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**ASSESSMENT OF CLASSROOM INTERVENTION STRATEGIES FOR CLASS  
THREE PUPILS WITH LEARNING DISABILITIES IN PUBLIC PRIMARY  
SCHOOLS IN MATHIRA WEST, NYERI COUNTY, KENYA**

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E55/OL/22295/2011**

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF  
EARLY CHILDHOOD EDUCATION OF KENYATTA UNIVERSITY**

**MAY, 2016**

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## DECLARATION

This research project is my original work and has not been presented in any other university/institution for consideration of any certification. This research project has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

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## **DEDICATION**

This project report is dedicated to my late mum and dad Mr. and Mrs. Micheck Murage, and my beloved son Kennedy Murimi.

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## LIST OF ABBREVIATIONS AND ACRONYMS

<b>AIM</b>	: Accessible Instructional Materials
<b>EARCS</b>	: Educational Assessment and Resource Centre Services
<b>FPE</b>	: Free Primary Education
<b>K.I.E</b>	: Kenya Institute of Education
<b>K.N.E.C</b>	: Kenya National Education Council
<b>LD</b>	: Learning Disabilities
<b>NICHHID</b>	: National Institute of Child Health and Human Development
<b>SCT</b>	: Social Cognitive Theory
<b>SNE</b>	: Special Needs Education
<b>SDE</b>	: Sub County Director of Education
<b>SPSS</b>	: Statistical Package for Social Science
<b>UNESCO</b>	: United Nations Scientific and Cultural Organization
<b>USA</b>	: United States of America
<b>WB</b>	: World Bank
<b>WHO</b>	: World Health Organization

## ABSTRACT

Learning disability is a problem that may be found among children of all origin throughout the world. What is of concern is that the problem has been persistent over the years among children in public primary schools in Mathira West Sub County. A number of school children in their early years, are experiencing learning disabilities as identified through a base-line survey. There however appears to be limited research studies conducted in the area on strategies teachers use to arrest the problem and hence the need for this study. The purpose of this study was therefore to find out classroom intervention strategies for class three pupils experiencing learning disabilities in public primary schools in Mathira West Sub County, Kenya. The objectives of the study were to: establish the methods used in teaching class three pupils with LD, to investigate the teachers' competencies in identifying causes of learning disabilities, find out the teachers' attitude towards pupils with learning disabilities, and determine the type of instructional materials used in teaching class three pupils with learning disabilities. The study was conducted in Mathira West Sub County, Nyeri County in Kenya, and was guided by Albert Bandura's Social Cognitive Theory (SCT) of 1997. The descriptive research design was adopted for the study. A sample size of 11 (30%) schools was selected randomly from a target of 35. Purposive selection of the 11 head teachers from the above sampled schools, random selection of 11 class three teachers out of 50 formed the study sample. Questionnaires for teachers and head teachers as well as an observation check list were used to collect data. Piloting was conducted in two schools to ascertain that the research instruments were well constructed and their validity was ascertained by ensuring that the content used conforms to the research objectives. The study employed test retest technique to pilot the instruments. The Pearson correlation coefficient was computed and found to be 0.78. Qualitative data was analyzed by sorting, editing, coding, classifying, categorizing and making themes related to research questions. Descriptive statistics were used to calculate, the mean, frequencies and percentages using the computer Statistical Package for Social Sciences (SPSS). The findings were presented in tables, graphs, and pie charts. The study established that; There were at least three pupils with LD in every class, teaching methods were inappropriate, teachers were not competent in identifying the causes of learning disabilities, teachers had a negative attitude towards learners with LD and made no provisions for them while instructional materials used by class three teachers were generally inadequate. Based on these findings, the study recommends; in-service training courses for lower primary school teachers, sensitization programs to address the negative attitude towards children with LD and use of a wide variety of teaching methods and instructional materials.

## CHAPTER ONE

### INTRODUCTION AND BACKGROUND TO THE STUDY

#### 1.0 Introduction

Chapter one presents the background to the study, statement of the problem, purpose of the study, research objectives, research questions, and significance of the study limitations and delimitation, assumptions of the study, conceptual and theoretical framework and operational definition of terms have also been presented.

#### 1.1 Background to the Study

Learning disabilities (LD) are neurological differences in processing information that severely limit a person's ability to learn in a specific skill area (Fletcher-Janzen, 2008). That is, these disorders are the result of actual differences in the way the brain processes, understands, and uses information. Children with LD experience severe problem in education at all levels of learning. LD includes difficulties in reading, math and written expressions. These problems are first noted by lower primary school teachers and parents when children fail to acquire basic competences (Osman, 1997). Children may have difficulty learning basic skills in reading and writing or understanding reading. Additionally, some learners with LD may easily learn basic skills but have difficulty applying skills in problem solving or higher level school work.

Some 2.6 million students one in eight in the United States (USA) have been diagnosed with LD and receive special education in their schools. Many more are undiagnosed. Data from the National Centre for LD reveals that 25% of students with LD drop out of high school, and only 61% of those who complete high school receive a regular diploma (U.S. National Centre for Education Statistics, 2011). The findings of a study conducted by Smith, et al (2001) indicated that the number of students with LD was higher in United

States of America (USA) than any other disability. The results of the study showed that 51% of the school going children were experiencing LD in 1995-1996 academic years. The ratio of prevalence was 4:1. This indicated that there were more boys with LD compared with the girls. Thurman, Vollmer & Pieper (2010) on a study comparing British and American education systems discovered that teachers are generally negative and most teachers do not want to teach children with LD because it means extra workload for them. In U.S., Ross-Hill (2009) discovered that selection of the appropriate program and specific intervention strategies for the lower primary school child with LD has helped to improve the situation. He reported that children with LD might not be intellectually challenged but their learning difficulty might have stemmed from inadequate instructional design.

UNESCO (2006) report indicates that a number of learners drop out of school in their early years and therefore fail to attain minimum learning standards. As a result, UNESCO advised that Governments provide quality education to all learners. In this report, UNESCO asserted that a child is likely to be handicapped throughout life if denied access to quality education since such a learner fails to acquire basic literacy and numeracy skill. Rouse and Florian (1997) revealed that various factors influence effective inclusion of children with LD in regular schools. The factors include; teachers being positive towards the learning abilities of children with LD, being able to apply special instructional methods when teaching learners with LD, and teachers' knowledge of LD. Secer (2010) on a study in Turkey noted that following the special education law, many schools have made efforts to provide school-based remedial help for children with LD and this has improved the situation. Learning disabilities invariably cause frustrations, which can lead to compound behaviour problems and emotional distress. Bradley, Danielson and

Hallahan (2002) in their study established that early intervention programs have positive effects on children with LD since some of the long range consequences of LD are lessened. When a child with LD fails to experience success in mastering new skills, they feel demotivated and this may cause them to lose the courage and enthusiasm to undertake new tasks. Persistence struggle for a child with LD destroys their self-esteem. Additionally, the child does not develop courage to face challenges or engage in class activities requiring problem solving. As a result, children with LD require a lot of support and encouragement from teacher's in order to acquire basic skills.

Studies in developing countries revealed that despite the fact that the general expectation is that children should be able to read fluently by the end of the third year in school, testing at grade-level show that a number of learners have difficulties doing basic math and reading (William & Flora Hewlett Foundation, 2008). Case example was in Zimbabwe where Nkamba and Nkanyik (1998) in their study established that among grade six learners only 25% had acquired basic literacy. In Nigeria pupils were asked to copy a single word and punctuate a five line sentence. Amongst grade four learners, only 25% were able to do the activity correctly (EFA, 2000). For Malaysia, those who demonstrated minimum literacy were only 25% of grade six pupils (Ellis, 2003).

Sari (2009) study found out that teachers had a negative attitude towards learners with LD. Teachers' resistance towards passionate delivery was reflected in curriculum delivery where teachers employed inappropriate methods to teach learners with LD and therefore excluding them of classroom instructions. In Botswana 71.1% of the head teachers revealed that the supply of instructional resources appropriate for teaching children with LD in most of the schools was inadequate. (Chhabra, Srivastava and Srivastava,

2010). Despite the fact that learners with LD require remedial programme, a study in Namibia found out that most schools had an acute shortage of teachers and instructional materials. The programme also lacked proper supervision and follow up. (Aro & Timo, 2011). A similar study conducted by Kuuloudokwa (2003) in Namibia attributed the poor English proficiency amongst the lower grade level learners to inadequate provision of learning resources, inappropriate methods of teaching, lack of intervention strategies from teachers, inadequate teacher preparation in training colleges, and lack of motivation to read.

A survey on the conditions of schooling and the quality of primary education in southern African countries conducted by the southern Africa Consortium for Monitoring Education Quality, (2004) revealed that the efforts to improve quality education at primary school level have been fruitless. According to the report, learners at lower grade levels were experiencing challenges in acquiring the basic literacy which hindered them from progressing to the next grade in primary education. In Namibia for instance, the report indicated that only 22.7% of the learners had acquired minimum reading literacy skills while only 7.8% of the learners demonstrated competence in reading. The results indicate that majority of the learners were experiencing LD which affected their performance across all the other grade levels. Similarly, children in East Africa continue to experience difficulties in acquisition of basic skills in reading, writing and numeracy in their early years of primary education. Access to education has affected the quality of education negatively due to the increase in enrolment (Uwezo East Africa Report, 2012). Uwezo a civil society group that monitors education achievements carried out a survey in which 350000 school going children aged between six and sixteen years in Kenya, Uganda and Tanzania were tested on literacy and numeracy skills. The results indicated that two out

of every three pupils who have completed two years of primary school in East Africa fail to pass basic tests in English, Swahili and numeracy. Less than one in three children was able to pass the Swahili test (32%) and numeracy 29%. Only one in six passed the English test (16%). Less than one in six passed both the literacy and numeracy tests (15%) (Uwezo East Africa Report, 2011). These results imply that the vast majority of pupils are not acquiring basic competencies during the early years of Primary School as expected in the national curriculum. This leads to poor children's education foundation resulting to children failing to acquire basic competencies and eventually becoming learning disabled a problem that is carried forward to their future.

The idea of inclusive education was endorsed by the Kenyan government by ratifying the Salamanca Conference (1994) and the Dakar Framework of Action (2000). A World Declaration on Education for All was adopted by The Dakar Framework for Action in 2000 and the goal to provide every girl and boy with Free Primary School Education by the year 2015 was established. The main idea of inclusive education is that every school has the capacity to accommodate all children. This philosophy was emphasized by the Universal Declaration of Human Rights (1948). It was then declared that the right to education is fundamental to all children in spite of their individual differences. In an effort to ensure education for all the government introduced the Free Primary Education (FPE) in 2003. The main challenge in achieving education for all has been to ensure provision of quality education to all children at all levels (UWEZO, 2012). Numerous studies have indicated that regular education teachers feel that both pre-service and in-service Education programs were inadequate in preparing them for teaching learners with LD in regular classrooms (Desemene & Parmar, 2006; Wilson, Lopreto & Slostad, 2000).

A study done by Gona (2004) on the identification of children with LD in Kilifi County found out that 18.6% of pupils in regular schools were experiencing LD. Rasungu's (2003) study found that there were pupils with LD in Starehe Division majority of whom had a high level of difficulty in the tests administered in English and Math (100% and 63.3% failure respectively). Another study conducted in Kilifi County by Silas (2012) established that teachers have a negative attitude towards learners with LD. Kithuka (2008) in a study in Kitui suggested that use of a wide range of instructional materials in learning has a positive impact among children with LD.

In Mathira West Sub County there are about 250 primary school children who have been assessed and found to be experiencing LD (CDE, 2012). This means that if the problem is not addressed early enough, these children are likely to continue with the problem even in their higher classes. This would affect their academic performance and life in the long run. Teachers therefore require putting in place various intervention strategies to enhance effective learning for children with LD. There may be many strategies but this study will only focus on the four classroom intervention strategies for children with LD. It is therefore imperative to assess the classroom intervention strategies for pupils with LD as this would help to establish ways of mitigating the problem. This concern lays the basis for this study.

## **1.2 Statement of the Problem**

A number of international protocols among them UNESCO (1994), Salamanca Conference (1994) and the Dakar Framework for Action (2000) endorsed the idea of inclusive education in an effort to ensure equalization participation for all learners including persons with disabilities. Locally in Kenya, the government ratified the

international protocols and consequently pupils with LD are now joining the regular primary schools. However, the presence of pupils with LD in public primary schools presents additional challenges; in that they cannot learn at the same pace with their non-disabled peers and hence they are left behind in terms of performance. Further, teachers are not well equipped with the teaching methods to enable them cope with pupils with LD (Reddy, 2006). As a result, the pupils fail to acquire the expected basic competencies in their early years in primary school as a base-line survey in Mathira West Sub County, in Nyeri, Kenya revealed (SDE, Mathira west, 2012).

Despite this revelation, there appears to be minimal or no studies conducted in the area of classroom interventions that teachers put in place to mitigate the problem. If this situation is not addressed in time, the expected outcomes of FPE may not be realized. The current study was therefore necessary in order to ensure that children with LD receive the help they require to enable them acquire basic competencies as well as success in school and in their daily life.

### **1.3 Purpose of the Study**

The purpose of the study was to assess the classroom intervention strategies for class three pupils with learning disabilities in public primary schools in Mathira West Sub County, Kenya in order to be able to make suggestions as to which ones provide the best outcomes.

### **1.4 Objectives of the Study**

The study was guided by the following objectives:

- i. To find out the prevalence of pupils with learning disabilities in class three.

- ii. To establish the methods used in teaching class three pupils with learning disabilities.
- iii. To investigate class three teachers' competencies in identifying causes of learning disabilities.
- iv. To find out teachers' attitude towards class three pupils with learning disabilities.
- v. To determine the types of instructional materials used in teaching class three pupils with learning disabilities.

### **1.5 Research Questions**

- i. What is the prevalence of pupils with learning disabilities in class three?
- ii. Which methods are used in teaching class three pupils with learning disabilities?
- iii. How competent are teachers in identifying causes of learning disabilities?
- iv. What is the attitude of teachers towards class three pupils with learning disabilities?
- v. What are the instructional materials used in teaching class three pupils with LD?

### **1.6 Significance of the Study**

The results of this study may be significantly used in the following ways; The Ministry of Education policy formulators may use the findings of this study to identify areas of improvement with a view of providing quality education to class three pupils with learning disabilities. Class three teachers may use the findings of this research to identify the appropriateness of the methods and instructional materials in teaching pupils with learning disabilities. The findings may also provide baseline information to be used by future researchers with the same interest which may open a window for education stakeholders on identifying areas of concern in laying a firm education foundation for pupils with learning disabilities. The findings may also elicit areas of focus to scale-up

academic benefit for pupils with learning disabilities that may eventually open life-long opportunities as a result of quality education provision.

## **1.7 Limitations and Delimitations of the Study**

### **1.7.1 Limitations of the Study**

The main limitation of the study was attributed to the respondents. One head teacher did not give back the questionnaires. Additionally, one teacher was not available for observation. This affected the results because the researcher did not have time for replacement. However, the researcher made maximum use of the available data.

### **1.7.2 Delimitations of the Study**

The study only covered public primary schools in Mathira West Sub County of Nyeri County, Kenya. This study only focused on classroom intervention strategies for class three pupils with learning disabilities. The findings of the study cannot be overly generalized to other parts in the county or school level because the study only covered children in class three and the existing conditions in Mathira West Sub County may not be similar to those in other areas outside the study locale.

## **1.8 Assumptions of the Study**

The study assumed the problem of learning disability is a reality among pupils worldwide and in particular in public primary schools in Mathira West Sub County. The study further assumed that teachers were aware of learning disabilities, use teaching resources and that there were classroom measures put in place to address the plight of learners with LD. Additionally, the study assumed that teachers would be cooperative in providing the information required for the study to be successful.

