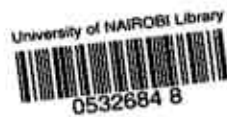


**INTERVENTIONS IN THE PARTICIPATION OF CHILDREN WITH
PHYSICAL CHALLENGES IN EARLY CHILDHOOD EDUCATION
LEARNING IN STAREHE DISTRICT OF NAIROBI**

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**A research project submitted in partial fulfillment of the requirements for the
award of the degree of Master of Education in Early Childhood Education in the
Department of Educational Communication And Technology of University of
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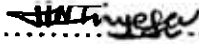
DECLARATION

This project is my original work and has not been submitted for an award of degree in any other institution.

Sign: 

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This project has been submitted with the knowledge of the supervisors.

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DEDICATION

I dedicate this work to my beloved family whose generous support gave me strength to work even harder.

ACKNOWLEDGEMENT

I wish to recognize the assistance accorded to me by my supervisors, Dr. H. Inyega and Mrs. Kazungu. I could not have completed this work on schedule were it not for their informed guidance and commitment to see me through this project. I also wish to thank my colleagues who read and constructively criticized my work. The time and knowledge that we shared is highly appreciated.

ABSTRACT

This study sought to investigate the interventions adopted by preschool teachers in the learning of physically challenged preschool children in Starehe District of Nairobi. The study looks at the background information regarding preschool learning and the problem facing children with physical challenges in their learning. The study reviews literature related to physical challenges in preschool children and examines literature in the pedagogy of such children. Moreover, the study examines theories related to learning and teaching children with physical challenges. In its methodology, the study uses structured interview and observation as the principle data collection instruments. The study identifies teachers and headteachers as the target population. Data for this study is analysed by tabular and graphic presentation of the findings. The study finds that children with physical challenges have special needs that influence their ability to learn well. Hence there is need for instructional interventions to facilitate their learning. The study established that learners have psychological, emotional, physical and instructional needs which teachers have effectively engaged interventions that have yielded encouraging results.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Promoting the physical, social, and psychological development of young children is perhaps the most important task for early childhood development programs in countries around the world (Young, 2002). This is more so in developing countries, where developmental risk due to the direct and indirect effects of poverty, is high. Yet, the plight of the disabled child has been of little focus in the policy frameworks in countries such as Kenya. Early Childhood Education, however, comprehensive programs have been implemented in developing countries integrating healthcare, nutrition, and education. These programs have demonstrated positive impacts on childhood as well as fostering favorable outcomes for later development (Wegman, 1999). Similarly, recognition of the need for early childhood development interventions for children with disabilities or developmental delays has emerged in Early Childhood Education years (Young, 2002). This has been partly due to improvement in infant and child survival, and changing attitudes and knowledge about disability.

According to World Health Organizations (1980) physically handicapped children are defined as those whose non-sensory physical limitation or health problems interfere with the school

attendance or learning to such an extent that special services, training equipment, materials or facilities are required. Children with physical challenges are faced with those disabilities, which relate primarily to disorders of the skeleton, joints and muscles including club feet, poliomyelitis, amputation (a missing limb) and fractures or burns that cause contractures. Physically challenged child's development like physical, emotional, mental and social is slower, to a greater or lesser extent, than that of a normal child, even though the handicapped child is of normal intelligence. So his/her concept of himself/herself, as a separate entity, is more difficult to achieve from the beginning. Universally, there is an increased awareness of the early years as a crucial period for promoting physical, mental, and psychological growth of children and preparing them for lives as productive adults Zinkin and McConachie, (1995), UNICEF, (2001). It also constitutes a unique phase for capitalizing on developmental forces to prevent or minimize disabilities and potential secondary conditions.

The government sessional paper on education and training (2004) captures the government policy intentions for mitigating the circumstances of children with special needs. The paper suggests that for this sub-sector, the MOES&T's policy is to focus on 4-5 year-old children with a view to providing a holistic and integrated

programme that meets the child's cognitive, social, moral, spiritual, emotional and physical needs. Hence, the Government was already implementing measures that seek to improve the performance of this sub-sector including: establishing guidelines and standards for the management, supervision and curriculum development for ECDE; establishment of NACECE and District Centres for Early Childhood Education (DICECE) for purposes of in-servicing teachers and training of trainers; mobilizing communities and parents through awareness creation, and providing community support grants to support marginalized/vulnerable communities in collaboration with other partners among other measures.

However, the government concedes that, despite the above measures, access, equity and quality in this sub-sector remain constrained by various factors that include: limited teaching and learning materials, inadequate ECDE centres; inadequate community participation; lack of a clear policy on transition from pre-primary to primary school; inadequate nutrition and health services; lack of enough trained teachers; low and irregular salaries for ECDE teachers and lack of clear entry age guidelines MOES&T, (2004). Evident here is the lack of consideration for equipping teachers in Early Childhood Education with pedagogic skills to deal with the needs of the children with special needs. This fact is acknowledged in this sessional paper. The

government acknowledges the lack of clear guidelines and support to the implementation of an all inclusive education policy.

Despite the governments assertion that, under the FPE, additional capitation grants are provided to children with physical challenges enrolled in special education institutions and units attached to regular primary schools. The challenge still exists. Further, the government has provided initial support to each public primary school to begin removing existing barriers that make the school environment unfriendly to physically challenged learners. However, the government does not provide essential resources that enable teachers of children with physical challenges to cope with their specific academic and schooling needs.

The case for early childhood intervention to promote development and prevent disability is supported by ethical principles as well as practical considerations. According to Shonkoff and Phillips, (2000), Balachander, Colletta, and Lyiang, (1996) and Young, (2002) the rationale for early childhood intervention of children with disabilities builds on the same underpinnings as those that support the rationale for early childhood development initiatives in industrialized countries and in developing countries. However, for children with delays and disabilities, an expanded rationale includes goals of treating physical conditions, reducing the impact of impairments, preventing

secondary problems, and supporting families with added physical and emotional demands in their care giving roles. Shrimpton (2003) clearly brings this out when he suggests three key considerations that form the basis for advancing early childhood intervention for children with disabilities. These considerations include the acknowledgement and formalization of the rights of children with disabilities; changing paradigms of development and disability; and evidence supporting the benefits of early intervention for young children with developmental delays or disabilities especially those of preschool age. This growing awareness of the need for early childhood intervention for young children with disabilities is reinforced also by international declarations on children's needs and rights and national advancement of legislation and programs to promote their physical and mental health and development. In Kenya, the rights of disabled children have not only been captured in the constitution but also in the education policy framework MOES&T, (2004). However, the implementation of this framework is far from being realized.

Interventions into the learning of children with physical challenges have been more elaborate in western countries. CECDE (2006) propose a transdisciplinary approach to interventions into the learning of children with physical challenges . The term transdisciplinary reflects an integration of assessment, intervention planning, progress

evaluation and communication across the professions. It includes the practice of individual professionals working across disciplines. The Key Worker also consults with the child's educators, mediates interest-based activities and routines for the child, integrates learning targets for the child across domains, and trains others to embed therapy into the child's daily routines. With the family and with early childhood educators, the Key Worker acts as a consultant, who coaches, models, educates and helps redefine attitudes and beliefs about the child, and about disability. Transdisciplinary practice is child and parent-centred. In other words, parents are an integral part of the team, active participants in their child's evaluation and in providing planned intervention. Parents learn to facilitate their child's learning in naturally-occurring daily interactions.

Integrated Holistic Intervention has been proposed by Linder, (2005) showing how play best supports the development of the whole child socially, emotionally, physically and intellectually. They follow the child's lead in spontaneous play in a relaxed, friendly environment. Through inclusion, children with special needs are increasingly experiencing education and care in settings alongside other children. Early childhood educators are therefore supported by the child's Key Worker to know how to identify which skills to teach, how to set up an appropriate environment to teach those skills, and how to identify

logical consequences as teaching tools.

Nairobi North district is in the heart of Nairobi Province. The economy of the country finds its roots here. The district can be defined as very cosmopolitan in nature. This is because it encompasses Nairobi's Central Business District (C.B.D) and its surroundings which together form the heart of Nairobi Province. A majority of businesses and government offices are found within the district. It is also the home to various large scale and small scale businesses. Most government offices are found within Nairobi North district and therefore hold a large population from various cultural, religious and economical backgrounds.

1.2 Statement of the Problem

The importance of preschool on any individual cannot be overstated. Preschool provides the most fundamental foundation for a child's growth and well being be it physically, socially, psychologically and otherwise. This stage is even more important to children born with disabilities and who must cope with stigma and lack of interventions, both at home and at school, to deal with the limitations caused by their physical status.

The overriding problem of this proposed study is that in spite of the fact that the rights of disabled children have been captured in the new constitution and the Education Policy Framework MOES&T, (2004), the implementation of this framework is far from being realized in many Kenyan pre-schools. Many early childhood development programs are often directed toward reducing the direct and indirect effects of poverty. However, such programs do not often constitute a sufficient approach to the complexity of needs of young children with disabilities, much less those with physical disabilities. The child with physical disability is usually treated with sympathy but no tangible mechanisms are put in place to mitigate the difficulties the child may face. Furthermore, there is little literature that has been written and studies carried out about interventions for participation for physically handicapped preschoolers, hence the need to conduct this research.

1.3 Purpose of the Study

The purpose of this study was to examine intervention measures currently being used in the participation of children with physical challenges in Early Childhood Education classrooms in Starehe Division of Nairobi.

1.4 Objectives of the Study

This study sought to achieve the following objectives:

1. Describe the needs of children with physical challenges in pre-schools in Starehe Division of Nairobi.
2. Identify the various interventions currently being used in the participation of children with physical challenges in Early Childhood Education classrooms in Starehe Division of Nairobi; and
3. Critically evaluate the quality of various interventions currently being used in the participation of children with physical challenges in Early Childhood Education classrooms in Starehe Division of Nairobi.

