DETERMINANTS OF EFFECTIVENESS OF PEER TUTORING ON
ACADEMIC PERFORMANCE OF STANDARD FOUR PUPILS WITH
LEARNING DISABILITIES IN NYERI CENTRAL SUB-COUNTY, KENYA

KIBUTHU ANNE NJERI

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DECLARATION

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

Signature_________________________ Date____________________

KIBUTHU ANNE NJERI

Department of SNE

E55/CE/14292/2009

This thesis was submitted with our approval as University Supervisors

Sign_________________________ Date____________________

Dr. Mary Runo

Department of Special Needs Education
Kenyatta University

Sign_________________________ Date____________________

Dr. Jessina Muthee

Department of Special Needs Education
Kenyatta University
DEDICATION

This work is dedicated to my husband and friend, Wachira, son Mwangi and daughter Nyaguthii for their moral, spiritual, and financial support in the course of this work.
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Above all to God be the glory.
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<tr>
<td>PMII</td>
<td>Peer Mediated Instruction and Intervention</td>
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<tr>
<td>CAT</td>
<td>Cross Age Tutoring</td>
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<tr>
<td>CBM</td>
<td>Curriculum Based Measurement</td>
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<td>CDO</td>
<td>Compare, Diagnose and Operate</td>
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<td>CRAB</td>
<td>Comprehensive Reading Assessment Battery</td>
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<td>CWPT</td>
<td>Class wide Peer Tutoring</td>
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<td>FPE</td>
<td>Free Primary Education</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>IDEA</td>
<td>Individuals with Disabilities Education Act</td>
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<tr>
<td>KCPE</td>
<td>Kenya Certificate of Primary Education</td>
</tr>
<tr>
<td>LD</td>
<td>Learning Disability</td>
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<tr>
<td>NCLB</td>
<td>No Child Left Behind</td>
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<td>PALS</td>
<td>Peer Assisted Learning Strategy</td>
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<td>PMI</td>
<td>Peer Mediated Instruction</td>
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<tr>
<td>RPT</td>
<td>Reciprocal Peer Tutoring</td>
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<tr>
<td>SLD</td>
<td>Specific Learning Disabilities</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UPE</td>
<td>Universal Primary Education</td>
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ABSTRACT

The main purpose of the study was to analyze the determinants of effectiveness of peer tutoring on academic performance of standard four pupils with learning disabilities in Nyeri Central Sub-County, Kenya. Literature was reviewed according to the objectives of the study. The study was premised on Vygotsky’s social development theory as the theoretical underpinning. The study adopted descriptive survey research design utilizing both qualitative and quantitative approaches. The target population was all teachers teaching class four pupils in Nyeri central sub-county, Nyeri County, Kenya. The study used questionnaires, interview guide and observation checklist as the data gathering instruments. The data collected was edited, coded, classified on the basis of similarity, and then presented in form of charts, graphs, and tables for clarity. Pearson Correlation analysis was also used as the inferential statistical methods. Since the study was a descriptive study, descriptive statistics in SPSS such as percentages, frequencies tables, graphs, and trend analysis were used to summarize and relate variables. The study found that the methods used to identify learners with LD were observation of pupils’ behavioral characteristics. It was also established that the teachers were adequately trained and well prepared to incorporate peer tutoring in their classes. The activities that peers engaged in were peer tutor demonstrating to tutee as an activity while learning socializing well, asking each other questions, concentration on task and asking guidance from the teacher. It was also found that some types of peer tutoring affected academic performance more positively than others. The study concluded that more training on methods of identifying learners with LD was important as it was critical in putting measures for early interventions. The study recommended that teachers should use professional methods of identifying learners with LD. It also recommended that government should be at the forefront of promoting policy frameworks that enhance special education in schools. Lastly, the study recommended that further studies should be conducted on the class eight pupils to establish how the candidate class copes with learners with LD.
CHAPTER ONE
INTRODUCTION

1.0 Introduction
The aim of the study was to evaluate the determinants of the effectiveness of peer tutoring on the academic performance of standard four pupils with learning disabilities in Nyeri Central Sub-County. This chapter presents the background information, problem statement, the purpose of the study, specific objectives, research questions, and significance of the study, delimitations, and limitations, assumptions of the study, conceptual framework, theoretical framework, and operational definition of terms.

1.1 Background to the Study
Peer tutoring is an ancient practice that can be traced back to the ancient Greeks (Topping, 1996). Primitive explanations of peer tutoring comprehend the peer tutor as a foster teacher in a linear model of the diffusion of knowledge from teacher to tutor to tutee (Boud, Cohen, & Sampson, 1999). Later it was established that the peer tutoring interface was qualitatively dissimilar from that between a teacher and a student, and involved various approaches (Mishra, 2009). It involves co-operation among the peer which involves a family of cooperative learning approaches that entail guided and formalized peer exchanges to promote and facilitate academic success. Inclusive education dictates that all children regardless of their intellectual strengths and weaknesses must be incorporated in the mainstream education (Greenwood, Carter, & Kamps, 1990). The spirit of belongingness among all community members including students, teachers, and other officials, is nurtured through inclusive education. Generally, such methods have always been operational across wide
multiplicities of tasks and the population of student and have been especially beneficial in promoting academic success (Rittschof and Griffin, 2001). Springing up from school budget miseries of the late 18th and early 19th centuries, peer tutoring became an efficient way of giving underprivileged (at that time, sadly, only male) children a reasonable crack at education (Barley, Laurer, Aren, Apthrop, Englert, Snow, & Akiba, 2002). The foremost systematic approach to peer tutoring is attributed to Andrew Bell, a superintendent of a Military Asylum in England, who transformed the Asylum into an official school (Goodlad & Hurst, 2009).