## 1.9 Theoretical Framework

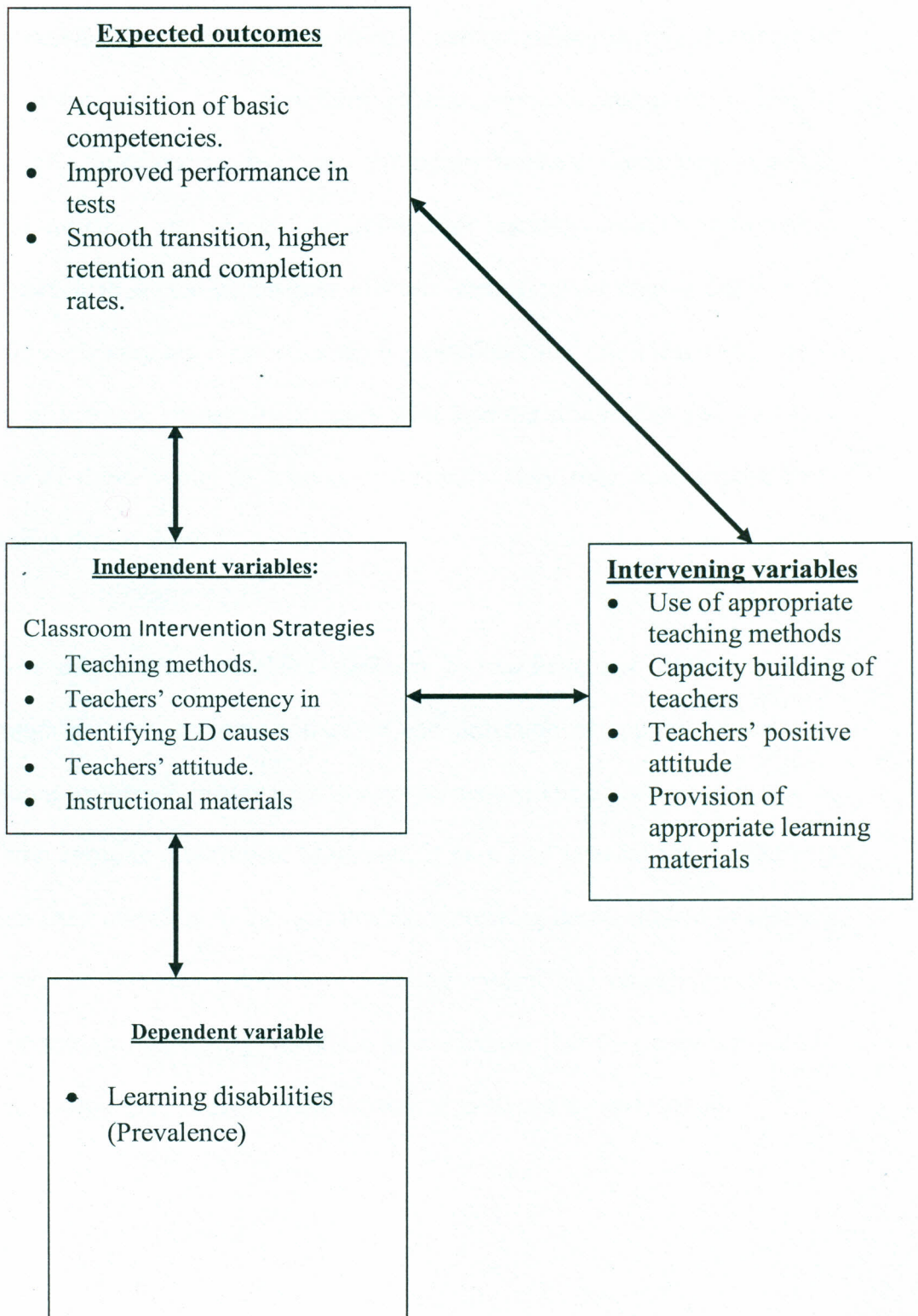
This study was guided by Social Cognitive Theory (SCT). SCT refers to a psychological model of behaviour that emerged primarily from the work of Albert Bandura (1997). Initially developed with an emphasis on the acquisition of social behaviours, SCT continues to emphasize that learning occurs in a social context and that much of what is learned is gained through observation. The theory also has been applied extensively by those interested in understanding classroom motivation, learning, and achievement. SCT rests on basic assumptions about learning and behaviour. A closely related assumption within the Social Cognitive Theory is that people have an agency or ability to influence their own behaviour and the environment in a purposeful, goal-directed fashion (Batshaw & Shapiro, 1997). The Social Cognitive Theory does not deny the importance of the environment in determining behaviour, but it does argue that people can also, through forethought, self-reflection and self-regulatory processes, exert substantial influence over their own outcomes and the environment more broadly.

In this study, classroom learning was assumed to be influenced by what goes on in the classroom and in particular the types of instructional materials, teaching methods and teachers' attitudes towards children with LD. Similarly, learning is affected by the teachers' competencies in identifying causes of LD. Additionally, learning outcomes were also assumed to be influenced by the events in the classroom environment through pupils' interactions with others. However, pupils with LD were placed in isolated ability groups for purpose of catering for their individual differences. While this would enhance focused attention by class three teachers, it also limits effective social interaction among pupils. SCT is therefore applicable in this study because the variables under study were mainly social cognitive and environmental in nature; teaching methods, teachers competencies in

identifying causes of LD, teachers' attitudes and types of instructional materials used by class teachers can promote or discourage acquisition of basic competencies among pupils with LD. Methods of teaching and types of instructional materials can make the child's environment stimulating and motivating and hence have a direct bearing in the child's learning; conversely they can attenuate the child's learning resulting in learning disabilities..

### **1.10 Conceptual Framework**

Figure 1.1 below presents the problem as conceptualized. It shows the relationship between the independent variable (classroom intervention strategies and the dependent variable (LD).



**Figure 1.1: Classroom Intervention Strategies for Class Three Children with LD**

Source: Researcher 2016

As shown in figure 1.1 above, the kind of existing classroom strategies may contribute or accelerate the problem of learning disabilities among pupils or minimize it. Use of appropriate teaching methods by teachers, enhancing teachers' knowledge through capacity building initiatives and provision of appropriate learning materials according to learners' needs may help in the acquisition of basic competencies among pupils with learning disabilities. It may also lead to smooth transition from one class to the next, higher retention of learning content by learners with learning disabilities and increased completion rates of these pupils in schools. Eventually, they may also acquire their potential and realize their dreams.

However, use of inappropriate teaching methods by teachers, not enhancing their knowledge through capacity building initiatives and provision of appropriate learning materials according to learners' needs may thwart the acquisition of basic competencies among pupils with learning disabilities. Moreover, it may also interfere with children's smooth transition from one class to the next thereby increasing the likelihood of learning disabilities in children, lowered retention of learning content and completion rates by these children in schools. Ultimately, there are great chances that they may not acquire their potential nor realize their dreams in life as desired in Kenya's vision 20-30.

## 1.11 Operational Definition of Terms

**Advocacy** : It is influencing teachers to support children with learning disabilities.

**Basic Competencies:** Acquisition of numeracy and literacy skills by the pupils with LD as expected for a specific level of learning.

**Capacity Building:** Empowering teachers with knowledge and skills to enable them manage children with learning disabilities.

**Classroom Intervention Strategies:** Refers to the efforts employed for modifying the curriculum, teacher instruction or pupils' activities to meet the needs for pupils with LD

**Completion** : All entrants with LD in primary in a cycle of education surviving to the end.

**Instructional Resources:** All the materials used by teachers to enhance effective learning to children with LD.

**Learning Disabilities:** Neurological differences in processing information that severely limit a person's ability to learn in a specific skill area among class three children.

**Performance in Tests:** scores attained in written examinations in various areas of study by pupils in class three.

**Retention** : Continued participation of a learner with LD in the formal school system until the completion of education cycle.

**Teachers' Attitude** : Beliefs, feelings and intentions to children with learning disabilities.

**Teachers' Knowledge** : State of the teacher being fully aware of or well informed about the concept of learning disabilities in children, causes and characteristics of children with LD, teaching methods, guidance and counseling to children with LD.

**Teaching Methods** : Planned ways of teaching or imparting knowledge to learners with LD.

**Transition** : Children with LD graduating from one class to another in an education cycle.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter reviews various scholarly works related to classroom intervention strategies for pupils with learning disabilities. It covers; types of learning disabilities, prevalence for children with LD, classroom intervention strategies, teaching methods for pupils with learning disabilities, teachers' knowledge of cause of LD, teachers' attitude towards pupils with LD and types of instructional materials used in teaching.

#### **2.2 Types of Children with LD**

Rose-Hill (2009) identifies a child with LD as one who can see, hear has general intelligence in the near- average, or above average but has educational disabilities that do not stem from inadequate educational experiences or cultural factors and does not acquire and use information effectively because of impairment in perception conceptualization, language, memory, attention or motor control. Children with learning disabilities do not have sufficient skills to focus and sustain attention on a certain tasks. This is because they experience developmental challenges that prevent acquisition of basic skills resulting to learning disabilities. They therefore experience significant difficulty in acquiring literacy and numeracy skills and perform below average compared to other. Most children with LD fall into one or two categories i.e. verbal and nonverbal. Children with verbal LD have difficulty with words both spoken and written. The most common and best known verbal LD is dyslexia, which causes children to have trouble recognizing or processing letters and the sounds associated with them. Since they are hyperactive, they run up and down and cannot stay still for a long time. Their concentration span is low which makes it difficult to persist with a give task for long. They also experience inability to accurately perceive, remember and produce written language. Due to their challenge incoordination

of activities, learners with LD are clumsy which makes it difficult to perform activities involving cutting, sorting objects in size and shape, buttoning and copying from the chalk board. These children have a language learning disorder that limits an individual's ability to learn to read in the absence of other accompanying conditions (Fletcher-Janzen, 2008).

Children with LD have trouble with reading and writing tasks. Some children with verbal LD may be able to read and write well but they have trouble with other aspects of language e.g. they may be able to sound out a sentence or paragraph perfectly making them good readers but they are not able to relate the words in ways that will allow them to make sense of what they are reading. These pupils have memory and organization problems and do not cope with the regular classroom curriculum. They cannot recall concepts learnt or understand abstract concepts; neither can they remember letters and so keep reversing them. They can perform like other pupils in some areas but not in others e.g. a pupil may be good in language but very poor in Mathematics another pupil may have good social skill but cannot read and write. Their learning problems can only be solved through intervention strategies by their teachers. (Bradley, Danielson, & Hallahan, D, (2000)

### **2.3 Prevalence of Children with LD**

The recently published world report on disability (2011) by the World Health Organization estimates that approximately 93 million children between 0-14 years, 13 million or 0.7% are handicapped (WHO AND WB, 2011:7) In Kenya, the Ministry of Education established Education Assessment and Resource Centre Services (EARCS) in 1984 in every district to identify children with Special Needs in Education (SNE) in need of early placement and Special Education service. The population of people with

disabilities in Kenya is estimated at 25% of the total population (UNESCO, 2003). About 25% of these are pupils. Out of a total of 750000 an estimated 90000 have been identified and assessed. According to the report, 14,614 pupils are admitted in Education institutions for pupils with disabilities; similar number is integrated in normal learning institutions. The implication is that more than 90% of the pupils with disabilities remain at home unattended or are enrolled in learning institutions where they do not receive adequate learning support. According to sessional paper number one (Republic of Kenya, 2005) there is no accurate data on the number of learners with LD in public primary schools in Kenya. According to the statistics received from regular schools throughout Kenya, an estimated 10-15% of the learners in public primary schools are those experiencing learning disabilities. According to the Ministry of Education in its National SNE policy paper launched in April 2010. (Daily Nation, 2010), school age going children with LD form the largest group of handicapped children in Kenya accounting for 5% of the total number of handicapped children.

In Nyaza County, statistics from EARCS centers indicates that there were approximately 797 children with LD between 2006-2010 in the regular classrooms (Nyanza County Director of Education, 2010). In Nyeri county, the number of children with LD aged between 6-13 years, according to statistics from EARCS centers between 2010-2012 was approximately 976 (Nyeri County Director of Education, 2012). In Mathira West Sub County, the number of children with LD was approximately 250 between 2010-2012 (SDE Mathira West, 2012). Moreover, every child has a fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of learning. This is emphasized in Kenya Children education act (2001). This triggers the

need to find out the prevalence of children with LD in Mathira West Sub County in order to ensure that this group of learners is adequately supported.

#### **2.4 Classroom Intervention Strategies for Children with LD**

A strategy is a way and means of organizing and facilitating learning experiences. It is a deliberate planning and organization of experiences and situations with a view of achieving specific goals. It is the overall way in which the process of instruction is organized and executed (Sailor, 1991). Research carried out in Namibia by Wang et al (1994) indicated that the experience that a child gains from classroom interaction with the teacher and the peers has greater impact to the child's learning compared with the general policies and the school operations. The study revealed that learning is affected by the set goals, motivation and realistic school routine. As such, effective learning for children with LD requires teacher selection and application of specific intervention strategies in the course of interaction with the learner in the regular classroom.

Early intervention programs for children with learning disabilities have positive outcome on children learning. Intervention strategies are required for better education achievements. If problems are identified early, there is a likelihood that intervention can reduce the challenges experienced by learners with LD in learning, long range effects of disability can be lessened and also reduce chances of developing secondary disabilities. (Twoli, 2007). The following intervention strategies have been identified for effective learning for pupils with LD in the regular classroom.

### **2.4.1 Providing Clear Instructions**

Ross-Hill (2009) provides that overall study skill instruction has been shown to improve academic performance among children with LD. Teachers should provide oral instructions supplemented with written instruction as much as possible, clarify points, provide information bit by bit accompanied with oral presentation. Teachers should enhance pupils' ability to follow instructions by getting pupils attention before giving directions. Reduce distractions both visual and auditory within the learning environment. Teachers should also give oral directions but keep them short and direct and always supplement them with clarification when needed and written directions. Give one direction at a time, repeat the direction with LD children after they have been given to the entire class. Teachers should also provide additional examples and have the learner repeat the direction to check for understanding and have a follow up of activities to be completely successful. This way good teacher- child relationship is enhanced.

### **2.4.2 Spaced Practice**

Sailor (1991) suggests that teachers should give children with LD breaks while learning because they require enough time to practice the skill learnt. It should be ensured that children with LD continue to study concepts even after they have mastered them and be encouraged to keep rehearsing what they have learnt. To enhance their memory, promote creativity and arouse their interest teachers should help them summarize information of what they have learnt through reciting poems, use of songs, questioning technique and use of mnemonic devices.

### **2.4.3 Enhancing Reading and Writing Skills**

To enhance reading skill teacher should locate lower level content material on the same topic for children with reading difficulties have it orally read to the pupils and then ask

question orally. Sample relevant concept starting at lower level of reading until the Childs level is reached. Teacher should also note any sensory difficulty. Key words and phrases should be highlighted by using a different color or by coding the text. Teachers should also encourage periodic feedback from the learners in order to check their understanding. It is also important for the teachers to pretest vocabulary words in order to be sure that learners can use them appropriately rather than simply recognizing them. Provide further guided practice by requiring more responses. Have the text tapped or read orally to the learners and makes appropriate use of visual aids such as charts and flash cards. Each learner should be allowed to respond in the way he can function best. Teachers should be made to understand that given an opportunity, all children are capable of learning (Sailor, 1991).

To improve writing abilities, teachers should enhance writing response avoiding assigning excessive amount of written class work, encourage neatness by allowing learners to circle or underline response , let them type or record answers instead of giving them in writing, allow sufficient space for answering problem and reduce amount of board copying or text book copying (Sailor, 1991).

#### **2.4.4 Involving Peers**

Sailor (1991) advocated for cooperative learning to enhance successful inclusion for children with LD in the regular classroom. Teacher should organize and put children in small groupings. This can be done using various criteria and guided by children's potential and characteristics. Some criteria used in grouping children include age, ability, and interest. Pupils should then be involved in group learning activities and provide reinforcement based on groups rather than individual performance. Children with LD

identify with the group and they all work to achieve a common goal. They also learn at their own pace and are assisted by their peers in the group. This also helps the teacher to cater for individual interests of the children when teaching. Teacher needs to give individual and group activities in which learners experience some amount of success, give tasks regularly and provide enough time to enable learners' complete tasks.

#### **2.4.5 Modification of the Curriculum**

Rose-Hill (2009) advocated for appropriate modification of the curriculum for children with LD. He asserted that the primary school curriculum in majority of African countries is rigid. The teachers are expected to make use of the laid down syllabus provided by the ministry of education for each grade level. It is therefore necessary to integrate the curriculum to meet the individual needs of all the learners. The school therefore plays an important role in terms of supporting learning and implementing teaching for children with learning disabilities. As such, the content and activities need to be modified and be presented from simple to complex. This is because children with LD are slow in understanding concepts which makes them lag behind compared to their peers. Learning should be broken into short systematic steps, accompanying it with a lot of demonstration since learners with LD have a short concentration span. This helps to sustain their interest and hence understanding of concepts taught in class.

The teacher should be able to design and implement adequate individual instructions in reading and writing for children with LD, identify the specific learning difficulty and deal with it appropriately by using a wide range of instructional materials and methods. This is due to the fact that children have different abilities, backgrounds, temperaments, attitudes and needs. Teachers should also set guidelines for appropriate classroom behavior for

children with LD. Teachers need to be skilled in classroom management in order to guide the learners 'effectively. There should be workable school routine and ways of managing learners' behavior within the classroom. This aids the teacher in setting standards of behavior enabling the learner to do the right things in the right way, at the right place and in the intended time. By so doing, learners with LD are expected to reap maximum benefits by directing their attention towards the intended activities in the learning process (Lloyd, 2009). The current study develops the studies of (Sailor, 1991) by not only focusing on cooperative learning but also the influence of the pupils' social interaction with others as well as the teachers to upgrade their learning abilities.

## **2.5 Methods used in Teaching School Children**

The methods of instruction used by the teachers can determine the level of attainment of basic competencies acquired by learners. Reading literacy is one of the most important skills acquired by learners as it lays the foundation for learning across all subjects in a learner. It can be used for recreation and personal growth, while simultaneously providing learners with the ability to participate more extensively in their communities and societies. Learners can construct meaning from a variety of texts. They read to learn, participate in community of readers and for enjoyment (Mullis et al, 2009).

In the USA, multi-sensory techniques are frequently used for children with LD. Studies from the National Institute of Child Health and Human Development (NICHD) have shown that for children with difficulties in learning, a multi-sensory teaching method is most effective. Multi-sensory teaching techniques and strategies stimulate learning by engaging them on multiple levels to use some of their senses to gather information. Most teachers use visual auditory teaching techniques. Learners depend on sight to gather

information from the text and pictures as well as reading written information from the chalk board while the sense of hearing is used in listening to the teacher. However, the Child's visual and auditory reception may develop some complication which may hinder the processing of information received. In order to effectively manage these difficulties, it is important that the teacher helps learners to make use of all their senses to learn. The learner is also assisted to develop kinetic and tactile memories along with auditory and visual ones. Since children with learning disabilities experience challenges in spelling, reading, writing, maths, listening, expressive language and comprehension, multisensory techniques provide an opportunity where learners make use of their strengths to manage their weaknesses. This enhances memory as learners gather information and store it for later recall, while all ideas learnt and understood are linked together. The learner also gains skills in problem solving and nonverbal reasoning and is also able to relate concepts learnt in class. This facilitates the acquisition of reading skills as the learner attempts to gather information and link it to ideas they already know (Mullis et al, 2009).