1.5 Research Questions

This study sought to answer the following questions:

1. What are the educational and pedagogic needs of children with physical challenges in preschools in Starehe Division of Nairobi?
2. What interventions are currently being used to enhance the participation of children with physical challenges in preschools in Starehe Division of Nairobi?

3. What is the quality of the various interventions currently being used to assist children with physical challenges in preschools in Starehe Division of Nairobi?

1.6 Significance of the Study

By examining the interventions put in place to assist these disabled children, the findings from this study may be useful to contribute to the existing literature; motivate other researchers in conducting further research on aspects that concern the specific needs of children with physical challenges; assist organizations and institutions that deal with emergent needs of children with physical disabilities in school; and address curricular and management needs of children with physical challenges. The study findings may further inform the curricula of the National Centre for Early Childhood Education (NACECE), and the Kenya Institute for Special Education (KISE) to make them more responsive to learner needs by providing necessary pedagogical skills to teachers trained by KISE. Furthermore, the findings of this study will help in the designing of appropriate curriculum for children with physical challenges

1.7 Limitations of the Study

This study was limited by the findings which may not apply to other institutions other than preschools operating in the same context.

Secondly, this study was limited in its scope in the sense that it examined only the interventions meant for the participation of children with physical challenges. Hence, children with other disabilities other than physical were not examined for this study.

1.8 Delimitation of the Study

This study was delimited to children with physical disabilities, their teachers and head teachers in preschools in Starehe division of Nairobi. It focused on both public and private preschools.

1.9 Assumptions of the Study

In this study, it was assumed that all the respondents would be willing to participate and cooperate with the researcher; the target sample provided relevant and reliable data; and the interventions used for pupils with disabilities influenced their participation in Early Childhood Education classrooms and subsequently their learning.

1.10 Operational Definition of Key Terms

Critical Evaluation Critical evaluation is a process of assessing the relative merit of a piece of work, or process. It is about deciding how useful and worthwhile the work and methodology presented are or has contributed to the learning of the physically disabled.

Dysplaxia motor skills disorder. It affects motor skill development

and such children have trouble planning and completing fine motor skills.

Interventions Interventions in this study refer to deliberate efforts made by the teacher to make the learning process more comfortable and enjoyable for the learner with physical disabilities to enhance the learner's participation.

Participation participation refers to activities or venture characterized by more than one person.

Physical Disabilities Physical disability refers to a broad range of disabilities which include orthopedic disorders. People with these disabilities often must rely upon assertive devices such as wheelchairs, crutches, canes, and artificial limbs to obtain mobility. The physical disability may either be congenital or a result of injury, muscular dystrophy, multiple sclerosis, amputation, heart disease, or epilepsy and other limiting conditions.

Pre-school Preschool generally refers to schooling for children between three and five years of age. In this study however, the preschool age is considered up to age nine.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This literature review is an extended examination of views and opinions regarding aspects of disability and the strategies that have been applied to deal with the needs of physically disabled learners. The review further examined aspects related to school based needs of the physically disabled. This was followed by discussion of a theoretical framework and conceptual framework..

2.1 The Concept of Disability

According to Sameroff and Fiese (2000), disability is viewed in the context of functional limitations characterizing a significant part of the population. This view shifts the focus from rehabilitation to a public health approach framed in terms of the reduction of risk factors and the removal of barriers to functioning. Reinforcing this population-based perspective on disability have been complementary contributions to the concept of disability from developmental psychology and social science. Within a developmental outcome model, development and disability reflects the product of the child's transactions with the environment (rather than as attributes located within the individual).

Victora, Wagstaff, Schellenberg, Gwatkin, Claeson, and Habicht, (2003) and Shrimpton, (2003) address the issues of rights and equity form the framework for the health and nutrition of children in the developing world. Those issues are equally applicable as principles to support the growth and development of young children Myers, (1992; 1995) and to encourage the promotion of social and economic development of society in such a way as to include those with disabilities.

The social model of disability has in a related way emphasized the fact that disability resides not in the individual but in social constructions about limitations. Groce (1999) notes that, within this socio-cultural perspective of disability, “the lives of individuals with disability around the world are usually far more limited by prevailing social, cultural, and economic constraints than by specific physical, sensory, psychological, or intellectual impairments” The population-based and social conceptions of disability have sought to separate disability from underlying disease conditions, consistent with a framework that was formalized two decades ago in the World Health Organization’s publication of the International Classification of Impairments, Disabilities, and Handicaps-ICIDH WHO, (1980). A more explicit endorsement of a dynamic perception of disability is evident in the revision of the ICIDH in the form of the International

Classification of Functioning, Disability, and Health-ICF WHO, (2001). Lollar and Crews, (2003) build on a biopsychosocial model by advancing the opinion that disability within a public health approach recognizes that disability and health are not mutually exclusive that is, disability does not necessarily equate to poor health.

The importance of the early years for full development of a child's potential has been a central message of theory, research, and policy and is reflected in the terms used to define the work of major child advocacy organizations. Thus UNICEF and the World Bank use the term Early Childhood Development-ECD while UNESCO refers to Early Childhood Care and (Initial) Education-ECCE. The Organization for Economic Development defines its work with the term Early Childhood Education and Care-Early Childhood Education. Although these terms have described various initiatives encompassing an agenda for health promotion and development of young children in developing countries, they are consistent with the focus of early intervention programs for infants and young children with disabilities. As such, they can be extended readily to define initiatives to reduce or prevent disabilities and complications secondary to underlying impairments or chronic conditions of children.

Contributions to a priority on interventions designed to promote development and reduce or prevent disability in early childhood come from changing paradigms of child development and disability. Sameroff and Chandler, (1975); Sameroff and Fiese, (2000), define the transactional model of developmental outcome. This model set aside assumptions about main effects of biological or environmental determinism with recognition of developmental outcomes as products of ongoing interactions of the child with the environment. Further, the model has served as a pervasive rationale for early intervention initiatives in the last three decades. The contribution of the transactional model as a rationale for early intervention has been complemented by a changed paradigm of disability from static to dynamic. Verbrugge and Jette, (1994) assert that, representative of this shift, is the paradigm of disablement as a process can be exacerbated or minimized by environmental factors

Simeonsson, (1991) assert that, for infants and young children, the first few years of life provide a unique opportunity to capitalize on developmental forces to significantly reduce, if not prevent, disablement through primary, secondary, and tertiary prevention. Given the low prevalence of children with disabilities, significant variability in the nature and severity of their conditions, and the need to individualize interventions, studies documenting the benefits of

early intervention for young children with disabilities are limited. The confounding role of development is a complicating factor as well, but available research studies provide qualified evidence that infants and young children with delays and disabilities do acquire skills and competencies and that parents value the services and support of early intervention. Guralnick, (1997) and Blackman (2003) concluded that programs associated with favorable outcomes for children were those that involved parents in a substantive way and provided a broad based approach to intervention. An important consideration was that outcomes were more likely to be in the affective and social realm, a finding consistent with Zigler's (2000) admonition that evaluation of early intervention should move beyond cognitive indicators such as IQ to a greater focus on skills needed for functioning in society.

Heron, (1979); Myers, (1988; 1992); Olmsted and Weikart, (1989) suggest that while specific elements have changed, broad recommendations have been quite consistent, endorsing the importance of early intervention, the need for a comprehensive approach combining health and education, the central role of complementing family life, sensitivity to cultural norms, basing services in the community and planning for sustainability. These recommendations, however, have focused on reducing risks and preventing compromised development of populations in a collective

sense, not the increased developmental risks faced by the subpopulation of children with delays and disabilities.

According to Werner, (1988), and Serpell, (1991), recognition of the intervention needs of young children with disabilities in the developing world has been more recent and limited by comparison. As noted in this review, the circumstances that compromise the early development of all children in developing countries also are associated with a disproportionate risk for developmental delays and disabilities. Addressing the needs of this group of children for comprehensive intervention is a societal responsibility and indicated on the basis of cumulative evidence demonstrating the benefits of early intervention for later development.

Simeonsson (1991), views prevention interventions in the well-known framework of the three levels of primary, secondary, and tertiary prevention, broad recommendations for supports and services have been proposed. Activities implemented in primary prevention are designed to prevent new developmental conditions from emerging, that is, to reduce incidence of delays and disabilities at the population level. Activities defined as secondary prevention address prevalence through interventions to reduce the nature or severity of existing conditions. Tertiary prevention has been defined in terms of

interventions designed to prevent complications and secondary conditions in children with existing disabilities. This framework of levels of prevention has been advanced as the basis for differentiating the nature of activities to prevent intellectual and other disabilities of children in Singapore, for example Lyen, (1989).

Broad initiatives directed toward all children are defined as universal prevention, requiring no targeting of children on the basis of recipient characteristics. In this case all children are at a common level of risk for disability. Initiatives directed towards children having a group identity associated with increased risk are defined as selected prevention, that is, interventions are targeted to a group sharing a common identity. The child may not be characterized by individual risk factors, but is identified because of a shared identity such as social class, family characteristics, or location of residence. Indicated prevention defines initiatives directed toward children identified on the basis of individual risk factors such as an established medical condition, documented impairment, or disablement associated with disability.

For children with physical handicaps, self-image is extremely important Edmunds, (2003). Teachers need to ensure that the child's self image is positive. Physically handicapped children are aware of

the fact that they are physically different that most others and that there are certain things they cannot do. Peers can be cruel to other children with physical handicaps and become involved in teasing, casting insulting remarks and excluding physically handicapped children from games and group type activities. Physically handicapped children want to succeed and participate as much as they can and this needs to be encouraged and fostered by the teacher. The focus needs to be on what the child CAN do - not can't do.

