increasingly being challenged. Educators began to question how services might be organized to include disadvantaged in the mainstream of communities (Booth and Ainscow, 1998); Porter and Richter, 1991), inclusive education was advocated as a channel of availing education opportunities for all children.

Awareness on the inclusive education is a key factor in the transformation of schools into hubs of inclusive education. Education stakeholders cannot

implement what they do not know. According to UNESCO/IBE (2008) in Africa, it was noted that countries recognize the importance of education but that there are policy gaps and weak commitments in relation to inclusive education. Well-articulated public policy is sorely needed in a cross-cutting way and in strategic partnership with other bodies. These policies must establish enabling environments through flexible curricula and thus target identified barriers of exclusion. UNESCO office for the Public (2006) observes that schools are inclusive when they are working full participation, community and equality through respect for differences, respect for different learning styles, variations in methods, open and flexible curricula and welcoming each and every child. In other words, inclusive schools are learner-centered and child-friendly.

UNESCO (2003) basing its report on examples of inclusive education in India, recommends that the attitude that 'inclusive education is not an alternative but an inevitability, if the dream of providing basic education to all children is to ever become a reality' needs to be cultivated among all concerned professionals, grassroots workers, teachers and community members, especially in rural and remote areas. Inclusion without 'adequate' preparation of general schools will not yield satisfactory results. It is essential that issues related to infrastructural facilities, curriculum modification and educational materials should be addressed.

According to Salamanca framework, the fundamental principle of the inclusive school is that all children should learn together, whenever possible, regardless of any difficulties or differences they may have. Inclusive schools must recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use and partnerships with the communities. There is strength in diversity, and all children have strengths. It is the fundamental responsibility of all those who teach and of all those who support teachers to build on children's strength, to believe in all children's capacity to learn and to uphold their right to learn. The realization of this vision is dependent on the awareness level among all educational stakeholders.

2.3 Difference between inclusive education and integration

Inclusive education differs from the notion of 'integration', which tends to focus more on ensuring that disabled children attend mainstream schools rather than ensuring that these children are learning (Hodkins, 2005). An integration approach to education suggests diversity is a problem to be overcome as it a burden on resources and detracts from the amount of time a teacher dedicates to other students.

By contrast, inclusion is about the child's rights to participate and benefit on an equitable basis to their peers. Inclusive approach stresses the duty of school and educational systems as a whole to adapt and in principles upon full participation by all students, including disabled children, and upon respect for their educational and wider social, civil, and cultural rights (Kim, 2001). Resources are used to encourage this participation, rather than to provide additional and separate activities. In this way, diversity in the classroom and the wider society is embraced and viewed as an asset (Levy and Kasi, 1999).

Inclusive education values and principles should promote rather than undermine a flexible approach to tackling the diversity of learning needs. For example, an inclusive approach to education may ensure the provision of specialized support for disabled children in a mainstreaming classroom (Vail and Scott, 1995). In certain circumstances for example, specialized classes within the mainstreaming school may be beneficial for some students to facilitate and complement their participation in regular classes. Examples of when this may be appropriate are Braille training and physiotherapy that requires the use of special equipment.

2.4 challenges to Inclusive Education

The road to achieving inclusive education is a long and varied one, on which challenges and opportunities arise. No government can realistically expect to

switch over night from special or integrated approach to education to inclusive ones. ‘Twin track’ approach may be adopted, that is special or integrated initiatives and inclusive schools sit side-by-side as governments work towards the proper inclusion of all children within mainstream education systems over time (Higgins, 2005).

There are particular challenges around negative attitudes and behaviour on the part of both educators and parents in relation to the ability of disabled children to learn. These challenges can be overcome by raising awareness of human rights in communities and publicizing positive examples of disabled children and adults succeeding in inclusive education and in life beyond school as a result (Parker and Mussen, (2010). Other methods include, supporting disabled children to express their aspirations and participate in planning processes. Ensuring that oversight bodies such as parents-teacher associations exist, and that parents of disabled children are adequately represented in such entities (Metcalf, 2001).

Other significant challenges relate to organizational structure and leadership. The political challenge in securing leadership so that the Ministry of Education develop, implement and monitor an inclusive education strategy that explicitly focuses on the most marginalized, should not be underestimated. It is important to ensure that disabled children are not just registered in mainstream schools but

can and do actually attend and genuinely progress in a safe environment (Hodge, 2004).

The other challenge is around procuring and sourcing assistive devices. For example, children who learn to read Braille alongside their sighted peers in an inclusive class, need Braille writing equipment and curriculum materials in mainstream schools can be expensive as economies of scale are difficult to attain. Moreover, when these products are distributed to individual children in mainstream schools, they may never be used again by other children, especially if there are no redistribution systems in place (bender, 2009).

2.5 An overview of deaf-blindness

Deaf-blindness is a condition in which there is a combination of visual and hearing impairments that cause such severe communication and other developmental and learning needs that the persons cannot be appropriately educated in special education programmes solely for children and youth with hearing impairments or visual impairments without supplementary assistance to address their educational needs due to these dual concurrent disabilities, Individual with Disability Education Act [IDEA], (1990). Persons who are deaf-blind make sense of the world using the limited information available to them. To a greater extent, deaf-blind persons depend upon the good will and sensitivity of

those around them to make their world safe and understandable. The greatest challenge that deaf-blind children face is learning language. It is also the greatest opportunity, since language holds the power to make their thoughts, needs, and desires known (Winnick, 2005). A person who is deaf-blind has a unique experience of the world. For the young child who is deaf-blind, the world is initially much narrow and she or he faces further the challenge of learning to move in the world as freely and independent as possible (Bender, 2009).

2.6 Adaptation of curriculum to suit deaf-blind learners

Curriculum adaptation refers to the modifications or change of the curriculum content presented to suit learners with disabilities and those with special needs (Ali and Jelas, 2006). Deaf-blindness is a unique disability; hence the learners cannot use the regular curriculum, for them to participate actively in class activities with the regular learners the curriculum must be adapted to suit their needs.

Swanson and Hosky (2001) conducted an analysis on educational practices to determine which ones positively influence the performance of deaf-blind learners. The findings were that curriculum adaptation that focused on learners' needs was successful. Swanson and Deshler (2003) noted that providing educators with specific examples on how to improve upon high quality instructional strategies such as explicit practice by combining them with content

enhancement / learning strategy instruction is also critical to improving outcomes for deaf-blind learners.

Most successful programmes incorporated by systems are guided by the same principles; all students are not alike and should be educated in the manner that is most beneficial to the individual. No one program or strategy will benefit all students, deaf-blind or not (Goodwill, 2001). However, curriculum adaptations for deaf-blind should take into consideration; communication issues, mobility issues, motivational issues, instructional formants and positive behaviour.

2.7 Attitudes of teachers towards inclusion of deaf-blind learners

According to (Eagly and Chaiken, 1993), attitude is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person or situation.

Teachers are instrumental to the success of inclusion programmes for children who are deaf-blind. Teachers' abilities and attitudes can be major limitations for inclusive education. Teachers' attitudes that influence inclusion are fear, overprotection, and limited expectations (Lieberman & Houston, 1999). Because of their unfamiliarity with the disability, teachers often do not know how to interact with deaf-blind students and have problems in identifying the student's

abilities; this has consequences on the teacher's expectations for the deaf-blind child. Classrooms are now becoming more diverse with respective student's abilities, therefore sensitivity and awareness on the part of the teacher in the regular school is essential to promote successful inclusion (Hodge, 2004). If a teacher has negative attitudes towards inclusion of deaf-blind learners, he or she will reject or oppose inclusive initiatives. This teacher is also likely to neglect or even mistreat deaf-blind children in the inclusive programmes. Therefore, since behaviour is guided by attitude and attitudes are learned, efforts should be made to positively influence teacher towards inclusion of children who are deaf-blind in regular schools.

If educators have negative attitudes or low expectations toward students with special needs, students will unlikely receive a satisfactory inclusive (Miller and Sarage, 1995). Studies done by Croll and Moses, 2000; Hodkinson, 2005, 2006; Scruggs and Mastropier, 1996 in the United States of America have indicated that whilst a majority of teachers would support the concept of inclusive education they can only do so with some reservation. Teachers are willing to support inclusion policies if they relate to children with mild mobility or sensory difficulties (Corbett, 2001).

Avramidis (2000), in his research, revealed that teachers with experience in creating inclusive classroom environments have a more positive attitude towards

inclusive education. The research also discovered that the level of professional development of the teacher significantly related to their attitude towards inclusion. This therefore reveals that when teachers are supported to enhance their skills and provided with opportunities to gain experience of an inclusive environment, improved attitudes towards inclusive education is likely to follow. Levy, Kasai and Kim (1990) conducted a study on teachers' attitudes towards inclusive education in Tanzania and concluded that teachers have negative attitudes about inclusion, and are not ready to implement inclusive education. Research indicates that negative attitudes towards persons with disabilities may lead to their low expectations, which may in turn reduce learning opportunities for deaf-blind learners (Swanson and Jelas, 1989). Teachers and parents only need to change their attitudes favourably and give children with disabilities an opportunity to optimally exploit their potentials in a natural setting, which is the child's local regular school.

2.8 Attitudes of regular learners towards inclusion of deaf-blind learners

Regular learners are the students who use the regular curriculum in the regular classroom/ school. Students' attitudes play a major role in the success or failure of inclusion in any learning institution (Mussen, 2010, Metcalf, 2011). If regular learners have negative attitudes towards inclusion of deaf-blind learners, they will

not support them; neither will they interact freely with them. They may isolate them in class and outside activities.

A study done by Siperstein, Parker and Widaman (2007) in an inclusive school in Florida, found that middle school children without disabilities welcome children with disabilities in none academic classroom such as art and physical education. The research found overwhelmingly, however, that regular students prefer not to have students with disabilities in their academic classroom such as Mathematics and English because the teacher will spend a lot of their time explaining the students with disabilities (Nowicki and Sandreson, 2000). In another study done by Siperstein (2007) to 5,800 middle class students, the students reported being happy to be friend handicapped students within their school setting. In their research on attitudes of students towards peers with disabilities, Bunch and Valeo (2004) found that the social interaction between regular students and those with special needs were better in schools with full inclusion model than in schools with special education needs. Additionally, in schools with inclusion model, regular students were more likely to have friends with students with disabilities than their counterparts in schools with special education model.

2.9 The role of physical school environment in inclusion of deaf-blind learners

Physical school environment is a key factor in the overall safety of students and especially those with disabilities and special needs. School buildings and grounds must be designed and maintained of safety hazards and promote inclusion.

Desirable designs includes having friendly and agreeable entrance area, free paths all over the school compound, supervised private places for students that support inclusion (Berry, 2005). Classrooms must be able to accommodate students' assistive technology devices, as well as other furniture to meet individual needs. An important foundation of inclusive education is the creation of heterogeneous classroom where students of varying abilities learn together (Swain and French, 2000). Children spend most of their time in school hence; the physical school environment has great impact in their academic achievement, (Dyson and Slee, 2001). There is enough research evidence to show that the buildings in which students spend a good deal of their time learning influence how well they learn (Erthman, 2004).

Studies done in the United States of America in 1990 on the influence of physical school environment on learner's academic achievement have shown that student's academic achievement can be affected either positively or negatively by the physical school environment (Mercer, 2003). Studies done in a unit for the

deaf-blind in the U.S.A in 2001 by deaf-blind association of U.S.A. about student academic achievement and building conditions concluded that the quality of the physical school environment significantly affects students' achievement. Though the Kenya government in 1998 gave money to all public primary schools for the adaptations of school facilities, some regular schools are still inaccessible to students in wheelchairs or to those other mobility aides and need elevators, ramps, paved path ways to get in and around school buildings (MoE, 2002).

2.10 Professional qualifications of teachers in handling deaf-blind learners

There is overwhelming evidence of a shortage of special education teachers in Kenya who have the knowledge and skills to serve the needs of children and youth with disabilities especially those who are deaf-blind (MoE, 2004, Sense International, 2009).

The Ministry of Education 2009, KESSP, 2005-2010, Sense International, 2010 state that one of the major challenges hindering provision of accessible quality services to learners with special needs and disabilities has been in the area of staffing, training, quality assurance, examinations, curriculum development and teaching/learning materials. Preparing qualified teachers to educate and support children who are deaf-blind is the most significant challenge facing the field of learners who are deaf-blind.

The government has however made major developments in the preparation of teachers of learners with special needs and disabilities. For example, the government established the Kenya Institute of Special Education (KISE) in 1987 to train teachers in special need education. Kenyatta University, Moi University, Mseno University, Mount Kenya University, Pwani University and Methodist University started departments of special needs to train teachers in special needs to cope with the tremendous annual enrolment of learners with disabilities in the schools. Inclusive education could be successfully implemented if the level of teacher's competency is increased (Ali, Mstafa and Jelas, 2006). Literature has shown that the success of inclusive education depends largely on the willingness and the ability of the teachers to make accommodation for individuals with special needs (Bender, Vail and Scott, 1995). Research study from West Virginia University done in 2004, suggested that success of inclusion depends upon teacher's beliefs. The study indicated "... when regular teachers are provided with proper training, supportive services through collaborative consultant... and designated time to meet ... willingness can be recorded." (Miller and Sarage, 1995).

2.11 Summary of literature review

The practice of inclusion has not yet picked momentum in Kenya despite the government effort to formulate many policies on inclusive education. However, the future for inclusion is promising especially when reference is made to

mainstreaming; for example, persons who are physically handicapped and visually impaired have been included in all levels of the education system.

