

**CURRICULUM BARRIERS TO TEACHING ORIENTATION AND MOBILITY
IN SELECTED SCHOOLS FOR LEARNERS WITH VISUAL IMPAIRMENTS,
WEST POKOT AND SIAYA COUNTIES, KENYA**

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DECLARATION

I confirm that this thesis is my original work and has not been presented for a degree in any other university/institution. The thesis has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works- including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

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DEDICATION

I dedicate this thesis to God all-powerful, wellspring of motivation, understanding and knowledge. He has been the wellspring of my strength all through this programme. I additionally dedicate this thesis to my entire family. Thank you for allowing me to further my studies in Special Needs Education. Finally, I dedicate this work to my dearest spouse Christine, whose unconditional encouragement and support made it possible for me to commence my studies.

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Despite the fact that my name shows up on the front of this thesis, many individuals have added to its last production.

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ABBREVIATIONS

AFB	American Foundation for the Blind
CBM	Christoffel Blinden Mission
KESSP	Kenya Education Sector Support Programme
KICD	Kenya Institute of Curriculum Development
KIE	Kenya Institute of Education
KISE	Kenya Institute of Special Education
SNE	Special Needs Education
PTR	Pupil-Teacher Ratio

ABSTRACT

The purpose of the study was to assess the curriculum barriers to teaching orientation and mobility in selected Schools for Learners with Visual Impairments in Kenya. The objectives of the study were to explore why orientation and mobility was not being included in the school time table, the administrative support available, teacher-pupil ratio, the perceptions of teachers and learners towards the teaching of orientation and mobility. The ecological systems theory developed by Urie Bronfenbrenner (1979) was utilized to guide the study. The theory focuses on learner's development within a setting of frameworks of connections that shape the learner's surrounding environment and each has an impact on a learner's development. The study used descriptive survey research design. The study was carried out in selected Schools for the Visually Impaired in West Pokot and Siaya counties which were both residential. The target population consisted of teachers, the head teachers, deputy head teachers and learners. Purposive sampling was utilized to pick the teachers, head teachers and deputy head teachers and stratified sampling technique was used to select learners who required orientation and mobility training. The size of the sample was 44 respondents which included 21 teachers, the head teachers and the deputy head teachers from each school (4 in total) and 19 learners. Questionnaires, observation schedules and semi-structured interview guide with open-ended question layout were utilized to gather information. Piloting of the study was conducted in a selected School for learners with visual Impairment in Kisumu County. Content validity was utilized. Supervisors' views on the standard of the instruments developed were sought after. Test re-test was used to establish the reliability of the instruments. Quantitative data analysis was done using descriptive statistics which included frequencies and percentages. Qualitative data analysis was accomplished by categorizing the data collected in themes and made interpretations from the data. The study established that the following were greatly lacking; educational programmes set up for orientation and mobility training, syllabus, time, poor administrative support, resources and curriculum based establishment hence its exclusion in the official school timetable. In this study it was concluded that lack of syllabus, time, resource and curriculum based establishment are the main curriculum barriers to the teaching of orientation and there was need to establish a curriculum to guide in the teaching of orientation and mobility according to grade-level. It was recommended that the Kenya Institute for Curriculum Development should take the initiative to establish a curriculum tailor-made to address the issues of the visually impaired in regard to orientation mobility training.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The study aimed at assessing curriculum barriers to teaching orientation and mobility in selected schools for learners with visual impairments in West Pokot and siaya counties in Kenya. This chapter, therefore, endeavours to provide the background of the study, statement of the problem, purpose, research objectives and questions, significance, delimitation and limitations, assumptions of the study, the theoretical and conceptual framework and operational definitions of terms.

1.1 Background to the study

Universally an estimated 253 million individuals live with visual impairments. Around 90% of the people are living in developing nations (WHO, 2017). The poorest regions of Africa and Asia are where seventy five percent of the world's children with visual impairments live. Globally, an estimated 19 million children with visual impairments are aged below 15 years (WHO, 2017). In an investigation of childhood blindness among 491 learners in Malawi, Kenya and Uganda, 62.9% and 14.1% were blind and low vision, respectively (Gilbert & Foster, 2001). The statistical year booklet (MoE, 2016) showed that the number of learners with Special needs enrolled in primary schools stood at 222,700 learners out of which 17% of the learners with special needs had visual impairments.

Visual system is one of our most critical sensory systems. It is the essential means of coordination among persons and the external situations. Accordingly, in children with visual impairment this can incredibly influence their capacity to walk securely and autonomously within the environment (Gilbert & Foster, 2001). The formal and coordinated endeavours among professionals to train individuals with visual impairments in orientation and mobility were initiated in the 1940s after the start of the Second World War, when United States' soldiers, who were blinded in the battlefield, were dispatched to hospitals at Valley Forge. They had been at first restrained in rehabilitation centres at Avon, Connecticut. The rehabilitation was demanding with both exclusive requirements and guidelines. The long cane idea, created by Richard Hoover at Valley Forge Hospital, was established, refined and extended by the staff. Amid the following couple of years, a methodical approach to deal with independent travel using the long cane strategy turned into the establishment of the new instruction in orientation and mobility. It was from that point that the requirement for orientation and mobility training was realized. At first, teaching individuals with visual impairment to walk about freely was by no means done. Individuals with visual impairments needed to discover ways of moving about independently by themselves (Blesdoe, 1980).

Pavey, Douglas, McCall, McLinden, & Arter (2002) summarizes the results of a noteworthy research project on orientation and mobility needs of learners with visual impairments in the United Kingdom and inferred that instruction in mobility ought to be viewed as inseparably connected with instruction in more extensive independence skills and proposes orientation and mobility programme. As far as the absence of vision is

concerned, it is therefore, vital for learners with visual impairments to develop independence and a sense of self mastery (Gray, 2008). It is through implementation of orientation and mobility curriculum that these skills may be achieved in addition to the provision of special equipment such as white canes (Farrell, 2006).

Orientation and mobility are learning areas that learners with visual impairments require in addition to the regular academic curriculum (Sapp & Hatlen, 2010). Despite these recommendations and the well-established importance of orientation and mobility instruction as discussed by Sapp and Hatlen, (2010), the provision of orientation and mobility instruction within the education sector remains inconsistent particularly in the United Kingdom. Therefore, lately there has been expanding concern over the inconsistent nature and quality of provision of orientation and mobility support for learners in the schools within the United Kingdom (Franklin, Keil, Crofts, & Cole-Hamilton, 2001). In regard to this, the implementation of orientation and mobility curriculum in educational settings can prove challenging.

Orientation and mobility were originally developed for adults and has been adapted and developed significantly from a modest beginning, marked by a continued expansion of instruction to African countries. In South Africa, the noted challenge was the revelation that after orientation and mobility training, the learners' mobility had not at all improved. The majority of the learners still embraced the habit of utilizing their self-taught cane strategies (Perla, & O'Donnell, 2004). Through orientation and mobility instruction students are given the opportunity to travel safely, independently, efficiently and

gracefully through all appropriate environments. These skills as part of the school curriculum are more generally accepted and understood within special settings such as schools for the visually impaired. The need for orientation and mobility experience within the setting makes sense. What is needed next is the evidence to support specific curriculum barriers in regard to the teaching of orientation and mobility.

The earliest documentation of orientation and mobility training in Kenya dates back to 1976 whilst Christoffel Blinden Mission (CBM), a private worldwide association from West Germany, organized the first workshop on the preparation of orientation and mobility instructors. This association held the workshop at the request of the Ministry of Education to instruct a gathering of teachers in Kenya's schools for learners with visual impairments on orientation and mobility. The mobility instructor, Theodore Reusch, facilitated the training (Nasimiyu, 2008). After the teachers' workshop, it was expected that the instructors would instruct other teachers and learners in orientation and mobility competencies. Be that as it may, without an orientation and mobility instructional programme, an inspector to carry out an enforcement of the instruction of the abilities and a training establishment to prepare extra teachers, it was challenging for orientation and mobility instruction to become noteworthy (Tooze, 1981).

Somewhere around 1978 and 1979 an attempt to start again orientation and mobility in schools for the learners with visual impairments was carried out by the Royal Commonwealth Society for the Blind. Doris Tooze, who was the Mobility instructor, directed a month's training in orientation and mobility. In the year 1982 the Ministry of

Education issued a work license to Inge Danielcek, who was by then a CBM mobility instructor. Danielcek was sent to St. Lucy School wherein taught orientation and mobility until 1985 (Nasimiyu, 2008). And, after it's all said and done, it was impractical to adequately impact the Ministry of Education authorities together with the schools to incorporate mobility training in the schools' educational programmes (Mullen, 1989). In January 1983, the Ministry of Education once more issued a work license to Edward Mullen, who was a CBM representative, from the United States of America. His primary obligation was to instruct Kenyan teachers on the concepts and aptitudes (skills) of orientation and mobility (Mullen, 1989).

Mullen worked closely with the special education inspectorate section for three years, specifically facilitating in-service courses in orientation and mobility in schools for the learners with visual impairments and making plans for the establishment of orientation and mobility teacher training course. In 1986, a teacher training course was held at the Kenya Institute of Curriculum Development, sponsored by both the Ministry of Education and CBM. Immediately after the completion of the training, the graduates returned to their particular schools to execute an orientation and mobility programme (Nasimiyu, 2008).

In the year 1986 Kenya Institute of Special Education (KISE) was mandated to run an orientation and mobility centre mainly for the training and demonstration purposes (<http://www.kise.co.ke/>). This was initiated to assist in getting the required personnel to conduct the instruction of orientation and mobility aptitudes. Mullen moved to the

institute to spearhead the training. For orientation and mobility training to achieve success it has been observed that team work is indispensable in its advancement and execution. The orientation and mobility trainer is supposed to work together with all the members of the team to deal with the remarkable orientation and mobility problems experienced by the learner (Gense, & Gense, 2004).

The state of mind of the administrator of the school toward the teaching of orientation and mobility may be one of the numerous elements influencing the achievement or disappointment of endeavours to offer orientation and mobility training (Gense, & Gense, 2004). The administrator's state of mind impacts the demeanour of others consequently, making an atmosphere of acknowledgement or of disappointment. An administrator believing in the teaching of orientation and mobility will assist in organizing a programme through providing resources both material and human resources. The administrator may possibly offer avenues for instructors to interact together and offer networking time (Gense, & Gense, 2004).

Presently, Kenya Institute of Curriculum Development (KICD) has made an attempt to prepare pre-school curriculum, independent living and developmental skills curriculum for the learners with visual impairments (SNE policy framework, 2009). Notwithstanding this effort, it is far incredible that curriculum-based establishment has not been virtually included in the prevailing ongoing National Curriculum. Along these lines, it is necessary therefore, to have a curriculum that is satisfactorily responsive to the issues of the learners. This consists of specialist courses such as orientation and mobility.

It is, nonetheless, disturbing that in various schools and institutions in Kenya and in several other developing nations, the teaching of orientation and mobility receive casual consideration. Saya (2002) proposes that a comprehensive way to deal with instruction requires great orientation and mobility abilities' preparation which must be incorporated into the teaching and curriculum programmes. This might empower the learners to profit through the aggregate learning encounters the same way their sighted companions advantage from theirs. In consideration of this then, the study was conducted to assess the curriculum barriers to the teaching of orientation and mobility and make possible recommendations pertinent to the findings.

1.2 Statement of the Problem

The requirement for orientation and mobility services especially among the school going age children with visual impairments is not an overstatement. It is likewise the initial move towards economic and social improvement in the life of an individual with visual impairment (Yasarapudi, 1999). Notwithstanding, little has been done in Kenya to make sure that there are in-school programmes set up that support the instruction of orientation and mobility. An earlier investigation on factors preventing teaching of orientation and mobility looked at whether orientation and mobility by and large was effectively instructed by skilled orientation and mobility instructors and focused more on teachers' competencies and time provided for teaching (Nasimiyu (2008). The investigation did not look into educational programmes' barriers to the teaching of orientation and mobility. The absence of active programmes and support services raised a great deal of concern about the achievement of the instruction of orientation and mobility in special schools in

spite of the fact that there are trained workforces who are capable of training learners in orientation and mobility. Learners with visual impairments have immediate issues like getting to and from school, to and from transportation destinations, in addition outdoor and indoor movements, for example, visiting or even going for shopping outside the school compound. Thus, the need to undertake this study to assess curriculum barriers to the teaching of orientation and mobility in selected special schools for learners with visual impairment.

1.3 Purpose of the Study

The purpose of the study was to assess the curriculum barriers to the teaching of orientation and mobility in selected Schools for learners with visual impairments in West Pokot and Siaya Counties in Kenya.

1.4 Objectives of the Study

The objectives of the study were to;

1. Explore why orientation and mobility was not being treated as part of the official school timetable.
2. Identify the administrative support available for the instruction of orientation and mobility skills.
3. Determine the teacher-pupil ratio in the teaching of orientation and mobility.
4. Identify the perceptions of teachers towards the teaching of orientation and mobility.
5. Assess the perceptions of learners towards orientation and mobility training.