2.2 Pedagogic Strategies for children with Physical Disabilities

Teaching strategies for challenged learners need to be carefully orchestrated to take into account the interactive nature of the teaching and learning process, which basically is the belief and characteristics of the learner, teacher and the instructional cycle Feinberg, (1992). The instructional cycle is where a teacher has to determine the goals of instruction and learning plan and deliver instruction and evaluate and modify instruction. Although the teacher teaches the whole class, the teacher should plan for each child needs. Educating children with special needs or abilities is a difficult challenge. Feinberg, (1992) suggest that teachers who have accepted that challenge work in an exciting and rapidly changing field; a field in which extensive professional development is essential to helping children master and exceed annual goals, as well as prepare them for post-secondary

educational and occupational options. Physical disabilities in children can include a wide range of both congenital and acquired disabilities and health issues. This may include individuals with a brain injury, orthopedic impairment, or other health impairment that needs special education or related services is considered to have a physical disability. In addition, social support through advising and counseling from family and peers is a necessary part of this equation. However, whether in special or general education, there is growing evidence that the single most important school influence in a child's education is a well prepared, caring, and qualified teacher.

The connections among the knowledge, skills, and ethics of teachers; the quality of children's educational experiences; and educational accomplishments are strong and undeniable (Baldwin, 1995). Some common physical disabilities include cerebral palsy, muscular dystrophy, and spina bifida. Since many more conditions may affect children in the classroom, teachers are advised to gather specific information about each child in your classroom and his or her disability.

Baldwin, (1995) further explains that, regardless of the specific disability, certain considerations of the physical environment in the classroom are necessary. This is perhaps the foundation of all the

teaching strategies that will be adopted to help the child. Teachers may arrange the room so that everyone can move around easily. Even if a child does not use a wheelchair or other medical equipment, he/she may need extra room to get around in class and avoid falling. A larger desk may help a child balance books, papers, and classroom supplies. The child should be asked where he would prefer to sit in the classroom.

For the physically disabled include setting up a buddy system so that another child can take notes for the child with a physical disability. Feinberg, (1992) suggests that a par educator may be needed to act as a scribe for other in-class requirements. Specific assignments can be adjusted or modified for children, too. A child who has difficulty speaking due to cerebral palsy may need an alternative presentation format in place of an oral presentation. Do not assume, however, that the child cannot or does not want to give the presentation. He may need more time to speak – and better attention from his audience Lollar and Crews, (2003). The key is to make sure all activities include all children. The Nebraska Department of Education (1996) identifies some of the features and strategies of teaching disabled children include the following:

2.2.1 Assessing Progress

This refers to continually examining data from both formal and informal assessments to determine child's knowledge. Some of the ways to examine is by reading inventories, looking at the standardized tests, work samples and observations. Types of evaluation measures a teacher can use are performance records, charts, progress graphs, portfolios, learning logs and journals. Feinberg, (1992)

2.2.2 Designing Instruction

Determining goals of instruction- Once children' skills have been assessed and objectives have been set, teachers should use the child data that has been gathered to plan for instruction. The first thing is to group children according to their educational needs. Setting goals for each child and identify children that may need more intensive instruction. Setting goals for instruction helps the teacher know where he or she is going. Due to the large range of abilities and interests among special education children, grouping the children according to their needs is an effective strategy for instructing disabled children. Blackman, (2003)

2.2.3 Adaptations

Butterworth and Harries, (1994) explains that the goal for adaptation is to ensure that all children participate to the maximum extent possible in classroom activities. It shows the care a teacher has for each individual child. Adaptations include; Instructional design- Examples would be accessing resources, collaboration and integrating technology; Making learning explicit by using clear, simple language, scaffolding and providing different ways of demonstrating learning; Behavior Management- teaching children acceptable behavior, being consistent, having routines, and engaging.

2.2.4 Scaffolding

According to Sutherland, (1992), scaffolding is also an effective strategy for instructing challenged children. This is simply adjusting and extending instruction so that the child is challenged and better able to develop new skills. A teacher can scaffold by manipulating the task at hand, materials, the group size, pace, presentation and so on. For instance, children with reading difficulties often do not infer the thought processes that good readers use, so a teacher should model strategies and guide children through the new task and assist them in inquiring the new skill without frustration.

2.2.5 Time Management

As one of the most powerful strategies in educating children with physical challenges, teachers should avoid wasting time and should carefully decide how much time to give to each activity or concept. An example would be a few children in a teacher's class are struggling with capitalizing proper nouns. A teacher could probably spend 10 minutes with these children providing direct instruction on the rules of capitalization, the teacher can check for understanding by asking the children to think aloud about why some nouns were or were not capitalized and based on their responses, she can modify instruction and make sure she is using time effectively.

2.2.6 Delivering Instruction

Once a teacher completes planning and designing effective instruction, the last phase is the delivery of the instruction. Some of the effective ways of delivering instruction are quick pacing, wait time and error correction. Quick Pacing refers to the instruction and child response that move at a manageable pace for children while taking full advantage of every minute of instruction. Quick pacing is important because it eliminates excessive talk from the teacher and hence minimizes the amount of time between activities, hence allowing more instructional time. An example would be children with reading problems will need increased instructional time to catch up to

their peers. Quick pacing also helps children stay more focused because there is no room for extra activities. When delivering the lesson a teacher's focus should be on allowing children to practice and review the skills they have been taught. Some of the ways is to limit teacher talk, use choral and individual responses and teaching children in small groups. Error Correction occurs when children give a wrong response, a teacher should correct them immediately. By utilizing these and other teaching strategies for children with disabilities, you ensure success in the classroom.

2.3 Theoretical framework

Reference to theoretical concepts and frameworks is essential in informing the research. This study will make reference to and draw its conceptual framework from three theories of learning namely: The Learning Styles theory, the Gestalt Theory and the Facilitation theory.

2.31 Learning Styles Theory

Kolb and Fry (1975) created this famous model out of four elements: concrete experience, observation and reflection, the formation of abstract concepts and testing in new situations. He represented these in the famous experiential learning circle that involves (1) concrete experience followed by (2) observation and experience followed by (3) forming abstract concepts followed by (4) testing in new

situations. It is a model that appears time and again. This approach to learning emphasizes the fact that individuals perceive and process information in very different ways. The learning styles theory implies that how much individuals learn has more to do with whether the educational experience is geared toward their particular style of learning than whether or not they are “smart.” The concept of learning styles is rooted in the classification of psychological types. The learning styles theory is based on research demonstrating that, as the result of heredity, upbringing, and current environmental demands, different individuals have a tendency to both perceive and process information differently. Kolb (1984); and Mills (2002) classify the different ways of doing as: Concrete and abstract perception—Concrete perceivers absorb information through direct experience, by doing, acting, sensing, and feeling. Abstract perceivers, however, take in information through analysis, observation, and thinking. *Active and reflective processors*—Active processors make sense of an experience by immediately using the new information. Reflective processors make sense of an experience by reflecting on and thinking about it. Traditional schooling tends to favor abstract perceiving and reflective processing. Other kinds of learning aren’t rewarded and reflected in curriculum, instruction, and assessment nearly as much.

2.3.2 Cognitive-Gestalt approaches

The emphasis here is on the importance of experience, meaning, problem-solving and the development of insights Burns (1995). Burns notes that this theory has developed the concept that individuals have different needs and concerns at different times, and that they have subjective interpretations in different contexts.

2.3.3 Facilitation Theory (The Humanist Approach)

Key proponent of humanism includes Carl Rogers (1994). A primary purpose of humanism could be described as the development of self-actualized, autonomous people. In humanism, learning is child centered and personalized, and the educator's role is that of a facilitator. Affective and cognitive needs are key, and the goal is to develop self-actualized people in a cooperative, supportive environment DeCarvalho, (1991).

Humanism is a paradigm, philosophy, and a pedagogical approach that believes learning is viewed as a personal act to fulfill one's potential. Humanism emerged in the 1960s and focused on the human freedom, dignity, and potential. A central assumption of humanism, according to Huitt (2001), is that people act with intentionality and values. This, Huitt insists, is in contrast to the behaviorist notion of operant conditioning (which argues that all behavior is the result of

the application of consequences) and the cognitive psychologist belief that the discovering knowledge or constructing meaning is central to learning. Humanists also believe that it is necessary to study the person as a whole, especially as an individual grows and develops over the lifespan.

Carl Rogers and other humanists developed the theory of facilitative learning. The basic premise of this theory is that learning will occur by the educator acting as a facilitator, that is by establishing an atmosphere in which learners feel comfortable to consider new ideas and are not threatened by external factors Laird (1985). Significant to the current study is the fact that the facilitation theory asserts that the most significant learning involves changing one's concept of oneself. Disabled children are most likely to have a low self concept of themselves due to their physical condition and this could affect their participation in the classroom.

The theory further views teachers as being facilitators of knowledge acquisition. Facilitative teachers are seen to be less protective of their constructs and beliefs than other teachers; more able to listen to learners, especially to their feelings; inclined to pay as much attention to their relationship with learners as to the content of the course; and apt to accept feedback, both positive and negative and to use it as

constructive insight into themselves and their behaviour. Their relationship with the learners ensures that Learners are encouraged to take responsibility for their own learning; provide much of the input for the learning which occurs through their insights and experiences; are encouraged to consider that the most valuable evaluation is self-evaluation and that learning needs to focus on factors that contribute to solving significant problems or achieving significant results.