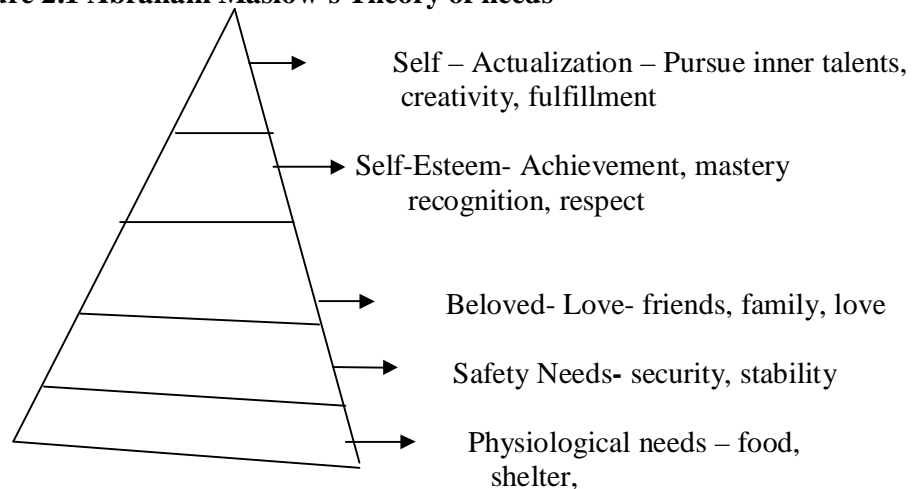
In Kenya, the education of the deaf-blind is relatively new hence very little research has been done. The inclusion of deaf-blind learners has not picked up in Kenya, most of these learners are still segregated in special schools. Whereas studies have been done on physical factors influencing inclusion of learners in other disabilities, no studies have been done on physical school factors influencing implementation of inclusion of deaf-blind learners. This study therefore intends to identify those physical school factors influencing inclusion of deaf-blind learners in Kilimani primary school, Nairobi County- Kenya.

2.12 Theoretical framework

Abraham Maslow developed the Hierarchy of Needs model in 1940 -50s in the United States of America and the theory remains valid today for understanding human motivation, management training, and personal development (Abraham, 1954). Teachers often assume that the learners' basic needs are met, and that their safety needs are also assured. They might not have a great deal of influence over what happens externally from the school. However, in keeping with the principles of Maslow's Hierarch of Needs theory, teachers need to adopt the appropriate

strategies required to assist in systems on effective classroom climate where students especially those with disabilities and special needs feel safe, secure and accepted by their teachers and peers.

Figure 2.1 Abraham Maslow's Theory of needs



Maslow's Hierarchy developed by Abraham Maslow is directly related to learning through motivation (McLeod, 2007). Each student including the deaf-blind have needs that must be met in order to maximize learning. Maslow's Hierarchy of Needs theory applies more especially to students with exceptionalities because many times students with exceptionalities needs are more difficult to meet (Reich, Jung and Adler, 2009). According to Kun (1992), all children are children and all children need to feel a sense of belonging, love with peer in the environment so that they feel safe especially the deaf-blind who

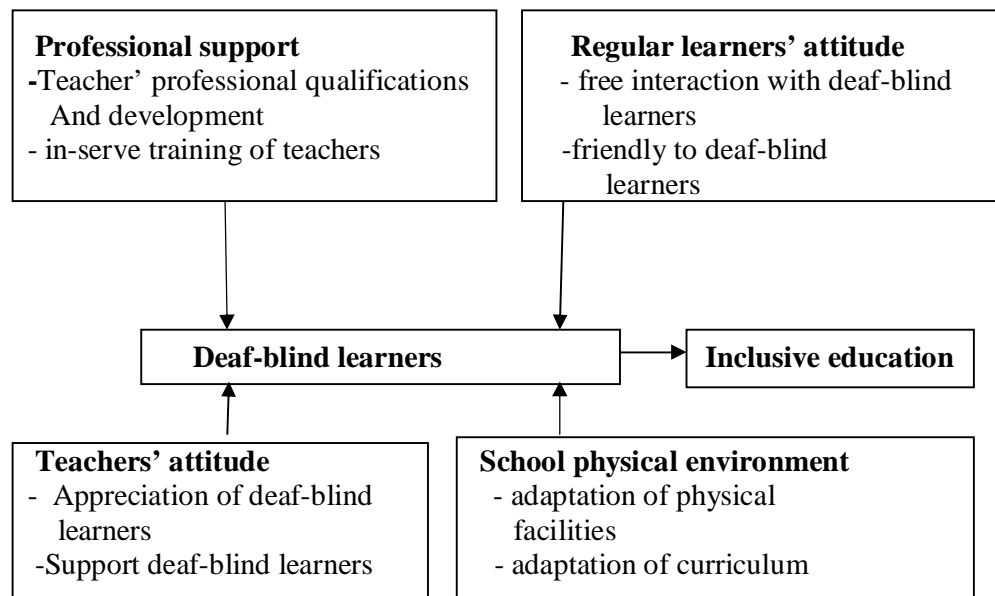
depend on others in most of their daily activities. Like everybody else, they need to have high self-esteem. In order To achieve this, they must be respected and recognized by others for whatever they do in and outside the classroom, they have to be included in every activity in the school to fulfill their aspirations. The curriculum should therefore be adapted to accommodate all learners including those with disabilities and special needs in the classroom; ensuring that deaf-blind learners are not educated in social isolation from their peers and as a result condemned to social isolation as adults. They have to be supported and motivated to reach to the highest level of the Maslow's Hierarch of Needs theory, self-actualization. Deaf-blind learners just like other learners require support of friends and peers to satisfy their social and belonging needs as advocated by Maslow 1954.

Segregating students into special education classrooms will not provide a sense of belonging for deaf-blind learners (Bacon, 2009). Kunc (1992) suggests that inclusive education is an opportunity for learners with disabilities and special needs to actualize Maslow's Hierarchy of Needs theory. In education, it calls for redistribution of resources and restructuring of the institutions to make them learner friendly. Hence, this study seeks to identify physical school factors that influence successful inclusion of deaf-blind learners in Kilimani primary school in Nairobi County.

2.13 Conceptual framework

Figure 2.2 represents the conceptual framework adopted from Hilda Taba's curriculum model. It identifies the various variables that must interrelate in order to make inclusion of learners who are deaf-blind successful.

Figure 2.2 Variables that interact to make inclusion a success



Adopted and adapted from Hilda Taba's Curriculum model (1971)

The study adopted Hilda Taba's curriculum model of 1972 which emphasizes the importance of considering the relationship between various elements of the factors to produce suitable learning experiences for the learner.

Figure 2.2 demonstrates interaction of the various factors that facilitate the implementation of inclusion of deaf-blind learners. Teachers' and learners'

attitudes towards inclusion, teachers' professional qualifications and school physical factors influencing inclusion of deaf-blind learners are major factors in the implementation of inclusion of deaf-blind learners. In the conceptual framework, the researcher shows how these factors interact to facilitate implementation of inclusion of deaf-blind learners. Inadequacy in any of these factors would be a barrier to inclusion of these learners.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research procedures which were used in this study. It focused on: research design, target population, sample size and sampling procedures, data collection instruments, test of reliability and validity, the procedures of data collection, analysis techniques and ethical consideration.

3.2 Research design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure Kothari (2004). It is the conceptual structure within which research is conducted; and it constitutes the blue print for the collection, measurement and analysis of data.

This study used a case study design where both qualitative and quantitative data was collected in order to determine physical school factors influencing inclusion of deaf-blind learners in Kilimani primary school, Nairobi County. Case study design focuses on and gathers information about a specific person, group, community or event Abel (2008). In this case the researcher used the case study design as the best because the research was on one group of disability, the deaf-blind in one school only in Kilimani primary school. Kilimani primary school in

Nairobi County was identified for the study because it is the only institution in Nairobi County practicing inclusion of deaf-blind learners.

3.3 Target population

The target population for this study was the headteacher, 20 teachers teaching in the classes where the deaf-blind learners are included, 250 regular learners from classes 4-8 (school records, 2013). The Headteacher was important because he plays a vital role in decision making on inclusive education in the school, and plays a role in sensitizing the school community and parents of the regular learners during parents' day on issues of inclusion of deaf-blind learners in the school. The teachers were included because they are in direct contact with the students and also implement the content of the inclusive curriculum, while the regular learners interact with the deaf-blind learners both inside and outside the classroom.

3.4 Sample size and Sampling procedures

The study employed census survey method. It is a type of survey involving the process of collecting information about each member of a given population, it is down to earth and holds the attention in harmony with the reader's own experience and provides a natural basis for generalization. It is accurate since the respondents involved are members of the given population, (Limax, 1994).

Considering this was a case study of Kilimani primary school, the headteacher was required to participate in the study because he plays a vital role in decision making on inclusive education in the school and hence will be purposively. All the 250 learners from classes four to eight where inclusion of deaf-blind is practiced participated in the study because deaf-blind learner are included in these classes. All the twenty teachers teaching in classes 4-8 were also included because they are the curriculum implementers in these classes and seven teachers teaching in the special unit were included they directly deal with the deaf-blind learners.

3.5 Research Instruments

Five types of research instruments were developed by the researcher and used in the study for the collection of data: two questionnaires, one interview schedule, one observation schedule and one lesson observation guide.

Questionnaires were administered to teachers and regular learners. According to Kombo and Tromp (2006), a questionnaire is useful in obtaining objective data because the participants are not manipulated in any way by the researcher as they will fill in the questionnaire. The questionnaire for teachers had four sections and each section collected different information as follows:

1. The background information of the respondents
2. Attitudes of teachers towards deaf-blind learners
3. Identification of Skills training areas

4. Identification of teaching and learning strategies

Interview schedule was used to gather information from the head teacher. Interview schedule is an appropriate instrument in any study as it helps the interviewer to cover all the dimensions of the investigation through probing of the participants (Lovel and Lawson, 2010). The interview schedule for the researcher had eight questions, and each question collected different information on inclusion. For example, question one was asking the headteacher the number of deaf-blind learners in the school, question two was asking the headteachers' opinion on inclusion of deaf-blind learners in his school. In question three, the researcher wanted to get the headteachers' opinion educating of deaf-blind learners in special schools.

Question four asked the headteacher on the availability and suitability of teaching and learning resources to cater for deaf-blind learners in his school. In question five, the researcher wanted the headteacher to state whether he thought curriculum adaptation was necessary for the deaf-blind learners. Question six was asking the headteacher to mention a few physical facilities in his school that he thought were necessary for adaptation to suit deaf-blind learners. Question seven was asking the headteacher to give his recommendations on the challenges of inclusion of deaf-blind learners in his school and question eight was asking the headteacher to give his recommendations on the inclusion of deaf-blind learners in regular schools.

An observation check list was used to establish the availability and state of physical facilities, equipment and resources with regard to successful inclusion of deaf-blind learners, teaching-learning strategies adopted, language used during the lessons. (Kombo and Tromp 2006, Oso and Onen, 2009) describe observation as a tool that provides information about actual behaviour and allows the researcher to gain firsthand experience without informants, records information as it occurs, and explores topics that may be uncomfortable to informants. The facilities the researcher observed included the availability of ramps in the toilets, classrooms, offices, dining hall and the school canteen and how wide are the doors in all these places. Other facilities the researcher observed were the playing grounds, the paths leading to different places among others.

3.6 Instrument validity

Instrument validity is concerned with whether or not a test or measuring instrument is representative of the full content of the object being measured, (Orodho, 2006). Validity in this study was tested through a pilot study which was conducted in Kilimani primary school using subjects that were not included in the main study but with similar characteristics.

3.7 Instrument reliability

Reliability of an instrument is the consistent in producing similar results when administered to the same subjects twice, Kombo & Tromp (2006). In this study,

reliability was tested through test-retest method. This involved administering the same test twice to the same subjects under the same condition using same method. The data obtained was analyzed and computation was done to determine the reliability coefficient.

3.8 Data collection procedures

The researcher sought permission from the Ministry of Education, Science and Technology and from the headteacher of the school. He conducted an exhaustive interview with the headteacher and administered the questionnaires to the teachers and regular learners. He also conducted lesson observations in classes where deaf-blind learners are included. Five lessons were observed in the classes where deaf-blind learners are included to determine the suitability of teaching/learning resources and techniques. The researcher also observed the physical facilities of the school to ascertain their availability, and suitability in supporting inclusion of deaf-blind learners.

3.9 Data analysis techniques

In this study, data was analyzed both qualitatively and quantitatively depending on its nature. Responses to the open-ended items in the questionnaires, interview responses and observation data were analyzed and reported qualitatively. Qualitative data was analyzed according to major themes related to inclusion of deaf-blind learners and presented in narrative forms. Responses were organized

in various pertinent aspects of the study: teachers' attitudes, learners' attitudes, teachers' professional qualifications and physical school environment.

Development of these relevant issues was based on the research questions of the study. The closed-ended items in the questionnaires were analyzed and reported using simple statistics such as frequencies and percentages. Statistical Package for the Social Science (SPSS) will be utilized to provide descriptive statistics.

3.10 Ethical consideration

It is of paramount importance that educational researchers consider the right, privacy, dignity and sensitivity of their research populations and also the integrity of the institutions in which the study takes place (Gall, 1996). In this study, the researcher made some ethical considerations in an attempt to protect the research participants and the school that I used for my data collection.

To start with, the researcher had to apply for permission to conduct the research from the relevant authorities. Once the researcher had the permission, he went to see the headteacher of the school from where the study will be conducted. The researcher explained to him about the study and why he had chosen his school for the study. The respondents were also informed about the purpose of the study and that their names as well as the name of the school would be concealed. The respondents were also informed about the purpose of the study and its possible benefits to the education system. Researchers must inform research participants about the study, its objectives and content and how the information will be used (Gall, 1996).