A study conducted by Fletcher-Janzen (2008)) established that increase in learners' diversity requires that teachers acquire appropriate teaching skills to manage all learners in order to ensure that they function at the expected levels in spite of having learning disability. Successful intervention for such learners call for appropriate know how on instructional requirements of learners with LD and how to meet their needs. At a conference held in Asia for lower primary school teachers (2012), it was noted that teaching a child to become a competent critical reader and writer is one of the gifts a teacher can give to a child. Yet in several schools especially in Asia, skills and drill worksheets are emphasized rather than teaching reading and writing strategies through the use of good stories. Research studies suggest that children knowledge, skills and attitudes

transfer naturally across languages from the mother tongue they have learnt at home to the school language. In New Zealand for example, it was observed that learners who had not developed competence in their first language did not grasp learned languages as easily as those who had a good foundation (NESB, 2005). Bloch (2002) in his study established that large numbers of children in South Africa do not learn to read and write either in mother tongue or any other language. Teachers, identify children's lack of literacy or inability to write as a major problem. The issue of pedagogical approach to teaching basic competencies in lower primary has been identified as an important contributing factor. The skills needed for teaching, reading and writing are taught to children from simple to complex and from part to whole with emphasis on phonics, letter formation and neat handwriting. Teaching reading and writing involve children in doing meaningful activities with written language from the start.

In Namibia, a study conducted by Baker (2003) recommended that lower primary grade teachers needed to use mother tongue in teaching to enhance effective transition of learners from home to school. This prepares the learner for an exit from the use of mother tongue instruction to English instruction at school. A report by the ministry of education (2009) asserted that when teachers use the language of the catchment area, they assist the learners to develop language skills and literacy. When the learners become competent in their mother tongue, they are able to cope well in their learning. This enhances mastery of other languages. The main objective in the use of local language for instruction when teaching is to enhance acquisition of skills which provide a good background for literacy, numeracy, understanding of concepts and ability to communicate effectively.

Kenyan children learn to read and write in lower primary school. The medium of instruction in education is the medium by which learners come to access and understand information that ultimately leads to their further acquisition of basic literacy (Schroeder, 2005). Koech report (1999) observed that children were being introduced to foreign languages too early, even before they had properly mastered their first language. This was attributed to the pressure of national examinations. As a result, the report recommended that in early years the first language be used in transmission of knowledge, skills and attitudes. A study done by Schroeder (2005) observed that learners need to rely on mother tongue in lower primary even though literacy in English is the ultimate objective. This is because most children think in mother tongue then attempt to translate their thoughts in English. In his study, Munyeki (1999) noted that some teachers fail to realise the multiple purpose when the first language of instruction is mother tongue. Lower primary school teachers need to teach reading and writing as well as speaking and listening in this first language of instruction.

A study carried out by Munyeki in thirty two primary schools found out that teachers were not motivated to use the children's mother tongue in teaching, yet using mother tongue is important because it facilitates children development of concepts that enables them to acquire knowledge in the second and third language. He also noted that use of mother tongue is important in school when it comes to learning stories, riddles, legends folk song and folk dances. Learning becomes more enjoyable and informative if presented and performed in a language that the learner understands best. Munyeki in his study further established that intensive and extensive reading was being implemented simply as reading and answering question in teaching reading. Teachers did not consider learners with LD and no provision was made for them. Additionally the study established

that the methods teachers used did not include pleasurable activities and the pupils were not motivated to learn. Some teachers confessed that they used reading comprehension questions to occupy the pupils time Teachers did not take into account the learners with LD and a lot of information was covered within a short period of time. A study conducted by Oyaro (2005) in two primary schools in Nairobi found out that teachers were encouraging children to read in class during the English lesson and to tell stories they had read to their classmates. This approach combines oral and print literacy. The study further established that teachers were also trying to make reading enjoyable by getting their pupils to read in a friendly environment and make their library lesson interesting by allowing the children to read outside, under trees. The study concluded that such an approach made reading enjoyable and relaxing, so the learners looked forward to the library lesson, as they would be doing something different from being in the classroom.

The studies revealed the influence of pedagogical skills in teaching and hence acquisition of basic competencies at an early age. The reviewed studies indicated that despite the government provision for inclusive education in schools, teachers do not take into account any need for smooth classroom provisions for learners with LD as they plan lessons. Thus as noted by Munyeki (1999), that some teachers fail to realize the need for multi-purpose lesson planning, this study explored further into other methods of lesson planning leading to acquisition of basic skills in literacy and numeracy for pupils with learning disabilities.

## **2.6 Teachers Competencies in Identifying the Causes of LD**

Learning is regarded as the process of acquiring of new knowledge, behaviors, skills, values and understanding and may involve synthesizing different types of information. A

child who is experiencing difficulties in mastering some aspects of his or her educational work might be termed as having LD (Harrison & Flanagan, 2005). In most countries, primary education lays the foundation in which other education levels build and since learning disabilities seem to be more manageable if it is discovered early in the life of an individual, primary school teachers have an important role to play in maintaining the learners' self-esteem by extending their willingness to learn.

Westwood (2008) noted that, for many years experienced lower primary school teachers were reasonably skilled in noting when children were having learning problems. He argued that these teachers were at the cutting edge of the early identification process. They were able to note various challenges experienced by their learners such as: Child's ability to maintain attention to tasks for adequate period of time, work with close supervision, persist with tasks despite frustration, listen to and understand instructions, socialize with peers, show interest with books and make serious efforts to learn. They were capable of identifying children experiencing learning problems but they were not able to explain the cause.

Robuck (2009) indicated that general teacher training did not include knowledge on LD and their causes. Teacher training curriculum content devoted no class hours to train teachers on challenges those children with LD face and how to upgrade them. Moreover, lower primary school teachers typically did not pursue any further studies or capacity development courses that focused on effective ways to teach learners with LD. Lastly, educational officials did not supervise quality education provision to learners with LD by teachers. The argument was that many teachers did not realize that children with LD had to work much harder than their peers to acquire, retain and perform academic and social

skills on a daily basis. This could cause overwhelming stress for the learners who had limited coping resources that very often translated into behaviors that were likely to be interpreted or not noticed by teachers who did not have a good understanding of LD and its causes. The assertion was that the solutions teachers usually offered to assist learners with LD normally focused on the child, rather than themselves since they did not understand the genesis of the problem. Quite often a teacher could successfully reduce or eliminate a child's LD with simple change in the way the teacher presents information, provides assistance, or alters the way the child could demonstrate performance of academic tasks.

Reddy (2006) suggested that the challenge of achieving full education integration of children with LD within the classroom could be easily achieved if the teachers possessed better knowledge about LD. He argued that lower primary school teachers should possess some specific competencies in assessment, planning individualized education program a part from guidance and counseling to children with LD. Teachers should possess thorough understanding about the concept of LD with the causes and characteristics, identification, assessment and teaching methods. Such knowledge he claimed would enable them manage children with learning disabilities which in turn would lead them towards children's acquisition of basic skills as a result of the early intervention program provided in class. A study conducted by Sari, (2009) in Jordan found out that 80% of regular classroom teachers had acceptable levels of knowledge of LD.

In Kenya a similar study done by Gateru (2010) in Makadara division established that 79% of the teachers were aware of LD and had identified children with LD while 21% of the teachers were not aware. However, such knowledge does not necessarily mean that

teachers provide learners with LD in their classes with the necessary adaptations and support. A study conducted by Kithuka (2008) in Kitui established that most teachers were not professionally trained to handle learners with special needs in education neither did they possess any knowledge on the subject. There is therefore a great need to have some radical changes in teacher education in attempt to adequately prepare teachers address the challenges of teaching learners with a wide range of abilities. While previous studies of Reddy (2006) focused more on lower primary LD the current study will expand the knowledge gap by probing into teachers' competencies in identifying causes of learning disabilities.

### **2.7 Teachers' Attitudes towards School children's Learning Disabilities**

The attitudes and beliefs of teachers are very important to ensure the achievement of inclusive education because the acceptance of the policy of inclusion by teachers can affect their commitments to implement it (Shalev, 2007). Teachers in Britain and United States of America had negative attitudes towards children with learning disabilities. This was mainly because children with LD required more time than other children (Thurman, Vollmer and Pieper 2010). Shalev (2007) conducted a study in Asia on 10500 teachers which revealed that two thirds of the teachers were not ready to teach children with LD where most of them supported the placement of children with LD in learning institutions which had specialized personnel, they felt that policy makers were not in touch with the realities of the classroom. These findings indicated that majority of the teachers believed that they were not responsible for modifying the curriculum for children with LD, only 21% of teachers believed otherwise.

In Europe a sample of pre service teachers had the opinion that the responsibility of teaching children with LD should remain with special education personnel and that integration of those learners in regular classroom was for socialisation purpose only (Alsheikh and Elhoweris, 2006). Teachers' attitudes towards the learners with LD were therefore found to impact negatively on the relationship between learners with LD and their counterparts.

The case is no different in Africa as Sari (2009) in his study found out that lower primary school teachers had a negative attitude towards learners with LD. This was evidenced by use of inappropriate instructional methods in curriculum delivery and lack of adequate support by the school administration. Additionally, most of the teachers were not professionally qualified to handle learners with a wide range of difficulties; as a result, most teachers were not motivated to teach learners with LD. A similar report given by (UNESCO, 2012) at the implementation level of inclusive education was that teachers in Africa have a negative attitude towards learners with special needs in education resulting from inadequate training. Majority of teachers felt that pre-service courses were not adequately preparing them with skills and competences needed to teach learners with widely varying abilities as most of them trained when special needs education units were not being offered in teacher training colleges. Most teachers were therefore not willing to teach any learner who required special attention in learning.

Shama (2006) on a study in Uganda show that the severity of disability affects the attitudes of teachers as teachers thought to meet the needs of children with emotional and behavioural difficulties is the most difficult, children with LD fall in the first group. In Kenya, teachers also have a negative attitude towards learners with LD as established by

Silas (2012) on a study in Kilifi County. Most teachers have negative attitude towards learners with difficulties in acquisition of basic competencies as they see it as a bother as these learners are low achievers and that they do lower the mean score. Consequently, majority of the teachers preferred excluding them from the examination system in their schools. Most of the head teachers are not trained in special needs education thus making it difficult to instil the support of these learners with the problem of acquisition of basic competencies in their schools.

A similar study carried out by Kamene (2012) in Yatta district also established that teachers had a negative attitude towards learners with a wide range of abilities. Teachers and head teachers in regular schools were not willing to accommodate and teach these learners. A head teacher in one of the regular schools accommodating children with LD revealed that teaching children with LD had translated into a calling. She explained that this was because training teachers in special needs education appeared to be more theoretical than practical as some of the teachers trained in special needs education were not willing to handle children with LD in their classes.

Due to lack of proper identification, most of the learners with LD lack proper placement and provision in ordinary schools. As a result, teachers identify them as those learners who are difficult to teach, slow learners, lazy, day dreamers, foolish and careless (Runo, 2001). It is evident from the literature that teachers are likely to have negative attitudes towards children with LD as most teachers have not developed ownership of these learners in their classes. This triggers the need to carry out a study on teachers attitudes because unless teachers have a positive attitude, children with LD are unlikely to benefit from the classroom interaction with the teachers. This is a concern for the study.

## **2.8 Types of Instructional Materials used by Teachers**

Material is anything used by a teacher to facilitate the development of knowledge, skills and attitude in learners. They include anything that is prepared, designed and modified to enhance effective teaching and learning in school. Provision of materials helps in stimulating learners' physical, mental, social, emotional, moral and spiritual development. (Ross-Hill, 2009). When children actively engage themselves in the manipulation of materials, they use all their senses during learning. This enhances understanding of concepts that would have otherwise been difficult to understand. Instructional materials are sources of information and serve as stimulants for learning when they are handed and manipulated. Teachers therefore need to use a wide variety of age appropriate instructional materials such as audio aids, visual aids, audio visual aids and manipulative materials (Cook, Cameron & Tankersley, 2007). Accessible instructional materials (AIM) are among the most helpful to students whose learning disabilities affect their ability to acquire basic competencies.

In U.S.A, Teachers are capable of using locally available materials to impact knowledge to all learners including those with LD (Ross-Hill, 2009). The education program mainly provides activities, variety of materials, and experiences that allow and encourage young children to become aware of the differences and similarities of the members of the community in which they live. Use of instructional resources helps stimulate learning because children get more attentive, arouses learners' interest, develops their imagination and enhances their participation in class activities. When children are allowed to be actively involved in their learning, there is a tendency of correcting wrong concepts and refining the imperfect ones. This enhances intellectual capacity, nurture achievement,

imagination, self-expression and good teacher pupil relationship (Twoli, 2007). This has helped to improve the performance of learners with LD.

In Botswana, however, Chhabra, Srivastava and Srivastava (2010) in their study, observed that most of the schools are ill-equipped and there is an acute shortage of teaching aids and equipment appropriate for special needs education including learning disabilities as indicated by 71.4% of the head teachers. The study also established that most teachers had not received any training in special needs education and lacked the knowledge required to use the instructional materials appropriately. In the study, majority (86.7%) of the teachers indicated that they were not using a wide range of instructional materials in teaching to cater for individual needs of children with LD. A study conducted by Kalabula and Mandyata (2003) in Zambia established that learning resources were inadequate in regular schools that had accommodated children with learning disabilities. Similarly in Uganda, Kristensen and Kristensen (1997) study also revealed that instructional materials were inadequate in ordinary schools.

Kamau (2000) emphasized the use of different types of locally available materials in teaching lower primary school pupils. This is because it was established in a study of lower primary schools in rural Kenya that there was lack of varied materials for all primary school grade levels. The study also established that too many reading materials failed and resources failed to capture the important cultural aspects of many communities in Kenya and did not borrow of indigenous African education. Kithuka (2008) on a study in Kitui suggested that use of a wide range of instrumental materials in learning has a positive impact among children with LD. Children learn better when they construct their knowledge through use of manipulative materials. At the same time, learning materials

help to minimize the learning difficulties and errors. However, learning materials in most schools were found to be inadequate.

Gateru (2010) on a study in Makadara division established that 20% of the teachers indicated that the school administration supported teacher involvement for pupils with LD by providing instructional resources. Learning resources were again found to be inadequate. The study recommended that the head teachers as school managers take the responsibility of ensuring that schools are adequately equipped with relevant learning resources. Their main task was to organise the acquisition, allocation and distribution of learning resources in their schools. This study therefore intends to investigate the types of instructional materials, production and supply of materials in order to boost acquisition of basic competencies in pupils with learning disabilities.

## **2.9 Summary of Literature Review**

The study has reviewed literature on the types of children with LD. The study has established that these are normal children whose general intelligence is the near average or above average but experience a wide range of learning difficulties. As a result, their performance is below average compared to their peers. The study has also reviewed literature on prevalence of children with learning disabilities and has established that there are children struggling with the problem of LD in public primary schools. Studies reviewed have also established that teachers use different intervention strategies in attempt to assist children with learning disabilities in their classes. It has also been established from the studies that teaching methods, teachers' competencies in identifying causes of LD, teachers' attitudes, and types of instructional materials enhance acquisition of basic competencies by pupils with LD. Failure to offer this school environmental

condition has resulted to pupils with LD in class three be promoted to class four without adequate learning abilities or competencies. Similarly, if the progression is maintained, pupils with LD would end up moving across other higher levels unprepared and eventually attain poor results in Kenya certificate of Primary Education as has been the case in Mathira West Sub county and hence the rational to conduct the study in the area.

## CHAPTER THREE

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1 Introduction

This chapter focuses on the methods to be used in the study and it is divided into thirteen areas. These are the research design, study variables, target population, sampling technique and sample size, the research instruments, validity and reliability of the research instruments. Also presented are the data collection techniques, data processing and analysis and ethical and logical considerations.

#### 3.2 Research Design

The researcher employed the descriptive research design using the survey method. The design was appropriate because it involved collecting data in order to answer questions on current status of subjects of the study. Kothari (2003) recommends descriptive survey design as it allows the researcher to describe, record, analyse and report conditions that exist or existed. According to Orodho (2004) descriptive research is used when the problem has been well designed. It involves fact finding and enquiries of different types. It explains a state of affairs as it exists. The descriptive survey design also allowed the researcher to generate both numerical and descriptive data that was used in measuring relationships between variables. This design was appropriate because it allowed the use of questionnaires and observation schedule to a large population within a short time, in order to gain information on classroom intervention strategies for class three pupils with learning disabilities.

### **3.2.1 Variables**

#### **3.2.2 Independent Variables**

The independent variables in the study were the following.

- **Teaching Methods**

The teaching methods used in a classroom determine the extent to which the pupils with learning disabilities acquire the basic competencies. Teaching methods were measured by use of an observation checklist where the researcher observed eleven class three teachers as they taught in class. Questionnaires were also administered to the teachers and head teachers.

- **Teachers' Competencies in Identifying Causes of LD**

When teachers are competent in identifying causes of LD, they are likely to understand the uniqueness in causes of learning disabilities so that they can cater for individual pupil differences in order to upgrade their cognitive ability. Teachers' competency in identifying causes of learning disabilities was measured by use of a 5 point likert scale administered to teachers and head teachers.

#### **Teachers' Attitude**

Attitude determines teachers' behavior towards an attitudinal object children. Teachers' attitude was measured through opinion counts using questionnaires administered to teachers and head teachers.

- **Instructional Materials**

Instructional materials enhance learning, simplify content, motivate learners and also make learning interesting. The study assessed the types of instructional materials by use of an observation checklist where the researcher observed eleven teachers in class three as they taught. Questionnaires were also administered to the head teachers and teachers in order to assess the types of instructional materials used.

### **3.2.3 Dependent Variables**

The dependent variable in the study was LD. It was measured by establishing the number or prevalence of children with learning disabilities in class three.