1.5 Research Questions

1. What were the reasons for orientation and mobility not being treated as a part of the official school timetable?
2. What type of administrative support was available for the instruction of orientation and mobility skills?
3. What was the teacher-pupil ratio in the teaching of orientation and mobility?
4. What were the perceptions of teachers towards the teaching of orientation and mobility?
5. What were the perceptions of learners towards orientation and mobility training?

1.6 Assumptions

It was assumed that:

1. All participants would answer all the inquiries genuinely and to the best of their capacities.
2. Learners were not effectively trained in orientation and mobility.

1.7 Limitations of the Study

The study was focussed on two schools, for learners with visual impairments thus limiting my findings to only two counties. For more noteworthy definitive results the various schools in different counties ought to have been studied. Nonetheless, this was impractical because of financial and time constraints. Because of limited funds and time only a small portion of the population was chosen to take part in the study.

1.8 Delimitations

The study confined itself to schools for Learners with Visual Impairments in West Pokot and Siaya Counties. Participation in this study was delimited to learners with visual impairments (those with low vision and those who were totally blind) who required orientation and mobility training. It was additionally delimited to teachers who had been trained in orientation and mobility and the administrators of the schools (the head and the deputy-head teachers) since they were individuals who had the information on various components that influence orientation and mobility curriculum implementation. This study concentrated on the curriculum barriers to teaching orientation and mobility.

1.9 Significance of the Study

The study might be significant to policy-makers as it might recognize flaws in execution (implementation) of the orientation and mobility curriculum, subsequently encouraging change to facilitate successful implementation of the orientation and mobility curriculum. The study may give valuable data that may enable partners to mobilize resources towards the provision of suitable resources for training in orientation and mobility. The curriculum barriers to teaching orientation and mobility were un. The results of the study bring to the pool of knowledge this missing data that will inform National Policy on orientation and mobility provision. The outcomes may be used by KICD and the Ministry of education. The study may in like manner add to the current body of knowledge, which may benefit intrigued researchers and scholars who purpose to accomplish further research work on orientation and mobility instruction. The results might help in documenting curriculum barriers to orientation and mobility that need to be addressed

through appropriate Orientation & Mobility implementation.

1.10 Theoretical Framework

The ecological frameworks theory created by Bronfenbrenner (1979) guided the study. This theory concentrates on the way that learners develop at the focal point of interconnected relationships and environments that all impact their development. In this study, the environment was the school and it goes about as a framework involving components which work in agreement amid the process of orientation and mobility training.

Bronfenbrenner (1979) accorded moderately equal significance to both the environment and the developing individual; for him development was adequately the developing cooperation between the variables. In connection to this, it was viewed that for adequate learning and training in orientation and mobility, various variables needed to cooperate for its success. This incorporated time, joint effort, administration, perceptions and policies. The fundamental unit of investigation for Bronfenbrenner was the two-person framework, a fact which it showed a sense of duty regarding not seeing the subject of development in social segregation.

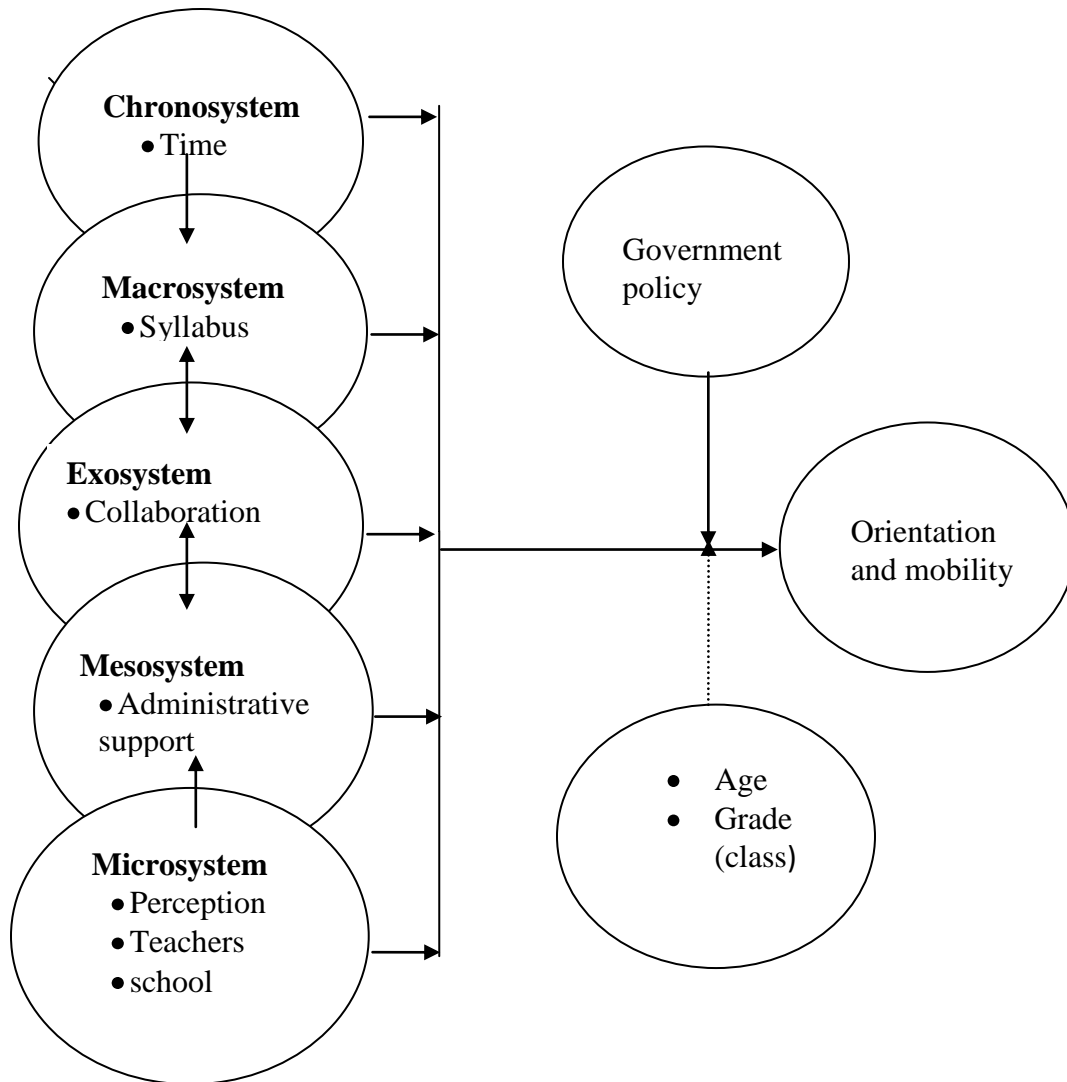
Chronosystem; Bronfenbrenner counts the measure of time. Time was significant as it involved the designing of environmental activities. This was interpreted as meaning that for orientation and mobility training to occur there ought to be arrangement of time. This planning gives the span for training.

Microsystem; This alluded to the exercises and connections that happen in the individual's prompt setting. Learners are impacted by the general population in their Microsystems. In this sense, the perception of the learner towards orientation and mobility was of prime significance as this would make the child be inspired or not to be trained to acquire the skills of independent travel. **Exosystem;** Teamwork was imperative in the advancement as well as execution of orientation and mobility instruction.

Mesosystem; This implied to the affiliations or interrelations among such Microsystems as homes, school and peer group. Bronfenbrenner contended that development was inclined to be improved by solid, steady connections among Microsystems. This was the place where the teacher-pupil ratio falls.

Macrosystem; This referred to an expansive belief framework that directs how learners ought to be dealt with, what they ought to be trained on, as well as the objectives for which they ought to strive for. Policies are made every so often that manages the arrangement of training. Consequently, there were various components that determined the execution of orientation and mobility curriculum. These incorporated aspects identified with the learners with visual impairments, teachers, time, perception and support. This theory was found relevant for the study in light of the fact that different components should come into play to facilitate the teaching of orientation and mobility among learners with visual impairments.

1.11 Conceptual Framework



(Source: Adapted from Bronfenbrenner model, 1979)

Figure 1.1: Conceptual framework.

The significant measurement used to gauge the accomplishment of any training is the execution of the skills learned. The achievement would be achieved after the different inputs are set up. In orientation and mobility training, the accomplishment of the training

was a function of how these variables cooperated. In the event that the interplay was healthy, then execution would be great and the other way around.

Cole (1996) demonstrated that every human conduct ought to be viewed as well as comprehended in connection to the setting encompassing it, as opposed to viewing the matter that one is considering in detachment, due to the fact that behaviour is constantly influenced by the setting in which it happens. This concurred with Bronfenbrenner's (1979) environmental framework's concept in which the researcher observed that a learner's development ought to be dependably viewed in the setting of the frameworks of connections that shape the learner's encompassing surroundings. Despite the fact that Bronfenbrenner discussed the theory in regard to the investigation of an individual's behaviour and development, the researcher considered this to relate to the investigation of provision of services especially to orientation and mobility training. This has been the case due the fact that the processes happening at various levels are influenced by the setting that encompassed it. The circles stand for various levels of settings with various components that affect alternate settings. The external layer is the Chronosystem. Here we discover time-planning (time allocation) and preference of the curriculum. Time matters in the designing of environmental events as in planning for the time and span of teaching orientation and mobility. Time was imperative subsequently influencing all that occurred in each context. In the Macrosystem we may discover laws, syllabus as well as curriculum. These may determine what ought to be taught in a school and at what time and length. These may likewise influence the Exosystem. This incorporated the formal

and casual activities of school boards, resources, professional development and changes in the teaching staff.

The Mesosystem included support from the administration and the teacher-pupil ratio. This was the setting that demonstrated the interrelationship between Microsystems, for instance, homes, school and peers. Solid and steady interplay between Microsystems may increase improvement. The Microsystem in the study was composed of perceptions, school and home support. The perceptions of learners, what occurred in a school and home support may greatly affect the teaching of orientation and mobility and its achievement may rely upon the interplay among the different factors in alternate layers. Therefore, for the successful training in orientation and mobility, as shown by the performance of the learned skills, was actually a function of how these variables interact. If the interaction was healthy between the settings, then performance was great, thus successful orientation and mobility training.

1.12 Operational Definitions of key Terms

In this research the accompanying terms were operationally defined as follows:-

Barriers: An obstruction to advance or access.

Curriculum: Organized experiences that schools provide to help learners learn and develop. It includes the subjects taught, the content, the school environment and other organized learning enhancement activities that take place outside the classroom. KICD Act (Republic of Kenya, 2013) defines curriculum as all planned learning programmes that facilitate formal, non-formal and informal learning and/or a programme of instruction which the learners are expected to undertake in their training under the guidance of schools' policies.

Curriculum barriers: Obstacles that impede learners getting a full extent of training.

Curriculum implementation: This is active training in a set programme of activities such as in orientation and mobility curriculum

Expanded core curriculum: Refers to concepts and skills that often require specialized instruction with students who are blind or visually impaired and incorporates orientation and mobility skills.

Mobility: Implies to one's self-propelled movement using body mechanisms or mobility aids through the environment.

Orientation: Is the capacity of an individual to figure out where one is and where one intends to go.

Orientation and mobility training: Refer to instructions given to the learners by qualified workforce to engage them accomplish efficient, safe and independent movement in their school, home and community settings.

Visual impairment: Refers to alteration in vision which may adversely affect learner's day by day activities or tasks. It consists of both low vision and blindness.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0. Introduction

This section first explores on orientation and mobility instruction. Then, review of related literature was carried out on orientation and mobility instruction, administrative support, time (chronosystem), teacher-pupil ratio and finally on teachers' and learners' perceptions towards orientation and mobility instruction.

2.1. Orientation and mobility instruction

Orientation and mobility instruction offer learners an arrangement of foundational skills to utilize remaining visual, auditory and tactile information to comprehend the surroundings. It additionally gives opportunities and aptitudes that can increase the learners' familiarity with the surroundings, bringing about expanded inspiration, freedom and safety (Gense, & Gense, 2004). Anthony, Lowry, Brown, and Hatton (2004) expressed that young children with visual impairments do not reach or move unreservedly towards objects until the point when they achieve the conceptual comprehension of individuals and objects within the surrounding. In this manner, formative readiness is a fundamental factor that must be considered for a learner's instruction while guaranteeing the age appropriate components of orientation (Pogrund, 2002). Fundamentally, orientation starts during birth and is a constant process practised all through life and ought to be consolidated into mobility training from the beginning. The successful programme of training is individual focused and maintained by the learners' individual supportive networks. Orientation and mobility instruction ought to be

designed to augment the coordination of all available supportive networks (Bozeman, & McCauley, 2010). According to Bronfenbrenner's theory, this ought to include all levels of the framework to enable success of the programmes set up, for example, orientation and mobility training.

Regardless of the way that it is achievable for a learner with a visual impairment to acquire a significant number of the same skills as a learner with normally created vision, numerous elements affect the event and sequence of ability fulfilment (Ferrell, 1996). The administrative support, particular guidelines, utilization of specialized resources and accessibility, development of compensatory skills and significant encounters within the environment assume critical roles. Through significant encounters with their surroundings and others, learners with visual impairments can expand their opportunities for development and learning. Subsequently, it is critical that the learners should be given suitable guidelines to address their requirements of mobility (Bischof, 2008).