During the interview process, the researcher endeavored to establish rapport with the respondents with the aim of making them to feel like a friend, a colleague and a partner in the exercise. The researcher finally showed appreciation of the respondents' participation by verbally thanking them for having taken part in the study.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The study aimed at establishing the school factors influencing inclusion of deaf-blind learner through a case study of Kilimani primary school. Specifically the study sought to establish the attitudes of teachers and the regular learners towards learners who are deaf-blind, suitability of professional qualifications of teachers to handle deaf-blind learners at Kilimani primary school and school physical environmental adaptation of school compound to support inclusion of deaf-blind learners.

The findings were presented in both quantitatively and qualitatively were analyzed. The presentation was done in thematically based on the stated research objectives. Presentation of the findings was done using pie charts, bar graphs, tables and histograms. Different items within the research instrument were categorized and classified under certain research objectives. The following information highlights the basic objectives and the responses to the items.

4.2 Instrument return rate

The total numbers of regular learners from classes 4-8 was two hundred and fifty (250) and all were issued with questionnaires. The two hundred and fifty (250) regular learners responded to all the 250 questionnaires which were issued to them. A hundred percent (100%) return rate of regular learners' questionnaires was realized. Twenty (20) questionnaires were issued to the twenty teachers

teaching in classes 4-8 where inclusion of the deaf-blind learners is taking place. A total of 19 questionnaires were responded indicating a return rate of about 95 percent, which was a good response.

The headteacher responded to all the items in the interview schedule and in addition, the researcher observed the physical school environmental adaptations to suit deaf-blind learners and observed five lessons.

4.3 Demographic composition of the respondents

Information on the demographic composition of the study respondents is vital because it gives a full picture of the type of respondents the researcher will deal with. In this study, the demographic composition of the study respondents include; the gender, teaching experience and teachers' professional qualifications. Table 4.1. In the background information of the teachers' questionnaire, the researcher wanted to know the gender of the teachers teaching the deaf-blind learners included from classes 4-8. It is important to know the gender because according to research done by Vail and Higgins (2005) on attitude of inclusion of deaf-blind learners in Germany, it was found out that female teachers have positive attitude towards inclusion of learners with disabilities and special needs. It also found out that female teachers are more tolerant to learners with disabilities and special needs than male teachers. Table 4.1 give the results of the composition of gender teaching the deaf-blind learners from classes 4-8 at Kilimani primary school.

Table 4.1. Gender of the study respondents

Gender	Total	Percentage
Male	5	26.31%
Female	14	73.68%

N=19

The research findings show that 73.68 percent of the teachers teaching in the inclusive classes are female and only 26.3 percent are male. This is also supported by another research findings done in India by Wiles and Smith (2009) in 100 inclusive middle schools, which found out that 85 percent of the teachers teaching in the inclusive classes were female.

Table 4.2. Teachers were asked to indicate their teaching experiences. It was important for the researcher to know the teaching experience of the teachers because teachers who are more experienced are more tolerant to learner with disabilities and have positive attitude towards inclusion than those who less experienced. Figure 4.2 gives the results of the findings.

Table 4.2 Teaching experience

No. of years taught	No. of teachers	Percentage
1-5	1	5.26%
6-10	8	42.10%
20 years and above	10	73.68%

N=19

The findings show that majority of the teachers 73.68 percent have taught for more than twenty years, 42.10 percent of the teachers have been in the service for between 6-10 years and 5.26 percent have been in the service for between 1-5 years. This finding is supported by a study done in China by Lieberman and Houston (2007) on the attitudes of teachers towards inclusion, and it was found out that teachers who have a time are more experienced and have a passion and positive attitudes towards inclusion than those without experience. Another study done in Tanzania by Kasai and Kim (1990) on the effect of teachers' experience on inclusion found out that less experienced teachers have negative attitudes towards inclusion because they have high expectation on the learners with disabilities which is not achievable.

Table 4.3. Teachers were asked to provide information on their professional qualifications. This information is vital because it gives the researcher the picture

of the respondents he is going to deal with. The success of inclusion depends on the correct professional qualifications of the teacher.

Figure 4.3 gives the results of professional qualifications of teachers in the inclusive classes at Kilimani primary school.

Table 4.3. Teachers' qualifications

Academic/professional qualification	No. of teachers	Percentage
Masters	2	10.52%
B. Ed.	5	26.31%
B. Ed. (Special Ed.)	6	31.57%
Dip. Ed.	0	0%
Dip. (Special Ed.)	0	0%
P1	2	10.5%
ATS	4	21.05%

N=19

The findings indicate that 31.57 percent of the teachers teaching in the inclusive classes have Bachelors of Education in special education, 26.3 percent have Bachelors of Education; 10.525 percent having Masters and 21.05 percent are ATS teachers.

According to the findings, 31.57 percent of the teachers have Bachelors of Education in special education which is the right professional qualification to teach in the classes where deaf-blind learners are included. This is because these

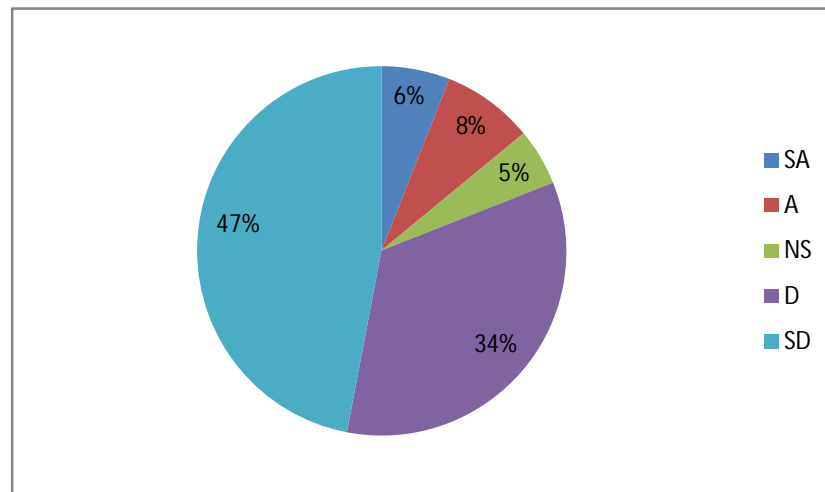
teachers have the skills, knowledge and attitudes to teach the deaf-blind learners. They know the characteristics of the deaf-blind learners and their language of communication. The other teachers though have good academic qualifications; they have no knowledge of the education of the deaf-blind hence they are learning on the job. Lack of qualified teachers is one of the hindrances of inclusive education and this is supported by a research done by the Ministry of Education, 2004, and Sense International, 2009, which found out that there is shortage of special education teachers who have the knowledge and skills to serve the needs of children and youth with disabilities especially those who are deaf-blind. Another study by Sense International (2010) found that the major challenge hindering provision of accessible quality services to learners with special needs and disabilities has been in the area of staffing, training, quality assurance, examinations and curriculum.

4.4 Attitudes of teachers towards inclusion of deaf-blind learners.

Teachers were asked to rate a survey statement on their appreciation of inclusion of deaf-blind learners. The success of inclusive education depends on the teachers' attitudes towards the learners with disabilities. Inclusion of deaf-blind learners will succeed only when teachers have positive attitudes towards the learners, when teachers have negative attitudes towards the learners, inclusion fails. Teachers were expected to rate their attitudes towards inclusion of deaf-blind learners in regular schools as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD). Figure 4.1 gives the results given by the teachers

Figure 4.1 Teachers' responses on appreciation of inclusion of deaf-blind learners in their classes.



N=19

From the findings, 47 percent of the teachers strongly disagreed with the statement while 34 percent indicated that they disagreed with the statement, this therefore means that teachers at Kilimani primary school appreciate the inclusion of deaf-blind learners in regular schools and therefore have positive attitudes towards inclusion. This is in support of a study done in India by Avramids (2002) which revealed that successful inclusion depends on the teachers' attitudes towards learners with disabilities. About 14 percent of the teachers strongly agreed or agreed with the statement that teachers don't appreciate the inclusion of deaf-blind learners in regular schools, and only 5 percent of the teachers were not sure. This indicates that majority of teachers have positive attitudes towards

inclusion and hence appreciate the inclusion of deaf-blind learners at Kilimani primary school. However, the 14 percent who agree with the statement and those who are not sure may have a negative effect on the implementation of inclusion of deaf-blind learners.

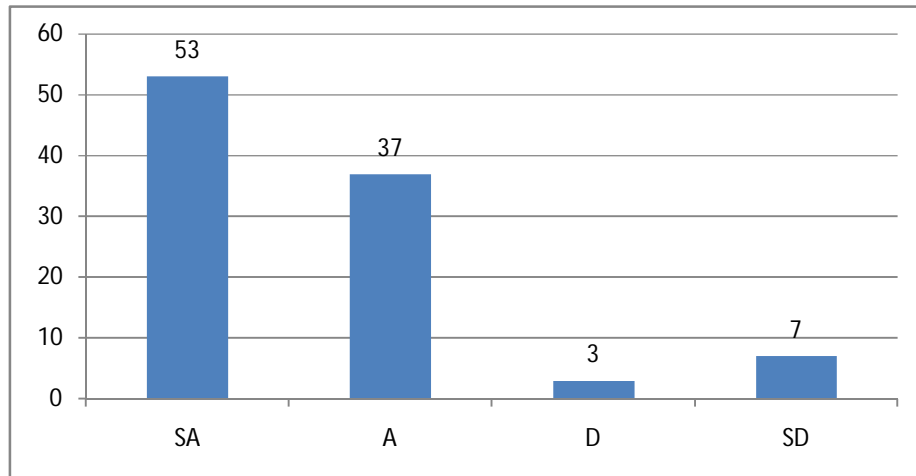
Teachers were asked to rate a survey statement on adequate support to deaf-blind learners. Deaf-blindness is a dual disability and each deaf-blind learner has specific learning needs. Due to their unique individual learning needs, each learner requires an individual teacher for support, unlike the regular learners who can be taught as a group by one teacher. The deaf-blind learners therefore need a lot of support from their teachers both in classroom and outside for successful inclusion.

The rating of the statement from teachers was expected as follows:

Strongly agree (SA), Agree (A), Disagree (D), Strongly disagree (SD).

Figure 4.2 gives the results from the teachers.

Figure. 4.2 Responses from teachers on adequate support given to Deaf- blind learners



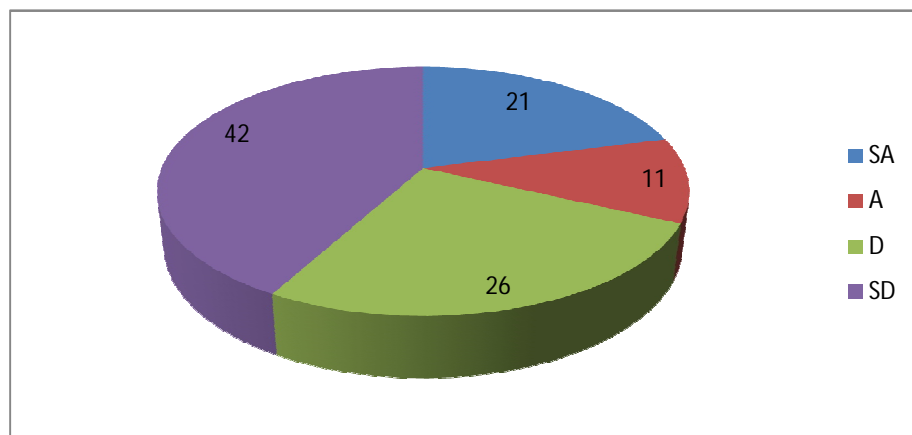
N=19

The findings show that about 7 percent of the teachers strongly disagreed while 3 percent disagreed with the statement that teachers don't support deaf-blind learners. 90 percent of the teachers either strongly agreed or agreed with the statement. This is an indication that teachers in Kilimani primary school give adequate support to the deaf-blind learners hence support inclusion of deaf-blind learners. The findings are in support of Corbett (2001) who says teachers support inclusion policies if they relate to children with mild mobility or sensory difficulties.

However, 10 percent of the teachers who support the statement that teachers at Kilimani primary school do not support the inclusion of deaf-blind learners may derail the inclusion program.

Teachers were asked to rate a survey statement that educating deaf-blind learners in regular schools does not increase the learners' level of academic performance. Figure 4.3 gives the results from the teachers.

Figure. 4.3 Teachers responses on deaf-blind learners' performance in regular schools



N=19

The responses from the respondents show that about 68 percent of the teachers do not support the statement that educating deaf-blind learners in regular school rather than in special does not increase the child's level of academic performance, which shows that deaf-blind learners increase their academic performance when educated in regular a school.

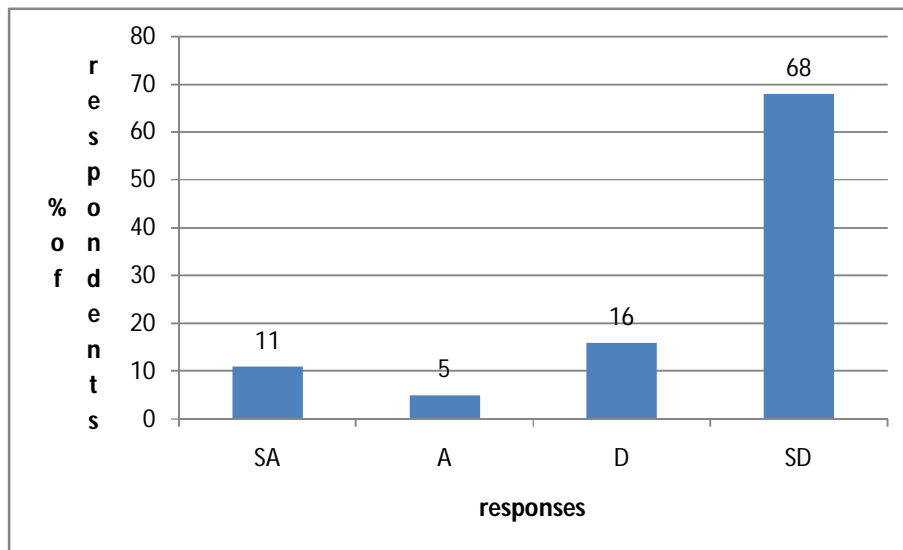
About 32 percent of the teachers support the statement and these teachers may influence the others which could have negative effect on the successful implementation of inclusion of the deaf-blind learners.