### **3.3 Location of the Study**

The study was carried out in Mathira West Sub County of Nyeri County Kenya located between longitude 36° 38' East and 37° 20' East and between the equator and latitude 0° 38' South. It has a population of 74423 persons in an area of 148.3 sq km. The area lies at an average altitude of 1868 Meters above sea level. The sub county experiences equatorial rainfall due to its location within the equatorial region of Kenya. It receives rainfall amounts of between 550 mm and 1500 mm per annum with the long rains from March to May while the short rains occur between October and December. Temperatures range from a mean annual minimum of 12° c to a mean maximum of 27° c. The Sub County is situated on the southern slopes of Mount Kenya, approximately 150 kilometers from Nairobi and borders Kieni East, Mukurweini, Nyeri central, Mathira East Sub Counties. The area has two administrative divisions namely Kirimukuyu and Ruguru. The area has rich volcanic fertile soils for the growth of coffee, tea and other horticultural crops, which has attracted a dense population, good road network and schools

population. The features may influence teachers' commitment in applying appropriate classroom intervention measures when teaching children with learning disabilities who require more contact hours.

Unfortunately, the favorable climatic conditions and rich soils may also encourage teachers to be engaged in farming activities which yield them high immediate incomes. As a result, time to cater for individual needs of children experiencing learning disabilities may become limited. Additionally, parents engage children in various farming activities at the expense of school work resulting to limited time for constant rehearsal. In this regard, a base-line survey done across the district revealed that at least ten lower primary school children in each lower primary school had not acquired basic competencies as expected to enhance smooth transition (SDE,2012)

### **3.4 Target Population**

The target population only consisted of class three pupils who are 2000 in total in the 35 public schools in Mathira West Sub County of Nyeri County, of which 15 schools were double streamed while 20 are single, streamed, 35 head teachers and the 50 class three teachers teaching these children. Class three pupils were targeted for the study because by this age, they are expected to have gained the basic competencies in reading (Lloyd, 2009). Also long range consequences of LD can be lessened with early intervention (Bradley, Danielson & Hallahan, 2002).

### 3.5 Sampling Techniques and Sample Size

#### 3.5.1 Sampling Technique

The researcher employed multi-stage sampling technique in different stages (Orodho, 2004).

i) **County:** Nyeri County was purposively sampled from the 47 Counties in Kenya.

ii) **Sub County:** Mathira West Sub County was purposively selected from the 8 Sub Counties in Nyeri County on the basis of the base –line survey done on acquisition of basic competencies amongst the lower primary school children (SDE, 2012).

iii) **Schools:** The 35 public primary schools in the district were stratified into single or double streamed. This is because in double streamed schools there were two teachers and two classes; these classes were being administered by the same head teacher. After stratification 30% of each school category was selected, i.e. six single streamed and 5 double streamed were randomly selected. This met the threshold recommended by Orodho (2004), which indicates that a sample size of at least 10% if the population is large and at least 20% if the population is small is adequate. The rationale of sampling single and double streams separately was due to the fact that in double streams the two classes were being administered by the same head teacher. Therefore, the characteristics of two classes in double streamed schools were assumed to be similar.

**Head teachers:** Purposive sampling was used to select 11 head teachers of the above schools sampled.

iv) **Teachers:** One class three teacher of each of the 6 single streamed schools was selected purposively while the 5 teachers from double stream were selected by simple random technique to avoid bias. The number of teachers in the study was 11.

### 3.5.2 Sample Size

The sample of the study consisted of 11 head teachers and 11 class three teachers in public primary schools in Mathira West Sub County.

**Table 3.1: Sampling Frame**

	<b>Population</b>	<b>Sample Size</b>
Head Teachers	35	11
Teachers	50	11

### 3.6 Research Instruments

Research instruments that were used in the study comprised of questionnaires for head teachers and teachers and observation check-list for class three teachers.

#### 3.6.1 Questionnaire for Teachers

The teachers' questionnaire had semi-structured items and consisted of two sections; A and B. Section A had seven items and gathered data on the teachers' background. Section B had 22 items in a five-point Likert scale and sought information on; methods used in teaching children with LD, teachers' competencies on identifying causes of LD, teachers' attitude towards pupils with LD, types of instructional material used in teaching children with LD. The teachers' questionnaire used for the study is in appendix II.

#### 3.6.2 Questionnaire for Head Teachers

The head teacher questionnaire had semi-structured items and consisted of two sections; A and B. Section A had six items and gathered data on the head teachers' background. Section B has 24 items in a five-point Likert scale and sought information on; methods used in teaching children with LD, teachers' competencies in identifying causes of LD,

teachers attitude towards pupils with LD, types of instructional material used in teaching children with LD.

The researcher found questionnaires adequate for the study because it was the most suitable research instrument for descriptive research design (Mugenda & Mugenda, 2003). It also encouraged honest responses to sensitive questions since it guaranteed confidentiality. The reason for using it was to reach many respondents within a short period of time and to gather quantitative data. Also the targeted population was considered learned and therefore much data required for the study would be easily available. The head teacher's questionnaire used for the study is in appendix III

### **3.6.3 Observation Check-list**

An observation check-list was used to counter check the responses from the questionnaires from all the 11 sampled schools and it assisted the researcher to note whether a particular characteristic or behaviour was present or not. The observation check list consisted of 17 items and looked at teachers' behaviours, on a four point likert scale rated, never, rarely, occasionally and consistently observed while teaching. A tick or a cross was put to determine the presence or absence of behaviour. The observation schedule had items to cover teaching methods, teachers' knowledge, teachers' attitude, and types of instructional materials. The researcher assumed observation was useful because it is a reliable and unbiased source of information to the degree to which it is focused and systematic and also helped to gather qualitative data (Orodho, 2004). Additionally, one of the most important and extensively used research methods in the field of social sciences is observation (Mugenda, 2008). The observation schedule used for the study is presented in appendix IV.

### **3.7 Pilot Study**

Prior to visiting the schools for data collection, the researcher tested the instruments using two schools in the Sub County, but which were not included in the final sample. The purpose of the pilot study was to enable the researcher to improve the reliability and validity of the instruments and to familiarize with its administration. According to Mugenda and Mugenda (2003), piloting procedure helps to ascertain that the instrument for collecting data is free of any pitfalls and mistakes that would surface in the main data collection process.

#### **3.7.1 Validity**

This was ensured by seeing to it that the questionnaires and observation check-list reflected the objectives stated in the study. Additionally, content validity was ensured by ascertaining accurate reporting from quoted work and that the language and the vocabulary used was accurate and simple to be understood by the respondents. Accuracy within test items was ensured during piloting and by checking carefully how items were worded and that they measured what they were intended to (Mugenda & Mugenda, 2003).

#### **3.7.2 Reliability**

The research instruments are tested in order to assess their reliability (Mugenda & Mugenda, 2003). In this regard, the test –retest method was employed whereby the head teachers and teachers in the pilot schools were given a similar set of questionnaires to respond to twice in two different occasions at an interval of one week. Thereafter, the scores for both sets were correlated by use of Kuder-Richardson (K-R) 20 formula (Mugenda & Mugenda, 2003) given as  $KR_{20} = \frac{K}{K-1} \left( 1 - \frac{s^2}{S^2} \right)$ .

Where:

KR20 = Reliability co-efficient of internal consistency

K = Number of items used to measure the concept

$S^2$  = variance of all scores

$s^2$  = Variance of individual items

The mean scores of the respondents on the two tests yielded a coefficient of 0.78. This was considered adequate to judge the instruments as very reliable for use (Orodho & Kombo, 2002).

### **3.8 Data Collection Techniques**

The researcher personally distributed the questionnaires to all 11 sampled head teachers and teachers. In addition each of the sections of the questionnaires was interpreted to ensure that the respondents fully understood the items before answering. Secondly, the researcher ensured that the respondents were not in a hurry and had adequate time to answer the questionnaires. The questionnaires were then collected after being filled the following day. Thereafter, the researcher booked an appointment for classroom observations in which the sampled 11 class three teachers were observed in class as they taught the children. Distribution, administration and collection of questionnaires from head teachers and teachers took two weeks. Classroom observation of the 11 teachers was done in about two weeks and one day that is, one school per day. Therefore the entire data collection process took about four weeks.

### **3.9 Data Analysis**

Data collected were coded, organized and analysed using both quantitative and qualitative methods. Qualitative data from observations check-lists was organized into specific themes or categories and discussions presented mainly as narratives. For quantitative

data, descriptive statistical analysis such as means, frequency and percentages were used to analyse data with the help of the computer package Statistical Package for Social Sciences (SPSS). The statements (items) on the Likert scale were scored as follows;

Strongly Agree (SA) = 5 Points, Agree (A) = 4 Points, Undecided (U) =3 Points, Disagree (D) = 2 Points, Strongly Disagree (SD) =1 Point. The scores were then summed up according to the category of responses and presented in form of tables, pie charts and graphs. In the interpretation of the scores, a grade means score of below 3.0 denoted a neutral effect while a grade mean score of 3.0 and above denoted a positive effect of classroom intervention strategies for class three pupils with learning disabilities. This was then used to identify the findings and also in making the final study report.

### **3.10 Logistical Consideration**

The researcher applied for a letter of introduction from the Graduate School of Kenyatta University, and then obtained a research permit from the National Council of Science and Technology. Thereafter, the researcher sought authority from the sub county Education Office in order to facilitate data collection. The researcher obtained consent from Ministry of Education and authority letters from respective county education office and primary school administrators.

#### **3.10.1 Ethical Consideration**

The information obtained from the respondents was confidential and only used for this study. Before beginning the study, the class three teachers, and head teachers were requested for their consent to participate in the study.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This chapter presents analysed data and offers interpretation of the results from the findings. The main objective of the study was to assess classroom intervention strategies for class three pupils with learning disabilities in public primary schools in Mathira West in Nyeri County. According to the study objectives restated below.

- To find out the prevalence of class three pupils with learning disabilities.
- To establish methods used in teaching class three pupils with learning disabilities.
- To investigate teachers' competencies in identifying causes of learning disabilities.
- To find out the teachers attitude towards class three pupils with learning disabilities.
- To determine the types of instructional materials used in teaching class three pupils with learning disabilities.

Data were collected from 11 class three teachers and 11 head teachers by use of questionnaires. It took the researcher two weeks to administer the questionnaire and two weeks for classroom observations. An observation schedule was used to collect data from 11 class three teachers in 11 public primary schools. The entire data collection process therefore took a period of one month. However one head teacher did not return the questionnaires while one class three teacher was not available for classroom observation. The return of questionnaires was 95.45% of the targeted population while data collected from observation schedule was 90.9% of the targeted population.

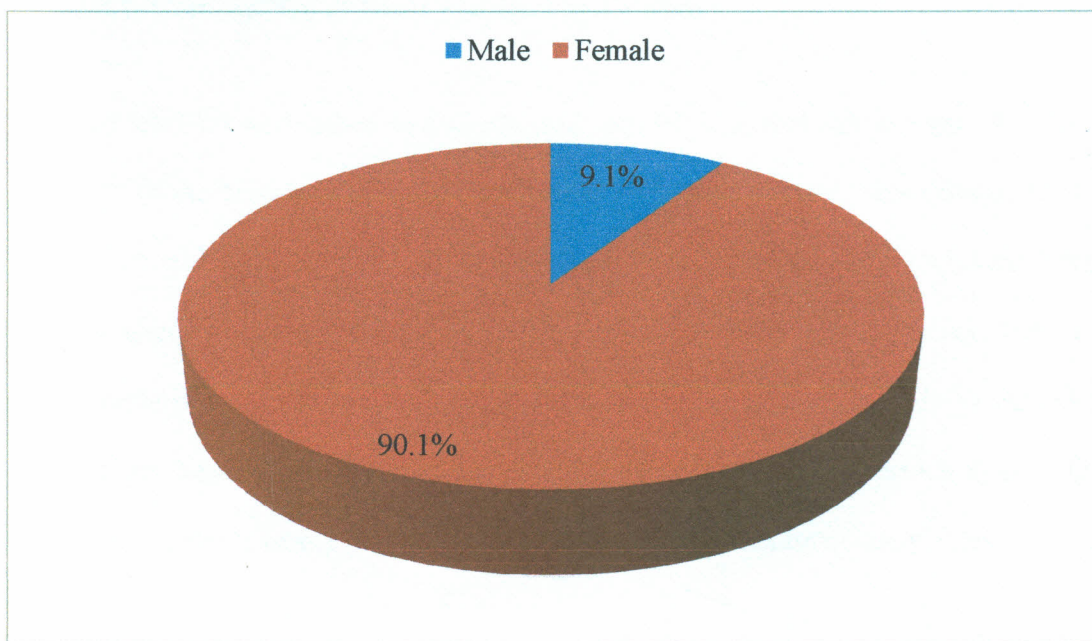
## 4.2 Demographic Characteristics of the Respondents

This section describes the demographic characteristics of the respondents in the study area. Such a description is important in providing a clear understanding of the respondents and institutions included in the study and which may have influenced the results based on the objectives of the study. The demographic characteristics covered in this section include; gender, work experience and professional qualifications of teachers.

The findings are presented in Figure 4.1

### a) Gender of Teachers

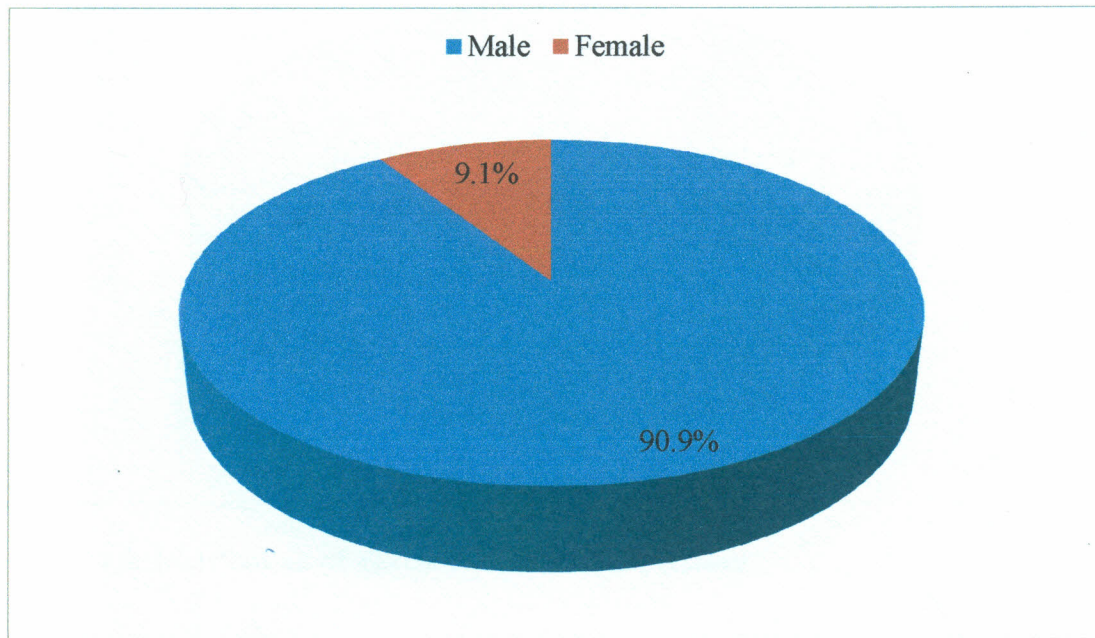
The study sought to establish the gender composition of the teachers and head teachers in the sub county. The respondents were asked to identify their gender, their responses are provided in Figures 4.1 and 4.2.



**Figure 4.1: Composition of teachers by Gender**

Figure 4.1 shows that majority of teachers (90.1%) were female while 9.1% were male. Although the number of male teachers was extremely low as compared to what of female

teacher, the few of the males sampled provided the opportunity to get feedback from both gender.

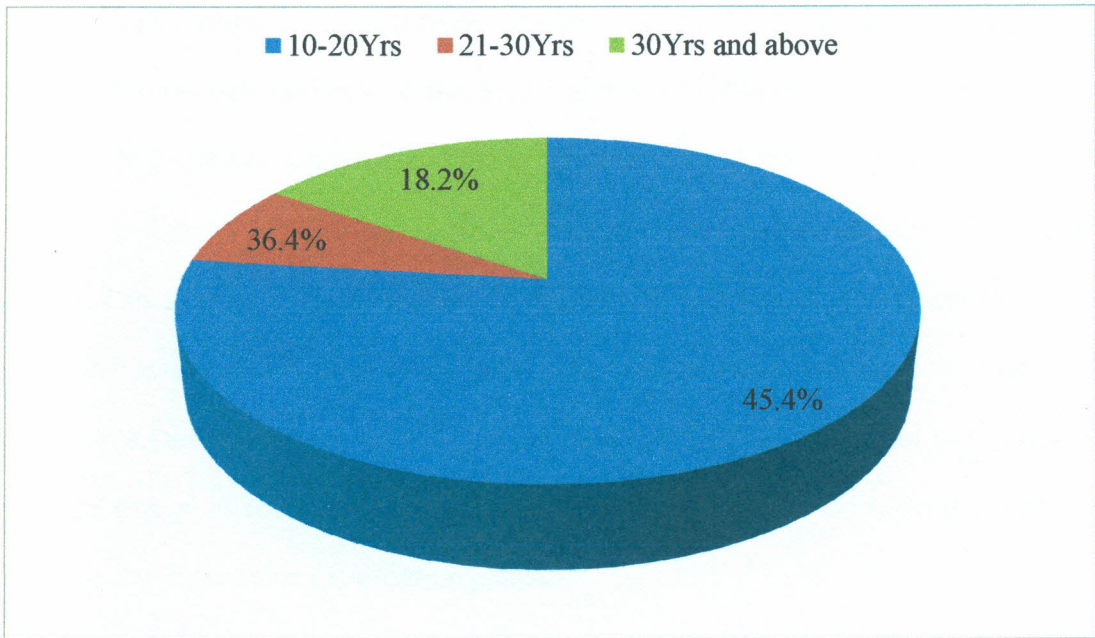


**Figure 4.2: Composition of Head Teachers by Gender**

The head teachers were asked to indicate their gender. The findings in figure 4.2 show that 90.1% of the head teachers were male while 9.1% were female. This concurs with a study conducted by Mukundi (2011) whose study in Nyeri County established that although women constituted majority of teachers in primary public schools, they are grossly underrepresented in positions of education in headship. The findings indicated that Mathira West sub county does not comply with the constitution which directs that more than two thirds in any public institution should not constitute of one gender.