The World Conference of 1994 made several proclamations which continue to influence the education for children and especially those with special needs such as learning disabilities. This conference was based on the recognition that each child has a cardinal right to education, and must be accorded the opportunity to actualize and sustain a standard level of learning. Further, it acknowledged that each child has inimitable physiognomies, abilities, interests, and learning needs. The conference made some recommendations which compel education systems to design and execute educational programmes factoring the wide variety of these features. In addition, it stressed that learners with special educational needs must access regular schools. These schools should accommodate the learners within a child-centred pedagogy adept at fulfilling their needs (UNESCO, 1994). Later, Dakar Framework of action (2000) declared that early childhood care and education must be expanded, improved, special learning needs of learners ensured and quality education improved. Further, it declared that this education should be measured in relation to essential skills in life, literacy, and numeracy.
Learning disabilities are a likely reason for the high rate of dropout among children in primary school (Vaughn & Fuchs, 2003). This dropout rate may be due to lack of fair opportunity to obtain a quality education. In America No-Child-Left-Behind Act [NCLB] (2001) was to guarantee that all children have an equal, fair, and significant opportunity to acquire a high-quality education and to attain a minimum aptitude on challenging state academic achievement standards (NCLB, 2001). From some of the highlights of the NCLB Act, every state needs to adopt coherent aptitude levels to be attained by all children (Wright and Health, 2004). To meet the NCLB education standard, all learners with disabilities were expected to make sufficient academic improvement to ensure that all students were dexterous by 2014. Schools and school districts were supposed to address the schooling requirements of all school children, as well as the unfortunate children, children who are disabled, English language learners, marginalized and migrant learners and other abandoned classes of learners, and to publicly account for their improvement in educating children annually.

Abosi (2007) cites, ‘overcrowded classrooms, poverty, health issues, shortages of experienced teachers, traditional beliefs, lack of teaching materials, school expectations and motivational issues’ as implicated in contributing to the poor achievement of large groups of children with learning disabilities in African schools and uses Botswana as an example. The present study focused on the effectiveness of peer tutoring strategy on performance of learners with LD. A recent nation-wide survey in Kenya by the Ministry of education, comprising of over 100,000 students aged between 3 and 16 in more than 2000 schools, established that the literacy level among primary school going pupils is very low with measly 33% of children in
standard 2 who can read a word whereas 25% of standard 5 pupils were found unfit to read a class 2 paragraph (Ministry of Education, 2008; Uwezo, 2010).

In Kenya, a lot of concern is on passing the examinations (Oloo, 2003). This hinders learners with learning disabilities to get chances during learning lessons. These learners with learning disabilities deteriorate in education due to lack of appropriate instructions. Children's Act of 2001 embraced the principles of “best interest” which stated that any decision affecting a child was made in the best interest of the child (The Republic of Kenya, 2003). The major commitments contained in the Act included co-ordinating, establishing, and promoting facilities and services within the community planned to advance the well-being of children with special needs in educational set up.

The research status of peer tutoring strategies on learners with LDs in Kenya is revealing as few scholars including Kiarie (2003); Rasugu (2010); Gateru (2010); Runo (2010); Njeri (2012); and Bukhala (2012) have explored the study with varied results. Bukhala (2012) focused on impact of peer tutoring on physical activity of learners with and without intellectual disability; Njeri (2012) analyzed teachers’ competencies, learning and teaching strategies they employed to instruct learners in regular public primary schools; Gateru (2010) assessed teachers’ awareness and interposition for pupils with learning disabilities in primary school, to inclusive education in the public schools in Makadara Division, Nairobi Province, Kenya; Rasugu (2010) examined the nature and prevalence of learning disabilities among standard three primary school pupils in Starehe Division of Nairobi Province; whereas Kiarie (2003) investigated the differential effects of peer tutoring and peer tutoring on
the spelling performance and disruptive behavior of fourth-grade students in a general education classroom. As such, very few scholars have ventured to study the effectiveness of peer tutoring strategies in Kenya. This was the focus of the study.

In her study, Runo (2010) found out that learning disabilities are by far the leading set of special education accounting for somewhat over a half of all the learners getting educational services in primary schools in the central region of Kenya. The study found that 51% of the pupils in class 5 had learning disabilities. Looking at these statistics, every teacher must expect to find pupils with learning disabilities in their classrooms. Despite obstacles, Mercer, Mercer & Pullen (2011), state that these children can be taught how to learn and put in a position to complete. The current state of poor performance among children with learning disabilities can be addressed through conducting research.