In spite of the fact that orientation and mobility has been perceived as a noteworthy component in the instruction of learners with visual impairments in the United States (Corn, Hatlen, Huebner, Ryan, & Siller, 1995), and as a related service stipulated in the IDEA (2004), the orientation and mobility needs of children with visual impairments are still underserved (Stuart & Zimmerman, 1990). Learners with low vision are accounted for to get less orientation and mobility services than their peers who are blind (Cameto, & Nagle, 2007). This situation could be worse in developing nations such as Kenya; hence

the need to explore whether learners with visual impairment experience similar issues or even worse than what is accounted for by Cameto and Nagle (2007).

2.2 Time

Time has a noticeable place in orientation and mobility training. In this section, a brief description of the component in connection to orientation and mobility training was done.

2.2.1 Time

Research that was based on National Longitudinal Survey data undertaken by AFB in the United States on transition to work among learners aged 13 to 16 years shows significant connections between learners' successful transitions to work and learners' being trained in even only a few of the content areas of the orientation and mobility curriculum. The research, notwithstanding, additionally demonstrated that instruction in the orientation and mobility curriculum was not generally offered in a coordinated way (Sacks, & Rothstein, 2010). This demonstrated the need to explore whether this was the situation for learners with visual impairments in Kenya.

The skills in orientation and mobility require allocating instructional time to train these skills. As indicated by Bronfenbrenner's theory, chronosystem is vital in the development process of a learner. A programme that suitably addresses the greater part of the instructive unique needs of the learners have to count on the fact that majority of the learners will require sizable time frames to get mastery of the skills required in orientation and mobility. Great care has to be taken that the skills contained within the orientation and mobility educational programme get equivalent consideration with

academic abilities focused in the current curriculum (Koenig, & Holbrook, 2003). Securing of very single central ability and learning require a tremendous measure of time and exertion (Iowa Department of Education, 2007).

As a way to acquire the greatest independence feasible, learners need the opportunity to develop proficiency in the skills unique to those required by learners with visual impairments and this includes orientation and mobility skills. This requires a colossal measure of time (Pogrud, & Fazzi, 2002; Fazzi, & Petersmeyer, 2001). Time is essential as it involves the designing of events in the environment (Watts, Cockcroft, & Duncan, 2009). Bronfenbrenner (1979) additionally considers the measure of time (chronosystem) as a basic component that influence on the direction of development. The number and nature of the interplay between the settings in which a learner invests time additionally have essential ramifications for development. The components within this system might be either outside, for instance, timing of the training. The important aspect of the Microsystem is the immediate contact and interplay with the learner for a significant time frame (Pena, 2009). Hence, there was a need to explore the sort of consideration accorded to orientation and mobility training locally and particularly in the schools under study.

2.3 Administrative Support

Research has demonstrated that administrators who concentrate on instructional issues exhibit definitive support for a specialized curriculum and give excellent expert development to teachers and improve performance for learners with visual impairments (Benz, Lindstrom, & Yovanoff, 2000; Gerstein, Keating, Yovanoff, & Harniss, 2001;

Klingner, Arguelles, Hughes, & Vaughn, 2001). Along these lines, the degree of support from the administration influences how much teachers create and actualize mediations intended to improve performance of the learner (Embich, 2001).

A research by Gerstein, Keating, Yovanoff and Harniss (2001) in three large Urban school districts in Arizona among special educators on components that improve special instructors' intent to stay, observed that established support from administrators had strong effects on "practically all basic aspects of (a specialized curriculum) educators' working conditions" (p.551). Effective supervision, administration and encouragement guarantees that instructors cooperate to actualize successful teaching programmes and monitor learner performance continuously (Thomas, Correa, & Morsink, 2001; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000).

Ingersoll and Smith (2003) likewise, affirmed that support from administration to teachers incorporates giving classroom materials and resources, encouraging instructors' association in the basic leadership procedures and providing dependable mentors to new instructors. With regard to schools, administration is characterized as "the work of preparing and impacting others to verbalize and accomplish the schools' shared expectations and objectives" (Leithwood, & Reihl, 2003). By extension administration for special education makes sure that these shared expectations and objectives give appropriate expertise, equitable access, and high-quality programming that encourage significant results for learners with visual impairments. Thus, the administrator's values and perception about special education significantly affect the culture of the school

concerning issues, for instance, the role of the orientation and mobility teacher (DiPaola, & Walther-Thomas, 2003). The administrator is frequently in-charge of decisions in regard to accessing materials, schedules, acknowledgement of staff, encouraging cooperation among staff and shared basic leadership (Billingsley, Carlson, & Klein, 2004).

Moreover, none of the nations in sub-Saharan Africa has specialized curriculum or other enactment ordering that learners with unique instructive requirement get the necessary services they require (Reynolds, & Fletcher-Janzen, 2007). In spite of the way that governments in Sub-Saharan Africa embraced specialized curriculum policies, services are not accessible to by far most of the learners in the countries (Reynolds, & Fletcher-Janzen, 2007). Emotionally supportive networks are essential if such programmes are to be successful.

In Kenya, the fundamental challenge that identifies with the provision and training of learners with visual impairments incorporates educational programmes that are not contextualized to address unique needs (KESSP, 2005; Republic of Kenya, 2009) and furthermore absence of coordination among service providers (Njoka, Riechi, Obiero, Kemunto, Muraya, Ongoto, & Amenity, 2012). The significance of suitable administrative support is twofold; It shapes the nature of the arrangement made and provides the co-ordination that is important (Hegarty, & Alur, 2005). This therefore, demonstrated the need to investigate the kind of administrative support the schools under

study were putting forth to encourage orientation and mobility instructions for learners with visual impairment.

2.4 Teacher-Pupil Ratio and Orientation and Mobility

Research has established that the teacher-pupil ratio is 1:70 in some schools, which is a long way past the prescribed most extreme proportion of 1:40. Such high ratio presents difficulties as teachers think that it is difficult to give individualized attention on all learners in regular schools particularly the learners with specific learning difficulties (Aduda, 2012, November 18). Teacher-pupil ratios have an influence on perception of teachers which therefore have an impact on teaching of learners. This is so critical considering that apart from most nations persistently insisting on proper teaching of learners, most governments in Sub-Saharan Africa especially Kenya, are introducing other subjects in the education programme, thus expanding the workload of the regular subjects. The Government of Kenya has embarked on capacity building for primary school teachers in special needs curriculum. In addition, university programmes have been preparing teachers for all levels of education with a purpose of enhancing the essential countrywide capacity to deal with special needs education (Njoka, et al., 2012). The Kenya government has additionally put resources into in-service training of teachers to boost special needs education (NSNE, 2009).

In Kenya, it is approximated that the ratio of pupils with special needs to a specialized teacher is 20:1 (in special institutions for learners with visual impairments). The suggested pupil-teacher ratio is between 5:1 and 15:1 depending on severity (NSNE,

2014. In Qatar, the difficulty of preparing, employing and retaining special education workforce are embedded into the complexities of national reform endeavours. In the Gulf state Pupil-Teacher Ratio is reported to be 40:1 in 2005 (UNESCO, 2008). According to Knott (2002) different learners need levels of services, so caseloads differ depending on the learners' needs. Likewise orientation and mobility instructors offer services straightforwardly, generally working one-on-one with learners and periodically with small groups. Similarly, in typical orientation and mobility training settings in which there are ever-present dangers, it is essential to give one-on-one training particularly tailored to meet the exceptional requirements of a learner instead of a gathering. Stoler (2007) noted that teachers make either positive or negative perceptions in light of the extent of their classes. The researcher notes that when such classes are large, the learners do not get extra consideration needful for their positive academic results. At the point when such a situation is presented, teachers eventually feel the weight of potential inadequacy and their perception turns out to be unavoidably negative.

This study investigated the current teacher-pupil ratio in the schools particularly while undertaking orientation and mobility training in addition to establishing whether shortage of teachers who can teach orientation and mobility additionally influences the Pupil-Teacher Ratio.

2.5. Teachers' Perceptions toward Orientation and Mobility Instruction

The orientation and mobility specialists' goals is to teach and support each learner to progress along the continuum in connection to the learners' encounters, interests,

objectives, and skills (Wall Emerson and Corn, 2006). For the orientation and mobility instructor a consideration of the relationship with the student may be the first step in effective instruction. Such a relationship requires a respect for diversity and is quite necessary in all types of instructions and learner interaction (Weiner, Welsh and Blasch, 2010).

Providing learners with visual impairments with an opportunity to participate in planning their own lessons communicates respect for students and for their input. This reinforces the basic perception of respect for diversity (Weiner, 2010). Given the low prevalence of this population of learners, it is likely that administrators will have almost no information or no knowledge of or special training in the area of visual impairments. If this is the case, they may not be prepared to plan and administer programmes for learners who are visually impaired (Holbrook, 2003). Caseloads designed for teachers in special education programmes often exceed reasonable numbers. Circumstances such as these can place teachers in the uncomfortable position of addressing needs in a superficial manner (Holbrook, 2003).

Scott (2009) study on orientation and mobility in the Australian education framework established that orientation and mobility instruction with learners with visual impairments was confined to occurring outside school hours bringing about extremely restricted contact with instructors. In the study Scott additionally found that early white cane use built up the perception that learners would utilize the white canes improperly and dangerously, transforming them into “weapons”.

Correspondingly, the researcher observed that some orientation and mobility instructors considered the white cane as an instrument for accomplishing objectives for the children they work with through the fostering of independence as opposed to viewing the white cane as a possibly socially negative identifier of visual impairment. The surroundings in any learning situation can influence one's accomplishment either positively or negatively. Perceptions have the capability of sending a positive or negative signal to the learner and could influence their mental perceptions to the instruction. Perceptions of instructors are particularly significant in light of the fact that instructors are in charge of instructing learners with visual impairments and preparing them for transition into the adult world.

Within the orientation and mobility instruction, Soodak, Erwin, Winton, Brotherson, Turnbull, Hanson and Brault, (2002) distinguish that co-operative action includes encouraging shared perceptions with all people involved with the child and building up a feeling of moral obligation toward activities guaranteeing the programme's prosperity. Where instructional objectives are not supported or cannot be accomplished O'Connor (2008) affirms that instructors encounter negative perceptions. Perceptions are as essential to instructor practise as the ability to apply practical instructional techniques (Denzin, 2009). This proved the need to investigate the perceptions of teachers toward orientation and mobility instruction and whether this was the case for teachers in Kenya.

2.6. Learners' Perceptions towards Orientation and Mobility Instruction

Orientation and mobility training is quite fundamental since independent movement influences the development of the learner and the learning process. A number of teachers

maintain that motivation and perceptions have an immediate relationship on the performance of the learners. It was sensible to assume that orientation and mobility are variables that may influence motivation and perceptions and along this line performance (Wiener, Welsh, & Blasch, 2010). As expressed in the theory by Bronfenbrenner's, Microsystem influences activities and associations happening in the prompt setting of the learner. For this situation, perceptions of a learner towards orientation and mobility training can either motivate or discourage the need to gain orientation and mobility skills.

Wiener, Welsh, and Blasch (2010), observes that the perceptions of learners can be a noteworthy hindrance to the effective instruction in orientation and mobility. A considerable portion of the perceptions emerge exclusively from the absence of opportunities and information and similarly from the perceptions of associates, instructors and guardians. Conduct in social circumstances is affected by the socially established implications of an object, for this situation the white cane. The white cane conveys no inherent significance in itself, rather, Denzin (2010) proposes, its significance is characterized through social connections in how individuals behave toward it. Symbols are dependably socially interpreted and it is through this interpretation that individuals come to see themselves and their part in public arena. Critically, Denzin (2007) clarifies symbols evoke perceptual reactions that associate individuals to others and influence people's activities. These perceptual reactions are in this manner fundamental to the development of orientation and mobility instruction. As indicated by Wiener, et al. (2010) individuals who are as yet encountering the injury of loss of vision or who are still

in the shock, withdrawal, denial, lamenting, and discouragement stages ordinarily will not present themselves for training.

In South Africa a study by Perla and O'Donnell (2004) on encouraging problem solving in orientation and mobility demonstrates that moving into the unknown can be exceptionally terrifying for some learners with visual impairments and simply confidence and trust in the instructor and in the immediate environment would enable them to reach out and interact. This implied that learners fear walking alone without a guide hence orientation and mobility instruction would help eliminate this fear of the unknown. This fear may hinder the development of orientation and mobility instruction.

Literature investigating the experience of age-related vision-loss by Moore, Constantino and Crisp (2000) and Wong, Guymer, Hassel and Keefe (2004) reliably distinguished basic topics of evasion toward the utilization of a white cane as a mobility aid. Participants in Wong, Guymer, Hassel and Keefe (2004) study saw the long cane as a “symbol of visual impairment, disabilities (sic) and shortcoming”. Ferguson (2007) reports that a number of individuals who were visually impaired opposed utilizing the white cane in view of negative implications of dependence. It might moreover have represented self-pity and self-insufficiency. To date, in the African context’ and specifically in Kenya there has been no research on perception of learners towards the instruction of orientation and mobility instruction within the related literature. This research sought to address this knowledge gap in the orientation and mobility field by providing insight into perception of learners toward orientation and mobility instruction.