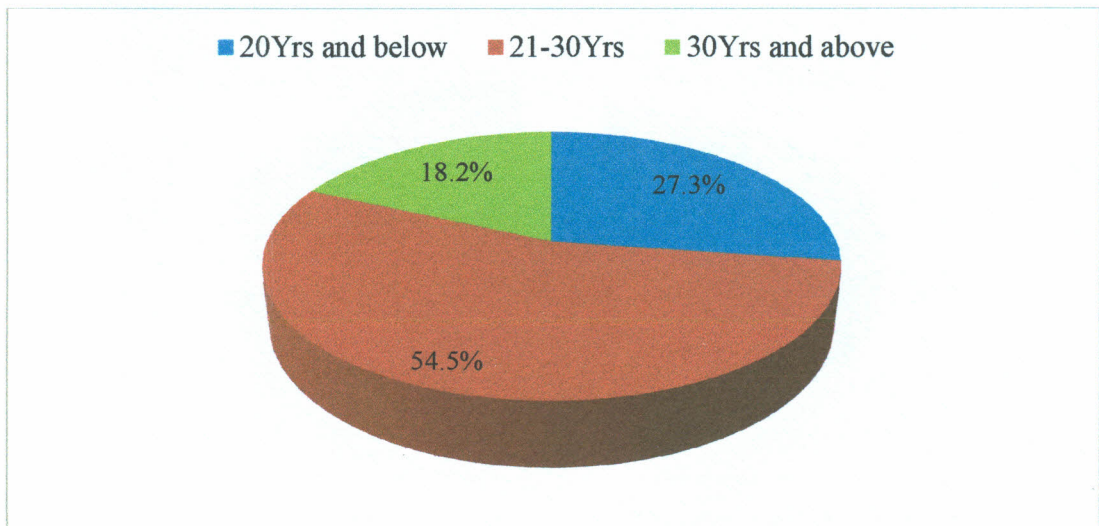
#### **b) Work Experience**

The study also sought to establish from the teachers how long they had served in the teaching profession. The respondents were asked to indicate their teaching experience in years.



**Figure 4.3: Distribution of Teachers by Work Experience**

The findings in figure 4.3 indicate that Majority of the teachers (45.4%) had a work experience of 10-20 years; this was followed by 36.4% with 21-30years and 18.2% with above 30years. The study established that all the teachers were well experienced in teaching since they had taught for more than 10 years.

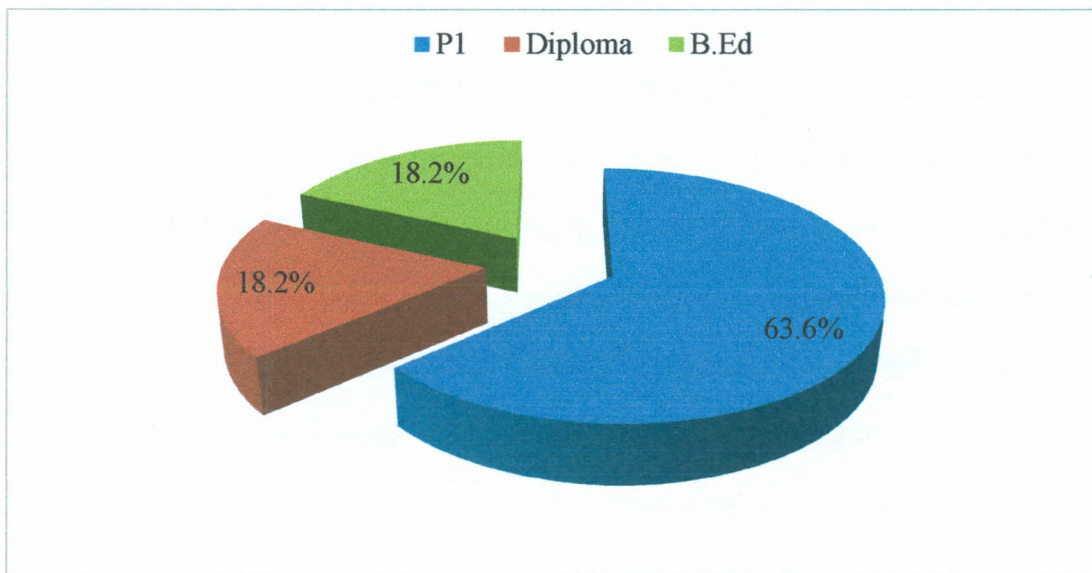


**Figure 4.4: Distribution of Head Teachers by Work Experience**

The study also sought to find out work experience for the head teachers. The findings in figure 4.4 show that majority of the head teachers (54.5%) had an experience of 21-30years, 27.3% had an experience of below 20 years with 18.2% having an experience of 30 years and above. The study established that all the head teachers were experienced. This was an advantage to the learners as asserted by Smith at al (1999) that there was shared advantage and experience if more time is spent in an organization. Also long service in a certain position provides a good opportunity for an individual to become an agent of change at social and individual levels. This enhances curriculum delivery and effective implementation of education policies.

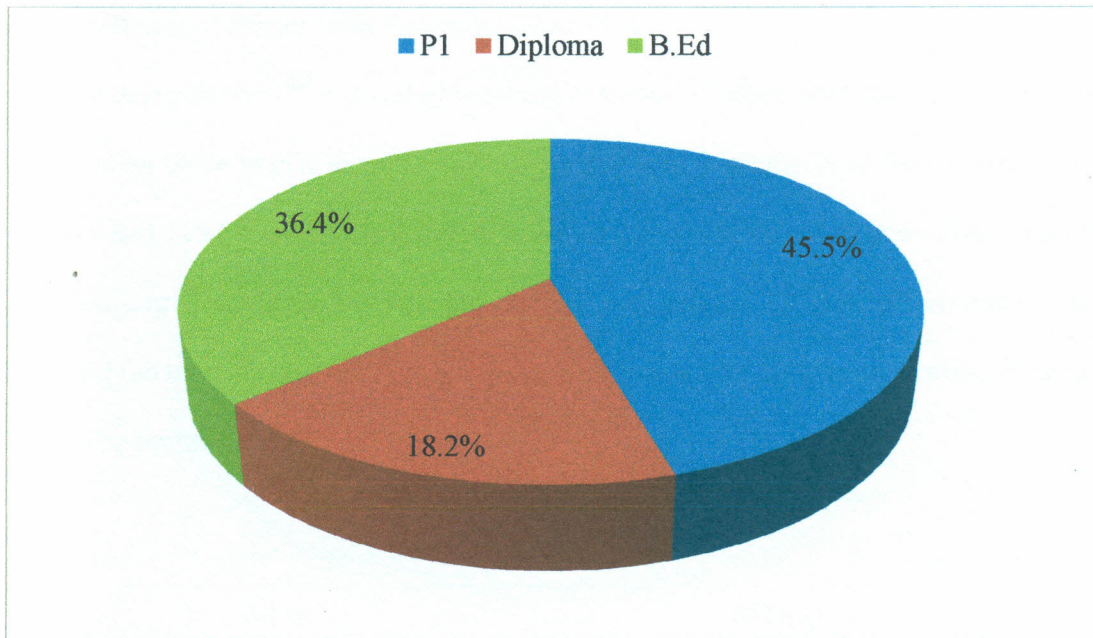
### c) Professional Qualifications

In order to establish the professional qualifications of teachers and head teacher's .The respondents were asked to indicate their highest professional qualifications. The findings are presented in figure 4.5



**Figure 4.5: Distribution of Teachers by Professional Qualifications**

The findings in figure 4.5 show that Majority, (63.6%) of the class three teachers had a P1 certificate in teaching while diploma and B.Ed. had 18.2% each. The findings show that a few teachers had furthered their education. However, none had under taken a course in special needs education.



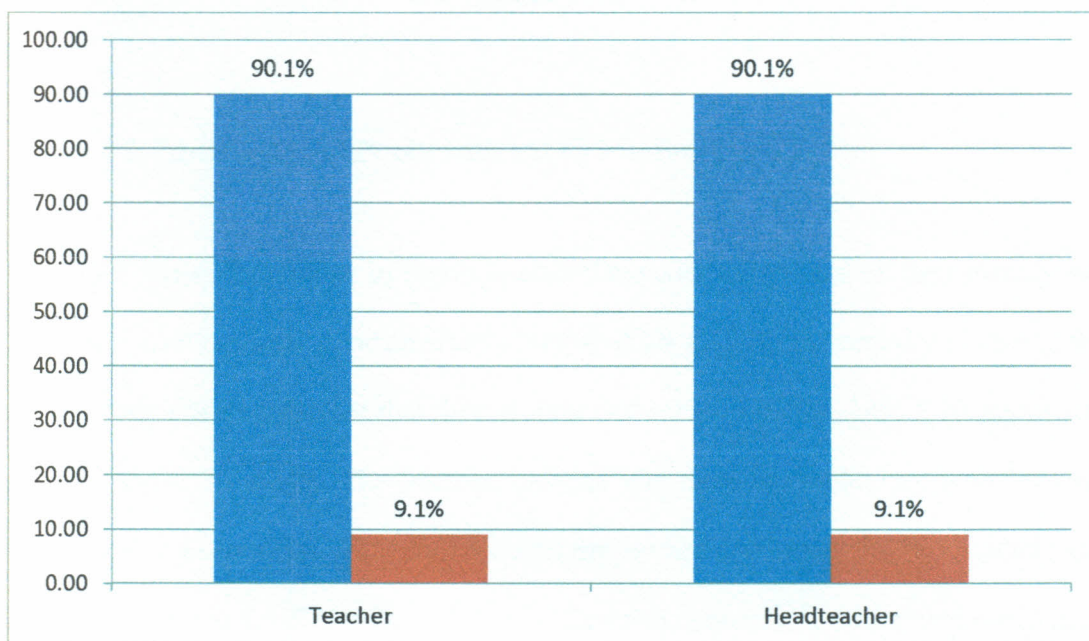
**Figure 4.6 : Distribution of Head Teachers by Professional Qualification**

The head teachers were also asked to indicate their professional qualifications. The findings in figure 4.6 presents the professional qualification of the head teachers as follows; P1 (45.5%), Bachelor of Education (36.4%) and diploma at 18.2%. These results indicated that the head teachers had higher qualifications compared with the teachers. This is probably due to the fact that the Teachers Service Commission prefers promoting teachers with higher professional qualifications to positions of headship. As a result, the head teachers who had initially trained as P1 enrolled for degree course and acquired higher qualifications but none of the head teachers had undertaken a course in special needs education. This concurs with a study conducted by Kamene (2012) which established that majority of the teaching staff did not have qualification for special needs

education. However the findings indicated that teachers and head teachers were professionally qualified. This was in agreement with report from World Bank (2004) that qualified teachers felt more confidence, secure and ready to teach.

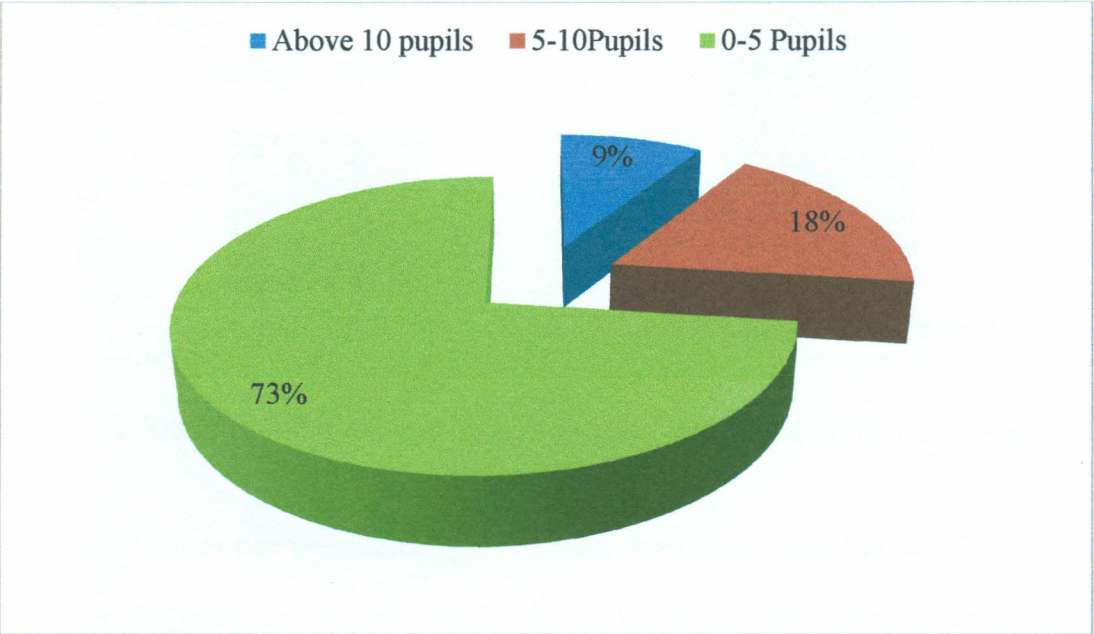
### 4.3 Prevalence of Pupils with Learning Disabilities

The first research objective investigated the prevalence of pupils with learning disabilities among class three pupils in public primary schools in Mathira West Sub County. The teachers and head teachers were asked to indicate whether they had identified children with learning disabilities in class three. This was gauged by teachers screening and assessing the learners' literacy and numeracy ability levels as well as acquisition of social skills. The findings are provided in Figure 4.7



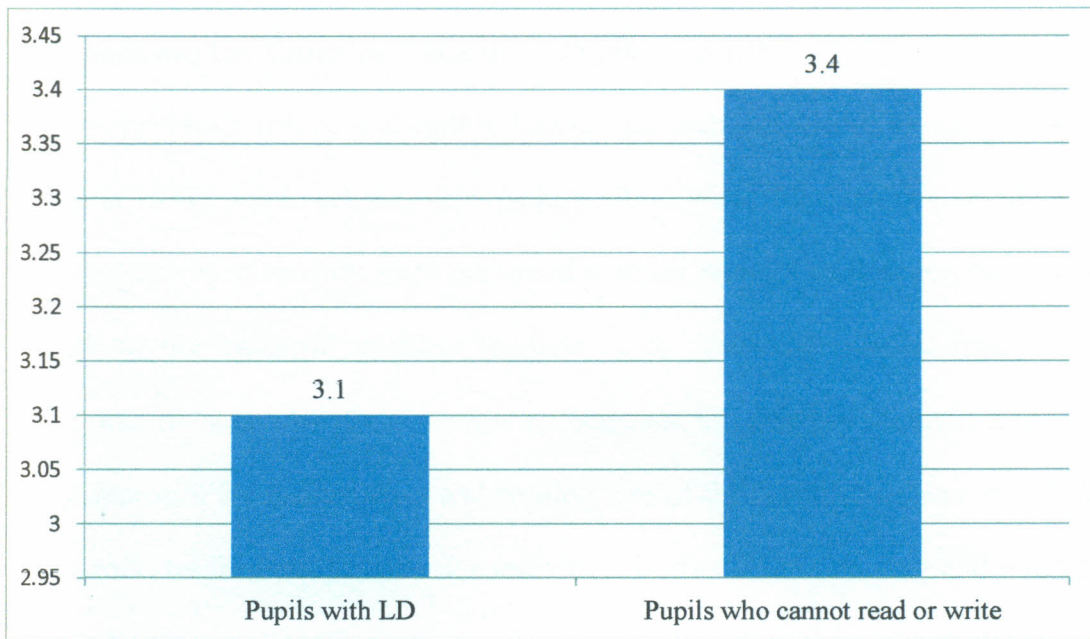
**Figure 4.7: Distribution of Teachers' and Head teachers' Responses on Presence of Pupils with LD in Class 3**

As shown in Figure 4.7 analyzed data revealed that majority of teachers and head teachers (90.1%) indicated that there were pupils with learning disabilities in class three while 9.1% were of the contrary opinion.



**Figure 4.8: Distribution of Pupils with LD by Number per Class**

Figure 4.8 shows the number of pupils in class three with LD gauged on their literacy and numeracy levels as well as acquisition of social skills as follows, majority (73%) of the teacher respondents indicated that their classes had below 5 pupils, 18% 5-10 pupils and 9% had above 10 pupils. The findings indicate that there were children with learning disabilities in every class. This concurs with the studies conducted by Gona (2004) and Rasungu (2003) in Kirifi County and Starehe Division respectively who found out in their studies that there were children experiencing learning disabilities in regular schools.



**Figure 4.9: Mean Number of Pupils per class with LD and cannot read or write**

Figure 4.10 shows that the mean number of class three pupils with LD was found to be 3.1 while the mean number of pupils with LD and could not read or write was 3.4. According to the findings, there were at least three pupils with learning disabilities in every class. These findings indicate that teachers in public primary schools can identify cases of pupils with LD gauged on the acquisition of literacy and numeracy skills as well as social skills. This concurs with the findings of Westwood (2008) who noted that, experienced lower primary school teachers were reasonably skilled in noting when children were having learning problems. He argued that these teachers were at the cutting edge of the early identification process. In Kenya a study conducted by Gateru (2010) in Makadara division established that 79% of the teachers were aware of LD and had identified children with LD while 21% of the teachers were not aware. However according to sectional paper number one (Republic of Kenya, 2005) there is no accurate data on the number of learners with LD in public primary schools in Kenya.

#### **4.4 Methods used in Teaching Class three Pupils with LD**

The second research objective sought to find out the methods used in teaching class three pupils with LD in public primary schools in Mathira West Sub County. To address this objective, class three teachers were presented with six items. The teaching methods were analyzed on the basis of; whether teachers used; systematic phonic when teaching reading, modify activities from simple to complex to enhance understanding, multi-sensory approach for mathematics and reading, use of drills and repetition in verbal and written work, teachers do not plan for individual instructions in reading and writing and lastly if teachers used mother tongue when teaching reading for children with learning disabilities. The teachers and head teachers were required to rate their agreement levels on a five point Likert type scale ranging from five to one as follows; Strongly agreed(SA) agree (A), Undecided (U), disagree (D), Strongly disagree (SD). Teachers and head teachers' responses are provided in Table 4.1.