2.4 Conceptual Framework

Based on the theories examined above and on the objectives of the stud, the variables to be considered can be designed in a conceptual framework as is shown below:

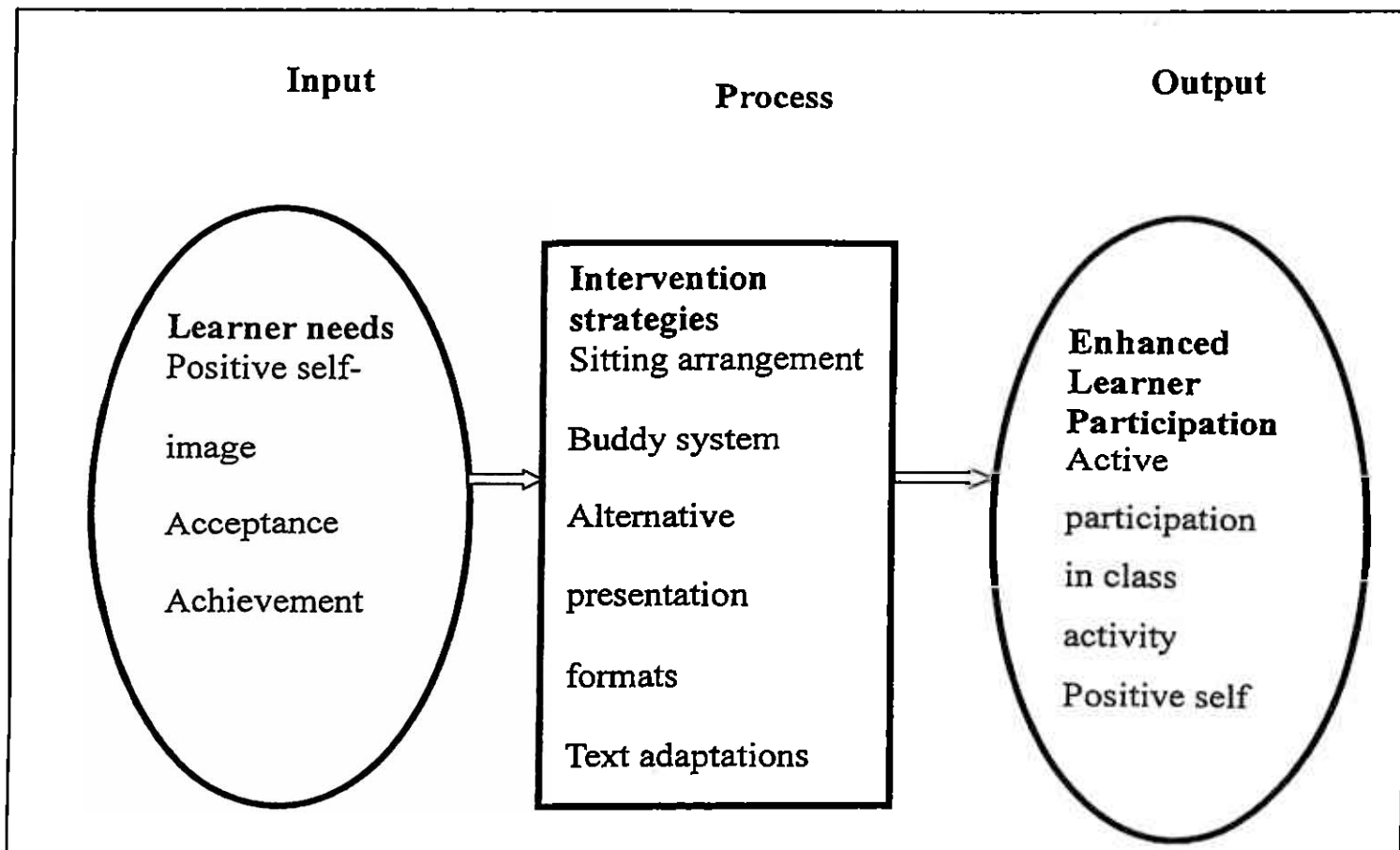


Fig 1: Conceptual framework

Source: Researcher 2011

The conceptual framework above presents the variables that are pertinent to this study. The framework looks at an input – process – output relationship between variables. The input include the needs of children with physical disabilities which include the need for a positive self image, the need for acceptance and the need for achievement regardless of the physical condition they find themselves in.

These needs must be addressed through a process that involves the teacher adopting pedagogic strategies that will impact upon the learner to address these needs. These interventions will include the learning environment, where the learning space will be made appropriate for the physically disabled child; introducing a buddy system where one of the unchallenged children in class acts as an academic assistant to the disabled child by copying notes and such related activity. It also involves the teacher adopting alternative lesson presentation formats that make the teacher a facilitator for learning for the physically disabled child. Finally the teacher could adopt text adaptation to suit the specific disability. These interventions lead to an output which is increased child participation in the class.

Summary

This literature review has examined literature related to physical challenges in learners, interventions in the learning of children with physical challenges and pedagogic strategies in the teaching of children with physical challenges as well as other challenges that children in an Early Childhood Education classroom face. Furthermore the review has examined theories related to teaching and learning that have a bearing on the topic of this study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The section covers the research design, target population, sample and sampling procedures, sample size, instruments for data collection, reliability and validity of the research instruments, as well as procedure for data collection and data analysis.

3.1 Research Design

This study employed a descriptive research design to gather data. Descriptive studies portray an accurate profile of persons, events or situations Chandran, (2004), Robson, (2002) describe existing conditions and attitudes through observation and interpretation techniques. The design was thus appropriate for this study to accurately capture data from observations on the various intervention measures adopted by preschools and the impact of those interventions on the preschool children with physical disabilities. The use of qualitative and quantitative research methods in this study provided the opportunity to examine and interpret patterns of instruction used by teachers at a school for children with learning differences.

3.2 Target Population

A population is an entire group of individuals, events or objects having common characteristics that conform to a given specification Mugenda & Mugenda, (2003). According to Sanders et al (2003); the population is the full set of cases from which a sample will be taken. The target population for this study was head-teachers, teachers and children with physical challenges in preschools in Starehe District of Nairobi.

3.3 Sample and Sampling Procedure

Sampling is the process of selecting a number of individuals for a study in such a way that the individual selected represents the large group from which they are selected Mugenda & Mugenda, (2003). According to Chandran (2003) a sample is a small proportion of an entire population; a selection from the population. Robson (2002) states that a sample is a selection from the population.

Purposive sampling and simple random sampling were used for this study. According to Kerlinger (2003), purposive sampling is characterized by the use of judgment and deliberate effort to obtain a representative sample while reducing error and increasing possibilities in analysis. Purposive sampling is useful in qualitative research design and especially in cases where the data illustrates

characteristics of particular subgroups of interest and also facilitates comparison, and the investigator relies on his or her expert judgment to select units that are representative or typical of the population Patton (1990). Mugenda and Mugenda (2003) suggest that purposive sampling is a technique that allows the researcher to use respondents that have the required information with respect to the objectives of the study.

Hence, the study used purposive sampling to pick the study area and to collect relevant information from a selected group of senior managers and administrators of preschools in the sample. This sampling procedure was also useful in pre-testing the questionnaire to assess the clarity and validity of the data collection instruments. This study took 30% of the target population to represent the entire population. This number was found to be adequately be representative of the total population of respondents since it was considered to be statically logical and practicable by the researcher. A simple random sample procedure that requires the use of larger sample sizes was used in the study, the number is also adequate to mitigate against sampling error, and to have a higher confidence level in the estimate. Furthermore, the 30% is above the standard required by various researchers (e.g., Anvy, Jacobs and Razariah, 1972; Ramenyi et al., 2003). The sampling frame that displays how people

were distributed in the sample of this study to represent the 30% is represented in the table below.

Table 1: Sampling Frame of the Respondents

Category of Respondents	Total number in Starehe District	Number of Respondents	Percentage
Head teachers	36	19	30%
Teachers	70	35	50%
Children with physical challenges	329*	32	10
Total	106	54	51%

(* source: Starehe Divisional education office statistics, 2009)

3.4 Instruments of Data Collection

Data for this study was collected from multiple sources, including interviews with head teachers and the class teachers, field notes from observations, and policy statements from the school. Data was triangulated among participants, observations, and document review to assure credibility. Teachers who were interviewed and observed were asked to review a summary of the final results of the inquiry in order to confirm the credibility of the information.

3.4.1 Interview schedule

The goal of the qualitative research interview is to understand the world from the subject's point of view and to interpret the meaning of their experiences Kvale (1996). The interview questions were developed based on the objectives and from a literature review in line with the theoretical framework. Theoretical sensitivity refers to a personal quality of the researcher. It indicates an awareness of the subtleties of meaning of data.... [It] refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn't pertinent to the study Strauss & Corbin, (1990). Theoretical sensitivity comes from a variety of sources, including professional literature, professional experiences, and personal experiences. The professional and personal experiences of the researcher and that of the sample respondents in this study informed the construction of the interviews. The interview questions were designed to elicit information on years of service, presence of children with physical challenges, the specific needs of these children and the interventions for participation of these children in classrooms.

3.4.2 Observation Schedule

Observations can lead to a deeper understanding and provide knowledge of the context in which events occur, and may provide the

researcher with the opportunity to view actions on the part of the participants that they themselves are not aware of, or that they are unwilling to discuss Patton, (1990). Observation is utilized to understand everyday activities more fully through a process of description, analysis, and interpretation Smith, (1978). In this study, the researcher observed the children with physical challenges as they took part in learning activities in the classroom. The researcher took the role of a nonparticipant and maintained a passive presence during the classroom observations. Lessons were visited for their entirety and field notes were taken. These lessons were randomly selected from the daily school timetable. Information recorded included teaching strategies, child behavior and reactions to the activities, verbal and nonverbal cues given by children and the teacher, and classroom layout. The observations were structured and the researcher recorded all relevant behaviors.

3.5 Pretesting Of Data Collection Instruments

In order to establish the validity of the data collection instruments, the researcher conducted a pilot test of the instruments by exposing the instruments to a sample not used in this study. The researcher interviewed two teachers and one head teacher and observed the teaching and learning activities in a classroom taught by one of the teachers interviewed.

3.6 Data Collection procedures

Data for this study was collected by administering the instruments on the respondents for the study. The interview schedule was prepared and the researcher, assisted by two research assistants, visited the schools and carried out a one-on-one interview with the Early Childhood Education teachers and the head teachers. One-on-one interviews were conducted using a semi-structured interview format. A total of 35 teachers and 19 head teachers were interviewed for this study. An interview guide was prepared and the same guiding questions were asked of each of the participating teachers and administrators. The order in which the questions were asked varied depending on the responses by the participant to previous questions. The questions were developed to make efficient use of the teachers' time. The interviews were carried out in an informal environment to allow the respondents to freely interact with the researcher. A handwritten account of each interview was recorded for analysis.