Teachers were asked to rate a survey statement that deaf-blind learners do not benefit from specialized instructions provided by teachers. Unlike the regular learners who do not need special instructions, deaf-blind learners have unique learning needs and hence need specialized instructions to supplement for their sight and hearing needs for successful inclusion. For example, they will require sign language and Braille for effective communication. The rating of the statement from teachers was expected as follows:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD).

The results from the teachers are shown in figure 4.4.

Figure 4.4 Teachers' responses on benefit of specialized instructions provided to deaf-blind learners by teachers



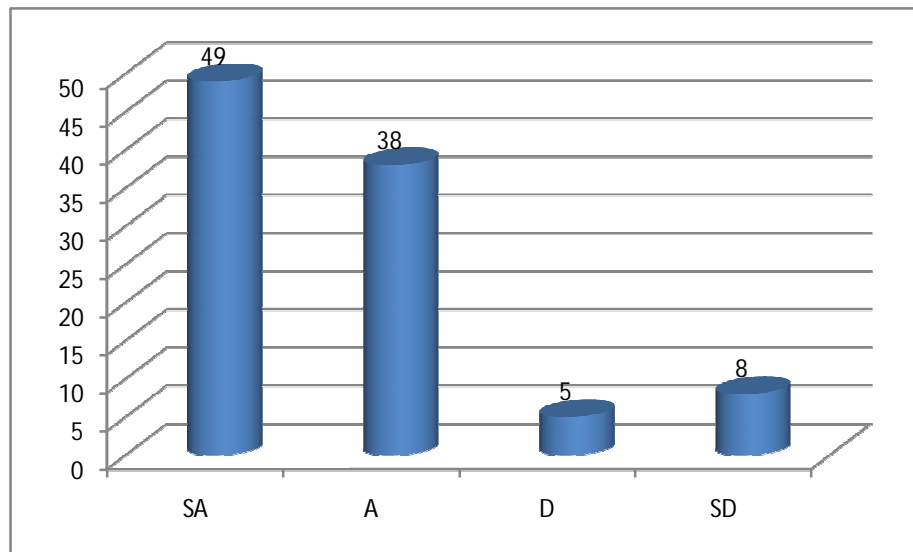
N=19

Majority of the teachers 68 percent indicate that they strongly disagreed with the statement while 16 percent disagreed with the statement, hence the deaf-blind learners benefit from the specialized instructions provided by the teachers in class. This is an indication that teachers in Kilimani primary school have positive attitude towards the inclusion of deaf-blind learners in their school. 16 percent of the teachers said that the deaf-blind learners do not benefit from the specialized instructions provided by teachers. Though the percentage is small, it may have a negative effect on the inclusion of deaf-blind learners in Kilimani primary school. Teachers were asked to rate a survey statement that the curriculum has not been adapted to take care of deaf-blind learners. Unlike the regular learners who are comfortably use the regular curriculum, deaf-blind learners require adapted curriculum to cater for their individual learning needs. It is therefore important to adapt the regular curriculum to suit the needs of deaf-blind learners. Figure 4.5 gives the results from the teachers.

The rating of the statement from the teachers was expected as follows:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD).

Figure.4.5 Teachers responses on curriculum adaptation to take care of deaf-blind learners



N=19

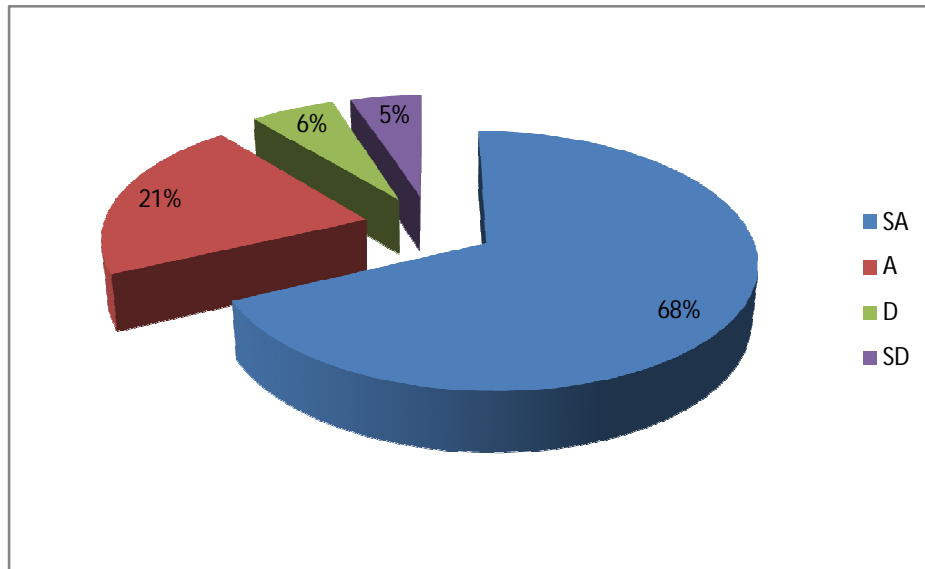
Research findings show that 49 percent of the respondents strongly agreed with the statement while 38 percent agreed that the curriculum has not been adapted to care for the deaf-blind learners. Most of the teachers 87 percent strongly agreed or agreed that the curriculum has not been adapted to take care of the deaf-blind learners and that teachers use the regular curriculum in teaching the deaf-blind learners, this supports Swanson and Hosky (2001) who conducted an analysis on educational practices to determine which ones positively influence the performance of deaf-blind learners, and the findings were that curriculum adaptation that focuses

on learners' needs was successful. Only 13 percent of the teachers did not agree with the statement. Adaptation of the curriculum to cater for learners with disabilities is an acceptance to inclusion but when the curriculum is not adapted, inclusion of learners with disabilities including the deaf-blind is compromised.

Teachers were asked whether they need specialized training to enable them to implement inclusion of deaf-blind learners. Deaf-blindness is a combination of two disabilities, visual and hearing hence the deaf-blind learners have unique individual learning needs. Due to their unique individual learning needs, the teachers require specialized training to enable them deal with the needs of these learners successfully. Teachers were expected to rate the statement as follows: Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD).

Figure 4.6 illustrates the responses.

Figure 4.6 Teachers' responses on the need of specialized training to implement inclusion of deaf-blind learners



N=19

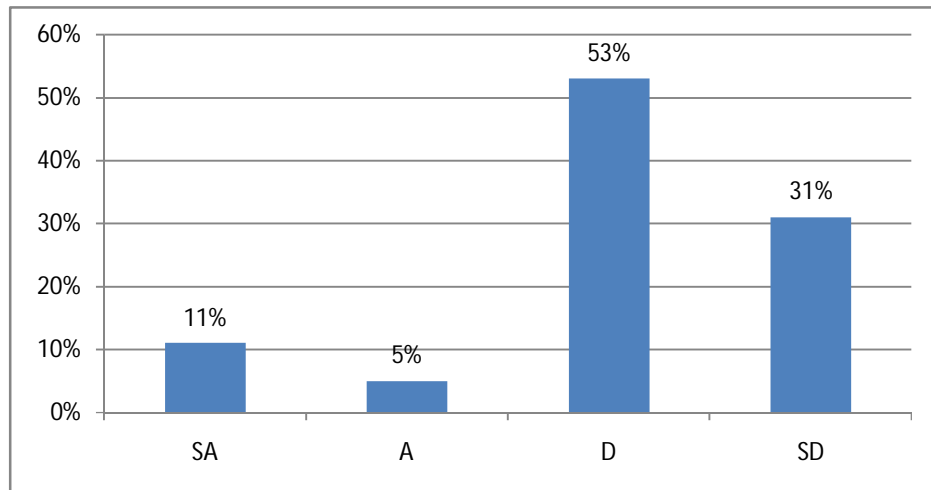
The findings show that 89 percent of the teachers needed specialized training to enable them successfully implement the inclusion of deaf-blind learners in regular schools, and 11percent strongly disagreed or disagreed with the statement. This shows that teachers strongly need specialized training to enable them implement inclusion of deaf-blind learners. Learners with disabilities have diverse needs and hence need teachers with special training to enable them deal with these needs. Lack of specialized training is a major hindrance to the implementation of inclusion of deaf-blind learner.

The findings are in support of a study done by the Ministry of Education (2009) and Sense International (20010) which found out that the major challenges hindering provision of accessible quality services to learners with special needs and disabilities has been in the area of staffing, training quality assurance, examination and examination.

Teachers were asked whether the schools had enough teaching and learning resources to cater for deaf-blind learners. Teaching and learning resources are important in the learning process and more so to deaf-blind learners. Teaching and learning resources enhance learning in areas where the learner did not understand during teaching, also learners can teach themselves using the teaching and learning resources in the absence of the teacher. Deaf-blind learners need these resources more to supplement for what they missed during teaching so that they be at par with their peers in class activities. Figure 4.7 illustrates the findings. Teachers were expected to rate their findings as follows:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD).

Figure. 4.7 Teachers' responses on teaching/learning resources for deaf-blind learners



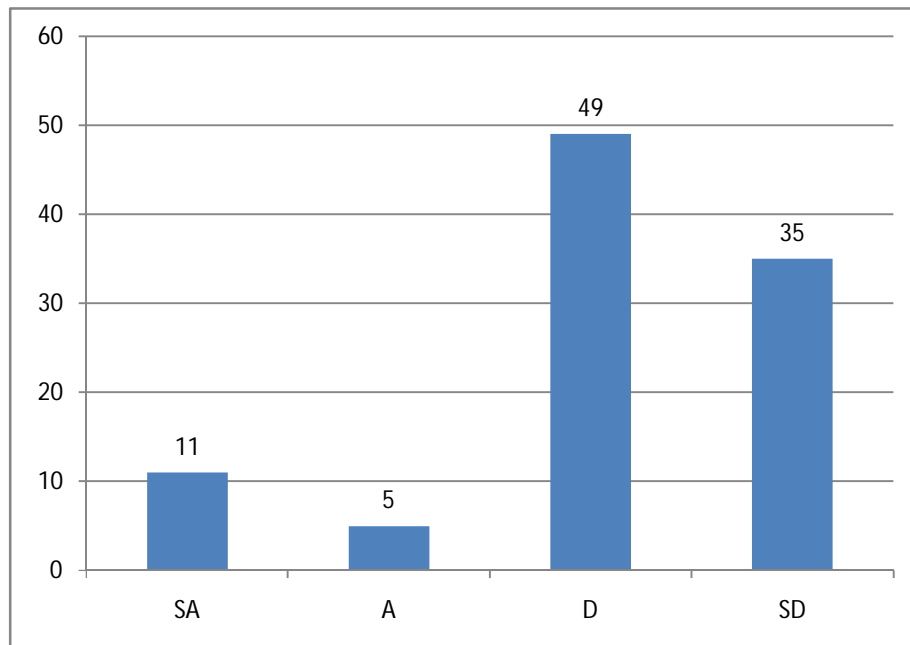
N=19

The findings indicate that 84 percent of the teachers strongly disagreed or disagreed with the statement, while 16 percent either strongly agreed or agreed that the school has enough teaching and learning resources to cater for deaf-blind learners. Teaching and learning resources are very essential in a learning situation and more important to those who are deaf-blind. Lack of enough learning and teaching resources hinders the implementation of inclusion for deaf-blind learners.

On whether teachers vary teaching and learning strategies to cater for deaf-blind learners, teachers' responses are shown in Figure 4.8. Deaf-blind learners have divergence learning needs and therefore the teaching and learning strategies for each learner are different. It is important for teachers therefore to use different learning and teaching strategies that suit each different learner. It was expected that teachers were going to rate the statement as follows:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly agree (SD).

Figure 4.8 Responses from teachers on whether they vary teaching/learning strategies



N=19

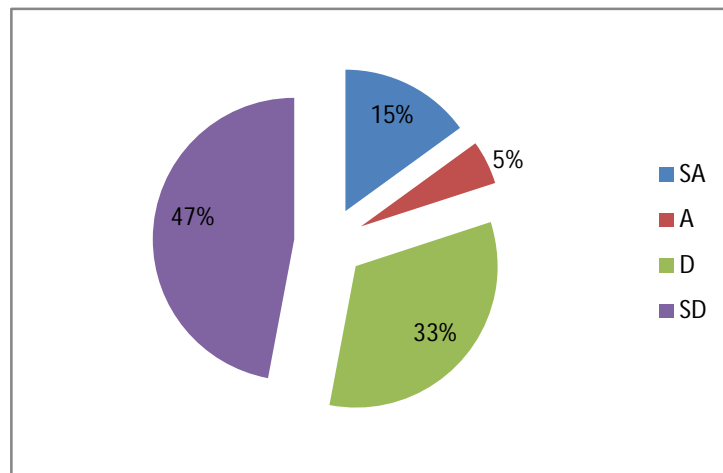
Majority of the teachers 84 percent indicate that teaches do not vary their teaching/learning strategies to cater for the deaf-blind learners in Kilimani primary school. Deaf-blind learners have varied needs ranging from communication, social needs and psychological needs. To effectively handle these learners, varied teaching methods need to be applied. Lack of varying teaching/learning strategies; make the deaf-blind learners miss a lot of information during class activities, hence hindering inclusion. The findings support a research done by Ali and Mustapha Jelas, (2008) in Tanzania on the use of teaching and learning strategies which found out that the use of varied teaching and learning strategies gives learners with disabilities an opportunity to understand difficult concepts.