**Table 4.1: Distribution of Methods Used in Teaching Class 3 Pupils with LD**

<b>Teachers' responses on assessment methods used in teaching pupils with LD as rated by class three teachers</b>								
<b>N=11</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers use systematic phonic when reading	Frq	3	5	1	1	1	11	4.1
	Scores	15	20	3	2	1	41	
	%	27.27	45.46	9.09	9.09	9.09	100	
Teachers use multi-sensory approach for reading	Frq	2	5	2	1	1	11	3.9
	Scores	10	20	6	2	1	39	
	%	18.18	45.46	18.18	9.09	9.09	100	
Teachers modify activities from simple to complex to enhance understand	Frq	3	5	1	1	1	11	4.1
	Scores	15	20	3	2	1	41	
	%	27.27	45.46	9.09	9.09	9.09	100	
Teachers use drills and repetition in verbal and written works	Frq	1	6	2	1	1	11	3.8
	Scores	5	24	6	2	1	38	
	%	9.09	54.55	18.18	9.09	9.09	100	
Teachers plan for individual instructions in reading and writing	Frq	2	5	2	1	1	11	3.9
	Scores	10	20	6	2	1	39	
	%	18.18	45.46	18.18	9.09	9.09	100	
Teachers use mother tongue when teaching reading	Frq	2	1	2	6	-	11	3.2
	Scores	10	4	6	12	-	32	
	%	18.18	9.09	18.18	54.55	-	100	

<b>Head teachers' responses on assessment methods used in teaching pupils with LD</b>								
<b>N=10</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers use systematic phonic when reading	Frq	1	2	5	1	1	10	3.1
	Scores	5	8	15	2	1	31	
	%	10	20	50	10	10	100	
Teachers modify activities from simple to complex to enhance understanding	Frq	1	2	5	2	-	10	3.1
	Scores	5	8	15	4	-	32	
	%	10	20	50	20	-	100	
Teachers use multi-sensory approach for reading	Frq	2	5	1	1	1	10	3.6
	Scores	10	20	3	2	1	36	
	%	20	50	10	10	10	100	
Teachers use drills and repetition in verbal and written work	Frq	1	4	4	-	1	10	4.0
	Scores	5	20	12	-	1	29	
	%	10	40	40	-	10	100	
Teachers plan for individual instructions in reading and writing	Frq	1	3	5	1	-	10	3.4
	Scores	5	12	15	2	-	34	
	%	10	30	50	10	-	100	
Teachers use mother tongue when teaching reading	Frq	1	2	3	4	-	10	3.0
	Scores	5	8	9	8	-	30	
	%	10	20	30	40	-	100	

Table 4.1 shows that according to the class three teachers' responses, majority (45.46%) agreed they used systematic phonic when teaching reading while 9.09% were undecided, and a similar number disagreed and strongly disagree, the head teachers responses on the same item were 20% agreed, 50% undecided while 10% disagreed and strongly disagreed. The mean rate for the teachers' responses was 4.1 and 3.1 for the head teachers. These results indicate that majority of the teachers agreed on use of systematic phonics in teaching reading, however a significant number were of the contrary opinion. A mean rate of 4.1 for the class three teachers and 3.1 for the head teachers denoted positive effect in the use of systematic phonic when teaching reading to children with LD. Use of systematic phonic was widely used because it helps learners with reading challenges to acquire the literacy skills. Additionally the fact that 54.5% of the head teachers were undecided implies that the head teachers were probably not in touch with the teaching methods used by class three teachers.

On use of multi-sensory approach for mathematics and reading when teaching pupils with LD, majority of the teachers 45.46% agreed, 18.18% strongly agreed, a similar number was undecided while 9.09% disagreed and strongly disagreed. On the same item, majority of the head teachers 50% agreed, 20% strongly agreed while 10% were undecided and a similar number strongly disagreed and disagreed. The mean rate of 3.9 for the teachers and 3.1 for the head teachers denoted that use of multi-sensory approach when teaching pupils with LD had positive effects in acquisition of basic skills. Multisensory teaching techniques and strategies stimulate learning by engaging the learners on multiple levels to use some or all their senses to learn. This helps the learner to gather more information and to link it with what they already know and what they learn in class (Mullis et al, 2009).

On whether teachers modified activities from simple to complex to hence understanding for pupils with LD, 27.27 % of the teachers strongly agreed and majority 45.46% agreed while 9.09% were undecided, disagreed and strongly disagreed. On the same item, 10% of the head teachers strongly agreed, 20% agreed, while 50% were undecided and 20% disagreed. A mean rate of 4.1 for the teachers and 3.1 for the head teachers implied positive effect of the teaching strategy in teaching learners with LD. These finding indicate that teachers were modifying activities from simple to complex to enhance understanding of the concepts by helping the learners build on the previous knowledge.

On use of drills and repetition in verbal and written work to cater for individual differences in learners with LD, 9.09% of teachers strongly agreed, 54.55% agreed and 18.18 were undecided, while 40% of the head teachers agreed, 40% were undecided, 10% disagreed and 10% strongly disagreed. A mean of 3.8 for the teachers and 3.6 for the head teachers denoted that the teaching strategy had high effects in helping learners with LD acquire skills. The findings indicated that majority of teachers used drills and repetition in verbal and written work. This was important because teachers should ensure that children with LD continue to study concepts even after they have mastered them to enhance their memory. Children with learning disabilities also experience some amount of success as they engage in activities which motivate them. This helps them gain courage to undertake more tasks. Again the head teachers were largely undecided on the methods used by the teachers this was probably because they were reluctant or lacked the skills required to monitor curriculum implementation at lower primary level.

When asked if teachers planned for individual instructions in reading and writing for children with LD, 18.18% of teachers strongly agreed, 45.46% agreed, 18.18% were

undecided and 9.09% disagreed. On the same item, 30% of the head teachers agreed 10% strongly agreed, and 50% were undecided, while 10% disagree. A mean rate of 3.9 for the teachers and 3.4 for the head teachers indicated a positive effect of the teaching strategy to learners with LD. Majority of the teachers' implemented individual instruction in reading and writing although some teachers did not. Implementing individual instruction helped the teacher to identify the specific learning difficulty being experienced by individual learner in order to deal with it appropriately. The head teachers were non-committal on the methods of instruction used by the teachers.

On use of mother tongue when teaching reading for pupils with LD, 18.18% of the teachers strongly agreed, 9.09% agreed, 54.55% disagreed while the head teachers who strongly agreed were 10%, 20% agreed, 30% were undecided and 40% disagreed. A mean rate of 3.2 for the teachers and 3.0 for the head teachers denoted high effects in the use of the first language of instruction for learners with LD. The findings indicate that teachers in public primary schools did not use mother tongue in teaching reading. This was probably because of pressure from parents becoming critical on lower primary school teachers who used mother tongue as a language of instruction.

The research also used an observation schedule on teaching methods used by class three teachers when teaching pupils with LD in Mathira West sub County public primary schools. The observations were measured on a 4 point likert scale as follows; behavior never observed (1), behavior rarely observed (2), behavior occasionally observed (3) and behavior consistently observed (4). The findings are provided in Table 4.2

**Table 4.2: Distribution of Observed Teaching Methods used by Class Three Teachers for Pupils with LD**

Teaching Methods	F	Responses (%)n =10				
		1	2	3	4	Total
Teacher provides direct instruction for reading and writing for learners with LD	Frq %	1 10	4 40	5 50	- -	100
Teacher varies the teaching method and teaching activities and involve LD learners throughout the lesson	Frq %	5 50	5 50	- -	- -	10 100
Teacher plan and implements individual instructions in reading and writing for pupils with LD	Frq %	3 30	7 70	- -	- -	10 100
Teacher uses paired or group work to encourage active participation of learners with LD	Frq %	10 100	- -	- -	- -	10 100
Teacher plans lessons to last short periods of time to cater for children with LD	Frq %	3 30	- -	7 70	- -	10 100
Teacher uses mother tongue occasionally when teaching	Frq %	10 100	- -	- -	- -	10 100

Table 4.2 indicates that majority (50%) of the teachers occasionally provides direct instruction for reading and writing for pupils with LD this was followed by 40% who rarely provided and 10% who never. This concurs with Ross-Hill (2009) who provided that teachers should give oral instruction and supplement with written instructions as much as possible to clarify points. Good teacher –child relationship is also cultivated through giving clear instructions about the activities to be under taken.

Or, whether teachers varied the teaching method and teaching activities and involved learners with LD throughout the lesson, 50% of teachers never and 50% rarely varied teaching methods. The results show that teachers were not using different strategies and approaches when teaching in attempt to organize and facilitate learning. On whether

teachers were planning and implementing individual instructions in reading and writing for learners with LD, 30% of the teachers never while 70% rarely. The results indicate that teachers were not individualizing instructions as expected. This is contrary to Oyaro (2005) whose study concluded that children have differences in terms of abilities, interest, intellect, background, attitudes and needs. It is therefore important that teachers treat them responsibly to enhance effective learning and teaching. Observation on whether teachers made use of paired or group work to encourage active participation of learners with LD, this behavior was never observed in all the classes. This was probably due to time factor as most teachers needed to cover the syllabus in time. The findings indicate that teachers are not encouraging active participation of pupils with LD.

Sailor (1991) advocated for cooperative learning where teachers involve children in group learning activities and provide reinforcement based on groups rather than individuals. This is meant to encourage learners to identify with the group and achieve a common goal. Workings in groups also allow children with LD to have an advantage of learning at their own pace and even from the fast learners in the group. On whether teacher plans lessons to last short periods of time to cater for children with LD, 30% did not while the behavior was occasionally observe in 70% of the respondents. Planning lessons to last for short periods of time is important because children with learning disabilities should be given breaks while learning since they require enough time to practice the skill learnt. (Sailors, 1991)

On whether teachers used mother tongue occasionally when teaching; this behavior was never observed in all the classes. This concurred with the results from the teachers' questionnaires. This was attributed to the pressure from parents who complained when

teachers used the language of the catchment area when teaching. This was contrary to the recommendation made by Koech that in early years the first language be used in transmission of knowledge, skills and attitude. (Koech report, 1999).

These findings indicate that the methods used by lower primary school teachers were generally inappropriate. This concurs with several studies conducted by Munyeki (1997) whose study in 32 primary schools found out that teachers did not consider learners with LD and no provision was made for them. The methods teachers used did not include pleasurable activities and the pupils were not motivated to learn. In the same study Munyeki (1997) also established that teachers were not motivated to use their children's mother tongue in teaching, yet using mother tongue is important because it facilitates children's' development of concepts that enables them to acquire knowledge in the second and third language.

Additionally, Schroeder (2005) established that learners need to rely on mother tongue in lower primary because most pupils think in mother tongue then attempt to translate their thoughts in English. Use of mother tongue for classroom instruction assist the learner to acquire skills which lay a good foundation for literacy, numeracy , understanding of concepts and ability to communicate effectively. This prepares the leaner for smooth transition from home to school language. Bloch (2002) observed that skills needed for teaching reading and writing should lay emphasis to phonics, letter formation. Again Rose-Hill (2009) advocated that teachers should be able to design and implement adequate individual instructions in reading and writing for children with LD, identify the specific learning challenges for individual learners and develop individualized educational programs for each case. This would help to develop each child to full

potential, vary the content and the objectives to suit personal needs, activities and aspirations according to the pace of the child.

#### **4.5 Teachers' Competencies in Identifying Causes of LD**

The third research objective assessed teachers' competencies in identifying causes of learning disabilities among class three pupils. The teachers' competencies in identifying causes of LD were measured on a five point likert scale ranging from five to one as follows; Strongly Agree (SA), Agree(A), Undecided ( U),Disagree(D) and Strongly Disagree ( SD). Teachers and head teachers were required to rate their agreement levels in the following statements; teachers awareness of causes of LD, teachers have full knowledge of children with LD, if identify children with LD, if teachers set guidelines for appropriate classroom behavior for pupils with LD, if teachers are able to cope with pupils with LD and if teachers were trained to handle pupils with LD. The findings are presented in Table 4.3

**Table 4.3: Assessment of Teachers' Competencies in Identifying Causes of LD**

<b>Teachers' Responses on assessment of their competencies in identifying causes of LD</b>								
N = 11								
		SA	A	U	D	SD	Totals	Mean Rate
Teachers are aware of the causes of LD	Frq	1	1	4	5	-	11	3.1
	Scores	5	4	12	10	--	31	
	%	9.09	9.09	36.37	45.45	-	100	
Teachers have full knowledge of children with LD	rq	1	2	3	4	1	11	3.1
	Scores	5	8	9	8	1	31	
	%	9.09	18.18	27.27	36.37	9.09	100	
Teachers identify children with LD	rq	3	5	1	1	1	11	4.1
	Scores	15	20	3	2	1	41	
	%	27.27	45.46	9.09	9.09	9.09	100	
Teachers are able to cope with children with LD	rq	2	2	1	6	-	11	3.1
	Scores	10	8	3	12	1	31	
	%	18.18	18.18	9.09	54.55	9.09	100	
Teachers set guidelines for appropriate classroom behavior for pupils with LD	rq	1	5	3	1	1	11	4.1
	Scores	5	20	9	2	1	41	
	%	9.09	45.46	27.27	9.09	9.09	100	
Teachers are trained to handle pupils with LD	Frq	1	1	3	6	-	11	3.0
	Scores	5	4	9	12	-	30	
	%	9.09	9.09	27.27	54.55	-	100	

<b>Head Teachers' Responses on Assessment of Teachers Competencies in Identifying Causes of LD</b>								
N = 10								
		SA	A	U	D	SD	Totals	Mean Rate
Teachers are aware of the causes of LD	Frq	1	1	5	3	-	10	3.0
	Scores	5	4	15	6	-	30	
	%	10	10	50	30	-	100	
Teachers have full knowledge of children with LD	rq	1	2	3	4	-	10	3.0
	Scores	5	8	9	8	-	30	
	%	10	20	30	40	-	100	
Teachers identify children with LD	rq	1	1	4	3	1	10	3.0
	Scores	5	4	12	8	1	30	
	%	10	10	40	30	10	100	
Teachers are able to cope with children with LD	rq	1	2	4	3	-	10	3.1
	Scores	5	8	12	6	-	31	
	%	10	20	40	30	-	100	
Teachers set guidelines for appropriate classroom behavior for pupils with LD	rq	2	2	4	1	1	10	3.3
	Scores	10	8	12	2	1	33	
	%	20	20	40	10	10	100	
Teachers are trained to handle pupils with LD	rq	2	1	2	5	-	10	3.0
	Scores	10	4	6	10	-	30	
	%	20	10	20	50	-	100	

As indicated in Table 4.3, majority of the teachers (45.45 %) disagreed, 36.37% were undecided that they were aware of the cause of learning disabilities; teachers who agreed

and strongly agreed were 9.09% in each case. For the head teachers majority (50%) was undecided and 30% disagreed while those who strongly agreed and agreed were 10% in each case. A mean rate of 3.1 for the teachers and 3.0 for the head teachers denoted that awareness of causes of LD had positive effects when dealing with pupils with LD. These results indicate that teachers were not aware of causes of LD. This was probably because teachers were not attending in-service courses organized on special needs education.

On whether teachers had full knowledge of children with learning disabilities, 36.37% of the teacher disagreed, 9.09% strongly disagreed and strongly agreed in each case while 27.27% were undecided. Majority (40%) of the head teachers disagreed, 30% were undecided and those who strongly agreed and agreed were 10% and 20% respectively. A mean rate of 3.1 for the teachers and 3.0 for the head teachers implied positive effect on the teachers' knowledge of children with LD. The results indicate that teachers did not have full knowledge of children with LD. This was probably because none of them had undertaken a course in special needs education.

On whether teachers identify children with LD gauged on their literacy, numeracy and social skill, majority (45.46%) of the teachers agreed 27.27% strongly agreed, while those who were undecided disagreed and strongly disagreed were 9.09% in each case. For the head teachers, 40% were undecided, 30% disagreed while those who strongly disagreed, strongly agreed and agreed were 10% in each case. A mean rate of 4.1 for the teachers and 3.0 for the head teachers denoted positive impact on teachers' ability to identify children with LD.

When the teachers were asked if they were able to cope with children with LD, majority (54.55%) of the teachers disagreed, while those who strongly disagreed and undecided were 9.09% in each case. Those who strongly agreed and agreed were 18.18% each. The head teachers' responses on whether teachers were able cope with children with LD were, 30% disagreed and 10% strongly disagreed, 20% agreed while 40% were undecided. A mean rate of 3.1 for the teachers and head teachers denoted positive impact with the teachers' ability to cope with pupils with LD. The results indicate that teachers were capable of identifying children with learning disabilities but were they were not able to handle them.

When teachers were asked if they set guidelines for appropriate classroom behavior for pupils with LD, majority (45.46%) agreed, while those who strongly agreed, disagreed, and strongly disagreed were 9.09% in each case. Those who were undecided were 27.27%. Head teachers responses were; those who agreed and strongly agreed were 20% each and undecided were 40% and disagreed and strongly disagree were 10% each. A mean rate of 4.1 for the teachers and 3.3 for the head teachers implied positive effect of setting guidelines for appropriate classroom behavior. The findings show that teachers set guidelines for appropriate classroom behavior. This is required in order to ensure that learners' attention is directed towards the intended activities for the purpose of reaping maximum benefits from the learning process.

When teachers were asked whether they were trained to handle pupils with learning disabilities, majority (54.55%) disagreed and 27.27% were undecided while 9.09% strongly agreed and agreed in each case. Head teachers responses were; majority (50%) disagreed, 20% agreed strongly and were undecided in each case while 10% agreed. A

mean rate of 3.0 for the teachers and head teachers implied positive impact when teachers have trained to handle pupil with learning disabilities.