A few studies have been published regarding orientation and mobility issues. However, omitted in the research are data regarding the curriculum barriers to teaching orientation and mobility. A need existed for a detailed assessment of the curriculum barriers to teaching orientation and mobility in the schools for learners with visual impairments.

2.7 Summary

The previous section had looked into the important literature on orientation and mobility training. Essential viewpoints which had been covered in the section included orientation and mobility instruction, administrative support, time and teacher-pupil ratio, perception of teachers and learners towards orientation and mobility training.

In consideration of the literature reviewed, it had been found out that orientation and mobility training had been downplayed. Despite the fact a few investigations had been carried out on orientation and mobility in parts of the nations in the world, for instance, practises for deciding the provision of orientation and mobility instruction for students with low vision in Florida, in the United States, little had been done on the same in Kenya. It was conceivable that if similar studies would be done in Kenya comparable outcomes would be realized. While it was obvious that timetabling plays a pivotal part of orientation and mobility training, it was not clear why orientation and mobility training was excluded in the official school timetable in Kenyan schools for learners with visual impairments.

Various issues had been looked into by the studies that were reviewed. These studies included administrative support, teacher-pupil ratio, perceptions of teachers and learners

towards orientation and mobility instruction. However, such studies had not been done in Kenya in connection with the teaching of orientation and mobility, hence the need to look into the issues within the Kenyan setting.

Numerous researchers globally have done investigations regarding the subject of orientation and mobility training with recommendations in light of the findings however learners still experience difficulties of independent and safe travel. However, omitted in the research were information in regards to curriculum barriers to teaching orientation and mobility to learners with visual impairments. As a result of this review, gaps were identified. This data was utilized to guide the research design with the point of developing new knowledge and cultivating greater understanding in regard to curriculum barriers to teaching orientation and mobility to learners with visual impairments in the Kenyan setting.

It was conceivable in this manner, that there were significant curriculum barriers which had not been brought to light. Along these lines, there was undoubtedly an issue that required to be addressed hence the research. It was on this basis that this study sought to assess the curriculum barriers to teaching orientation and mobility in selected schools for learners with visual impairments in West Pokot and Siaya Counties. Having summarized the issues pertaining to the instruction of orientation and mobility in the literature review, attention was now turned to the methodology section of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section of the study discussed research design, the variables, locale of the study, target population, sampling techniques and the sample size, the pilot study, the construction of the research instruments, validity and reliability of instruments, data collection techniques and data analysis procedures and the logistical and ethical considerations.

3.1 Research Design

Descriptive survey research design was utilized as the researcher intended to collect original data from the members of the population. In this design, respondents addressed inquiries regulated through interviews and questionnaires. Through this design, people's descriptions of their perceptions were constructed on the spot (Orodho, 2009). It was suitable as the research aimed at analysing the curriculum barriers to teaching orientation and mobility. The design was appropriate because of its high analytical based content and facilitation of in-depth information including sensitive and personalized experiences, which were hard to obtain using other available methods (Kane, 1995). The design facilitated getting accurate accounts of curriculum barriers to teaching orientation and mobility to learners with visual impairments in West Pokot and Siaya counties in Kenya.

3.1.1 Variables

The dependent variable in the study was the acquisition of orientation and mobility skills. The independent variables in the study were as follows: time allocation, administrative support, teacher-pupil ratio and perception of teachers and learners towards orientation and mobility training.

3.2 Location of the Study

The research was conducted in the residential schools for learners with visual impairment in West Pokot and Siaya Counties. The school in Siaya County is in the Southwest part of Kenya and lies between latitude $0^{\circ} 26' N$ to $0^{\circ} 18' N$ and longitude $33^{\circ} 58' E$ and $34^{\circ} 33' W$. The school is in South Gem Location in Siaya County ([en.wikipedia.org/wiki/siaya, county](http://en.wikipedia.org/wiki/siaya,_county)). The school in West Pokot County is situated in the northwest region of Kenya in the former Rift Valley Province. (en.wikipedia.org/wiki/westpokotcounty). The study was conducted in these counties due to the fact that the schools were in diverse geographical distances and each school had unique expectations and experiences. Tapping into such diversity was to help the researcher to take care of all the divergent experiences of the participants in regard to the instruction of orientation and mobility. Additionally, these schools were chosen on the grounds that they had similar characteristics and they were expected to implement orientation and mobility training for learners with visual impairment. They were purposively selected due to cost implications in terms of transport for the researcher.

3.3 Population

The target population included only teachers teaching in the selected schools (51), administrators (4), and learners (412) (those with low vision or with total blindness).

3.4.0 Sampling Techniques and Sample Size determination

In the study, the researcher used purposive and stratified sampling techniques to identify the sample. Purposive sampling was utilised since the researcher only sought cases rich in information for study in depth. In the study the sample participants were selected basing on their knowledge, sufficient and relevant work experience and expertise in regard to the instruction of orientation and mobility. A stratified sampling procedure was used for selecting the learners. The technique was employed to ensure a fairly equal representation of the learners for the study. Below is the description of the sampling techniques and the sample size.

3.4.1 Sampling Techniques

A purposive sampling technique was used to select the administrators (head teachers and the deputy head teachers) and teachers trained in orientation and mobility. This was accomplished by requesting the head teachers to provide data on the number of teachers trained in orientation and mobility. Stratified sampling was used to identify learners in lower and upper classes and purposively picked the upper classes because of their age and ability to respond to the interview. The researcher requested for the class registers for the upper classes. Purposive sampling was used to pick the learners who required orientation and mobility training for the study.

3.4.2 Sample Size Determination

The sample size was composed of 21 teachers, administrators (the head teachers and the deputy head teachers) (two from each school), and 19 from class four to seven were identified for the interview. They were purposively identified since only those who needed orientation and mobility were to be chosen as respondents. The sample matrix yielded a sample size of 44.

Table 3.1: Sample matrix

Respondents	Target population	Sample size	%
Head teachers	2	2	100
Deputy head-teachers	2	2	100
Teachers	51	21	41.2
Learners class 4 to 7	357	19	4.6
Total	412	44	10.7

3.5 Research Instruments

The researcher constructed questionnaires which were utilized to gather data from the teachers and to facilitate anonymity. The questionnaires were considered ideal because the respondents could individually record and interpret this instrument due to their high literacy level. The questionnaire used to collect information had set of statements on time, administrative support, teacher-pupil ratio and perception of teachers towards orientation and mobility instruction. The developed questionnaires were administered to the teachers. The implications described in the study contained questions related to the study variables.

A semi-structured interview guide with open-ended question format was considered appropriate for the administrators and the learners. These were considered ideal for the learners because they had varied ages and low literacy levels to read, interpret and react to a questionnaire (Orodho, 2009). The semi-interview guide was appropriate for the head teachers and the deputy head teachers to enable collection of in-depth information from the administrators on their perception, time, administrative support, and the teacher-pupil ratio towards orientation and mobility training.

Observation schedule was also designed for the researcher to collect information on resources required in relation to orientation and mobility activities within the school in the natural setting. This was to permit the researcher to record the resources required in the instruction and the adaptation of the school environment. This method was utilized in order to obtain a logical, well-established knowledge base about the curriculum barriers to teaching orientation and mobility instruction. The results were analysed using tables and frequencies and were also thematically analysed.

3.5.1 Pilot Study

A pilot study was carried out in selected School for the learners with visual impairments in Kisumu County. It is a residential school and it was one of the schools where orientation and mobility training was expected to be taught seriously, hence it formed a good pilot school to test the reliability of the instruments. Permission was sought from the school administration to carry out the pilot study. Five learners, five teachers, the head teacher and the deputy of the school were involved in the pilot study. This was

carried out by the researcher to clarify instructions, determine appropriate levels of independent variables, and determine reliability and validity of the instruments. The results were utilized to make changes in the instruments. The results were analysed to recognize any shortcomings in the instruments. Ambiguities identified in the research instruments were corrected to upgrade their reliability before field administration.

3.5.2 Validity

The validity of the study was content validity. This was utilized on the grounds that it measured the degree to which the sample of the items represented the content that the instruments were intended to measure. For this situation the researcher sought the supervisors' view on the nature of the instruments developed. The goal was to approve the instruments as measuring instruments with the end goal for them to be appropriate tools. The supervisors examined the instruments independently and gave their input. The suggestions offered were incorporated in the final research instruments before they were pre-tested.

3.5.3 The Reliability of Instruments

Coolican (2008) characterizes reliability as a degree of consistency in giving comparable results on various however, practically identical events. Reliability relates to the consistency of a measure either across different testing (external) or within itself (internal). Test re-test of instruments was done to test the reliability of the instruments. Scores from both tests were subjected to correlation test and a correlation co-efficient of

0.78 was established. The Pearson moment correlation was used to carry out the correlation.

3.6 Data Collection

The data collection techniques included interview guides which were also prepared for the administrators. Firstly, the administrators were asked for permission to collect data from the school after presentation of the relevant documents from the government authorities granting permission to conduct the research. After explaining to the administrators the purpose, significance of the study and the procedure of the interview, the researcher requested for an interview with the administrators which they granted. The aim was to allow the administrators to facilitate the meeting with the teachers. The researcher recorded each response on the blank spaces in the interview guide.

Secondly, the administrators were asked to assemble the teachers who had undergone training in orientation and mobility. After explaining how to answer the questions, the questionnaires were distributed to the teachers with the help of one research assistant per school. The research assistant collected them after ensuring that all had been filled.

Thirdly, the researcher requested for the class registers from the class teachers. With the help of the class teachers of different classes from class four to seven, the learners who required training on orientation and mobility were identified considering also the gender of the learners. The learners were informed clearly about the purpose of the interview and that they would not be linked to any conversation to preserve anonymity and confidentiality. The learners were interviewed individually using the semi-structured

interview guides for their perceptions towards orientation and mobility training since some of them were not able to read and responded to a questionnaire. The interviews with the learners were conducted in a private office where no third person could hear the discussion or conversation going on. The responses were recorded in the spaces in the interview guides.

Fourthly, the observation schedule was administered by the researcher who recorded each and every observation with the help of the research assistant for consistency. This was conducted to provide a well substantiated knowledge base about the curriculum barriers to the teaching of orientation and mobility

3.7 Data Analysis

Data obtained from the questionnaires were screened for completeness and analysed utilizing the descriptive and inferential statistics in the statistical packages for social sciences (SPSS). Interview and observation responses were put into themes and were analysed qualitatively using content analysis. These were preferred in light of their effectiveness and capacity to deal with large amounts of information. It involved description of data as indicated by the responses, data analysis and processing of the information.

Distinctive items that addressed a given research question were put together and discussed together. The stage that followed was displaying or presentation of the data that had been analysed quantitatively using frequency tables and percentages to establish the number of respondents falling within a specific item. Descriptive surveys involve the

utilization of frequency tables, graphs, pie-charts, computation of percentages and tabulating them appropriately (Gay, 1992). Lastly, a brief discussion of the findings was done.

3.8 Logistical and Ethical Considerations

It is essential that every researcher is aware of legal and ethical considerations. In the research the following were considered.

Permission

The researcher got the endorsement to collect information from the participants of the study from the National Council for Science and Technology, County Commissioners and County Directors of Education, Siaya and West Pokot Counties. Administrators of the schools were likewise requested to consent to conduct the study in the respective schools for learners with visual impairments.

Respect for people as autonomous individuals

In the study, it was guaranteed that respondents gave informed consent to partake in the study. Prior to the respondents giving consent, the motivation behind the study was fully disclosed to them in the language they were well acquainted with. Risks and benefits were highlighted. The respondents were made to understand that participating in the study was voluntary and they were free to pull back (withdraw) in the event that they so wish. The respondents were guaranteed that neither participation, withdrawal, nor refusal would result in negative consequences. Before the respondents giving their consent, there was a time of questioning to guarantee that the participants totally comprehended the

clarifications. At the end of the clarifications, the participants were humbly requested to give their consent.

Confidentiality and anonymity

In this research, anonymity was accomplished by not indicating the names of the respondents on the questionnaire. The researcher toward the end did not link any information to any respondent. The interviews were conducted in a private office where no third person could hear the discussion or conversation going on.

Avoiding harm

In this study, psychological harm through circumstances of long waiting and keeping up secrecy and anonymity was the presumable risk the participants could have experienced. The time of interviewing the participant was minimized. Keeping up privacy, secrecy and anonymity amid the interview likewise, counteracted psychological harm.

Informed consent

After a full clarification of the nature of the research, participants were requested to give verbal consent of their willingness to take part in the research.

Conclusion

This section depicted the methodology used in gathering data and the ethical issues which were considered to conduct the study. Chapter four presents the interpretation and discussions of the findings obtained from the study.

CHAPTER FOUR

FINDINGS, INTERPRETATION AND DISCUSSIONS

4.0. Introduction

In this part the results of the study are depicted. The purpose or motivation behind the study was to assess curriculum barriers to the teaching of orientation and mobility. The data were gathered and afterward presented in response to the following study's objectives:

1. To explore why orientation and mobility was not being treated as part of the school timetable,
2. To identify the availability of administrative support,
3. To determine the teacher-pupil ratio in orientation and mobility instruction
4. To identify the perceptions of teachers and also assess the perceptions of learners towards the teaching of orientation and mobility.