Teachers were asked whether teaching and learning resources have been adapted to suit deaf-blind learners. Unlike their peer who use the regular teaching and learning resources, the teaching and learning resources for the deaf-blind learners must be adapted to cater for their diverse individual learning needs. For example, the deaf-blind learners use the Braille machine as a means both communication and writing and they also use embossed materials when reading. Adaptation of teaching and learning resources is vital for the deaf-blind learners in the learning process. Figure 4.9, illustrates the responses of the teachers.

The rating of the statement from teachers was expected as follows:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree.

Figure 4.9 Teachers' responses on whether teaching and learning resources have been adapted



N=19

The findings show that 80 percent of the teachers strongly disagreed or disagreed that the teaching and learning resources have been adapted to suit deaf-blind learners, and only 20 percent of the respondents strongly agreed or agreed that teaching and learning resources have not been adapted to suit deaf-blind learners. The use of un adapted teaching and learning resources hinders the inclusion of deaf-blind learners in Kilimani primary school.

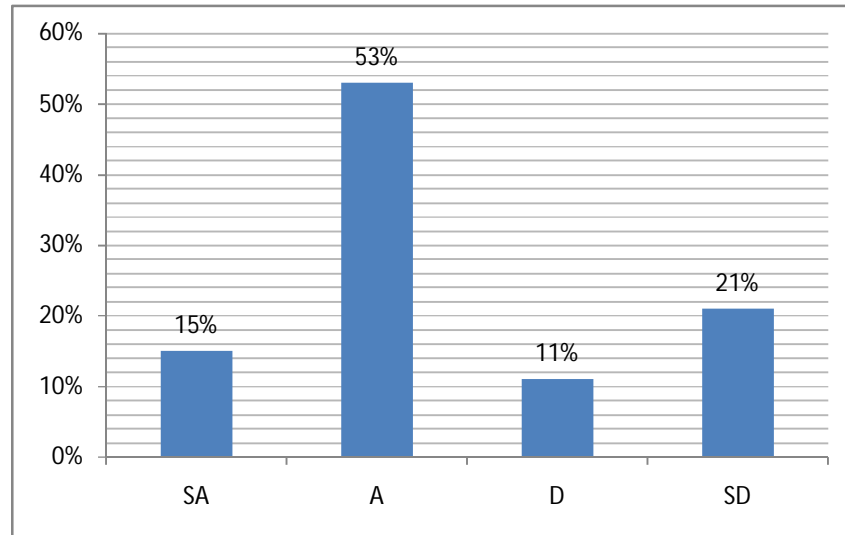
Deaf-blindness is a unique disability and the learners require special or adapted teaching and learning resources to cater for their different needs. Lack of special or adapted teaching and learning resources hinders implementation of inclusion.

On whether deaf-blind learners receive specialized services to supplement curriculum implementation, teachers' responses are illustrated in Figure 4.10

Deaf-blindness is a dual and unique disability and therefore the learners require specialized services from teachers. For example, in order for the teachers to teach deaf-blind learners successfully, they must learn both sign language and Braille for effective communication both in class and outside, the deaf-blind must also be given orientation and mobility services to enable them move freely in the school compound and at home. To rate this statement, teachers were expected to do the following:

Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD)

Figure 4.10 Teachers' responses on whether deaf-blind learners receive specialized services



N=19

The findings show that 68 percent of the teachers strongly agreed or agreed that deaf-blind learners receive specialized services to supplement curriculum implementation. About 32 percent of the teachers disagreed with the statement. Specialized services influence curriculum implementation for deaf-blind learners.

Teachers were asked to indicate skills training areas that are required by teachers to enable them implement inclusion of deaf-blind learners. Deaf-blindness is a unique disability and therefore the teachers dealing with these learners require special training for the implementation of inclusion.

Some of the specialized skill areas the teacher for deaf-blind must acquire include; sign language, communication skills, training in special needs education, Guidance and counseling, educational assessment among others. Teachers were expected to rate the statement in percentages. The results are shown in table 4.1

Table 4.4 Teachers’ responses on skill training areas needed for the implementation of inclusion of deaf-blind learners

Skill training area	Frequency	Percentage
Training in SNE (Deaf-blind)	17	89.4%
Training in inclusive education	15	78.9%
Programme management	14	73.6%
Education assessment	16	84.2%
Guidance and counseling	15	78.9%
Sign Language	16	84.9%
Braille training	15	78.9%
Communication skills	14	73.6 %

N-19

According to the findings, all skills training areas have high percentages indicating that teachers need these skills to enable them implement inclusion of deaf-blind learners.

Training in SNE, equips teachers with specialized skill, knowledge and attitude required in facilitating inclusion of deaf-blind learners. Training in inclusive education, is essential in imparting skills and knowledge on the concept of inclusion, while skills in programme management are important for managing inclusive education for deaf-blind learners. Skills in education assessment are important in facilitating early identification of deaf-blind learners and thus providing early intervention. Guidance and counseling training is important because teachers constantly guide and counsel the learners, parents/guardians, colleagues and sensitize them on the unique needs of deaf-blind learners. Training in sign language is essential because that is one of the languages the deaf-blind use for communication. Braille training is important for the teacher because the deaf-blind learners use the Braille for communication and writing. Communication skills training is important to the teacher because it will enable the teacher to impart these skills to deaf-blind learners. The study therefore shows that the teachers need varied teaching skills necessary to handle needs of the deaf-blind learners.

Teachers were asked to identify teaching and learning strategies they use in their school in teaching deaf-blind learners. Unlike the regular learners who can be taught using one method in a lesson, the deaf-blind learners with their diverse learning needs require varied teaching and learning methods for successful inclusion. For example, depending on the severity of the disability, the teacher

could use more than one teaching and learning method in one lesson. Some of the teaching and learning methods required for successful inclusion include; individualized education instruction, task analysis, direct instruction, prompting among others.

Teachers were asked to identify some of the teaching and learning strategies used when teaching the deaf-blind learners. The teachers' results are presented in Table 4.5

Table 4.5: Teachers' responses on the identification of teaching and learning strategies for deaf-blind learners

Strategy	Frequency	Percentage
Individualized education instruction	16	84.2%
Diagnostic prescriptive teaching	6	31.5%
Prompting	9	47.3%
Task analysis	17	89.4%
Unit teaching	7	36.8%
Thematic teaching	11	57.8%
Peer teaching	9	47.9%
Direct instruction	15	78.9%

N-19

Responses from the respondents indicate that for successful implementation of inclusion of deaf-blind learners, the teacher should use varied teaching and learning methods because each deaf-blind learner has specific learning needs. The most frequent used strategies were individualized educational instruction 84.2 percent, task analysis 89.4 percent and direct instruction 78.9 percent, because these strategies address individual learning needs. Poor rating on teaching methods such as prompting 47.3 percent , diagnostic prescriptive teaching 31.5 percent, unit teaching 36.8 percent, and peer teaching 47.3 percent, reflect lack of competency and skills among teachers to teach deaf-blind learners and this therefore adversely affect inclusion of these category of learners.

During the lesson observation, the researcher found out that most of the teachers used adapted teaching and learning resources to cater for the deaf-blind learners, there was also a lot of interaction between the regular learners and deaf-blind learners during the lesson an indication that the regular learners accept the deaf-blind learners. Teachers gave the deaf-blind learners remedial instructions to catch up with regular learners. However, the researcher found out that the curriculum content has not been adapted to cater for the deaf-blind learners but the adaptation is done by the teacher when teaching in class and this is one of hindrances to successful inclusion of the deaf-blind learners.

4.5 Attitude of regular learners towards inclusion of deaf-blind learners in Kilimani Primary School, Nairobi County

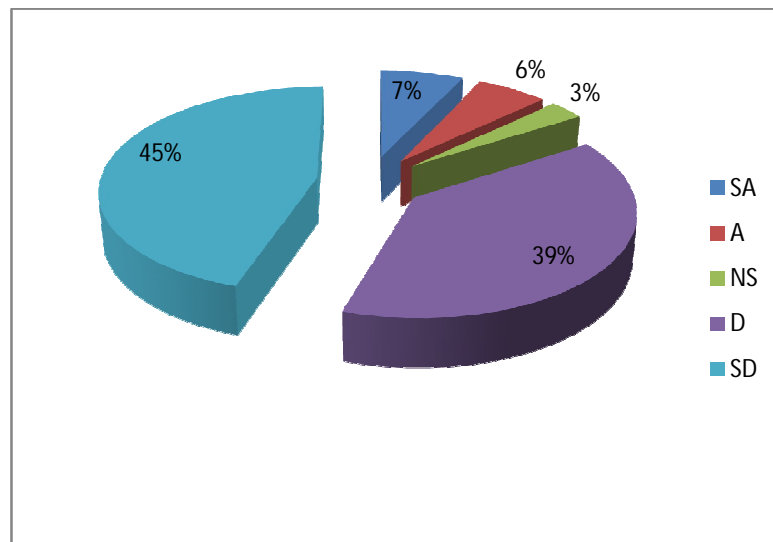
For successful inclusion, there should be free interaction among the learners including those with disabilities and special needs. Free interaction among the learners is important because deaf-blind learners depend on the services of regular learners for most of their daily services, for example, they need the regular learners to help them to move freely from one place to the other in and outside the classroom, during peer teaching, sometimes washing of their clothes.

Regular learners were asked whether they interact freely with deaf-blind learners.

The regular learners were expected to rate their results as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD). The results are illustrated in Figure 4.11

Figure 4. 11 Regular learners’ responses on interacting freely with deaf-blind learners



N=250

The findings show that 45 percent of the learners strongly disagreed while 39 percent disagreed with the statement, which shows that there is free interaction between regular learners, while 13 percent of the regular learners strongly agreed or agreed deaf-blind learners do not interact freely regular learners and 3 percent are not sure whether deaf-blind learners interact freely with regular learners

This indicates that there is a lot of interaction between regular learners and deaf-blind learners which indicates that regular learners have positive attitudes towards deaf-blind learners. The findings of this study is support of a study done by Siperstein, Parker and Widaman (2007) in an inclusive school in Florida which found that middle school children without disabilities welcome children with disabilities in non academic classroom such as art and physical education. However, a few regular learners do not interact freely with deaf-blind learners. Lack of interaction among the two groups of learners is an indicator of negative attitude and would consequently affect inclusion of deaf-blind learners.

Regular learners were asked to rate a survey statement that deaf-blind learners are not socially accepted by regular learners.

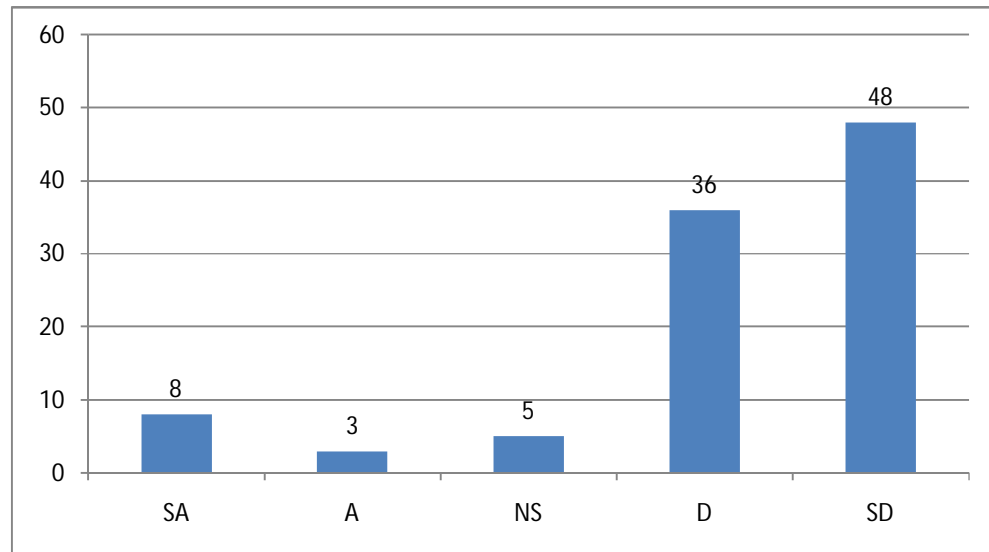
On whether deaf-blind learners are not socially acceptable by regular learners, the results are illustrated in Figure 4.12. Learners spend most of their time at school and the therefore, the school is like their second home. In any community, socialization is vital because the members of the community need each other in their daily activities and more so for the deaf-blind learners who need the services of the regular learners on daily basis. It is imperative therefore for successful

inclusion deaf-blind learners must be accepted by regular learners in the school.