The study administered an observation schedule to investigate the teachers' competencies in identifying the causes of LD in their classes. The observations were recorded on a four point likert scale as follows; behavior never observed (1), behavior rarely observed (2), behavior occasionally observed (3) and behavior consistently observed (4). The findings are provided in Table 4.4

**Table 4.4: Distribution of Observed Teacher Competencies in Identifying Causes of LD in Class Three**

Teachers competencies in identifying causes of LD	f	Responses (100%) n =10				Total
		1	2	3	4	
Teacher identifies children with LD	F %	- -	- -	10 100	- -	10 100
Teacher motivates children with LD	F %	2 20	7 70	1 10	- -	10 100
Teacher assists children with LD	F %	- -	7 70	3 30	- -	10 100
Teacher involves children with LD in the lesson	F %	10 100	- -	- -	- -	10 100
Teacher identifies specific learning difficulty and deals with it	F %	10 100	- -	- -	- -	10 100

Table 4.4 shows that all the teachers occasionally identified learners with LD in their class gauged on their numeracy, literacy and social skills. On motivating learners with LD, majority (70%) rarely, 20% never and 10% occasionally motivated them. On whether teachers assist children with LD, 70% of the teachers 'rarely assisted and 30% occasionally assisted. None of the teachers was observed to involve children with LD in

the lesson or identified a specific learning difficulty and dealt with it. This was probably because teachers were not being sensitized on issues related to learning disabilities and neither had they attended any in service course on special needs education. Teachers therefore lacked the necessary skills to meet the instructional needs of children with learning disability.

The findings indicate that teachers were not competent in identifying causes of learning disabilities although they could identify learners with LD gauged on their literacy and numeracy skills. However, they were unable to deal with them adequately. This resulted in these learners being excluded from classroom instruction. These findings are in agreement with Westwood (2008) who found out that experienced lower primary school teachers were skilled in noting and identifying children with learning disabilities. However Robuck (2009) observed that general teacher training did not include knowledge on LD and their causes. These research findings also agree with a study by Sari (2009) who found out that teachers were largely unable to cope with learners with LD and they were therefore not motivated to integrate them in teaching.

#### **4.6 Teachers Attitudes Towards Pupils with LD**

The fourth research objective assessed teachers' attitudes towards class three pupils with LD in Mathira West Sub County. Attitude was measured on opinion count where a five point likert scale was used to extract teachers and head teachers opinions on colleague teachers' attitude towards pupils with learning disabilities. Six items (6) in each case were subjected to teachers and head teachers where they were supposed to respond as follows; Strongly Agree (SA), Agree ( A), Undecided(U), Disagree ( D) and Strongly Disagree ( SD) with count ranging from 5 – 1. The researcher sought teachers' opinion on whether

teachers ignored pupils with LD in class, teachers' opinion on who should be responsible for handling learners with LD, whether remedial teaching for pupils with LD was in place, opinion on modifying curriculum to cater for pupils with LD, teachers opinion on the purpose of placement of learners with LD in the mainstream and opinion on whether teachers individualize teaching to cater for pupils with LD. The findings are provided in

Table 4.5

**Table 4. 5: Distribution of Teachers by Attitude Towards Pupils with LD**

<b>Teachers ‘ Responses on their Attitude Towards Pupils with LD</b>								
<b>N = 11</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers did not ignore children with LD in class	Frq	1	2	4	4	-	11	3.3
	Scores	5	8	12	8	-	33	
	%	9.09	18.18	36.36	36.36	-	100	
To teachers, responsibility of teaching pupils with LD should remain with special education teachers	Frq	2	6	1	1	1	11	3.6
	Scores	10	24	3	2	1	36	
	%	18.18	54.55	9.09	9.09	9.09	100	
Teachers provide remedial for pupils’ with LD	Frq	2	2	4	2	1	11	3.3
	Scores	10	8	12	2	1	33	
	%	18.18	18.18	36.37	18.18	9.09	100	
Teachers modify curriculum to cater for children with LD	Frq	1	2	4	3	1	11	3.2
	Scores	5	8	12	6	1	32	
	%	9.09	18.18	36.37	27.27	9.09	100	
To teachers, placement of pupils with LD in the mainstream is for socialization only	Frq	2	5	2	1	1	11	3.9
	Scores	10	20	6	2	1	39	
	%	18.18	45.46	18.18	9.09	9.09	100	
Teachers individualize teaching to cater for children with LD	Frq	1	2	4	3	1	11	3.4
	Scores	5	10	12	6	1	34	
	%	9.09	18.18	36.37	27.27	9.09	100	

<b>Head Teachers’ Responses on Teachers Attitude Towards Children with LD</b>								
<b>N= 10</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers did not ignore children with LD in class	Frq	1	2	4	3	-	10	3.1
	Scores	5	8	12	6	-	31	
	%	10	20	40	30	-	100	
To teachers, responsibility of teaching pupils with LD should remain with special education teachers	Frq	2	5	1	1	1	10	3.6
	Scores	10	20	3	2	1	36	
	%	10	50	10	10	10	100	
Teachers provide remedial for pupils’ with LD	Frq	1	3	5	1	-	10	3.4
	Scores	5	12	15	2	-	34	
	%	10	30	50	10	-	100	
Teachers modify curriculum to cater for children with LD	Frq	1	2	4	3	-	10	3.3
	Scores	5	10	12	6	-	36	
	%	10	20	40	30	-	100	
To teachers, placement of pupils with LD in the mainstream is for socialization only	Frq	2	5	1	1	1	10	3.6
	Scores	10	20	3	2	1	36	
	%	20	50	10	10	10	100	
Teachers individualize teaching to cater for children with LD	Frq	1	2	4	3	-	10	3.3
	Scores	5	10	12	6	-	33	
	%	10	20	40	30	-	100	

Table 4.5 presents the responses of teachers on colleague teachers’ opinion on attitudes towards children with LD in their classes. Teachers’ opinion on whether pupils with LD

were ignored in class was that 36.36% were undecided and disagreed in each case while 9.09% strongly agreed and 18.19% agreed. The head teachers opinion was that majority 40% were undecided, 30% disagreed while 10% strongly agreed and 20% agreed that teachers did not ignore children with LD class. The results from the opinion counts indicate that some teachers ignored pupils with LD in class hence they had negative attitude towards them. A mean rate of 3.3 for the teachers and 3.1 for the head teachers implied a positive effect when children with LD are assisted. The head teachers' opinion on whether the responsibility of teaching pupils with LD should remain with special needs education teachers was that majority(45.55)% agreed,18.18% strongly agreed while 9.09% were undecided, disagreed and strongly disagreed. These findings show that teachers and head teachers' opinion was that the responsibility of teaching pupils with LD should remain with special needs education teachers which denoted a negative attitude towards them. This was probably because they expected such learners to be enrolled in educational programs that cater for children with special needs in education.

Teachers opinion on whether teachers provided remedial for pupils with LD, was that 36.37% were undecided,18.18% strongly agreed, agreed, and strongly disagreed in each case. The head teachers opinion on the same item was that majority (50%) were undecided, 30% agreed, 10% strongly agreed and disagreed in each case. The results from the opinion counts indicate that teachers were not committed to providing remedial for pupils with LD hence they had a negative attitude towards them. A mean rate of 3.3 for the teachers and 3.4 form the head teachers opinion counts denoted positive effects in the provision of remedial for learners with LD.

On whether teachers modify curriculum to cater for pupils with LD teachers opinion was that 18.18% agreed, 36.37% undecided, and 27.27%, disagree, while 9.09% strongly disagreed and strongly agreed in each case. The head teachers' responses on the same item were that 40% undecided, 10% strongly agreed, 20% agreed, while 30% strongly disagreed. The results from the opinion counts implied that class three teachers were not committed in modifying curriculum for pupils with LD. A mean rate of 3.2 for the teachers and 3.3 for the head teachers indicated positive effects of curriculum modification for pupils with LD. When teachers modify the curriculum, pupils with LD become accommodated in the learning process.

Class three teachers' opinion on whether placement of pupils with LD in the mainstream is for socialization only was that majority (45.46%) agreed, 18.18 strongly agreed, and was undecided on each case, while 9.09% disagreed and strongly disagreed each. For the head teachers majority (50%) agreed, 20% strongly agreed, while 10% were undecided, disagreed and strongly disagreed each on the same item. The findings from the opinion counts indicate that teachers consider the purpose of placing children with LD in the main stream as for socialization only. This was attributed to the fact that these learners experienced challenges in acquisition of basic numeracy and literacy skills and their performance was below average.

The study investigated teachers and head teachers opinion on whether teachers were individualizing teaching to cater for pupils with LD. Teachers responses were 36.37% were undecided, 27.27% disagreed, 18.18% agreed and 9.09% strongly disagreed. The head teachers' opinion on the same item was that 40% were undecided, 30% disagreed, 10% strongly agreed and 20% agreed. The findings show that some class three teachers

were not individualizing teaching to cater for pupils with LD. This was attributed to the fact that these learners experienced challenges in acquisition of basic competencies and their performance was below average.

These findings suggest that teachers are reluctant to take the responsibility of educating pupils with LD. They were also not ready to provide extra support to children with LD in their classes. These findings concur with a study conducted by Alsheikh and Elhoweris (2006) in Europe which also established that teachers believed that the responsibility of teaching learners with LD should remain with the special education personnel.

According to the findings of this study the teachers and head teachers had a negative attitude towards learners with LD. This is in agreement with Shalev (2007) who conducted a study, in Asia on 105000 teachers which revealed that two thirds of the teachers were not ready to teach children with LD where most of them supported the placement of children with LD in institutions which had specialized personnel. Most teachers favoured the continuation of a pull out model and felt that policy makers were not in touch with the realities of the classroom on the issue of inclusive education. Further, Sari (2009) found out that many teachers were not professionally qualified to handle learners with wide range of difficulties. Additionally, most of them felt that pre-service courses were not adequately preparing them with the skills needed to teach learners with widely varying abilities. A study conducted in Kutui by Kithuka(2008) also established that teachers had a negative attitude towards learners with LD as was revealed by one of the head teacher that teaching children with LD had translated into a calling. The reason being that even those teachers trained in special needs education were not willing to have children experiencing LD in their classes. As a result of being negative,

teachers in regular schools had labeled learners experiencing learning disabilities in their classes as difficult to teach, slow learners, day dreamer, careless and foolish (Runo,2001).

#### **4.7 Types of Instructional Materials used by class three teachers on pupils with LD**

The fifth research objective assessed the extent to which selected types of instructional materials were used by class three teachers when teaching pupils with LD in public primary schools in Mathira West Sub County. A five point likert scale was used to extract teachers and head teachers' responses. Six items were subjected to the teachers and head teachers where they were supposed to respond as follows; Strongly agree( SA ),Agree (A),Undecided ( U ), Disagree ( D), and Strongly disagree (SD) with counts ranging from five to one. The instructional materials investigated in the study included; manipulative or real objects, tape recorders, videos, charts and flash cards and story books and storytelling. The findings are provided in table 4.6

**Table 4.6: Assessment of Types of Instructional Materials used by class three teachers for pupils with LD**

<b>Teachers' Responses on assessment of types of instructional materials they used for pupils with LD</b>								
<b>N = 11</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers use charts	Frq	4	5	2	-	-	11	4.6
	Scores	20	20	6	-	-	46	
	%	36.36	45.46	18.18	-	-	100	
Teachers use flash cards and cut outs	Frq	4	4	2	1	-	11	4.8
	Scores	20	20	6	2	-	48	
	%	36.36	36.36	18.19	9.09	-	100	
Teachers use manipulative or real objects	Frq	2	4	3	1	1	11	3.9
	Scores	15	12	9	2	1	39	
	%	18.19	36.36	27.27	9.09	9.09	100	
Teachers use tape recorders	Frq	1	1	2	7	-	11	2.9
	Scores	5	4	6	14	-	2.9	
	%	9.09	9.09	18.18	63.64	9.09	100	
Teachers do not use videos	Frq	1	1	2	6	1	11	2.8
	Scores	5	4	6	12	1	2.8	
	%	9.09	9.09	18.18	54.55	-	100	
Teachers use story books and story telling	Frq	1	5	2	2	1	11	3.6
	Scores	5	20	6	4	1	36	
	%	9.09	45.46	18.18	18.18	9.09	100	

<b>Head Teachers' Responses on assessment of types of instructional materials used by class three teachers on pupils with LD</b>								
<b>N = 10</b>								
		SA	A	U	D	SD	Tot	Mean Rate
Teachers use charts	Frq	4	5	1	-	-	10	4.3
	Scores	20	20	3	-	-	43	
	%	40	50	10	-	-	100	
Teachers use flash cards and cut outs	Frq	5	4	1	-	-	10	4.3
	Scores	20	20	3	-	-	43	
	%	50	40	10	-	0	100	
Teachers use manipulative or real objects	Frq	2	5	1	1	1	10	3.6
	Scores	10	20	3	2	1	36	
	%	20	50	10	10	10	100	
Teachers use tape recorders	Frq	1	1	1	6	1	10	2.5
	Scores	5	4	3	12	1	25	
	%	10	10	10	60	10	100	
Teachers use videos	Frq	1	1	1	7	-	10	2.6
	Scores	5	4	3	14	-	26	
	%	10	10	10	70	-	100	
Teachers do not use story books and story telling	Frq	1	5	2	1	1	10	3.4
	Scores	5	20	6	2	1	34	
	%	10	50	20	10	10	100	

Table 4.7 presents the teachers responses on the extent to which various instructional materials were used in teaching class three pupils with LD. On the use of charts and flash cards majority (54.46%) of the teachers agreed, 36.36% strongly agreed and 18.18% were undecided. For the head teachers, majority (50%) agreed, those who strongly agreed were 36.36% and disagreed were 10%. The findings indicated that most of the teachers used charts when teaching pupils with LD. A mean rate of 4.6 for the teachers and 4.3 for the head teachers denote very high effects positive in the use of charts. This shows that teachers were creative since they developed simple teaching and learning materials to make learning meaningful among the learners.

On the use of flash cards and number cut outs, majority of the teachers (36.36%) strongly agreed and agreed in each case, 18.19% undecided, and 9.09% disagreed. For the head teachers, majority (50%) strongly agreed, 40% agreed and 10% were undecided. A mean rate of 4.8 for the teachers and 4.3 for the head teachers implied positive effects in the use of flash cards and number cut outs to pupils with LD.

On manipulative or use of real objects, 36.36 of the teachers agreed and 18.19% strongly agreed and were undecided in each case, 9.09% disagreed and strongly disagreed each. For the head teachers 50% agreed, 10% were undecided, disagreed and strongly disagreed in each case. A mean rate of 3.9 for the teachers and 3.6 for the head teachers denoted a positive impact in the use of manipulative objects when teaching pupils with LD. The results established that majority of the teachers made use of manipulative objects when teaching children with LD. This was attributed to the fact that these materials are locally available and help learners use most of their senses in learning. This makes it easier to understand concepts that would have been difficult.

On use of tape recorders in teaching, majority (63.64%) of the teachers disagreed and 9.09% strongly disagreed, strongly agreed and agreed in each case. For the head teachers majority (60%) disagreed and 10% strongly disagreed. Those who were undecided strongly agreed and agreed were 10 in each case. On use of videos in teaching majority (54.55%) of the teachers' strongly disagreed and 18.18 % were undecided while 9.09% strongly agreed and agreed in each. For the head teachers majority (70%) disagreed, while 10% were undecided, strongly agreed and agreed in each case. The findings indicated that teachers were not using audio visual aids in teaching. On use of story books and storytelling in teaching, majority (45.46%) of the teachers agreed and those who strongly agreed and strongly disagreed were each 9.09%, undecided and disagreed were 18.18%each. For the head teachers, majority (50%) agreed and those who were undecided were 20%, while disagreed, strongly disagreed and strongly agree were each 10%. These findings indicate that teachers were using story books in their teaching. This gave learners with LD an opportunity to continue practicing the reading skill.

The study administered an observation schedule to investigate the teachers' use of different types of instructional materials to teach pupils with LD in class three. The observations were recorded on a four point likert scale as follows; behavior never observed (1), behavior rarely observed (2), behavior occasionally observed (3) and behavior consistently observed (4). The findings are provided in Table 4.7

**Table 4.7: Distribution of Observed Types and Use of Instruction Materials in Class Three for Pupils with LD**

Types of use of instructional materials	Responses (100%)					
	f	1	2	3	4	Total
Teacher use charts in teaching	Frq	1	2	2	5	10
	%	10	20	20	50	100
Flash cards and no contact	Frq	2	7	1	-	10
	%	20	70	10	-	100
Use of manipulative instructional materials in teaching	Frq	-	7	3	-	10
	%	-	70	30	-	100
Use of story books to teach reading	Frq	10	-	-	-	10
	%	100	-	-	-	100
Use of audio visual materials in teaching	Frq	10	-	-	-	10
	%	100	-	-	-	100

Table 4.8 presents the findings of the observation schedule on use of instructional materials. Majority (60%) of the teachers were occasionally observed using charts and flash cards, 30% were rarely observed and 10% were consistently observed. On use of manipulative instructional materials in teaching, teachers who were occasionally and rarely observed engaging in this behavior were each 50%. On use of story books to teach reading, majority (50%) of the teachers were occasionally observed engaging in this behavior, 40% rarely and 10% never. None of the teachers observed used audio visual materials in teaching. This was attributed to the fact that funds in public primary schools were limited and use of electronic media in teaching was expensive.