The methodology discussed earlier in chapter three gave the baseline to data gathering. The following were utilized to carry out the analysis of the data; sample description, main results, discussion, presentation and the interpretation of the results of the research. The following section provides the attributes of the sample.

4.1 General and Demographic Information

The study was informed by teachers, learners and school administrators who were critical to assessing curriculum barriers to the teaching of orientation and mobility in selected

schools for learners with visual impairments in West Pokot and Siaya Counties in Kenya. Their response rate was 100%.

4.1.1. Demographic data

The first item was to explore the gender, age, teacher training and experience in order to establish their influence on teaching orientation and mobility. The respondents were requested to provide their gender, age, training and working experiences. The responses from the participants were as indicated below.

Table 4.1. Gender, age of teachers and administrators.

AGE IN YEARS	HEADTEACHERS		TEACHERS		TOTALS
	Male	Female	Male	Female	
10-20					
21-30					
31-40			2	1	3
41+	1	3	14	4	22
Totals	1	3	16	5	25

From the data collected it was clearly evident that majority of the teachers were male while only half were female. This implied culture plays a great part in education of the male hence the male dominance in teaching at the schools for learners with visual impairments in orientation and mobility both in West Pokot and Siaya Counties. Additionally, majority of the teachers were aged between 41 years and above while only a few were aged between 31-40 years. This according to the researcher inferred that

majority of the respondents were well exposed to issues of curriculum barriers to the teaching of orientation and mobility.

Table 4.2: Teachers' qualifications and working experience.

Qualification and Working Experience				
Years	Diploma	Degree	Masters	Totals
>5	7	1	1	9
6-10	8			8
11-15	2	1		3
16 >	1			1
Totals	18	2	1	21

The greater numbers of the teachers were diploma holders while degree holders formed the minority with only one teacher who had attained Masters Degree in Special Needs Education. However, the fact that majority of the respondents had diploma certification or more inferred that they had the qualifications to reliably answer questions about the curriculum barriers. This revealed that there were enough teachers that possessed the necessary qualifications to conduct training in orientation and mobility yet they were not actively engaged in the teaching. Therefore, when a significant number of teachers are trained yet orientation and mobility services are not being effectively implemented, then there must be some overriding issues which need to be addressed to make teaching of orientation and mobility practical in schools.

Additionally, majority of the teachers had worked for less than five years. Only four teachers had worked for 10 years and above and had worked in the two schools for a

period of between 11-15 years. Considering that the larger part of the teachers had worked in the schools for the duration of between five to ten years they would have been great advocates for incorporation of orientation and mobility training in the official educational timetable by Kenya Institute of Curriculum Development.

4.1.2. The Nature of Learners that Participated in the Study (N=19).

The following are the number of learners that were sampled because they required orientation and mobility training.

Table 4.3. The class, nature, gender and age of learners who participated in the study (N=19).

Classes	MALE		FEMALE		Total
	Totally Blind	Low Vision	Totally Blind	Low Vision	
4-7	5	4	6	4	19
AGE	MALE		FEMALE		
>10	–		–		–
11-20	10		6		16
21>	2		1		3
TOTALS	12		7		19

From the Table 4.3 above there were almost equal numbers of learners who were totally blind who needed training in orientation and mobility as those who had low vision. The learners with low vision were included in the study since they had severe low vision that was not suitable for near tasks but would be useful for independent movement through

provision of orientation and mobility skills. This necessitated the provision of instruction in orientation and mobility to the learners with low vision to allow them move about safely and confidently. The learners with total blindness were included by virtue of their nature as orientation and mobility allows them to move safely and confidently within the environment. Majority of the learners were male aged between 10-20 years while a third were girls aged between 10-20 years. This inferred that most of the learners could understand issues related to orientation and mobility instruction.

4.1.5. Influence of Teacher Training on Teaching of Orientation and Mobility

The first item was to explore the teacher training and establish their influence on teaching orientation and mobility. The results were as seen in Figure 4.1.

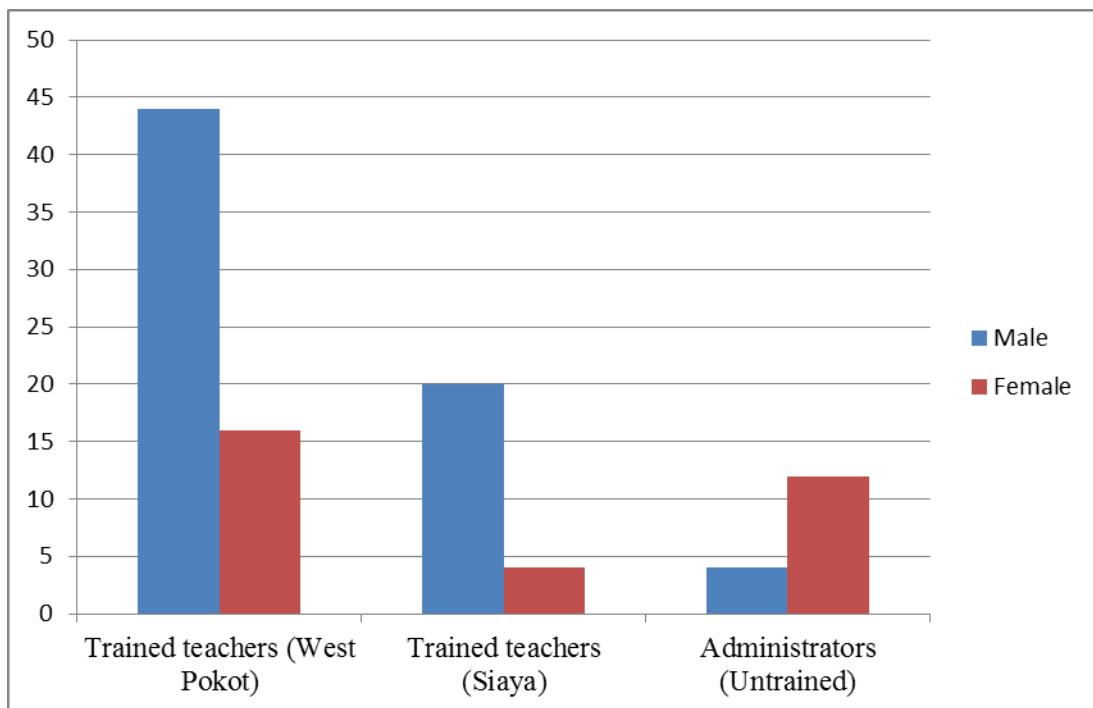


Figure 4.1: Teachers and administrators trained in orientation and mobility

From the Figure 4.1, it showed that majority of the teachers had received formal training in orientation and mobility. This information revealed that lack of training in orientation and mobility was not an impediment to instruction. However, the head teachers and their deputies in both schools had not received any form of training. The data revealed that if the administrators in each school would appoint one teacher as a full-time outdoor instructor of orientation and mobility travel skills, the two would still be backed by a strong team of trained teachers that would enhance orientation and mobility by integrating the skills in their subject areas. Such efforts are backed by literature which supports teamwork in the instruction in orientation and mobility (Bozeman, & McCauley, 2010).

4.2: Timetabling of Orientation and Mobility Training

The first objective in this research was to explore the reasons why orientation and mobility training was not being taught in the selected schools. Teachers and administrators were asked the reasons why orientation and mobility instruction was not included in the official school timetable. The following were the results of the study.

4.2.1. Allocation of Lessons for Teaching Orientation and Mobility

The study also aimed at establishing the number of lessons allocated to teaching orientation and mobility per week. This was to establish the consideration of orientation and mobility lessons in the official educational timetable. The results were as indicated below.

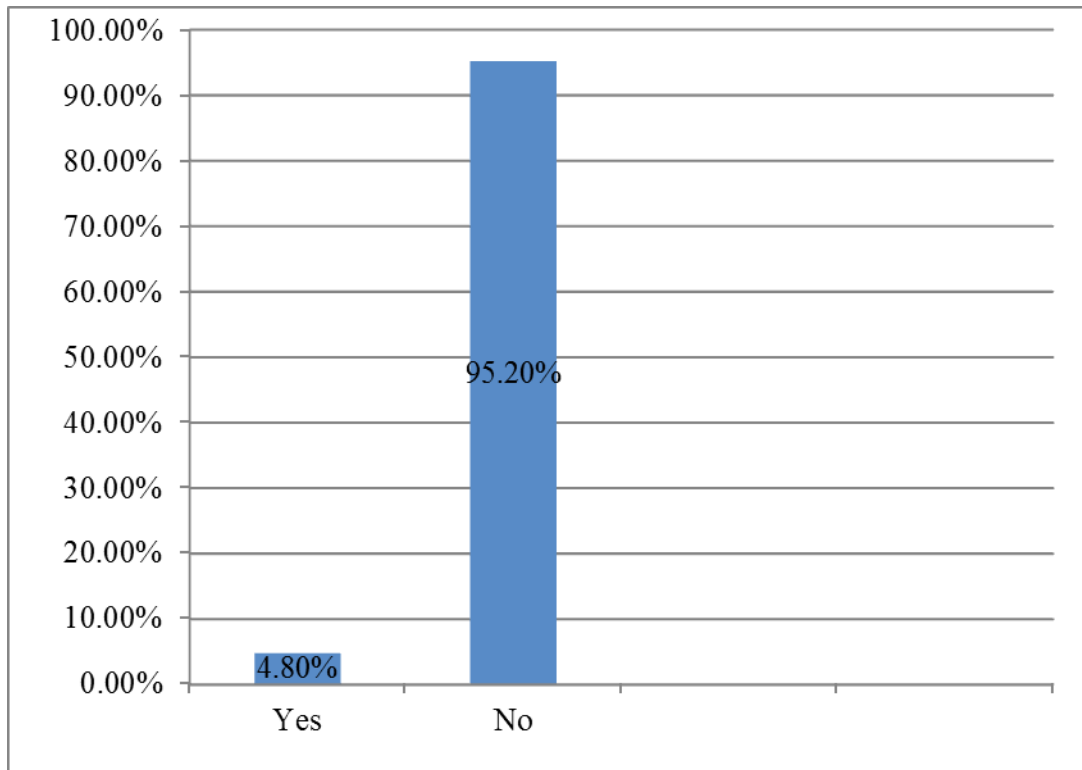


Figure 4.2: Teacher’s responses on orientation and mobility lessons allocated on the school timetable

Figure 4.2 showed that majority of the teachers indicated that there were no lessons for orientation and mobility instruction allocated in the school timetable. A few of the teachers stated that they had orientation and mobility lessons. The teachers who accepted that there were lessons seemed to fear incriminating the administration. The information revealed that the subject was not valued hence it is an important subject in the daily lives of the learners with visual impairment. When teachers were probed further to give reasons why orientation and mobility had not been incorporated into the timetable, they responded as shown in the table below.

Table 4.4: Teachers responses on exclusion of orientation and mobility in the timetable

Responses	Frequency	Percentage (%)
Not examinable	19	90.5
No syllabus/reference materials	21	100
Teachers have a lot of workload	18	85.7
Not in the curriculum	13	61.9
Not taught due to lack of enough white canes	16	76.2
No time for teaching since the curriculum is rigid	18	85.7

More than half of the respondents had varied reasons why orientation and mobility was not allocated time in the official timetable. For instance, all the teachers indicated that orientation and mobility had no formal syllabus and/or reference books. This implied that teachers neglected including the subject in the school timetable due to unavailability of reference materials. Nearly all teachers said it was not an examinable subject and therefore it was not usually given preference in the official timetable. Teacher's workload and curriculum rigidity were also cited as barriers to teaching of orientation and mobility. Above three quarters of the teachers indicated that they had a lot of workload. There were regular subjects to be taught which were examinable so there was no time to be wasted. Finally, almost three quarters of the teachers indicated that Orientation and Mobility was not taught due to unavailability of white canes. This implied that the curriculum does not allow inclusion of subjects apart from what had been directed by the curriculum

developers. This was as serious as Van Reusen, Shoho, and Barker, (2001) observed that apart from most government insisting on proper teaching of learners with visual impairments, most governments in Sub-Saharan Africa especially Kenya were introducing other subjects in the education programme, thus bulging the workload of the regular subjects. With such a situation, teachers viewed the instruction in orientation and mobility as an additional load. Consequently, it can be said that their perception cannot be further from negative. This suggested that it was a great challenge to fit these programmes into the average school day. These reasons given inferred that there was no teaching of orientation and mobility being carried out in the schools for the learners with visual impairments. Thus, there was no plan being made by the Kenya Institute of Curriculum Development to make sure that it was incorporated into the official school timetable.