The regular learners were expected to rate their results as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.12 Regular learners' responses on deaf-blind learners are socially accepted by regular learners



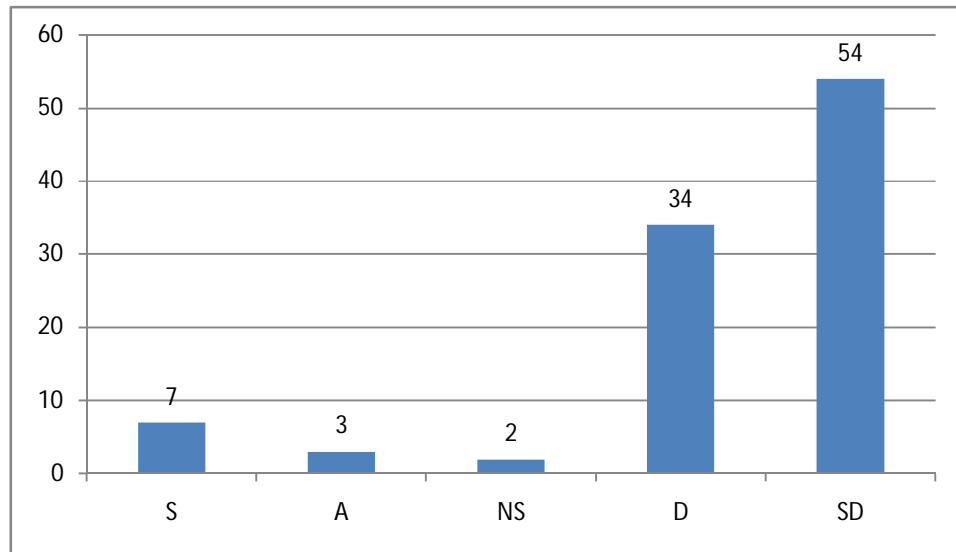
N=250

The findings show that 48 percent of the regular learners strongly disagreed while 36 percent d with the statement that deaf-blind learners are not socially acceptable by regular learners. This is an indication that deaf-blind learners are socially accepted by regular learners. Some regular learners however, do not socially accept deaf-blind learners. Lack of social acceptability is a reflection of negative attitude among those involved, and could hinder successful inclusion of deaf-blind learners.

On whether regular learners are not friendly to deaf-blind learners, the regular learners responses are shown in figure 4.13. For successful inclusion, both regular and deaf-blind learners must be friendly because they need each other in one way or the other in and outside classroom. For example, the deaf-blind learners need the help of regular learners for free movement in and outside classroom, carrying of their Braille machine and act as readers for them. They also need each for peer teaching which is very important especially for the deaf-blind learners. Regular learners were asked whether they are friendly to deaf-blind learners and were expected to rate their results in the following:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.13 Responses on regular learners are not friendly to deaf-blind learners



N=250

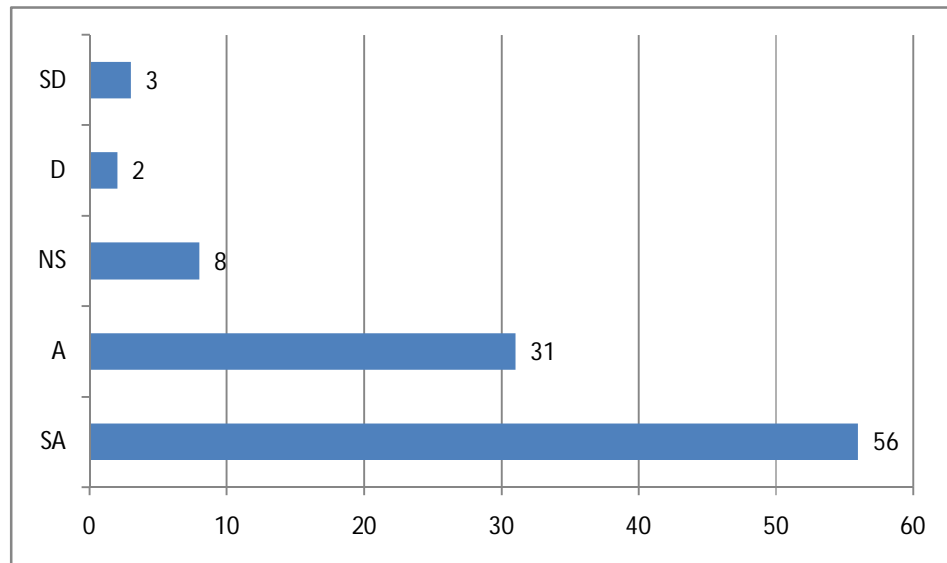
The responses indicate that 88 percent of the learners either strongly disagreed or disagreed that regular learners are not friendly to deaf-blind learners while 10 percent of the respondents strongly agreed or agreed that are not friendly to deaf-blind learners. These findings are in support of a study by Sipertein (2007) to 5,800 students; the students reported being happy to be fiend handicapped students within their school setting. 2 percent of the respondents are not sure whether regular learners are not friendly to deaf-blind learners. This therefore indicates that regular learners are friendly to deaf-blind learners hence have a positive attitude towards deaf-blind learners.

On whether deaf-blind learners receive special attention from teachers, regular learners responded as illustrated in Figure 4.14

Attention span is different to different learners including those with special needs and disabilities. While the regular learners can listen for a teacher for more than twenty minutes, the deaf-blind learners have very short attention span and will always want to do something different after a short time and hence require special attention from the teachers. Regular learners were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.14 Regular learners' responses on whether deaf-blind learners receive special attention from teachers



N=250

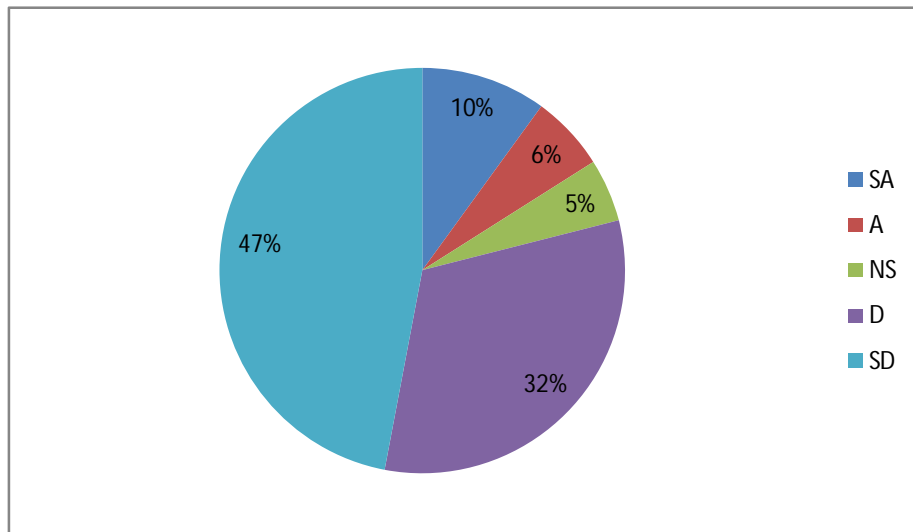
Research findings show that 87 percent of the regular learners who responded strongly agreed or agreed that deaf-blind receive special attention from teachers, with 5 percent of the respondents strongly disagreed or agreed that deaf-blind receive special attention from teachers and 8 percent of the regular learners are not sure of such attention. Deaf-blind learners have varied complexities which should be handled with care. They have low attention span and communication problems and also they easily distracted by irrelevant stimuli, hence the need to be given special attention. Understanding and attending to the needs of the deaf-blind learners is a step towards successful implementation of inclusion of deaf-blind learners.

Regular learners were asked whether deaf-blind learners are given extra tuition to improve their performance. Tuition is given to students to for remedial teaching and sometimes to cover what was not completed in the previous lesson. For the deaf-blind learners, tuition is necessary because due to their disability they miss a lot during the normal teaching and hence there is need for teachers to give them tuition to cover for what was missed during the lesson. The extra tuition gives the deaf-blind learners a chance to improve their performance. The results are illustrated in Figure 4. 15

The regular learners were expected to rate the statement as follows:

Strongly agree (A), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.15 Regular learners’ responses on whether deaf-blind learners are given extra tuition to improve their performance



N=250

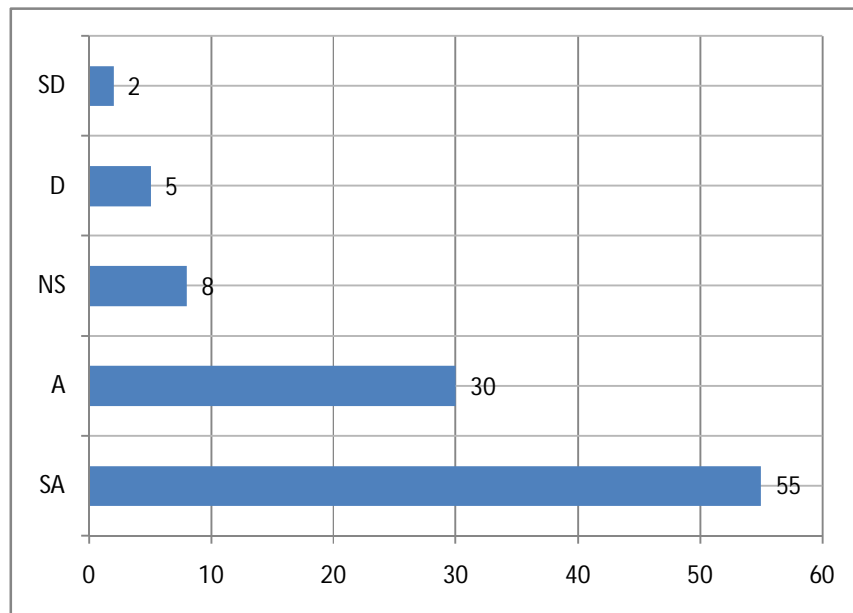
Research findings show that 79 percent of the regular learners strongly disagreed that deaf-blind learners are given extra tuition to improve their performance. Only 16percent strongly agreed or agreed that they are given extra tuition and 5percent are not sure. Lack of giving deaf-blind learners extra tuition is a big hindrance to inclusion of deaf-blind learners because they feel neglected hence drop out of school.

On whether deaf-blind learners can learn better in special schools or units, regular learners responded as illustrated in Figure 4.16.

According to the Individuals with Disability Education Act (IDEA), no child should be assigned to a special classroom or be segregated into another part of the school and this is called inclusion which has many benefits to both the learners with disabilities and the regular learners. Some of the benefits include; social interaction with the regular learners which gives a chance to both regular and deaf-blind learners to share ideas a chance that deaf-blind learners cannot get in special schools. When deaf-blind learners are in an inclusive class, they compete academically with the regular learners and sometimes do better than the regular learners and this gives them the hope that they are all the same. The regular learners were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.16 Regular learners' responses on whether deaf-blind learners can learn better in special schools or special units



N=250

The findings show that about 85 percent of the learners either strongly agree or agree that deaf-blind learners can learn better in special schools or units. About 7 percent of the respondents strongly disagree or disagree that deaf-blind learners can learn better in special schools or units, and 8 percent are not sure. The regular learners' responses imply that deaf-blind learners learn better in special school or unit.

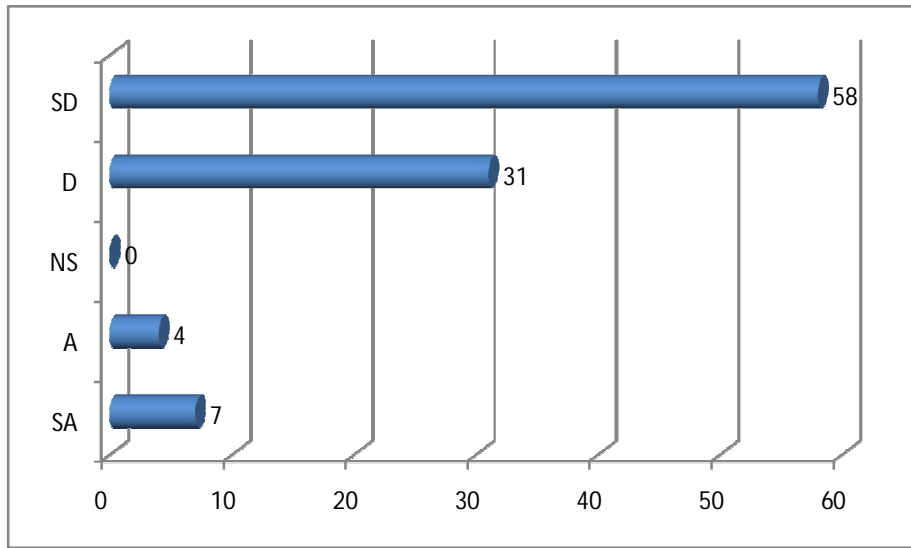
The findings of this study are supported by other research findings done by Kachhar, West, and Tayman (2000) which found that inclusion gives students with disabilities a feeling that they are performing more, increasing their ability to work well with different instructions and increasing their ability to work to higher levels. This is because teachers in these institutions are specially trained to deal with special challenges that face the deaf-blind learners.

On whether regular learners assist deaf-blind learners, the results are illustrated in Figure 4.17

Student's attitudes towards inclusion play a major role in the success or failure of inclusion in any learning institution. When regular students have negative attitudes towards inclusion, they will offer no assistance to those with disabilities and assist them when they have positive attitudes. Students were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD)

Figure 4.17 Regular learners' responses they do not assist deaf-blind learners



N=250

The responses indicate that 89 percent of the regular learners either strongly disagreed or disagreed that regular learners don't assist deaf-blind learners, while 11 percent of the regular learners agreed with the statement. The responses from the regular learners imply that regular learners assist deaf-blind learners. This is an indication that regular learners have a positive attitude towards deaf-blind learners and that they support inclusive education.