The study established that teachers were using charts, flash cards, manipulative instructional materials and story books to teach reading but were not using audio visual materials in teaching. This concurs with Kamau (2000) who emphasized the use of different types of locally available materials in teaching lower primary school pupils. This

is because it was established in a study of lower primary schools in rural Kenya that there was lack of varied materials for all primary school grade levels. Kithuka (2008) on a study in Kitui suggested that use of a wide range of instructional materials in learning has a positive impact among children with LD. Children learn better when they construct their knowledge through use of manipulative materials. At the same time, learning materials help to minimize the learning difficulties and errors. Additionally, teaching learning materials enhance active participation of all learners where children take centre stage in classroom learning process making learning meaningful. Though providing necessary teaching and learning materials that are age appropriate, a good teacher- child relationship is cultivated. As a result, learners are motivated and their interest sustained which enhances acquisition of basic competences.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter intends to evaluate the project as a whole in order to determine whether the objectives of the study had been achieved. The main objective of the study was to assess classroom intervention strategies for class three pupils with learning disabilities in public primary schools in Mathira west Nyeri County, Kenya. The chapter discusses the summary, conclusions, recommendations and areas that need further research based on the findings of the study.

#### 5.2 Summary

A total of 22 respondents comprising of 11 head teachers and 11 class three teachers were given questionnaires. The response was 95.45%. The researcher also conducted classroom observation in 11 public primary schools in which 11 class three teachers were observed as they taught in class. On prevalence of pupils with learning disabilities majority of teachers and head teachers indicated that there were pupils with learning disabilities in class three and most classes had below 10 pupils. The mean number of pupils with LD per class was found to be three.

On the methods used in teaching class three pupils, majority of the teachers used systematic phonic when teaching reading, however majority of the head teachers were undecided. This indicated that the head teachers were not in touch with the instructional methods used by the lower primary school teachers. Majority of the teachers used multi-sensory approach for mathematics and reading, modified activities from simple to complex to hence understanding, and made use of drills and repetition in verbal and

written work to cater for individual differences in learners. They also planned for individual instruction in reading and writing but were not using mother tongue when teaching reading for children with learning disabilities.

On teachers' competencies in identifying causes of learning disabilities among class three teachers, the study found out that most did not have full knowledge of children with LD, were unaware of the causes of learning disabilities, could identify children with LD gauged on their numeracy, literacy and social skills but were unable to cope with them. The teachers were also found to set guidelines for appropriate classroom behavior but they had not received training on how to handle pupils with LD. The study concluded that teachers were not competent in identifying causes of LD.

The study also established that teacher' attitude towards pupils with LD was negative since majority preferred that the responsibility of teaching such learners should remain with the special needs education teachers. They were also uncommitted on providing remedial for pupils with LD, and in modifying curriculum as well as individualizing teaching to cater for learners with LD. Additionally, teachers opinion on placement of such learners in the mainstream was for socialization and not acquiring of academic skills. It was further established that teachers were using charts, flash cards, manipulative instructional materials and story books to teach reading but were not using audio visual materials in teaching such as tape recorders and videos.

### **5.3 Conclusion**

From the findings of the study it can be concluded that, the prevalence of learners with LD stands at an average of three pupils per class. The findings indicated that there are

children with LD in lower primary classes in public primary schools. The implication might be that this group of learners fails to acquire the basic competencies as it is expected at lower primary level of education and their learning outcome is endangered. National goal of education is therefore not achieved as stipulated by the Millennium Development Goals and the Education for All (EFA) goals. Koech (1999) in his report asserted that it's the responsibility of the society to provide education opportunities to all children according to their individual capabilities.

The study also established that teachers had a negative attitude towards pupils with LD. There was no commitment to support this group of learners and therefore pupils with LD were not benefiting from classroom instructions. This was probably because they required more time and attention compare with the others learners in class and that they lagged behind in learning of skills compared with their peers.

Although teachers could identify learners with LD gauged on their numeracy, literacy and social skills, the main challenge is to meet their educational needs in order to help them acquire the basic competences during their early years in education. Teachers were unable to deal with them probably because they did not have the skills or were not willing to set aside special learning programs to support them. Methods used in teaching were found to be inappropriate. Teachers lacked competence in methodology and appropriate special approaches required to teach children with learning disabilities.

On teachers competencies in identifying causes of learning disabilities among class three pupils, the study found out that most teachers' did not have full knowledge of children with LD and were unaware of the causes of learning disabilities. This was probably

because none of them had under taken a course in special needs education. This affected acquisition of basic competencies for children with learning disabilities since teachers were unable to attend to individual challenges and interest of these children in their classes. Teachers found it difficult to give special attention needed to motivate, educate or even assist children with learning disabilities.

On use and types of instructional materials, it was established that the instructional materials were inadequate and teachers relied on a constricted range, namely, charts, flash cards, manipulative instructional materials and story books to teach reading but were not using audio visual materials in teaching. This was probably because the school administration could not afford to provide adequate and appropriate instructional materials since the Ministry of education funding was limited.

#### **5.4 Recommendations**

Based on the findings of the study, the following recommendations can be made on how teaching lower primary school pupils with learning disabilities can be improved.

- i. The ministry of education science and technology should include units on special needs education in teacher training in order to equip teachers with the appropriate methodology and required competencies in teaching children with LD in the mainstream classes. It is the responsibility of the teaching profession to come up with various means of ensuring that public primary schools successfully accommodate learners with a wide range of increasing diversity in learning.
- ii. The ministry of education should also facilitate in-service training courses for lower primary school teachers so as to equip them with appropriate information that would help them understand the background of special needs education

including identifying the causes of learning disabilities. Such knowledge would make them competent in giving the support required to children with LD in order to meet their instructional needs. In service courses are important since they aid in providing updated information in the teaching profession including the current trend in the field of special needs education.

iii. Sensitization programs ought to be facilitated so that lower primary school teachers in public primary schools can be sensitized on the need to have a positive attitude towards children with learning disabilities. Teachers need to be encouraged to include this group of learners in all class activities in order to raise their self-esteem and self-confidence. Additionally, teachers need to understand that ignoring and not supporting such learners in class make them develop a negative attitude towards school and learning. As a result, children with learning disabilities fail to acquire basic competencies during their early years in school yet, improving the literacy and numeracy outcomes for pupils is a key concern of any teacher. Consequently, advocacy on children experiencing learning disabilities should be intensified by all the stakeholders in attempt to eliminate the stigma and the negative attitude associated with the condition.

iv. Curriculum implementation at lower primary school level should be properly supervised in order to ensure that children with LD benefit from classroom instructions. The head teachers who are also the school managers should be empowered with the necessary skills needed to occasionally monitor curriculum implementation at lower primary school level. Education officials should also be actively involved in effective and efficient monitoring of the curriculum

implementation in regular schools in attempt to ensure provision of quality education for all children. The main goal is to ensure that all stake holders in school management guarantee that learners with LD have access to quality teaching and learning. Effective curriculum delivery ensures that all the needs of individual learners are met and hence successful learning. The fact of the matter is that provision of quality education is the sixth goal of Education for All (EFA) goals.

v. The Ministry of Education Science and Technology should provide lower primary schools with a wide variety of instructional material especially where classes have learners of mixed ability. Instructional materials should be relevant, adequate and age appropriate. They are meant to motivate learners, build their attitude and enhance understanding of the concepts taught in class. Learners need facilitation to express their own creativity and individuality. As a result, learning becomes more real, practical and more meaningful to them.

vi. Additionally, the Ministry of Education should develop a policy geared towards making provisions for children experiencing LD since this group of learners forms the majority of pupils with special needs in education. This is because the trend in special education has been to put emphasis on the four traditional categories of special needs namely; intellectual differences, hearing impaired, visually impaired, and physically challenged. All other categories of special needs including LD have long been neglected. All schools should be committed in modifying curriculum to meet the needs of all learners including those with LD. If this is implemented, it would guarantee acquisition of basic numeracy and literacy skills among pupils with LD leading to smooth transition, high retention and completion rates of all learners. This is because the current curriculum is

examination oriented which has resulted to teachers developing a negative attitude towards children with LD since they view them as low achievers who lower the class mean score.

### **5.5 Suggestions for Further Research**

Based on the findings of the study the following suggestions for further research can be made.

A study on the use of ICT in teaching lower primary school pupils with LD should be carried out.

A study focusing on the causes of teachers' negative attitude towards pupils with learning disability should be carried out.

Future researchers need to explore in depth integration of special needs in education units during teacher training since majority of the teachers lacked the relevant skills in handling children with learning disabilities in their classes.

A study focusing on lower primary schools teachers' failure to use the language of the catchment area when teaching should be carried out.

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## APPENDICES

### APPENDIX 1:INTRODUCTION LETTER

I Margaret Wanjiru Murage, a teacher by profession and a special needs assessor, is carrying out a study titled “**Classroom Intervention Strategies for Class Three Pupils with Learning Disabilities in Mathira West Sub County**” I would like you to take part in the research by filling in the questionnaires provided.

#### **Confidentiality and consent clause.**

Kindly note that I can confirm to you that your responses will be treated with utmost confidentiality. Your name will not appear anywhere in this form and will never be used in connection with any of the information you give. These questions will help the researcher understand the classroom intervention strategies for class three pupils with learning disabilities in Mathira West Sub County. THANK YOU.

**Margaret WanjiruMurage**

## APPENDIX II: TEACHERS' QUESTIONNAIRE

### Introduction

Kindly respond to the following simple questions about “**Classroom Intervention Strategies for Class Three Pupils with Learning Disabilities in Mathira West Sub County, Kenya**”. Kindly do not indicate your name but tick the appropriate response and provide explanations where necessary. Note that the information you provide will be confidential and will only be applied to develop this research paper.

### Section A: Background information.

Please tick (  ) one answer for each item.

1. Gender

Male (  )

Female (  )

2. Work experience -----years

3. Professional qualification

P1 (  )

Diploma (  )

B. Ed (  )

Masters (  )

Others. Specify .....

4. What is the mean age in years of pupils in your class?

5-6 years (  )

7-8 years (  )

9 + (  )

5. Do you have children with learning disabilities in your class?

Yes ( )

No ( )

6. How many children have LD in your class .....

7. How many children in your class cannot read or write .....

**Section B**

The following section consist of five items in a five point likert scale ranging from, strongly agree (SA), agree (A), undecided (U), disagree (D) and strongly disagree (SD). Kindly tick (✓) the response that most accurately describes your opinion. There is no right or wrong answers. Tick your response appropriately.

**Methods Used in Teaching pupils with LD in Class Three**

		SA	A	U	D	SD
8	Teachers use systematic phonic when reading					
9	Teachers modify activities from simple to complex to enhance understanding					
10	Teachers use multi-sensory approach for reading					
11	Teachers use drills and repetition in verbal and written work					
12	Teachers plan for individual instructions in reading and writing					
13	Teachers use mother tongue when teaching reading					

**Teachers' competencies in identifying Causes of LD among class three pupils**

		SA	A	U	D	SD
14	Teachers are aware of the causes of LD					
15	Teachers have full knowledge of children with LD					
16	Teachers identify children with LD					
17	Teachers are able to cope with children with LD					
18	Teachers set guidelines for appropriate classroom behavior for pupils with LD					
19	Teachers are trained to handle pupils with LD					

**Teachers Attitude Towards Pupils with LD**

		SA	A	U	D	SD
20	Teachers do not ignore children with LD in class					
21	To teachers, responsibility of teaching pupils with LD should remain with special education teachers					
22	Teachers provide remedial for pupils' with LD					
23	Teachers modify curriculum to cater for children with LD					
24	To teachers, placement of pupils with LD in the mainstream is for socialization only					
25	Teachers individualize teaching to cater for children with LD					

**8. Types and Use of Instructional Materials in Class Three with LD learners**

		<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
26	Teachers use charts					
27	Teachers use flash cards and cut outs					
28	Teachers use manipulative or real objects					
29	Teachers use tape recorders					
30	Teachers do not use videos					
	Teachers use story books and story telling					

**THANK YOU FOR YOUR CO-OPERATION**

## APPENDIX III

### HEAD TEACHERS' QUESTIONNAIRE

#### Introduction

Kindly respond to the following questions about “**Classroom Intervention Strategies for Class Three Pupil with LD in Mathira West Sub County, Kenya**”. Please note that the information you provide will not be used for any other purpose other than what pertains to this study and will be treated with utmost confidence.

#### Section A: Background information.

Please tick (  ) one answer for each item.

1. Gender

Male (  )

Female (  )

2. Work experience -----years

3. Professional qualification

P1 (  )

Diploma (  )

B. Ed (  )

Masters (  )

Others. Specify .....

4. What is the pupil enrollment in class three in your school .....

5. Do you have children with learning disabilities in your school?

Yes (  )

No (  )

6. How many children in lower primary have LD .....

### Section B: Knowledge of Causes of LD.

The following section consist of five items in a five point likert scale ranging from, strongly agree (SA), agree (A), undecided (U), disagree (D) and strongly disagree (SD).

Kindly tick (✓) the response that most accurately describes your opinion. There is no right or wrong answers. Tick your response appropriately.

#### Methods Used in Teaching Class Three pupils with LD

		SA	A	U	D	SD
7	Teachers use systematic phonic when reading					
8	Teachers modify activities from simple to complex to enhance understanding					
9	Teachers use multi-sensory approach for reading					
10	Teachers use drills and repetition in verbal and written work					
11	Teachers plan for individual instructions in reading and writing					
12	Teachers use mother tongue when teaching reading					

#### Teachers' competencies in identifying Causes of LD

		SA	A	U	D	SD
13	Teachers are aware of the causes of LD					
14	Teachers have full knowledge of children with LD					
15	Teachers identify children with LD					
16	Teachers are able to cope with children with LD					
17	Teachers set guidelines for appropriate classroom behavior for pupils with LD					
18	Teachers are trained to handle pupils with LD					

### Teachers Attitude towards Class three Pupils with LD

		SA	A	U	D	SD
18	Teachers do not ignore children with LD in class					
19	To teachers, responsibility of teaching pupils with LD should remain with special education teachers					
20	Teachers provide remedial for pupils' with LD					
21	Teachers modify curriculum to cater for children with LD					
22	To teachers, placement of pupils with LD in the mainstream is for socialization only					
23	Teachers individualize teaching to cater for children with LD					

### Types and Use of Instructional Materials in Class Three with LD learners

		SA	A	U	D	SD
25	Teachers use charts					
26	Teachers use flash cards and cut outs					
27	Teachers use manipulative or real objects					
28	Teachers use tape recorders					
29	Teachers do not use videos					
30	Teachers use story books and story telling					

**THANK YOU FOR YOUR CO-OPERATION**

## APPENDIX IV

### OBSERVATION SCHEDULE

Key:

1 = behavior never observed.

2 = behavior rarely observed.

3 = behavior occasionally observed.

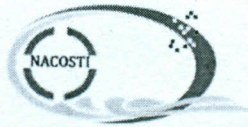
4 = behavior consistently observed.

Date ..... Name of researcher .....

#### Behaviors to be observed

		1	2	3	4
	<b>Methods used in teaching Class Three learners with LD</b>				
1	Teacher provides direct and clear instructions for reading and writing				
2	Teacher varies the teaching method and teaching activities and involve all the learners throughout the lesson				
3	Teacher designs and implements individual instructions in reading and writing				
4	Teacher uses paired or group work to encourage active participation of learners with LD				
5	Teacher plans lessons to last short periods of time to cater for children with LD				
6	Teacher uses mother tongue occasionally when teaching				
	<b>Teachers Competencies in identifying Causes of LD</b>				
7	Teacher identifies children with LD				
8	Teacher motivates children with LD				
9	Teacher assist children with LD				
10	Teacher involves children with LD in the lesson				
11	Teacher identifies a specific learning difficulty and deals with it				
	<b>Types and Use of Instructional Materials</b>				
12	Teacher use charts and flash cards in teaching				
13	Use of manipulative Instructional materials in teaching				
14	Use of story books to teach reading				
15	Use of any other audio visual materials in teaching				

# APPENDIX V: RESEARCH AUTHORIZATION NACOSTI – NAIROBI



## NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 310571, 2219420  
Fax: +254-20-318245, 318249  
Email: secretary@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/15/38495/8203**

Date:  
**23<sup>rd</sup> November, 2015**


Margaret Wanjiru Murage  
Kenyatta University  
P.O. Box 43844-00100  
NAIROBI.

### RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Assessment of classroom interview strategies for class three pupils with learning disabilities in public primary schools Mathira West Nyeri County Kenya,*" I am pleased to inform you that you have been authorized to undertake research in Nyeri County for a period ending **15<sup>th</sup> November, 2016.**

You are advised to report to **the County Commissioner and the County Director of Education, Nyeri County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

  
DR. S. K. LANGAT, OGW  
FOR: DIRECTOR GENERAL/CEO

Copy to:

The County Commissioner  
Nyeri County.

The County Director of Education  
Nyeri County.

*National Commission for Science, Technology and Innovation | P.O. Box 30623-00100 | Nairobi, Kenya*

# APPENDIX VII: RESEARCH AUTHORIZATION NACOSTI – NYERI

## MINISTRY OF EDUCATION



Telegrams: "Schooling", Nyeri  
Telephone: (061) 2030518, 2030540  
Fax: 0612030535  
When replying please quote

District Education Office,  
MATHIRA WEST DISTRICT  
P. O. Box 1628,  
KARATINA.

**DATE: 24TH NOV 2015**

**REF: NACOSTI/P/15/38495/8203**

**REF: RESEARCH AUTHORIZATION FOR MARGARET WANJIRU MURAGE**

The above named MED student from Kenyatta University has been authorized to conduct research on "Assessment of classroom intervention strategies for class three pupils with learning disabilities in public primary schools in Mathira West Nyeri County Kenya."

Kindly accord her all the necessary support.

For: D.E.O. MATHIRA WEST  
P. O. Box 10101-1628 KARATINA

Date: ..... Sign: .....

**WILSON K. MWANGI**

**FOR SUB COUNTY DIRECTOR OF EDUCATION**

**MATHIRA WEST, NYERI COUNTY**

**KENYATTA UNIVERSITY LIBRARY**