4.2.2. Administrator's responses to orientation and mobility lessons allocated on the school timetable (N=4)

The head teachers and their deputies raised numerous reasons that had made orientation and mobility to be excluded in the official timetable. From the study the following verbal quotes were the responses to the above:

"This is not an examinable subject and it is not put on the official timetable"

(Administrator A)

"The subject is not in the syllabus". (Administrator B)

"There are regular subjects to be taught which are examinable". (Administrator C)

"Teachers have a lot of workload". (Administrator D)

The reasons provided by the administrators inferred that the teaching of orientation and mobility was not being carried out in the schools. Thus, there was no plan by the administration to make sure that it was taught. This concurs with Gense and Gense (2004) who observed that the perception of the administrator of the school in regard to the instruction of orientation and mobility might be one of the numerous elements influencing the achievement or disappointment of endeavours to carry out orientation and mobility instruction. The administrator's perception impacts the demeanour of others accordingly making an atmosphere of acknowledgement or of refusal. An administrator who believes in the instruction in orientation and mobility will support the setting up of a programme by providing resources both material and human to provide the needed training. These reasons given inferred that there was no teaching of orientation and mobility being carried out in the schools for the learners with visual impairments. Thus, there was no plan being made by the school administration to make sure that it was incorporated into the official school timetable and it was actually taught.

4.3. Administrative Support Available for the Instruction of Orientation and Mobility

The next objective sought to investigate the support that administrators availed for the instruction in orientation and mobility skills. The teachers were asked to indicate the administrative support available for the instruction of orientation and mobility. The results were as discussed below.

Table 4.5: Teacher's responses on administrative support available.

Responses	Frequency	Percentage (%)
No focus on orientation and mobility instructional issues	14	66.7
Lack of team approaches	10	46.7
Lack of effective management supervision	18	85.7
Not helped by providing necessary resources	13	61.7

From the data collected, it was clear that majority of the teachers stated that there was no effective management and supervision which could have helped in teaching of orientation and mobility. This gave a negative indication that the management was not up to task as far as supervision was concerned and this has not helped in teaching of orientation and mobility. An effective supervision, administration, and support guarantees that teachers cooperate to actualize viable instructional programmes and to conduct monitoring of the learner performance consistently (Thomas, Correa, & Morsink, 2001; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000). About two thirds of the teachers indicated that the school administrators have not really focused on orientation and mobility instructional issues. This contradicts Benz, Lindstrom, & Yovanoff, (2000) who asserts that administrators who concentrate on instructional issues exhibit administrative support and give high-quality expert development for teachers. They likewise produce improved results from the learners. Embich (2001) also affirms that the degree of administrative support provided influences the extent to which teachers develop and execute interventions designed to enhance learners' performance. Nearly half of the instructors stated that there was no team approaches in schools that could have created conducive

conditions for the instructors. This implied that lack of conducive school organization could result into a curriculum barrier to the teaching of orientation and mobility. A study by Gerstein and colleagues (2001) found that support from administrators had a strong influence on “every basic part of teachers’ working conditions” and in this way lack of it causes problems.

4.3.1. Support provided by the administration in the teaching of orientation and mobility (N=4).

The researcher sought to investigate the support the school administration availed towards orientation and mobility training.

The administrators indicated that the supports they provided included the following as illustrated by the following verbal quotes:

“The school provides white canes” (Administrator A)

“We provide optical devices from the Sabatia Eye Hospital”, (Administrator B)

“Timetable in lower primary and books”. (Administrator C)

“Though the subject is included in the timetable, there is no one who teaches”.

(Administrator D)

These responses indicated that there was no provision of timetable in the upper primary and it was not in all the schools. The administrator is frequently responsible for decisions with respect to accessing materials, plans, acknowledgement of teachers, facilitating cooperation among teachers and shared basic leadership (Billingsley, Carlson, & Klein, 2004). From the data collected it was established that the administrators were not trained in orientation and mobility. This indicated that when a critical number of school

administrators are not trained there can never be successful teaching in orientation and mobility. The researcher suggests that lack of training has made the administrators unaware of what to do in relation to orientation and mobility training.

4.4. Teacher-Pupil Ratio in the Teaching of Orientation and Mobility

The third objective sought to explore teacher-pupil ratio in regard to the teaching of orientation and mobility. The teachers were requested to give information on the number of learners they were assigned to be taught orientation and mobility. The outcomes are provided below.

4.4.1. Number of learners assigned to a teacher to be taught orientation and mobility

When teachers were asked to indicate assigned learners for teaching orientation and mobility, majority of the teachers agreed that they were not assigned any number of learners. Therefore, it was quite hard to find out the number of learners assigned to a teacher. This compounded by the fact that there was no orientation and mobility lessons undertaken by the teachers in the schools, it was difficult to establish the teacher to learner ratio. In order to get an understanding of lack of assigned learners to be taught orientation and mobility, the instructors were asked to provide reasons why they were not assigned.

Table 4.6: Teachers responses on lack of assignment of learners to be taught orientation and mobility

Responses	Frequency	Percentage (%)
No syllabus to guide the instruction	20	95.3
Large number of learners that require the training makes it difficult to give concerted attention to learners	12	57.1
Unavailability of time	19	90.5

From the data collected majority of the teachers indicated that, despite their willingness to teach, there was no syllabus to guide the instruction and unavailability of time. As demonstrated by Bronfenbrenner, in the Macrosystem we might discover policies, laws, curriculum and syllabus. These determines what ought to be taught in a school and at what time and duration. Therefore, without proper guidelines it becomes difficult for orientation and mobility to be conducted in the schools.

Nearly two thirds of the teachers further indicated that the large number of learners that require the training makes it difficult to give concerted attention to learners with visual impairments in orientation and mobility training as a result it had made it difficult to effectively handle teaching orientation and mobility. This, therefore, implied that large number of learners in need of the training were a stumbling block of effective handling of learners with visual impairments in teaching orientation and mobility. Larger classes place extra demands on the orientation and mobility educator, while reinforcing concern that all students may not get proper time or attention (Stoler, 2007).

Teachers make either positive or negative perceptions in light of the size of their classes (Stoler, 2007). The researcher observed that when such classes have many learners, the learners with visual impairments do not get additional consideration needful for their positive academic results. At the point when such a situation is presented, teachers eventually feel the weight of potential incompetence and their perception turns out to be definitely negative. Large classes may be seen as an obstacle to the effective teaching of orientation and mobility (Stoller, 2007).

Lastly, the above data may be inferred that teacher-pupil ratios play a critical role in ensuring that adequate teaching of orientation and mobility is accomplished. In Kenya, it is approximated that the ratio of learners with special needs to a teacher trained in special needs is 20:1 in special institutions for learners with visual impairments. The suggested pupil-teacher ratio (PTR) is 1:5 (UNESCO, 2008). Large pupil teacher ratio suggests a lowered quality of instruction in schools.

4.5 Teachers' Perceptions on Teaching Orientation and Mobility

4.5.1 Perception of Administrators on the Teaching of Orientation and Mobility to Learners with Visual Impairments (N=4).

The researcher sought to establish the perception of the administrators on the teaching of orientation and mobility to the learners with visual impairments. The following verbal quotes emerged from the study were the results.

"It is important to teach the learners orientation and mobility" (Administrator A)

"It is good to teach orientation and mobility" (Administrator B)

“Orientation and mobility instruction to learners with visual Impairments is good for them since it will make learners be independent”. (Administrator C)

“Will make learners not to cling to others as they move about in the school compound” (Administrator D)

From the study it showed that the administrators agreed that it was necessary to teach orientation and mobility to learners with visual impairments. The responses from the respondents indicated that it was quite necessary for the learners to be offered orientation and mobility training.

In order to get in-depth information, the administrators were further asked to give their perceptions in relation to the teaching of orientation and mobility to learners with visual impairments. The following verbal quotes were given as the importance.

“This will help learners move alone within the school compound and at their homes”. *“They will not fall into holes or pits”.* (Respondent A).

“It will improve their walking posture”. (Respondent B).

“This will enhance their self-esteem”. (Respondent C).

“Will enhance their socialization skills”. (Respondent D).

From these responses it implied that there was awareness of the importance of providing teaching of orientation and mobility to the learners. This concurred with Gense and Gense (2004) who observed that orientation and mobility instruction provides a set of foundational skills to utilize remaining visual, auditory and other tactile data to comprehend their surroundings. It additionally gives opportunities and aptitudes that can

increase the learner's familiarity with the environment, bringing about increased motivation, freedom and safety. Similarly it concurs with Anthony, Lowry, Brown, and Hatton (2004) who expressed that learners with visual impairments do not reach or move independently towards objects until they develop and achieve the conceptual understanding of people and objects within the surrounding. Therefore, formative readiness in orientation and mobility is an essential component that must be taken into account for a child's instruction.

4.5.2 Administrators' Preferred Times for Teaching Orientation and Mobility

The researcher intended to establish the preferred times for carrying out the teaching of orientation and mobility by the administrators. The administrators were asked to state their preferred times for carrying out the instruction of orientation and mobility. The outcomes of the information gathered are indicated below in Figure 4.4.

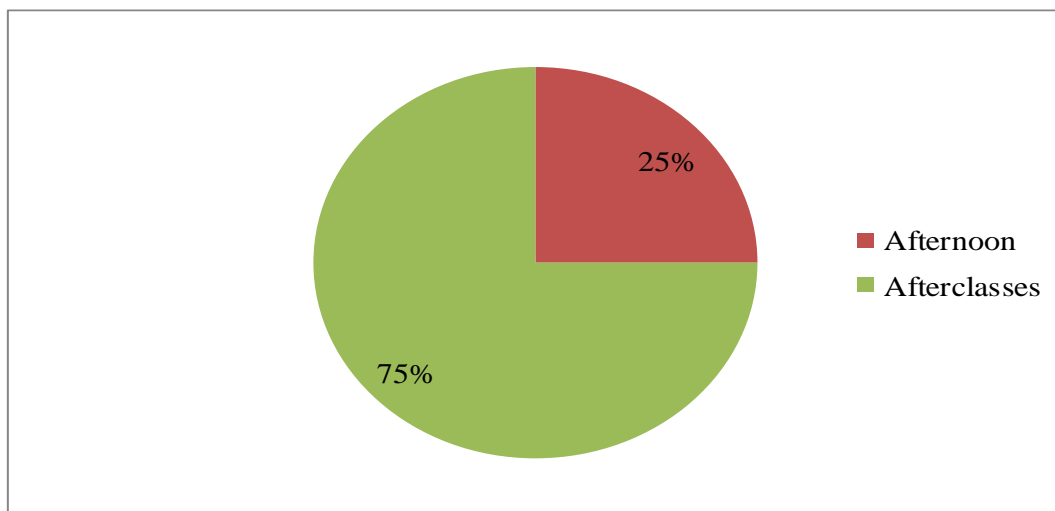


Figure 4.3: Time for the instruction of orientation and mobility

From the Figure 4.3, it indicated that three-quarters of the administrators preferred the teaching of orientation and mobility after classes compared with a quarter who preferred teaching in the afternoon. A number of them, similarly to the above, replied that it additionally, depended on time available to teach orientation and mobility. The researcher probed, in addition, to find out the reasons for the times preferred. From the study the following verbal quotes were provided as their responses to the issue of time for the instruction:

“The regular subjects would have been taught after classes” (Administrator **A**)

“Teachers are free together with learners after classes”. (Administrator **B**)

“Life skills may be used by teachers to teach orientation and mobility”
(Administrator C)

“Games, clubs and societies’ periods can be used to instruct orientation and mobility”.
(Administrator D)

From the responses it suggested that there had been preference for teaching orientation and mobility after the official school-time. There was absence of priority given to its teaching that was why great attention was accorded to the regular subjects at the expense of orientation and mobility.

4.5.2. Mechanisms put in place by Curriculum Developers

The researcher wanted to explore the teacher’s perception if the curriculum developers had provided adequate mechanism to teach orientation and mobility to learners who are visually impaired. The outcomes of the findings were as indicated in Table 4.7.

Table 4.7: Mechanisms developed by Curriculum Developers

Category	Frequency	Percentage (%)
Yes	0	0
No	19	100
Totals	19	100

From the Table 4.7 it suggested that all the teachers' agreed that there were no mechanisms initiated towards the teaching of orientation and mobility. This concurred with the assertion that in spite of its recognition as a major component in the instruction of learners in the United States with visual impairments, (Corn, Hatlen, Huebner, Ryan, & Siller, 1995), related services to the learners (IDEA, 2004), the orientation and mobility needs of learners with visual impairments are nonetheless underserved (Stuart, & Zimmerman, 1990). This implied that the Kenya Institute of Curriculum Development (KICD) had not made any attempt to put in place programmes to help in the teaching of orientation and mobility as well as the trained personnel to advocate for the proper programmes and resources to be availed to help in the implementation of the curriculum. The teachers were further, to get in-depth information, asked to provide reasons for their responses. Majority of them stated the following as described below.

Table 4:8: Reasons for lack of mechanism put in place by curriculum developers.

Responses	Frequency	Percentage (%)
Lack of orientation and mobility curriculum	16	84.2
No curriculum based-establishment	9	47.4
No in-service training	12	63.2

The majority of the teachers stated that there was lack of orientation and mobility curriculum. This brought an indication that there was a gap in provision of resources for teaching orientation and mobility consequently hampering teaching of orientation and mobility. This concurred with the assertion by Reynolds and Fletcher-Janzen (2007) that in spite of the way that national governments in Sub-Saharan Africa embraced specialized curriculum arrangements, special education services were not accessible to by far most of the children in the region.