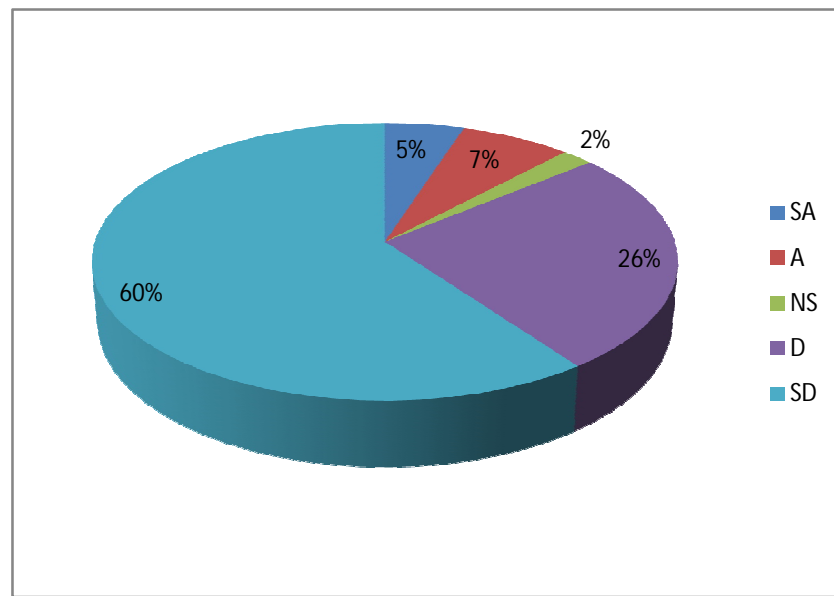
This is in support of a study done by Bunch and Valeo (2004) who found that regular learners gave more assistance to learners with disabilities than their counterparts in schools with special education model.

On whether deaf-blind learners do not take part in co-curriculum activities, the results are illustrated in Figure 4.18

Inclusion is the process where students with disabilities are educated in the regular education classroom full-time and do all the curriculum activities together including the co-curriculum activities. For successful inclusion, the deaf-blind learners should be included in all the school activities regardless of their disabilities. However, this is possible when some of the activities are adapted to suit their needs. For example, the deaf-blind learners can run like the regular learners but with some adaptations. Learners were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.18 Responses from regular learners on deaf-blind learners take part in co-curriculum activities



N=250

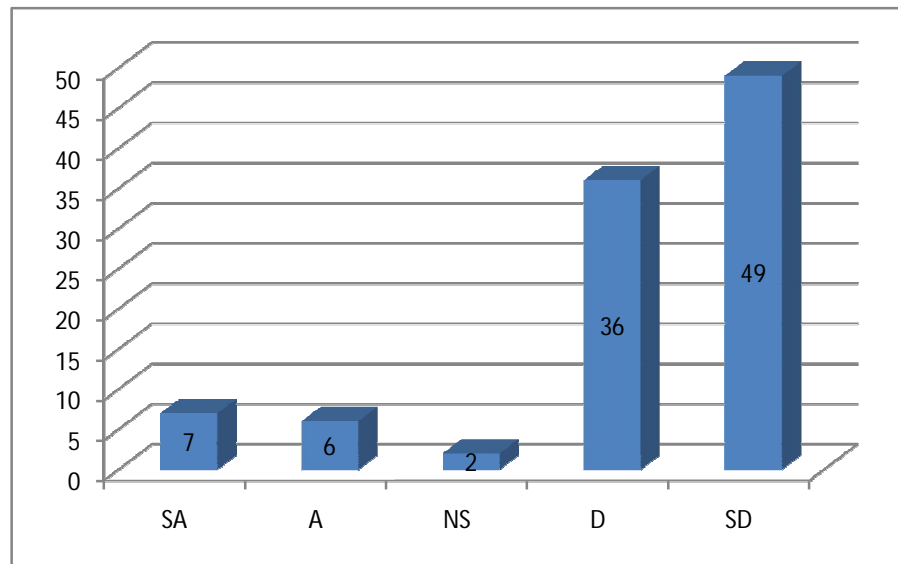
Research findings show that 86 percent of the learners either strongly disagreed or disagreed with the statement that deaf-blind learners don't take part in co-curriculum activities. About 14 percent of the regular learners agreed with the statement that deaf-blind learners don't take part in co-curriculum activities. The findings therefore indicate that deaf-blind learners fully participate in the co-curriculum activities. This is an indication that regular learners accept the deaf-blind learners and hence support inclusion in Kilimani primary school.

Regular learners were asked whether special teaching and learning resources are available for deaf-blind learners. The results are illustrated in Figure 4. 19

Teaching and learning resources play a major role in the learning process and more so to the learners with disabilities and special needs. With the availability of teaching and learning resources, learners can learn on their own in the absence of the teacher, teaching and learning resources also help the learner to understand a concept that the teacher did not explain properly. It is important therefore that special teaching and learning resources are available to the deaf-blind learners to assist them in their learning. The respondents were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly disagree (SD).

Figure 4.19 Regular learners’ responses on whether special teaching and learning resources are available for deaf-blind learners



N=250

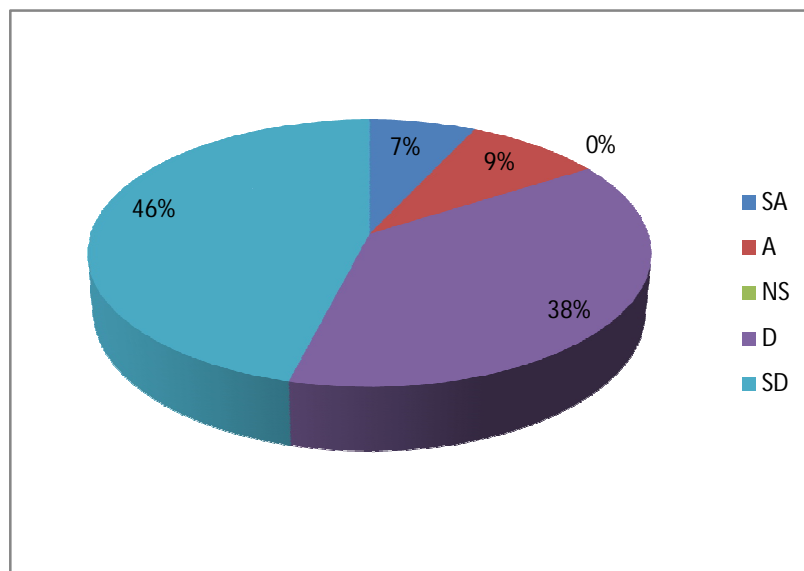
According to the findings, only 15 percent of the regular learners either strongly agreed or agreed that special teaching and learning resources are available, and 85 percent either strongly disagreed or agreed that special teaching and learning resources are not available. Learners with disabilities require special teaching and learning resources especially the deaf-blind learners. For example, the deaf-blind learners require the Braille machine for writing purposes and lack of such teaching and learning resource makes difficult for the deaf-blind learner participate in the class activities hence hindering inclusion.

Regular learners were asked whether deaf-blind learners need to learn special subject content/topics. The results are illustrated in Figure 4. 20

According to Block and Volger (1994), inclusive education is an approach where students with disabilities become part of the general education classroom, receiving a curriculum with necessary support and being taught the same subjects and topics. This therefore supports the findings that deaf-blind learners should learn the same subject concept/ topic but with little adaptation depending on the severity of the disability. Regular learners were expected to rate the statement as follows:

Strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and Strongly agree (SA)

Figure 4.20 Regular learners' responses on whether deaf-blind learners need to learn special subject content/topic



N=250

Majority of the regular learners 84 percent either strongly disagreed or disagreed with the statement that deaf-blind learners need to learn special subject content/topic, and 16 percent agreed that deaf-blind learners need special subject content/topic. Deaf-blind learners have to learn same subject content/topic with the regular learners but with little adaptations.

4.6 Physical school environment to support inclusion of deaf-blind learners

School facilities have great effect on the academic achievement of the learner and especially to those learners with disabilities. Adaptation of the school physical facilities to suit learners with disabilities therefore is a priority in inclusive education. According to Chesire (2007), inclusive education is not only restructuring of the school systems, strategic plans, policies and teaching/learning strategies but also the school physical structures and facilities to make them accessible to all children including those with disabilities and special needs. With the deaf-blind, the school compound must be barrier free to allow for free movement. The researcher observed the physical facilities of the school to establish their availability.

The results of the findings are shown in table 4.6

Table 4.6 Findings from observation of the school physical facilities that support inclusion of deaf-blind learners.

Statement	Available	Not available
The toilets have ramps and wide doors to allow deaf-blind learners to get in and out with ease.		√
The classrooms and offices have ramps and wide doors to allow for easy of the deaf-blind learners.	√	
The pathways around the school compound are wide and no stumbles to allow deaf-blind learners to use their white canes with ease.		√
The dining hall doors have ramps and wide enough to cater for deaf-blind learners.		√
Rows in classrooms are wide enough to allow for deaf-blind learners to move with easy from one place to another.		√
Desks/chairs have been made for use by deaf-blind Learners.		√
Rows in dormitories are wide enough to allow free movement of the deaf-blind learners.		√
Rows in dining hall are wide enough to allow for free movement of deaf-blind learners.		√
Playing fields and facilities have been adapted to allow deaf-blind learners participate in the outdoor activities.		√

According to the findings from the observation of the school physical facilities and structures, the toilets, classrooms, offices and dining hall lacked ramps making it difficult for the deaf-blind learners get in and out of these premises.

The doors for the classrooms, dining halls and offices are not wide enough to allow for free movement for the deaf-blind learner while using their white canes

is a hindrance to inclusion. The paths around the school compound have many holes and stones all over restricting the deaf-blind learners to have free movement in the school compound. The desks/chairs are not specially made to suit the needs of the deaf-blind learners hence uncomfortable. Though the deaf-blind learners participate in almost all the co-curriculum activities they do that with difficulties because the play fields and facilities have not been adapted to suit their needs hence hindering inclusion of the deaf-blind learners in Kilimani primary school.

4.7 Teachers' professional qualifications to support inclusion of deaf-blind learners

Teachers were asked to provide information on their professional qualifications. This information is vital because it gives the researcher the picture of the respondents he is going to deal with. The success of inclusion depends on the correct professional qualifications of the teacher.

Figure 4.7 gives the results of professional qualifications of teachers in the inclusive classes at Kilimani primary school.

Table 4.7. Teachers' qualifications

Academic/professional qualification	No. of teachers	Percentage
Masters	2	10.52%
B. Ed.	5	26.31%
B. Ed. (Special Ed.)	6	31.57%
Dip. Ed.	0	0%

Dip. (Special Ed.)	0	0%
P1	2	10.5%
ATS	4	21.05%

N=19

The findings indicate that 31.57 percent of the teachers teaching in the inclusive classes have Bachelors of Education in special education, 26.3 percent have Bachelors of Education; 10.525 percent having Masters and 21.05 percent are ATS teachers.

According to the findings, 31.57 percent of the teachers have Bachelors of Education in special education which is the right professional qualification to teach in the classes where deaf-blind learners are included. This is because these teachers have the skills, knowledge and attitudes to teach the deaf-blind learners. They know the characteristics of the deaf-blind learners and their language of communication. The other teachers though have good academic qualifications; they have no knowledge of the education of the deaf-blind hence they are learning on the job. Lack of qualified teachers is one of the hindrances of inclusive education and this is supported by a research done by the Ministry of Education, 2004, and Sense International, 2009, which found out that there is shortage of special education teachers who have the knowledge and skills to serve the needs of children and youth with disabilities especially those who are deaf-blind. Another study by Sense International (2010) found that the major challenge hindering provision of accessible quality services to learners with special needs and disabilities has been in the area of staffing, training, quality assurance, examinations and curriculum.

4.8 Challenges faced by headteacher and teachers

The challenges faced by the headteacher and teachers in the implementation of inclusion of deaf-blind are many and varied. For example, the headteacher and majority of the teachers cited lack of skills and knowledge to teach and handle deaf-blind learners and found this as one of the major hindrance to successful inclusion of deaf-blind learners.

Adaptation of curriculum to suit deaf-blind learners was another challenge faced by teachers. Teachers are forced to use the normal curriculum in teaching the deaf-blind learners which a great hindrance to inclusion.

Adaptation of teaching/learning resources was another challenges cited by the teachers when teaching the deaf-blind learners in the inclusion programme. The school lacks adequate facilities and instructional materials suitable for deaf-blind learners; this is another major hindrance to inclusion of the deaf-blind learners at Kilimani primary school.

The other challenge faced by the headteacher was lack of co-operation from parents of children who are deaf-blind. The parents don't collect their children in good time after the schools are closed and some parent don't collect them at all and when schools are opened, some parents bring their children after about one month which is a disadvantage to the child who is already disadvantaged, this also hinders inclusion. When the children are not collected in good time they feel neglected and when they get the chance to be at home they refuse to come back to school hence hindering inclusion of deaf-blind learners.

4.9 Suggested solutions to the challenges

On the item of suggested solutions to the challenges, the headteacher generated the following suggestions/solutions

On the side of lack of skills and knowledge by teachers to handle deaf-blind learners, the headteacher suggested that the government should in-service the teachers on the skills and knowledge on how to handle these learners.

The headteacher also suggested that there should be sensitization programmes to the parents and regular learners on deaf-blindness and creating awareness on the uniqueness of the disability.

The headteacher also suggested that the government should support these learners by providing them enough facilities and relevant resource materials such as hearing aids and Braille machines which are too expensive for the parents/guardian to buy. The other suggestion made by the headteacher to the Ministry of education was that, the ministry should give these schools four

thousand per term instead of the two thousand given per term as per now. This is because deaf-blindness is a multi-disability and hence the needs for these learners are unique.

4.10 Summary of the findings

The study indicates that majority of the teachers and regular learners are friendly to deaf-blind learners. There is evident of positive attitude of inclusion of deaf-blind learners shown among the school community in Kilimani primary school

because the regular learners are friendly, interact freely and socialize with the deaf-blind learners.