The researcher took notes on the issues raised and discussed. Furthermore, data was collected through observation of the teachers in the classroom. The researcher sat in the classrooms while the teacher taught. The researcher indicated on the observation schedule, the intervention measures the teacher put in place and identified the

level of participation of the children with physical challenges in the class. Mugenda & Mugenda (2003), asserts that the researcher has to be careful to avoid causing physical or psychological harm to respondents by asking embarrassing and irrelevant questions, threatening language or making respondents nervous. Similarly, Sommer and Sommer (1997) argue ethical considerations such as confidentiality, anonymity and avoidance of deception are very important issues in social research. For the purpose of this study, permission was first sought from relevant authorities and a letter granted to allow carrying out the research. Furthermore, the purpose of the study was explained to the respondents and assurance given to them of confidentiality of their responses and identities.

3.7 Data Analysis

After data collection, editing, coding of similar themes, classifying and tabulating are the processing steps to be used to process the collected data for a better and efficient analysis. As Mugenda (2003) points out that data editing, classification and tabulating are the process of bringing order, structure and meaning of the mass information collected. Qualitative data analysis involves "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others"

Bogdan and Biklen, (1982). Axial coding involves searching for commonalities and making connections between data that were open coded. Strauss and Corbin, (1990). The open codes were compared across situations and participants to determine connections between the conceptual codes and were collapsed into axial codes. Findings were integrated from the information obtained during the interviews and observations to describe the phenomena surrounding the events and actions thus creating a connective web of description.

Summary

This chapter has dealt with issues pertaining to methodology that was used in this study. The study design, study population, sampling procedure data collection and analysis procedures, as well as the piloting for validation of the data collection instruments.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

The purpose of this study was to critically examine intervention measures currently being used in the participation of children with physical challenges in Early Childhood Education in Starehe District of Nairobi. Information on teaching methodology and on participation of children with physical challenges was sought both in and out of classroom. Furthermore, the researcher attended five lessons in each school to observe the teaching and learning process. The researcher took notes on what was observed during classroom interactions.

4.1 Oral Interview Responses from Teachers

This study interviewed 35 preschool teachers and 19 preschool head teachers. All the teachers and the head teachers were available for the interviews therefore giving a 100% response rate.

4.2 Results from the respondents

4.2.1 Oral Interview Results From respondents

The study sought to know the number of years the respondents had worked in their various schools. This study also sought responses from the head teachers of the schools in the sample because they are

the supervisors of the teachers and have a responsibility to oversee the implementation of the curriculum in their schools. The results are shown below:

Table 4.1: Years of Service of the Respondents

No. of Years of Service	Teachers		Head Teachers	
	Frequency	Percentage	Frequency	Percentage
< 1 year	0	0	0	0
1-2 years	5	14.3	0	0
2-5 years	6	17.1	7	36.8
5 - 9 years	10	28.6	10	52.6
□ 10 years	14	40.0	2	10.5
Total	35	100	19	100

From Table 4.1, the highest number of preschool teachers (40%) in the sample had worked for over 10 years while 28.6% had worked for 5 and 9 years. Seventeen percent had worked for 2 to 5 years while the least number (14.3%) had worked for 1 to 2 years. With regard to the head teachers, data shows that the highest number of preschool head teachers (52.6%) in the sample had worked for between 5 and 9 years while 36.8% had worked for 2 to 5 years. Ten percent had

worked for over 10 years.

4.2 Years of service in current station

The study also sought to know for how long the respondents had taught at their current stations. This was essential to provide evidence of extended interaction by the teachers and the head teachers with the children with physical challenges being examined in this study. It was also intended to provide a basis for knowledge of intervention measures for these children's participation in learning activities. The results are presented below in Table 4.1.3

Table 4.2: Years of Service at Current Station

No. of Years of Service in Current Station	Teachers		Head Teachers	
	Frequency	Percentage	Frequency	Percentage
< 1 year	0	0	0	0
1-2 years	3	8.6	0	0
2-5 years	10	28.6	7	36.8
5 - 9 years	18	51.4	10	52.6
□ 10 years	4	11.4	2	10.5
Total	35	100	19	100

From Table 4.2, the highest number of teachers (51.4%) had taught at their current station for between 5 and 9 years. These were followed by those who had served for between 2 and 5 years. These constituted 28.6% of the total sample. Those who had been at their current stations for more than 10 years were 11.4% while those that had served in their current stations for between 1 and 2 years constituted only 8.6% of the sample. With regard to how long pre-school head teachers had been teaching at their current station, the study established that each of the head teachers had been transferred on promotion to head their respective schools. Hence, their length of stay at their teaching stations was equal to the number of years they had been teaching at those stations. Hence, the pre-school head teachers in the sample had been in their respective schools long enough to give an objective and informed opinion about the pedagogic practices in the schools with regard to the participation of children with physical challenges children under their charge.

4.3 Prevalence of Children with Physical Challenges

The study sought to know whether or not the respondents had children with physical challenges in their classes. This provided the evidence of the teacher's active involvement with children with physical challenges. The findings in this regard are shown in figure 2 below:

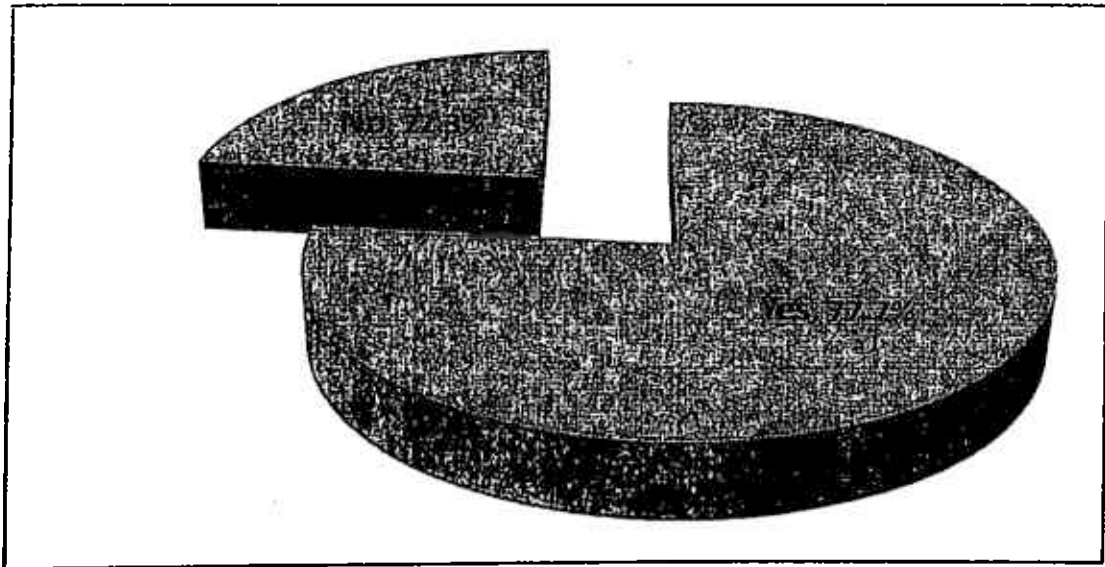


Figure 2: Prevalence of Children with physical challenges in Classrooms

Figure 2 above indicates that 77.7% of respondents had children with physical challenges in their classrooms. Only 22.3% did not have children with physical challenges. Likewise, 77.7% of pre-school head teachers agreed that there are children with the majority of respondents had children with physical challenges in their schools. These constituted 77.7 % of the study sample. The ones who didn't have children that were physically challenged constituted only 22.3%. These figures tallied with those given by the teachers in these schools.

4.4 Types of Physical Challenges in Early Childhood Education Classrooms

Having identified the prevalence of children with physical challenges

in Starehe District, the study further sought to find out the types of physical challenges respondents encountered in their classrooms. The findings are shown in Figure 3 below:

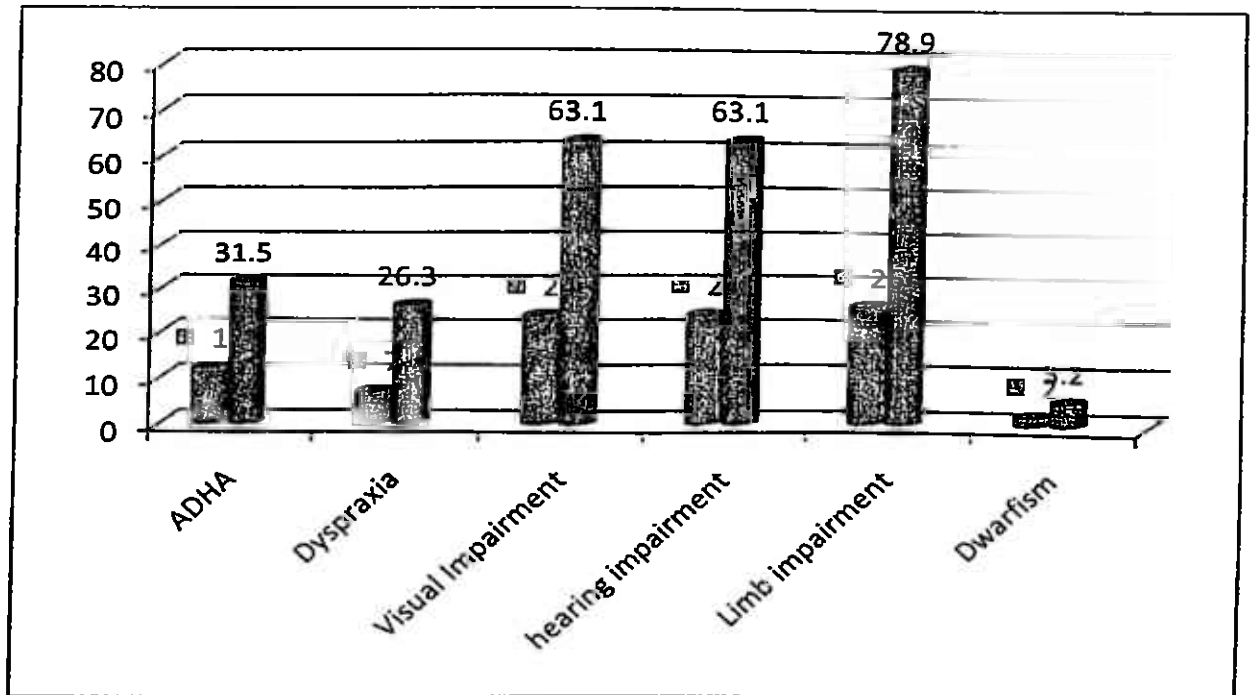


Figure 3: Types of Physical Challenges among Children in early childhood education in Starehe District

Adha -4; 2-dysp;8-vi;8hi;9;1

Figure 3 shows the most common forms of physical disabilities among children in Early Childhood Education classrooms in Starehe District. Limb impairments – constituting all challenges to the arms and legs- were the commonest form of disability (26%) in sampled schools. Hearing impairment and visual impairment each constituted 24% of the incidences of physical challenge. Attention Deficit Hyperactive Disorder (ADHD) constituted 12% of children with

physical challenge sampled. Dyspraxia accounted for 7% while dwarfism accounted for only 2% of the sample.