More than half of the teachers stated that there was no curriculum based-establishment put in place to guide in the teaching of orientation and mobility. This implied that there was no guideline on the number of learners and also what amount of classroom workload should be allocated to a teacher who was expected to teach orientation and mobility skills. This implied that the quality assurance section of the Ministry of Education had not recognized the importance of orientation and mobility instruction. In spite of this attempt it was clearly noted that curriculum-based establishment had not been actually incorporated into the National Curriculum. The researcher suggested that lack of

curriculum based-establishment observed by the teachers was a clear reflection of the lack of self-assurance in teaching orientation and mobility.

4.6. Perceptions of Learners towards Orientation and Mobility

4.6.0. Analysis of Interview Schedule Responses by learners

In an effort to actuate and discover this, the study endeavoured to investigate perceptions of learners that needed to be taught orientation and mobility. The learners that required orientation and mobility instruction were required to indicate their perceptions towards the teaching of orientation and mobility. The results were as described below.

4.6.1. Movement in the School Compound

In this research learners that required to be trained to acquire orientation and mobility skills were requested to indicate how they walked around the school compound. The results were as indicated below.

Table 4.9: Learners movement in the school compound

Responses	Frequency	Percentage (%)
Fellow learners	10	52.6
Alone	6	31.6
Using white cane	3	15.8
Totals	19	100

The results from Table 4.9 indicated that majority of the learners were assisted by their fellow learners. This implied that due to the absence of the training in orientation and

mobility, the learners were unable to move on their own hence depending on the assistance of fellow learners to move about the school compound. A third indicated that they were able to move on their own. This implied that due to consistent use of the paths within the compound the learners had become familiar with the compound hence were capable of walking alone. From this it was deduced that there was a considerable problem of orientation and mobility training considering that learners were not capable of moving on their own using the white cane.

4.6.2. Learner's use of the white cane (N=19)

The researcher intended to explore the learners' use of the white cane at home and as they walked to the shopping centres. The learners provided the following as the responses to the question.

Table 4.10: Learner's use of white cane

Responses	Frequency	Percentage (%)
Yes	3	15.8
No	16	84.2
TOTALS	19	100

The majority of the learners responded by indicating that they could not move within the community using the white cane. From additional probe on the learner's use of the white cane, a number of the learners that disliked its use gave the following as their cause for the dislike:-

“Inafanya mtu kuonekana kama ‘’koko’’” (It makes one appear like granny)

“Huonyesha mtu vibaya” (It identifies an individual negatively).

Few of them indicated that they could move on their own around their home environments without the use of the white cane. This was supported by the following reasons provided for their independent movement within their home environments.

“Naona kidogo” (I can see a little)

“Ninafahamu njia hapa shuleni” (I am acquainted with the school compound)

“Niko na white cane” (I possess a white cane).

From the responses, it certainly suggested that the majority of the learners could not withstand using the white cane. This was deduced to mean that the white cane was a sign of stigma or they kept away from using it as it identified them as visually impaired. This implied that the learners with visual impairments faced a myriad of motivational issues that affected their appreciation of the white cane.

As a consequence, it followed that on a Mesosystemic stage, there could have been no interplay between learners with visual impairments and their teachers in regard to orientation and mobility training. In regard to Bronfenbrenner’s concept the Microsystem alluded to events and associations happening within the immediate setting of the learner. In regard to the situation, the perception of the learner in relation to orientation and mobility training would make the learner be inspired or not to learn to acquire orientation and mobility skills.

4.6.3 What the learners use at home to move about

The study required the learners to state what they used at home to move about. The data obtained were summarized in Table 4.11.

Table 4.11: What the learners use at home to move about

Category Of Responses	Frequency	Percentage (%)
Sticks	3	15.8
White Canes	2	10.5
None	14	73.7
Totals	19	100

Table 4.11 indicated that the majority of the learners did not utilize any orientation and mobility resource to walk within the community. This implied that there had been negative perception towards the usage of the cane. Perhaps the learners had been associating the white cane with an image of stigma hence the negative perception towards using the white cane. This finding concurred with Wiener, Welsh, and Blasch (2010), who observed that the perceptions of learners could also be the primary barrier to the successful instruction in orientation and mobility. Most of the perceptions rise up entirely from lacking understanding and opportunities and from the perceptions of peers, teachers and guardians.

4.6.4. Learner's Preferred times for Teaching Orientation and Mobility (N=19)

The researcher intended to find the learners' preferred times for being taught orientation and mobility. The following were the results.

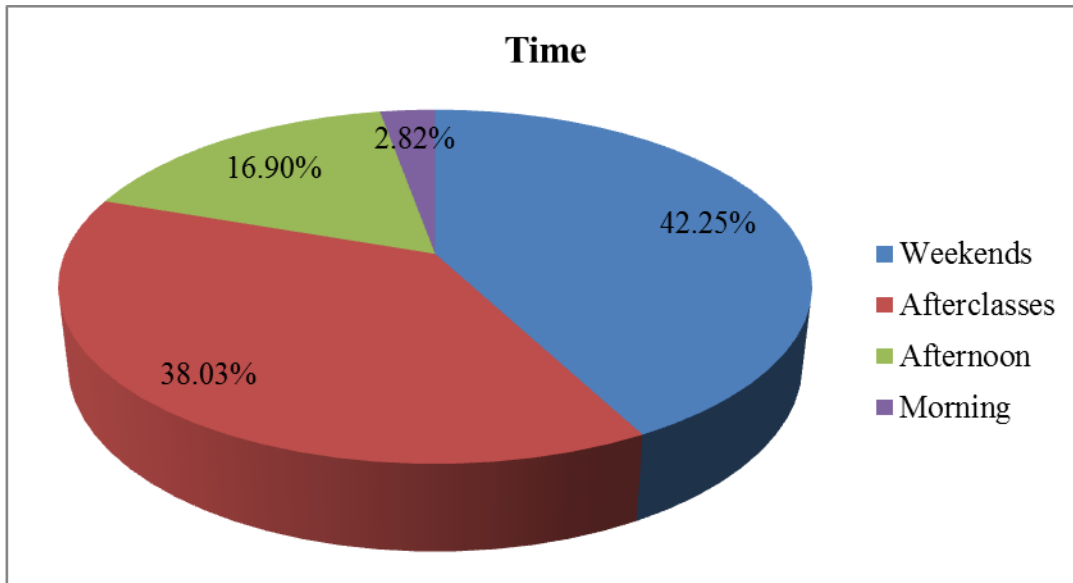


Figure 4.4: Learner's response on preferred times for teaching orientation and mobility

From the Figure 4.4, the learners indicated that they opted to be taught over the weekends and very few chose to be trained after classes.

4.6.5. Reasons for the learners' preferred times

The majority of learners expressed that they opted for after lessons and over the weekends due to the fact that during these times they ought to be free from classroom work. From this, it was deduced that priority was given to the subjects in the regular or national curriculum than the orientation and mobility training. Orientation and mobility training was given low priority, hence its placement when regular subjects had been

taught. This asserted the importance of time as demonstrated by Iowa Department of Education (2007) that acquisition of all essential skills and knowledge requires substantial amount of effort and time. This finding contradicted the assertion by Koenig and Holbrook (2003) who states that care should be taken that the skills contained in the orientation and mobility curriculum receive same attention with the competencies stressed in the present curriculum. Really, this showed lack of commitment from the Kenya Institute of Curriculum Development to include orientation and mobility curriculum in the official school timetable.

4.6.6. Importance of Orientation and Mobility Skills (N=19)

The researcher sought to establish the perceptions of the learners on the significance of acquiring orientation and mobility skills. Their responses were indicated below:

When learners were asked about the usage of the white cane majority indicated that they had suitable intentions to make use of the white cane. A number of the learners indicated reasons that led them to use the white canes as stated below;

“Husaidia mtu asiingie kwa shimo” (Assist one not get right into a hole)

“Inaonyesha mtu haoni” (It identifies an individual as blind)

“Huwa ninatumia kwa soko pekee, siyo kwa shule” (I use it in shopping centres, but not in school)

“Kutembea vizuri bila kugonga kitu au kuingia shimo” (To walk accurately without knocking objects or falling right into holes)

“Ili kujua kutumia white cane” (To familiarize using the white canes)

“Mtu anaweza kupoteza macho baadaye” (An individual might lose sight in future)

Others of course mentioned that they had positive perceptions towards orientation and mobility because they had learned the basic components and because of their condition, they had no choice but to learn to meet the requirements placed on them. These findings indicated that majority of the learners had negative perceptions towards the usage of the white cane. This concurred with Wiener, Welsh and Blasch, 2010 assertion that motivation and perceptions have an immediate influence on learners' performance. In relation to this the researcher inferred that the perception of the learner towards orientation and mobility is of prime significance as this could make the child be encouraged or not to be trained to acquire the competencies of independent travel and this determines the success of training in orientation and mobility.

4.6.7 Challenges experienced by orientation and mobility instructors.

The teachers were asked to state the challenges experienced in the implementation of orientation and mobility curriculum. The following were the teachers' responses.

Table 12: challenges experienced by orientataion and mobility instructors.

Responses	Frequency	Percentage
Congested timetable and heavy workload	15	78.9
Lack of support from the administration in terms of provision of resources	10	52.6
Learners' negative perceptions	12	63.2
Lack of team approach from the parents, teachers and administrators	14	73.7
Lack of syllabus	19	100

From the responses of the teachers, there were a number of demanding situations that they encountered which hindered the teaching of orientation and mobility. The following were the noted challenges as stated by the teachers.

Form the Table 4.12 above three quarters of the teachers stated that they experienced congested timetable and heavy workload. This implied that given the number of subjects and lessons according to the curriculum provided by the Kenya Institute of Curriculum Development it was not possible to find time for teaching orientation and mobility. Priority was, therefore, given to the subjects in the official timetable at the expense of orientation and mobility instruction.

Additionally, above half of the teachers indicated that they lacked support from the administration in terms of provision of resources that could have facilitated the teaching of orientation and mobility. It is the responsibility of the administration to ensure that the resources required in a school are availed to enhance performance of learners as observed by Ingersoll and Smith (2003) that administrative assistance to teachers incorporates giving training materials and resources. This therefore implied that the lack of administrative support and unavailability of resources was a barrier to the successful training of the learners in orientation and mobility.

Almost three quarters of the instructors observed that the learners showed negative perceptions towards orientation and mobility training specifically in the usage of the white cane. This implied, therefore, that perceptions of learners could be one of the curriculum barriers to the training of the learners in orientation and mobility skills. This

was evidenced by Wiener, Welsh, and Blasch (2010) assertion that the perceptions of learners can additionally be a prime barrier to their successful instruction in orientation and mobility

From the Table 4.12 almost three quarters of the teachers asserted that they experienced lack of team approach from the parents, teachers and administrators. As evidenced by Gense and Gense (2004) that for orientation and mobility training to achieve success, team work is indispensable in its development and execution. The orientation and mobility instructor was supposed to work collaboratively with all team participants to deal with the remarkable orientation and mobility issues of the learner. The lack of team approach therefore, was a curriculum barrier to the teaching of orientation and mobility.

It was indicated by the majority of the teachers that one of the greatest challenge they experienced was lack of commitment by the Kenya Institute of Curriculum Development to recognize the value of orientation and mobility to learners with visual impairments. This was evidenced by the teachers' responses that there was no curriculum in place specifically prepared for orientation and mobility training. This implied that it was far devalued as an important subject which should not be incorporated into the official school timetable. The Kenya Institute of Curriculum Development (KICD) had made an attempt to organize preschool curriculum, developmental and independent living skills' syllabus for learners with visual impairments (NSNE policy framework, 2009). Notwithstanding this attempt it was notable that orientation and mobility curriculum had not been incorporated into the National Curriculum. This had consequently contributed to

its exclusion in the official school timetable hence a curriculum barrier to the implementation of orientation and mobility. These responses reinforced the data collected and this indicated that clearly there were barriers to orientation and mobility training.

4.8 Analysis of Observation Schedules

4.8.1 Availability of white canes to be used by the learners in the school

The researcher sought to assess the provision of white canes to be used by the learners within the school. The provision of white canes for the training and use by learners might additionally contribute to the achievement of orientation and mobility training. Having this in mind, the researcher intended to carry out an assessment of the availability of the white canes which might be primarily used in training of orientation and mobility. They are essential resources that can enhance the achievement of the training by most of the learners and the instructors.

Table 4.13: Resources for orientation and mobility training

Items	Quantity	Condition	
		Poor	Good
White canes	23	14	9
Spectacles	31	6	25
Reference materials (books)	-	-	-

In the observation accomplished, there were extraordinarily few white canes. A number of the white canes were of irregular shapes (bend). Some were additionally, short that

could not be utilized by learners that might also need them. They were often stored in the head teachers' and deputy head teachers' offices.

Additionally, extremely few numbers of learners utilized the white canes in the schools. Similarly, a number of the white canes were of various heights and were being held in a manner that was not always recommended. This observation indicated that the learners were using canes that they had outgrown and none was receiving on-going orientation and mobility training within the school environment at that moment. The lack of on-going orientation and mobility training not only prevents school staff from understanding and supporting the learners' independent travel, the use of the white canes that children had outgrown restricts their ability to safely use orientation and mobility skills. There were no reference books found in the schools. From these results it indicated that there was scarcity of the required resources for the instruction in orientation and mobility.