According to research, positive attitude by teachers is important to success of inclusion of deaf-blind learners in any learning institution. In a study conducted in the United States in 2006 by Kasari, found that when teachers had more positive perceptions of their relationship with included deaf-blind learners, the learners' behaviour problems were reported to be lower, and the learners were more socially included with their peers.

On the benefit of inclusion of deaf-blind learners in regular schools, both teachers and regular learners had positive attitude about the inclusion. Both respondents seem to agree that inclusion of deaf-blind learners increases their academic performance. These findings are in agreement with other studies which show positive outcomes for deaf-blind learners who participate in inclusive programs. A research conducted by Levy and Kim Tanzania in 2008 show that when deaf-blind learners are included in a regular school, they perform better than when they are in special school or unit because they both discuss and help one another in the class work.

The research findings also show that teachers lack specialized skill to implement inclusion of deaf-blind learners. When teachers lack specialized training, they fail to utilize strategies in teaching deaf-blind learners. Teachers also suggested that they need to adapt the curriculum and teaching/learning resources to suit deaf-blind learners.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings, conclusions and recommendations. The summary discusses the study findings based on the objectives of the study which include: teachers' and learners' attitudes towards inclusion of deaf-blind learners, teachers' professional qualifications to handle deaf-blind learners, school physical factors influencing inclusion deaf-blind learners. Finally, the chapter also drew the conclusions and recommendations.

5.2 Summary of the study

The purpose of the study was to identify school factors that influence the inclusion of deaf-blind learners in Kilimani primary school- Nairobi County. Specifically, the study sought to establish the attitude of teachers and regular learners towards inclusion of deaf-blind learners, teachers' professional qualifications to handle deaf-blind learners, school physical factors influencing inclusion of deaf-blind learners.

The study used a case study design where both qualitative and quantitative data was collected and analyzed. The target population for this study included the headteacher of the school, 20 teachers who teach in the classes where the deaf-

blind learners are included, and all the 250 regular learners from classes 4-8 where the deaf-blind learners are included and seven teachers teaching in the unit. The data obtained was analyzed qualitatively and responses in the questionnaires, interview responses and observation data were analyzed and reported qualitatively. Statistical Package for Social Sciences (SPSS) was used to analyze data and the findings were presented in graphs, tables, charts and in narrative form.

The attitude of both teachers and regular learners towards inclusion of deaf-blind learners were investigated in this study. Various aspects reflective of their attitudes were investigated which included: appreciation, support, educating deaf-blind learners in regular school increases academic performance, deaf-blind learners benefit from specialized instructions, specialized training for teachers among others. The findings indicated that majority of the teachers, 81 percent have positive attitudes as shown by their appreciation of inclusion of deaf-blind learners in the regular school.

To find out whether teachers had professional qualifications and exercised professional in their work with deaf-blind learners, the research examined different aspects of teachers' professionalism including support to deaf-blind learners, provision of specialized instructions beneficial to deaf-blind learners and supportive of curriculum implementation, and need for specialized training of teachers. The findings show that 90% of the teachers adequately support deaf-blind learners in the inclusive setting. The support in the form of specialized

instructions is beneficial to deaf-blind learners as indicated by 84 percent of the teachers who held the view that deaf-blind learners benefit from specialized instructions.

On the need to train teachers, majority of the teachers needed specialized training to enable them to implement inclusion of deaf-blind learners. The study findings also show that lack of suitable adapted curriculum for deaf-blind learners hinders successful inclusion. The findings also indicate that there were inadequate resources in the school to cater for deaf-blind learners.

On the part of regular learners, various aspects were also reflected of their attitudes that were investigated which included: respect, friendship, interaction, social acceptability of deaf-blind learners among others. The findings show that 88% of the regular learners were in agreement they were friendly to deaf-blind learners, 84% that there is free interaction between regular learners and their deaf-blind colleagues. 84% strongly agreed that deaf-blind learners are socially acceptable by the school community.

5.3 Conclusion

From the foregoing findings of the study, it can be concluded that there exists a favourable attitude towards deaf-blind learners among teachers and regular learners.

However, negative attitudes towards inclusion of deaf-blind learners still exist among certain population of the institution. There is also evident that teachers lack necessary skills to implement inclusion of deaf-blind learners. Use of inappropriate teaching/learning strategies and inadequate teaching and learning materials are also cited as barriers to inclusion of deaf-blind learners and suggestion of appropriate areas of training are made by teachers. The study also shows that curriculum needs to be adapted to accommodate deaf-blind learners.

5.4 Recommendations

From the findings of the study, the following is recommended:

1. The Ministry of Education should urgently start sensitization programmes targeting regular learners and teachers who still have negative attitude towards inclusion of deaf-blind learners in regular schools that practice inclusive education because negative attitudes hinders inclusion .
2. The Ministry of Education should urgently provide financial support to the schools with inclusion programmes to facilitate acquisition of specialized teaching and learning resources required for the successful inclusion of deaf-blind learners, deaf-blindness being a unique disability requires specialized resources which are too expensive for the parents to buy.

3. The Ministry of Education in collaboration with Kenya Institute of Special Education and local universities should urgently start in-service training programmes to equip teachers with specialized skills to handle deaf-blind learners.
4. The Kenya Institute of Curriculum Development should urgently carry out a needs assessment to determine the curriculum needs of deaf-blind learners, make the necessary adaptations to the curriculum content so deaf-blind learners can learn like their peers.
5. The headteacher of Kiliman primary school should immediately start awareness programmes on the importance of inclusive education to the Kilimani primary school community and all the parents so that they have positive attitudes towards inclusion.

5.5 Suggested Areas for further research

The following areas are recommended for further research:

1. This research looked for only one category of disability (deaf-blind). The same type of research could be carried out for the other categories of disability so that the inclusion programme may be favourable for all learners.

2. Research to determine skills and content that should be included in teacher programme.
3. A study on social, economic and educational benefits of inclusive education to all learners and to the public in general

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APPENDICES
APPENDIX 1
INTRODUCTION LETTER

University of Nairobi,
Department of Education Administration and Planning,
P.O. Box 30197-00100
NAIROBI

The Headteacher
Kilimani Primary School
P.O. Box 32482-00100
NAIROBI

Dear Sir/Madam

RE: REQUEST FOR DATA COLLECTION

I am a post graduate student in the University of Nairobi pursuing a Masters Degree in Curriculum Studies. As part of the requirement for the award of the Masters Degree, it is expected that one undertakes a research study. I will be carrying out a research on “**School factors influencing inclusion of deaf-blind learners in regular schools- A case study of Kilimani primary school, Nairobi County.**”

This is to request for your participation in a study that examines the physical school facilities that influence the inclusion of deaf-blind learners in Kilimani primary school- Nairobi County.

I would further request for the participation of teachers and learners in the study. The names of those who participate will remain confidential.

Thank you.

JOSEPH E.D. MASHA

APPENDIX 2

TEACHERS' QUESTIONNAIRE

This questionnaire is intended to help the researcher to gather information on teachers' professional qualifications to handle deaf-blind learners in Kilimani primary school-Nairobi County. All the information given shall be treated with utmost confidentiality.

Background Information

1. Gender Male () Female () (tick one)
2. Teaching experience : 1-5 years (), 6-10 years (), 20 years and above () (tick one)
3. Professional qualification: Masters Ed. (), Bed (), Bed (Special Ed.) (), Dip. Ed. (), Dip. (Special Ed.) (), P1 (), ATS () (tick one)

The following is a list of statements on educating deaf-blind learners in an inclusive setting. Kindly **tick** () in the box against the words that best describes your views after every statement.

SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree.

Item	Statement	SA	A	D	SD
1.	Teachers do not appreciate inclusion of deaf-blind learners				
2.	Teachers do not adequately support deaf-blind learners in the inclusive setting				

3.	Educating deaf-blind learners in a regular school rather than in a special school does not increase the child's level of academic performance				
4.	Deaf-blind learners do not benefit from specialized instructions provided by teachers				
5.	Curriculum has not been adapted to take care of deaf-blind learners				
6.	Teachers in the school need specialized training to enable them implement inclusion of deaf-blind learners				
7.	My school has enough teaching/learning resources to cater for deaf-blind learners				
8.	Teaching/learning resources have been adapted to suit deaf-blind learners				
9.	Deaf-blind learners receive specialized services to supplement curriculum implementation				
10.	Teachers vary teaching/learning strategies to cater for deaf-blind learners				

The following are skill training areas for teachers. Indicate with a tick (✓) those that teachers in your school need to enable them implement inclusion of deaf-blind learners.

Item	Skill training area	Appropriate	Not appropriate
1.	Training in SNE (Deaf-blind)		
2.	Training in inclusive education		
3.	Programme management training		
4.	Educational assessment training		
5.	Guidance and counseling course		
6.	Sign language training		
7.	Braille training		

The following is the list of teaching/learning strategies used in teaching deaf-blind learners; tick (√) against the ones teachers in your school use.

Item	Teaching/learning strategies	appropriate	Not appropriate
1.	Individualized educational instructions		
2.	Diagnostic prescriptive teaching		
3.	Prompting		
4.	Task analysis		
5.	Unit teaching		
6.	Thematic teaching		
7.	Peer tutoring		

THANK YOU

APPENDIX 3

INTERVIEW SCHEDULE FOR THE HEAD TEACHER

The researcher will administer the head teacher's interview schedule. The head teacher will respond to the following issues regarding inclusion of deaf-blind learners. All the information given shall be treated with utmost confidentiality.

1. What is the enrollment of deaf-blind learners in your school?
2. What is your opinion regarding introduction of inclusion of deaf-blind learners in your school?
3. What is your opinion on educating deaf-blind learners in special schools?
4. Comment on the suitability of available teaching/learning resources to cater for deaf-blind learners in your school?
5. What adaptations in the curriculum are required to accommodate deaf-blind learners?
6. What are the possible school physical facilities that can be adapted to accommodate deaf-blind learners?
7. What could you recommend for the challenges you mentioned above?
8. What recommendation could you make concerning implementation of inclusion of deaf-blind learners?

THANK YOU

APPENDIX 4

LEARNER'S QUESTIONNAIRE

This questionnaire is intended to help the researcher to gather information on attitude of regular learners on inclusion of deaf-blind learners in Kilimani primary school- Nairobi County. All the information will be treated with utmost confidentiality.

Background Information

1. Class _____
2. Sex: Girl () Boy () (tick as appropriate)
3. Age _____

Rate the following statements related to inclusion of learners who are deaf-blind and tick () appropriately.

SA – Strongly Agree, A – Agree, NS – Not Sure, D – Disagree, SD – Strongly Disagree

Item	Statement	SA	A	NS	D	SD
1.	Regular learners are not friendly to deaf-blind learners					
2.	Deaf-blind learners are not treated with respect by other learners					
3.	Regular learners do not interact freely with deaf-blind learners					
4.	deaf-blind learners are not socially					

	acceptable					
5.	deaf-blind learners are given extra tuition to improve their performance					
6.	Learning material are easily used by all the learners including those who are deaf-blind					
7.	Deaf-blind learners receive special attention from teachers					
8.	Deaf-blind learners can learn better in special school or units					
9.	Regular learners don't assist deaf-blind learners					
10.	Special teaching/learning resources are available for deaf-blind learners					
11.	Deaf-blind learners don't take part co-curriculum activities					
12.	Deaf-blind learners need to learn special subject content/topics					

THANK YOU

APPENDIX 5

OBSERVATION CHECKLIST

The researcher will observe the specific physical school facilities in the school. The information gathered from the observation is intended to help the researcher to conclude whether the physical school environmental factors support inclusion of deaf-blind learners in Kilimani primary school- Nairobi County.

SA – Strongly Agree, A – Agreed, D – Disagree, SD – Strongly Disagree

Item	Statement	Available	Not available
1.	The toilets have ramps and wide doors to allow deaf-blind learners to get in and out with easy		
2.	The classroom and offices have ramps and wide doors to allow for easy movement of the deaf-blind learners		
3.	The pathways around the school compound are wide enough and no stumbles to allow deaf-blind learners to use their white canes with ease		
4.	The dining hall doors have ramps and wide enough to cater for deaf-blind		

	learners		
5.	Rows in classrooms are wide enough to allow for deaf-blind learners to move with easy from one place to another.		
6.	Desks/chairs have been made for use by deaf-blind learners		
7.	Rows in dormitory are wide enough to allow free movement of deaf-blind learners		
8.	Rows in dining hall are wide enough to allow for free movement of deaf-blind learners		
9.	Playing fields and facilities have been adapted to allow deaf-blind learners participate in the outdoor activities		

APPENDIX 6

LESSON OBSERVATION CHECKLIST

The following will be observed during the lesson:

The researcher will use checklist to observe teaching/learning strategies used to support deaf-blind learners during lesson presentation.

V.E.U – VERY EXTENSIVELY USED, E.U – EXTENSIVELY USED, F.U – FAIRLY USED, M.U – MINIMALLY USED, N.U – NOT USED						
Item	Teaching/Learning strategies	V.E.U	E.U	F.U	M.U	N.U
1.	Individualized education instruction					
2.	Diagnostic prescriptive teaching					
3.	Prompting					
4.	Task analysis					
5.	Unit teaching					
6.	Thematic teaching					
7.	Peer tutoring					
8.	Direct instructions					

The researcher will observe and comment on the following during the lesson presentation:

1. Adaptation made to teaching/learning materials to cater for deaf-blind learners.

2. Regular learners'/ deaf-blind learners' interaction.

3. Whether remedial instructions are provided to deaf-blind learners.

4. Adaptation of the curriculum content.

THANK YOU