Responses from the head teachers showed the most common forms of physical disabilities among children in Early Childhood Education classrooms in Starehe District. Limb impairments – constituting all challenges to the arms and legs- were the commonest form of disability (26%) in sampled schools. Hearing impairment and visual impairment each constituted 24% of the incidences of physical challenge. Attention Deficit Hyperactive Disorder (ADHD) constituted 12% of children with physical challenge sampled. Dyspraxia accounted for 7% while dwarfism accounted for only 2% of the sample. The responses in Figure 5 corroborated with those of pre-school teachers in showing that the highest incidence of physical challenge among Early Childhood Education children was that of limb impairment.

4.5 Special Needs of Children with Physical Challenges

The children with physical challenges obviously display unique needs especially when being taught together with children without any such challenges. In order to understand the effects of the interventions the teachers were employing in enhancing learner participation, the study sought to identify these specific child-needs as they manifest

themselves in the study sample. Respondents were asked to identify any special needs they found among children with physical challenges in their classes. These needs were classified as psychological, emotional, physical and instructional for clear definitions of need type. The findings are shown in Table 4.3 below:

Table 4.3: Special Needs among Children with Physical Challenges

Need Category	Description	
	Teachers	Head teachers
Psychological	<ul style="list-style-type: none"> • They are too conscious about their disability and need reassurance. • Lack initiative 	<ul style="list-style-type: none"> • They need reassurance. • Need for attention • Lack of initiative
Emotional	<ul style="list-style-type: none"> • Tendency to be withdrawn • Some are temperamental • Some are shy 	<ul style="list-style-type: none"> • Withdrawal syndrome • Need for attention/empathy
Physical	<ul style="list-style-type: none"> • Inability to manipulate objects • Some have problems performing subtle movements, such as tying shoelaces, doing up buttons and zips, and handwriting. • Some find it hard in the playground to jump, catch or kick a ball, hop, skip or play 	<ul style="list-style-type: none"> • Inability to manipulate objects • Problems with movements and handwriting. • difficulty in the playground
Instructional	<ul style="list-style-type: none"> • Children with dyspraxia commonly find it hard to focus on one thing for long and find it difficult to learn new skills. • Need help in the classroom to process language faster. 	<ul style="list-style-type: none"> • Need follow-up in learning. • Some need help in the classroom to process language faster.

From Table 4.3 above, respondents indicated that psychological needs manifested themselves in two ways. Firstly, the challenged children were too conscious of their physical disability that they displayed a need for reassurance. Furthermore, the respondents indicated that the children who displayed psychological needs of this nature also lacked initiative.

Respondents reported also that those children who had physical needs also developed emotional needs. They often were temperamental and thought other children looked down upon them because of their challenges. They reported further that some of the children had become withdrawn or become outrightly shy.

Respondents reported that most of the children displayed inability to manipulate objects. Some had problems performing subtle movements such as tying shoelaces, doing up buttons and zips, and handwriting. Some found it hard in the playground to jump, catch or kick a ball, hop, skip or play. The severity of the difficulty depended on the nature and extent of the disability. Respondents indicated that those with less severe deformities had fewer problems compared to those with more severe ones.

With regard to instructional needs, respondents indicated that children with dyspraxia commonly find it hard to focus on one thing for long and found it difficult to learn new skills. Some of the children, particularly those with deformities in the oral cavity and those with dyspraxia needed help in the classroom to process language faster.

Responses from the head teachers indicated that psychological needs manifested themselves in three ways. Firstly, the challenged children displayed a need for reassurance. Respondents indicated that these children with physical challenges were not sure of themselves hence this need. Hence, they needed attention and also lacked self initiative. As a result, these children have developed emotional needs. According to the respondents, the children were withdrawn and needed empathy particularly where they were supposed to compete against their able bodied colleagues.

With regard to children who have physical challenges, the respondents indicated that most of the children displayed inability to manipulate objects, had problems in movement and handwriting; and they had difficulty performing activities in the playground depending on the nature of physical challenge.

With regard to instructional needs, respondents indicated that children with physical challenge constantly required follow-up in their learning and needed assistance in areas such as language learning.

4.6 Teacher Interventions to Enhance Learner Participation

This study set out to identify and evaluate the interventions in learner participation in Early Childhood Education classrooms. Having identified the specific needs of the learners with physical challenges, the study then identified the specific interventions employed by the teachers to deal with these needs of the learner. The study then sought to know the interventions the teachers used to address the specific needs that they had identified among children with physical challenges in their classrooms. The responses are presented in Table 4.4 below:

Table4. 4: Methods of Dealing with Needs of Children with Physical Challenges

Need Category	Intervention
Psychological	<p>Assigning leadership roles</p> <p>Talking positively about physical challenges</p>
Emotional	<p>Providing the challenged children with more individual attention</p> <p>Involving parents and guardians</p> <p>Enhancing collaboration with the able children</p>
Physical	<p>Reorganized the class space to provide adequate space for mobility.</p> <p>Adopt alternative activities that are manageable by children with physical challenges</p>
Instructional	<p>Use learning aids because the use of these aids ensured that children understood the lesson; it made learning more enjoyable, easy and interesting; it reinforced concepts; helped sustain children's interest in learning.</p> <p>Involvement and encouragement of the challenged children in all activities</p>

Table 4.4 above shows the methods used to deal with specific needs displayed by children with physical challenges in respondents classrooms. With regard to psychological needs, the teachers indicated that they assigned leadership roles to the children particularly during group work. This, the respondents argued, availed an opportunity for a child with physical challenges to control the activity and hence boost his/her self esteem. Moreover, the teachers indicated that they talked positively about physical challenges in order to remove the feeling of self consciousness from the affected children and to make the other children accept children with physical challenges as equals despite their challenges.

With regard to emotional needs of the children with physical challenges, the respondents indicated that they provided them with more individual attention. This included responding to their needs for movement and manipulation of objects instantly and with a lot of care and love. The respondents indicated that they used polite language and empathy to achieve this. Furthermore, the teachers involved the parents and guardians in counseling and guiding their children with physical challenges to cope with the demands of participating in class activities. In addition, the teachers indicated that they encouraged collaboration in learning tasks between children with and without physical challenges.

With regard to the physical needs of the children with physical challenges, respondents indicated that they reorganized the class space to provide adequate space for mobility of ALL children. In the case of the children who couldn't effectively engage in some of the outdoor activities and play, the teachers indicated that they provided alternative activities.

With regard to instructional needs, the teachers indicated that they maximized on the use of learning aids so that children not only understood their lessons but also the aids made learning more enjoyable, easy and interesting. It also reinforced concepts and helped sustain children's interest in learning. This was accompanied by involvement and encouragement of the children with physical challenges in all learning activities.

The study also sought to know the interventions the head teachers used to address the specific needs that they had identified the children with physical challenges to have. The head teachers indicated that they did not provide specific interventions for specific challenges. However, they indicated that they provided teachers with opportunities to attend workshops and seminars to improve their skills in handling children with physical challenges. Moreover, head

teachers provided conducive learning environments by ensuring that physical facilities in the schools were friendly to the physically challenged and that counseling services were available for all children that were challenged.

The head teachers also involved the parents and guardians of these challenged children by allowing them to participate in school activities and consultations with the teachers.

4.7 Effectiveness of Intervention Strategies by Teachers

The intention of this study was not just to identify the intervention strategies employed by the teachers but to also evaluate the effectiveness of such strategies in enhancing learner participation in classroom activities. The study therefore sought to identify the effectiveness of interventions used by teachers in Early Childhood Education classrooms with children with physical challenges. The findings are presented in Table 4.5 below:

Table 4.5: Effectiveness of Interventions

Intervention	Effectiveness
<ul style="list-style-type: none"> • Assigning leadership roles • Talking positively about disability 	<p>Children become assertive</p> <p>Children feel appreciated</p>
<ul style="list-style-type: none"> • Providing children with physical challenges with more individual attention • Involving parents and guardians • Enhancing collaboration with the able children 	<p>There is increased participation in asking and answering questions.</p> <p>Children desire teacher's attention.</p> <p>Children begin to compete with other Children without hesitation</p>
<ul style="list-style-type: none"> • Reorganized the class space to provide adequate space for mobility. • Adopt alternative activities that are manageable by children with physical challenge 	<p>Children are more comfortable when performing class tasks.</p> <p>Children feel a sense of accomplishment when they perform and complete tasks;</p> <p>Children enjoy outdoor activities more.</p>
<ul style="list-style-type: none"> • Use learning aids. • Involvement and encouragement of the challenged children in all activities 	<p>Children are able to look at and interpret objects, pictures, symbols and signs.</p> <p>Children develop concentration; children develop eye-hand coordination.</p>

Table 4.5 above presents data on intervention strategies employed by Early Childhood Education teachers to encourage participation, and, the resultant effectiveness of using these strategies.