4.8.2. Adaptation of the school environment

The researcher sought to explore how the school environment was appropriate for the teaching of orientation and mobility in the schools under study. The adaptation of the school environment to suit orientation and mobility of learners is an aspect that compliments the safe and independent movement of learners within the school. The researcher executed an observation of the adaptation of the surrounding and the researcher noted that the pavements had many potholes, grass had been growing alongside them, there were many small sharp stones on numerous parts of the pavements, the kerbs were not coloured to assist the learners with light perception as well as learners

with low vision. The paths to the washrooms and to a few classes were covered with grass and no markings made to guide the learners find the facilities.

In the schools, only the pavement to the administration right from the main gate close to the administration office is marked with yellow colourings. The remaining pavements were covered with grass and a few had damaged blocks. From the observations, it clearly suggested that the training of orientation and mobility faced numerous challenges. Consequently, there was need to make appropriate modifications or improvements around the school to facilitate successful training.

4.8.3. Movement of learners within the school

The researcher intended to look into the movement of learners within the school compound. The following were the observations made. Most of the learners were not using white canes as they moved about the school. For those who used the white canes they held them in ways that indicated they had not been taught how to hold the canes. Most of the students used their self-taught cane techniques. This concurred with the observation by Perla and O'Donnell (2004) who stated that most of the students had embraced the use of self-taught cane techniques due to the fact that they had not been taught how to use them.

Similarly, majority of them walked holding hands close to each other. The totally blind when moving alone, to signify their presence, they made sounds using their fingers or objects they were holding. In the presence of a child with low vision, in a group they held hands in a string moving in a cohort of learners.

From the observation, some learners with total blindness were walking alone. This might have been contributed by the fact that they had become familiar with the various paths of the school environment. This implied that the learners had been left to find ways of moving about by themselves as evidenced by Blesdoe (1980). Despite these difficulties, the researcher observed that all children were confident about travelling around school environments independently utilizing their white canes as good as they could with incorrectly sized canes.

4.9 Conclusion

This chapter presented the findings, as gathered from the participants about the curriculum barriers to teaching orientation and mobility. The findings presented were guided by the research questions and what transpired during the interviews and observations. The key findings were interpreted and discussed and the extent to which the research questions were addressed was provided. In the next chapter the summary of the study were presented, conclusions and recommendations were made and possible avenues for further research were suggested.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the findings, the conclusions drawn and the recommendations made thereof. At the end the suggestions for further research was provided.

1.1 Summary of Findings

The purpose of this study was to assess the curriculum barriers to teaching orientation and mobility in selected schools for learners with visual impairments. The literature reviewed was done according to the objectives of the study as outlined in chapter 1. The descriptive survey design facilitated the collection of data on the research problem and it helped to achieve the objective of the study.

Primarily based on the first objective, the respondents had varied reasons why orientation and mobility was not allocated time in the official timetable. The teachers indicated that orientation and mobility had no formal syllabus and/or reference books.

The teachers indicated that orientation and mobility was not examinable subject and therefore it was not usually given preference in the official timetable. Teacher's workload and curriculum rigidity were also cited as barriers to teaching of orientation and mobility as well as the fact that it was not in the national curriculum revealed that orientation and mobility training was not taken seriously. Teachers indicated that they had a lot of workloads. There were regular subjects to be taught which were examinable so there was

no time to be wasted. Finally, teachers indicated that Orientation and Mobility was not taught due to lack of white canes.

Based on the second objective, the instructors stated that there was no effective management and supervision which could have contributed to teaching orientation and mobility. The instructors stated that there was no team approach in schools that could have created conducive conditions for the instructors. The teachers indicated that the school administrators had not really focused on orientation and mobility instructional issues. The instructors also indicated that administrators had not helped by providing necessary resources to improve teaching of orientation and mobility skills. Finally, the instructors generally, stated that administrative support had not been effective in enhancing teaching of orientation and mobility skills.

Based on the third objective, from the data collected the teachers indicated that, despite their willingness to teach, there was no syllabus to guide the instruction and unavailability of time. The teachers stated that they were not assigned any number of learners. Therefore, it became difficult to get the number of learners assigned to an instructor. The teachers further indicated that the large number of learners that required the training made it difficult to give concerted attention to learners with visual impairments in orientation and mobility training as a result it has made it difficult to effectively handle the teaching of orientation and mobility.

Based on the fourth objective, the administrators preferred the teaching of orientation and mobility after classes compared with a number who preferred teaching in the afternoon.

Additionally, it depended on availability of time to carry out the training. From the findings of the study, it indicated that all the teachers' agreed that there were no mechanisms initiated towards the teaching of orientation and mobility.

The teachers stated that there was lack of orientation and mobility curriculum. The teachers stated that there was no curriculum based-establishment put in place to give direction in the teaching of orientation and mobility. Regardless of this effort, it was remarkable that curriculum-based establishment had not been in reality integrated into the National Curriculum. The researcher suggested that lack of curriculum based-establishment observed by teachers was an indication of the absence of confidence in teaching orientation and mobility.

Based on the fifth objective, it was clear that the assertion by the instructors that in their perception learners had a negative perception of orientation and mobility. From the learners' responses certain issues were made clear. One of the factors was the idea that they had negative perceptions of learning orientation and mobility due to in large part, consideration of the examinable subjects in the timetable. Additionally, the outcomes of the study indicated that the learners were guided by their peers to move about the school compound. Some of the learners indicated that they were able to move on their own.

From the reasons offered it certainly indicated that the learners did resisted utilizing the white cane. The learners were not using any orientation and mobility aid to walk within the community. The learners preferred after classes and over the weekends due to the fact

that during those moments they were free from the regular class work. The learners' responses to the usage of the white cane indicated that they had desirable intentions to utilize the white cane. Others of course mentioned that they had positive perceptions of orientation and mobility because they had learned the basic components and because of their conditions, they had no choice but to learn to meet the requirements placed on them.

The data gathered from the schools revealed that there were generally few white canes. A number of the white canes were of irregular shapes (bend). There had been no reference books found in the schools. Similarly it became clear that the school environment was not suitable for the training of orientation and mobility due to the poor conditions of the pavements and the obstacles in the various parts of the paths. Additionally, the learners walked holding hands close to each other. The totally blind when moving alone, to signify their presence, they made sounds using their fingers or objects they held. The learners with total blindness were moving alone.

5.2 Conclusion

Primarily based on the findings of the research, it could be concluded that:

There was no specific syllabus and/or reference books and resources (white canes) for orientation and mobility training. The fact that orientation and mobility was not an examinable subject had made its instruction to be excluded from the official timetable.

Similarly, teacher's workload and curriculum rigidity were cited as barriers and had caused its instruction not to be taken seriously. There was lack of orientation and mobility curriculum as well as curriculum based-establishment put in place to guide in

the instruction. Curriculum-based establishment has not been clearly integrated into the National Curriculum.

The school administrators really did not focus on instructional issues. This resulted to the conclusion that lack of administrative support had created a barrier to teaching orientation and mobility.

The study revealed that there was unavailability of time for orientation and mobility instruction. It can therefore be concluded that unavailability of time had generally created a barrier to orientation and mobility curriculum implementation.

The learners had a negative perception of orientation and mobility due to in large part, the subject not being examinable as priority was given to the subjects in the syllabus which were examinable. There was resistance to the use of the white cane. Therefore, negative learner perception had generally created a barrier to teaching orientation and mobility.

From these findings, therefore, it was concluded that these facts had contributed to the exclusion of orientation and mobility training in the official school timetable hence barriers to its implementation.

5.3 Recommendations

Based totally on the findings and conclusions of the research, the following recommendations were made by the researcher.

5.3.1 Policy Recommendations

The following are the existing policies that need enhancement:

(i) Safe surroundings

The schools ought to make sure that there is an establishment of barrier free surrounding (NSNE, 2009)

(ii) Resources

Schools ought to make sure there is acquisition of resources and should promote utilization of white canes among learners with visual impairments (NSNE, 2009).

(iii) Development of curriculum

The Kenya Institute of curriculum development must ensure consistent evaluation and development of curriculum that is tailor-made to address the needs of learners with visual impairments.

(iv) Partnership and collaborations

The Ministry of Education should support and co-ordinate organizations and co-operation with other partners in provision of resources and materials towards learners with visual impairments (NSNE, 2009).

(v) On a case-by case premise, the utilization of school purchased orientation and mobility devices in a learner's home or in other settings is needed if the learner's orientation and mobility team members consider that the learner needs access to the devices in order to receive suitable training in orientation and mobility.

In view of the findings of the study the researcher suggests the following non-existent policies to be formulated:

- a) Orientation and mobility services need to be offered as early as feasible in a learner's education and adapted or supplemented periodically as required through the preparation of a syllabus.
- b) The school administration ought to initiate resource mobilization that could assist get the prerequisite physical resources required for the learners with visual impairments.
- c) The teachers must engage in proactive motivation approaches to alter the negative learner perception to a more positive one. This could make certain effective teaching of orientation and mobility to the learners.
- d) The KICD needs to ensure that the recommended one-to-one teacher-pupil ratio is maintained to foster proper instruction and enhance positive and effective teaching of orientation and mobility through the initiation of curriculum based establishment in schools.
- e) The Ministry of Education ought to make certain that the recommended class sizes is strictly enforced, and they should further review the teaching methodology policy to ensure it fully and effectively meets its objectives of ensuring that, among other things, learners with visual impairments gets quality education tailored to meet their needs.
- f) Students with visual impairments require instructive programmes that incorporate orientation and mobility instructional programmes, from the discoveries it is recommended that extra instruction time is important. Students who are blind or have low vision need time to develop orientation and mobility skills that will enable them to get to training materials. This requires significant investment in the form of time.

Consequently, it is recommended that adding time of the school years to get all the instruction could be considered at each level of school.

1.3.2. Recommendations for Further Studies

This study makes the following suggestions for further research:

1. Impact of teacher motivation towards orientation and mobility training to learners with visual impairments.
2. Teacher perception and its impact on orientation and mobility instruction to learners with visual impairments
3. It may be interesting to explore the data for demographic information about who receives instruction in the other expanded core curriculum areas.

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APPENDICES**APPENDIX I: INTERVIEW SCHEDULE FOR THE HEAD/DEPUTY HEADTEACHER**

1. How many teachers in your school are fully trained in orientation and mobility?
2. How many learners both totally blind and low vision require orientation and mobility training in the school?
3. How many lessons for orientation and mobility are allocated in the school timetable per week?
4. As an administrator, what is your perception towards the teaching of orientation and mobility to learners with visual impairment?
5. According to you at what time of the day should orientation and mobility training be carried out?
6. What are your reasons for choosing the time for instruction?
7. What kind of support do you provide towards the teaching of orientation and mobility in the school?
8. According to you what challenges does the school experience in the teaching of orientation and mobility?

APPENDIX II : QUESTIONNAIRE FOR TEACHERS

INTRODUCTION:

My name is **William Tataka**. Am a Master of Education (Special Needs Education) student at Kenyatta University. This questionnaire is for my research on “ **Curriculum barriers to teaching Orientation and Mobility in selected schools for Learners with Visual Impairments, West Pokot and Siaya Counties, Kenya**”. Do not write your name anywhere on this paper. The answers you will give will be treated in confidence. Please write your responses in the spaces provided. Where necessary, you can write comments on your responses in the spaces provided. Thank you in advance for your co-operation.

SECTION A –Background Information

1. Sex

Male	()
Female	()

2. Age

a. 20-29	()
b. 30-39	()
c. 40-49	()
d. 50-54	()
e. 55 and above	()

3. What level of Education have you attained?

Diploma	()	Degree	()	Masters Degree	()
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4. Is training in orientation and mobility included in the official school timetable?

Explain the reasons for your answer.

5. Within the lessons of a week, how many orientation and mobility lessons do you teach as an orientation and mobility teacher

If none, give reasons;

4. How many learners are you assigned to teach orientation and mobility in the school? ()

If none, give reasons why you are not assigned.

6. What kind of support do you get from the administration?

7. In your opinion, do you think the curriculum developers have provided you with adequate mechanism to teach orientation and mobility to students who are visually impaired?

Give reasons for your answer.

8. What challenges as a teacher for orientation and mobility do you experience?

APPENDIX III: INTERVIEW SCHEDULE FOR LEARNERS**Learners' opinions towards orientation and mobility**

1. Who assists you to move around in the school compound?
2. (a) Do you go home, shopping centres alone using a white cane?
(b) If no, give reasons for your answer.
3. At home, what do you use to move about?
4. At what time would you prefer to be taught orientation and mobility?
5. Why do you prefer such a time?
6. In your opinion why should you be trained in orientation and mobility?
7. Do you prefer using a white cane than walking with friends?

APPENDIX IV: OBSERVATION SCHEDULE

1. Are there enough white canes for use by the learners with visual impairments in the school?
2. How is the school environment adapted to suit orientation and mobility instruction?
3. How are learners moving about?

APPENDIX V : AUTHORIZATION LETTER FROM NACOSTI

APPENDIX VI: APPROVAL LETTER FROM NACOSTI