With regard to assigning children with physical challenges leadership roles, the respondents indicated that there was the exuberance of self confidence and assertiveness in the children. This was noticed, for instance, in their ability to give instructions on the sequence of play and ordering members of the group in readiness for group activities. Furthermore, by the teacher talking positively about physical disability, children with physical challenges felt appreciated.

The findings indicate also that by providing the children with more individual attention, involving parents and guardian, and enhancing collaboration between children with and without physical challenges, there was increased participation in posing and answering questions. The children further showed desire for the teacher's attention. They began to compete with other children without hesitation.

With regard to interventions in physical needs, the teachers indicated that they had reorganized their classes and created adequate space to provide for mobility. This was with regard to children who had lower limb disability. Furthermore, the teachers also indicated that they

adopted alternative activities that were manageable by children with physical challenges. When these strategies were used, the children became more comfortable when performing tasks within and outside the classroom. Moreover, they felt a sense of accomplishment when they were able to perform and complete tasks. Hence, they enjoyed indoor and outdoor activities more.

With reference to interventions in instructional needs, respondents indicated that they used learning aids and involved and encouraged the children with physical challenges in all learning activities. The result was that children with physical challenges were able to look at and interpret objects, pictures, symbols and signs. Moreover, continued use of these interventions caused the children to develop higher concentration levels than they previously had. Subsequently, many children also developed better eye-hand coordination.

4.8 Suggestions for Improving Learner Participation

Bearing in mind the experience the preschool teachers had, the study sought to identify measures to improve both interventions and learner participation in Early Childhood Education classrooms. Hence, the study asked respondents what measures could be taken to improve the participation of children with physical challenges in preschool. The suggestions made are summarized in Table 4.6 below:

Table 4.6: Suggestions on Improving Participation of Children with Physical Challenges in Classroom Activities

Suggestion	Freq	%
1. Focusing on what children with physical challenges can do at all times.	35	100
2. Finding out what a child's strengths are and capitalizing on them.	35	100
3. Keeping the teacher's expectations of the child with physical challenges high and acknowledging that this child is capable of achieving.	28	80
4. Never accepting rude remarks, name calling or teasing from other children.	35	100
5. Complimenting appearance from time to time.	20	57
6. Making adjustments and accommodations in learning activities whenever possible to enable this child to participate.	35	100
7. Never pitying the child with physical challenges.	28	80
8. Taking the opportunity, when the child is absent, to teach the rest of the class about physical handicaps to foster understanding and acceptance.	35	100
9. Taking frequent one- to-one time with the child to make sure that s/he is aware that you're there to help when needed.	35	100

From Table 4.6, all responded suggested that pre-school teachers must focus on what children with physical challenges can do at all the time. They must find out what a child's strengths are and capitalizing on them. They must make adjustments and accommodations in learning activities whenever possible to enable this child with physical challenges to participate. They must never accepting rude remarks, name-calling or teasing from other children. They must take the opportunity, when the child is absent, to teach the rest of the class about physical handicaps to foster understanding and acceptance as well as take frequent one- to-one time with the child with physical challenges to make sure that s/he is comfortable and adjusting well to pre-school. They must reassure the child with physical challenges that they are there to help when needed. In addition, many teachers concurred on the need to keep their expectations of the child with physical challenges high and acknowledging that this child is capable of achieving as well as never pitying the child with physical challenges but instead complementing them on their physical appearance.

4.9 Findings from Classroom Observation

The study used observation as a data collection instrument to collect data that would corroborate the information given by respondents in the questionnaire. The researcher sat through five class sessions that

were randomly selected from the schools in the sample and made observations of the teachers' use of learning aids in the classrooms.

The findings are presented in table 7 below:

School	Physical challenge	Instructional area	Intervention measure	Participation level*
School 1	Attention Deficit Hyperactive Disorder (ADHA)	Basic alphabet skills- read syllables and three letter words	The teacher gave the child more attention than she did the other children in class. She constantly positioned herself next to the child and constantly gave the child a chance to answer questions	3
School 2	Visual impairment	Number work	Use learning aids because the child was short sighted and could not see the front properly. The teacher moved the child to the front and placed a chart with the numbers written in large font before her. This aid ensured that the child did not strain to see and she kept interest in learning.	2
School 3	Limb impairment	Game- group races	The teacher Provided the child with an alternative activity. Since the child had lower limb impairment, the child was asked to do handstand and cartwheel which needed the upper limbs more than the lower limbs. Two other children were paired with the challenged child.	2
School 4	Hearing impairment	Modeling	The teacher gave personal attention to the child. He had a serious hearing deficiency and the teacher had to give the instructions to him alone, while speaking loudly for him to hear. She took the child through the modeling steps to ensure the child gets it well.	2
School 5	Dwarfism	Game-Tug of war	The teacher gave this child the responsibility of organizing his group. He divided the two groups in such a way that the stronger children belonged to the dwarfs group. This essentially ensured his group won and he felt happy about it.	1

*Key: 1: Very Involved 2: Involved 3: Fairly Involved 4: Not Involvement

Table 4.7 above summarizes findings from classroom observations. In one school the researcher observed how a teacher interacted with a child with Attention Deficit Hyperactive Disorder (ADHD) during a lesson on reading syllables and three-letter words. The teacher gave the child with ADHD more attention than she did the other children in her class. She constantly positioned herself next to the child and constantly gave the child a chance to answer questions. This strategy caused the child to get fairly involved. It was also an effective way of taming the child's restlessness.

In another school, the researcher observed how a teacher interacted with a child with low vision in a number-work lesson. The lesson involved identifying numbers and reading them aloud following the teachers cue stick. The teacher had moved the child with low vision to the front middle row of the class. She placed a chart with numbers written in large font before the child. This approach ensured the child did not strain to see chalkboard work and was also interested in learning. Her participation was energized by the teacher's assistance and provision of legible materials.

In a third school, the researcher observed how a teacher interacted with a child with limb impairment in a physical education (P.E.) lesson. The P.E. activities included group races. Children were divided into groups that were made to compete over short distances of about 30 metres. The teacher provided the child with limb impairment an alternative activity. The child did 'handstand' and 'cartwheel' activities which required use of upper- more than the lower limbs. To prevent the child from feeling the odd one out, the teacher paired him with two other children. The child with limb impairment visibly

enjoyed the activity and did not seem to care that he wasn't involved in the group races.

In the fourth school the researcher observed how a teacher interacted with a child with hearing impairment during a modeling exercise. The children were required to model objects found in their homes using plasticine. The teacher gave some verbal instruction to the class to guide them in the modeling exercise. The teacher then approached the child with hearing impairment repeated; she spoke rather loudly for the child to hear. She then took the child through the modeling steps to ensure the child got it well. The child was able to model as well as the other children did. Moreover, he showed enthusiasm by calling on the teacher's attention to see his models.

In the fifth school, the researcher observed how a teacher interacted with a child challenged with dwarfism during an outdoor activity that involved children playing Tug-of-war. The class was divided into four groups and then into two groups. When the child appeared reluctant to participate in the activity, the teacher assigned the child the responsibility of organizing his group. The child was able to follow the teacher's instructions and actively participate in the tug-of-war activities.

Concluding Summary

This chapter has examined data that was collected for this study. The data was presented in tabular and graphic forms indicating the frequencies and the percentages of responses made by respondents. A brief discussion of the data was made immediately after each item presented.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The purpose of this study was to critically examine intervention measures currently being used in the participation of children with physical challenges in early childhood education in Starehe District of Nairobi. This chapter presents discussion of findings based on objectives of the study, conclusions and recommendations made from the study as well as suggestions for further research.

5.1 Discussion of Findings

5.1.1 Description of Needs of Children with Physical Challenges in Preschools in Starehe District of Nairobi

The study set out to describe the needs of children with physical challenges in preschools in Starehe district. In order to achieve this, the study examined the common forms of disability found in preschools in the district. Identification of the types of physical challenges set the stage for clearer identification of the specific needs of the children with physical challenges.

The study found that Limb impairment – constituting all challenges to the arms and legs- was the most common form of physical challenge among these children. However, other forms of disability were equally common. These included hearing impairment and visual impairment as well as Attention Deficit Hyperactive Disorder (ADHA), Dyspraxia and dwarfism.

The study identified the needs of children with physical challenges as falling into four main categories: psychological, emotional, physical and instructional. Psychological needs manifested themselves in two ways. First, children with physical challenges displayed a need for reassurance, borne from a constant feeling of inadequacy. Children with physical challenges who displayed psychological needs of this nature also lacked initiative. They never initiated anything for fear of ridicule from their able-bodied classmates. This finding corroborates the assertion by Edmunds (2003) that for children with physical handicaps, self-image is extremely important. He further indicates that children with physical challenges are aware of the fact that they are physically different than most others and that there are certain things they cannot do.

The study found out that children with physical challenges were temperamental and viewed other children as looking down upon them because of their challenges. Some of them displayed withdrawal tendencies or were just outrightly shy. When peers are cruel to children with physical handicaps or tease and cast insulting remarks at them or even exclude them from games and group-type activities, these children can undoubtedly develop emotional needs for love and belongingness.

Children with physical challenges were also found to display inability to manipulate objects; performing subtle movements, and handwriting. Some found it hard in the playground to jump, catch or kick a ball, hop, skip or play. The severity of the difficulty to manipulate objects depended on the nature and extent of the physical challenge.

With regard to instructional needs, the study found that those children with dyspraxia commonly find it hard to focus on one thing for long and found it difficult to learn new skills. Some of the children, particularly those with deformities in the mouth cavity and those with dyspraxia needed help in the classroom to process language faster.

5.1.2 Interventions Used in the Participation of Children with Physical Challenges in Early Childhood Education classrooms in Starehe District of Nairobi

This study also examined the intervention measures that teachers and administrators of pre schools took to enhance the participation of children with physical challenges in their learning. As Feinberg, (1992) suggests, teachers who have accepted the challenge to work with children with physical challenges must help the children to master and exceed annual goals, as well as prepare them for higher level educational and occupational options. This calls for interventions and strategies in the children learning.

This study found that teachers used several methods to deal with the specific needs displayed by the children with physical challenges in their classes. With regard to the psychological needs, the teachers assigned leadership roles to the children particularly during group work. This, the respondents argued, availed an opportunity for the child with physical challenge to control the activity and hence boosted his/her self esteem. Moreover, the teachers talked positively about physical challenges in order to remove the feeling of self-consciousness from the affected children and made the other children accept the children with physical challenges as equals despite their physical challenges. This is in line with the assertion by Edmunds (2003) who suggests that teachers need to

ensure that the child's self image is positive. Children with physical challenges children are aware of the fact that they are physically different than most others and that there are certain things they cannot do.

With regard to the emotional needs of children with physical challenges, the study found that teachers provided these children with more attention. This included responding to their needs for movement and manipulation of objects instantly and with a lot of care and love. The respondents indicated that they used polite language and empathy to achieve this. Feinberg (1992) agrees that there is growing evidence that the single most important school influence in children's education is a well prepared, caring, and qualified teacher. Hence the interventions adopted by teachers in this case were appropriate.

Teachers indicated also that they encouraged collaboration in learning tasks between the able children and the challenged ones. They involved parents and guardians of children with physical challenges in counseling and guiding their children to cope with the challenges of participating in class as a result of their challenges. Blackman (2003) concludes that programmes associated with favourable outcomes for children are those that involve parents in a substantive way and provide a broad-based approach to intervention.

With regard to the physical needs of children with physical challenges, the study found that teachers reorganized the class space to provide adequate space for mobility. As Simeonsson, (1991) asserts, there is need to individualize interventions, and providing

early intervention for young children with physical challenges. In the context of this study, this was found necessary especially for those children that had more severe limb deformations and those that had visual and hearing challenges. In the case of the children who couldn't effectively engage in some of the outdoor activities and play, the teachers indicated that they provided alternative activities that were manageable by children with physical challenges.

The study also found that teachers maximized on the use of learning aids to satisfy the children's instructional needs. Respondents indicated that the use of these aids ensured that children understood the lesson; it made learning more enjoyable, easy and interesting; it reinforced concepts; helped sustain children's interest in learning. Moreover, teachers also used involvement and encouragement of the challenged children in all activities.

5.1.3 Critical Evaluation of Interventions Used in the Participation of Children with Physical Challenges in Early Childhood Education Classrooms in Starehe District of Nairobi

The study further sought to investigate the effectiveness of interventions preschool teachers used in the participation of children with physical challenges in the learning process in Early Childhood Education, classrooms in Starehe District. This was essential to establish whether or not the interventions were yielding positive results for the learners. With regard to assigning the challenged children leadership roles, the teachers deliberately asked the children with physical challenges to lead their groups in activities such as simple games and play routines. The resultant effect was the exuberance of self

confidence and assertiveness in most of the children with physical challenges. This was noticed in their ability to give instructions on the sequence of play and ordering members of the group in readiness for the group activity. Furthermore, by the teacher talking positively about physical disability, the children with physical challenges showed less intimidation and were bolder in class.

Furthermore, the study established that by providing the children with physical challenges with more attention, involving parents and guardians, and enhancing collaboration with the able children, these children increased participation in asking and answering questions in the classroom. The children further showed desire for the teacher's attention and began to compete with other children without hesitation.

Interventions in physical needs were found to be effective in the sense that adequate space was provided for mobility. This was with regard to children who had lower limb disability. The adopted alternative activities that were manageable by children with physical challenges made them enjoy learning activities in class. The children felt a sense of accomplishment when they were able to perform and complete tasks. Hence, they enjoyed outdoor activities more.

The use of learning aids ensured that children understood the lesson; it made learning more enjoyable, easy and interesting; it reinforced concepts; helped sustain children's interest in learning. Furthermore, the teachers involved and encouraged the children with physical challenges in all activities. This resulted in children with physical challenges being able to look at and interpret objects, pictures, symbols and signs.

Moreover, continued use of these interventions caused the children to develop higher concentration levels than they previously had. The Children also developed better eye-hand coordination.

5.2 Conclusions

Based on the discussion of the findings in 5.1 above, the following conclusions can be made from this study:

1. Children in Early Childhood Education who are physically challenged display unique needs that result from their state of disability.
2. The needs of these children with physical disability vary in nature and severity. There are those needs which may be psychological, emotional, physical, instructional or otherwise. Regardless of the specific need, the children with physical challenges need attention.
3. Teachers in Early Childhood Education provide for several interventions in the participation of children with physical challenges in their school activities. These interventions range from in-class interventions to out-of- class interventions.
4. The strategies that teachers employ to intervene in the participation of children with physical challenges in Early Childhood Education classes have been effective since they have encouraged the children to actively participate in learning activities. Moreover, these interventions have boosted the morale of the children to learn and interact during learning activity.
5. There is need to enhance learner participation in learning activities since the child with physical challenges requires more time and attention from the teacher. Due to their physical limitation, these children with physical challenges end up

being psychologically challenged as well and need patience to deal with their individual needs.

5.3 Recommendations

Based on the study finding, the researcher makes the following recommendations:

- a) To enhance early identification, assessment and intervention of the needs of learners with physical challenges.
- b) To promote awareness on the educational needs and capabilities of children with physical challenges.
- c) To put in place measures to promote barrier free environment for learners with physical disabilities.
- d) To provide and promote the use of specialized facilities assistive devices and technology, equipment and teaching/learning materials.
- e) Parental and family support in terms of health, guidance and counseling and provision of learning resources.
- f) Educate the parents and other learners and the communities on the special needs of children with physical challenges.
- g) Intensify monitoring, supervision and quality standards in Early Childhood Education centers to ensure quality education.
- h) To provide appropriate infrastructure and adequate facilities & equipment

Recommendations for further research

There is need to conduct further research in the area of physical disabilities in order to help the affected children cope with this challenges.

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APPENDICES

APPENDIX 1: Observation schedule on intervention measures

Activity area

Date.....

Physical context of the lesson	Curriculum topic	Learners attainment	Gender	
			Male	Female

Remarks.....

.....

APPENDIX II: Interview Schedule for Early Childhood Education Teachers

Your response shall be treated confidential and your anonymity is assured. The information obtained is purely for academic purposes.

Kindly respond to all items and indicate correct alternative by putting a tick () where applicable.

Part I

1. Name of the school	-	
2. Gender	- Male	- Female
3. Religion	- Christian	- Islam
	- Others	
4. Marital status	- Married	- Single
5. Age 20 – 30	()	
30 – 40	()	
40 above	()	
6. Work experience 1 – 10 years () 20 – 30 years () 30 and above ()		
7. Indicate the highest academic qualification		
Certificate ()		
Diploma ()		
Graduate ()		

Part II

1. For how long have you been teaching?
2. For how long have you taught at this station?

3. Do you have any disabled children in your current class?
4. What types of disabilities do these children have?
5. Have you encountered any special needs among physically disabled children?
6. Please describe these needs in terms of :
 - Psychological
 - Emotional
 - Physical
 - Instructional
 - Others
7. Please describe how you deal with each need within the classroom and outside the classroom.
8. Do you think your strategy works?
9. What evidence do you have that it works?
10. What evaluation strategies do you have to measure the participation and performance of the physically disabled children in your class?
11. Do you solicit and /or get support from:
 - Parents
 - Teachers
 - Community
 - School administration
12. What suggestions would you make regarding teaching approaches that would enhance the participation of physically disabled children in your class?

APPENDIX III: Interview Schedule for Head Teachers

Your response shall be treated confidential and your anonymity is assured. The information obtained is purely for academic purposes.

Kindly respond to all items and indicate correct alternative by putting a tick (✓) where applicable.

- 1 For how long have you been teaching?
- 2 For how long have you administered at this station?
- 3 Do you have any disabled children in your pre school?
- 4 What types of disabilities do these children have?
- 5 Have you encountered any special needs among physically disabled children?
- 6 Please describe these needs in terms of :
 - Psychological
 - Emotional
 - Physical
 - Instructional
 - Others
- 7 Please describe how you deal with each need within the classroom and outside the classroom.
- 8 Do you think your strategy works?
- 9 What evidence do you have that it works?
- 10 What evaluation strategies do you have to measure the participation and performance of the physically disabled children in your class?
- 11 What suggestions would you make regarding teaching approaches that would enhance the participation of physically disabled children in your school?

APPENDIX IV: Research Budget

ITEMS	JUSTIFICATION	COSTS (KSHS)
Project writing	Writing materials (paper, pens, pencils, notebooks).	4,000
a). Stationery	Cost of browsing internet and cost of relevant reading materials.	5,000
b). Internet and textbooks		
c). Typing	Typing and printing of research instruments, 50 copies each 12 pages each 3 Shs. Per page (50 x 6 x 3).	10,000
a). Pilot study	Pilot study for 5 days by researcher each Kshs. 500 per day (500 x 5)	2,500
b). Main field study		
- Travelling	Travelling at Kshs. 300 per day for 5 days (300 x 5).	1,500
- Research assistant	One researcher assistant per day at Kshs. 500 (500 x 5)	2,500
- Meals	Meals per day at Kshs. 500 for 5 days.	2,500
a). Data analysis and typing	Data processing, analysis and typing of research report.	20,000
b). Photocopying research report	Photocopying research report of 100 pages at Kshs. 5 for 10 copies (100 x 5 x 10)	5,000
c). Binding research report	Binding 10 copies of research report at Kshs. 500 (10 x 200)	5,000
TOTAL		58,000

APPENDIX V: Research timetable

Dates/Activity	Sept. 2010	Jan. 2011	Oct. 2010	May 2011	June 2011	July 2011
Proposal writing						
Defense of proposal						
Pilot and revision of instruments						
Actual data collection						
Data analysis						
Submission for examination						