A study by Bukhala (2012) focused on the impact of peer tutoring on physical activity of learners with and without intellectual disability. The World Health Organization (WHO) approximates that 10% of every populations suffer from different forms of disability. In addition roughly 85% of the world’s children with disability below 15 years live in the developing countries (World Bank, 2000; Mwangi & Orodho, 2014). Educational opportunities for learners with special needs and disabilities are a key challenge to the learning sector. The bulk of learners with Special Needs and Disabilities in Kenya lack access to educational services. For example, in 1999 records state that, there were only 22,000 learners with special needs and disabilities enrolled in special schools, units, and integrated programs. This number rose to 26,885 in 2003 and 45,000 in 2008, which compares poorly with the proportion in
general education (MoE, 2009). The present study examined the determinants of the effectiveness of peer tutoring strategy on performance of class four learners with LD. Due to the current state of poor performance of children with learning disabilities, it is necessary that the issue is addressed through conducting research. This current study sought to address the strategies that teachers employ in peer tutoring and how they influence the overall academic outcome of standard four pupils with learning disabilities in Nyeri Central Sub-County, Kenya.

1.2 Statement of the Problem

The practice of learners growing physically and not developing academically is a cause for concern to many educationists (Uwezo, 2010). Classrooms that produce a comparatively low level of academic performance among their students are likely not providing effective instruction on a consistent and systematic basis (Ministry of Education, 2008). When Peer tutoring strategy is executed effectively, has the ability to reduce the learning disabilities in children. It is expected that teachers apply the skills of peer tutoring learned during their training and cater for learners with learning disabilities in their practice to ameliorate their otherwise dismal performance. The learners with LD continue to perform poorly in Nyeri central sub-county (KCPE Results, 2011, 2012 & 2013). Such poor performance in key subject areas such as math and languages in Kenya Certificate of Primary Education (KCPE) persists and needs instant redress. In the face of the fact that administrative agencies like Ministry of Education (2008) and researchers including Kiarie (2003); Rasugu (2010); and Gateru (2010) have interrogated the peer tutoring and education, miniature or no focus has been put on the strategies of peer tutoring that boost performance in
academic of children with learning disabilities particularly in developing countries such as Kenya. As such, it is in counter to this background, that a research on the determinants of the effectiveness of peer tutoring on the academic performance of learners with LD is not only essential but unavoidable. Thus, the current study intended to examine the determinants of the effectiveness of peer tutoring strategies on academic performance among class four pupils with LD with a view of recommending how they can be made more efficient and effective.

1.3 Purpose of the Study
The purpose of the study was to analyze the determinants of the effectiveness of peer tutoring on the academic performance of pupils with learning disabilities and how it could be made more effective and beneficial to the children with learning disabilities in Nyeri Central Sub-County.

1.4 Objectives of the Study
The study was led by the ensuing specific objectives: To

i. Find out the methods used by teachers to identify learners with learning disabilities among class four pupils.

ii. Establish how the preparedness and training of the teacher affects peer tutoring.

iii. Identify the activities that peers engage in during peer tutoring sessions.

iv. Establish the types of peer tutoring strategies that affect academic performance among standard four pupils with LD.
1.5 Research Questions

The study was guided by the following research questions:

i. What methods do teachers use to identify learners with learning disabilities among class four pupils?

ii. How does the preparedness and training of the teachers affect peer tutoring among standard four pupils with LD?

iii. What are the activities that peers engage in during peer tutoring sessions?

iv. What are the types of peer tutoring strategies that affect academic performance among pupils with LD?

1.6 Significance of the Study

The results of the research may benefit the teachers, parents, learners, and curriculum developers. Teachers may apply peer tutoring when teaching. Teachers may gain an understanding concerning how peer tutoring may be made more effective in addressing the learners with learning disabilities. Learners with LD may feel represented, accepted, and hence develop confidence in their studies.

The government through the Ministry of Education may be able to come up with ways of enhancing peer tutoring strategy in primary schools. Data taken out from this investigation seeks out to give practical information on the accessible actualities in mutually widespread circumstances and several specific facets of the nexus between peer tutoring strategies and academic performance of children with learning disabilities. Future researchers will, therefore, benefit from the findings by using it for further research as a reference material due to dearth and/or shortage of literary sources in this area.
1.7 Delimitations and Limitations of the Study

1.7.1 Delimitations of the Study

The research to examine determinants of the effectiveness of strategies of peer tutoring on the performance in academic of children with learning disabilities was carried out in Nyeri central Sub-County and involved class four pupils in public schools and subject teachers of class four. The study was only carried out in four schools (10% of the target 40 schools). There were other methods that could be used to teach learners with LD but this study only focused on peer tutoring strategy among standard four classes. The focus was on this group of learners because this is a transition class from lower classes to the upper and therefore acted as the best stage to ground the foundation of learners with LDs for future better performances. Owing to competition tendencies among private schools they barely hold on to learners with learning disabilities. Additionally, several studies regarding LDs and performance have been exhaustively conducted in several high schools (both public and private) thus, they were not necessary for study.

1.7.2 Limitations of the Study

In carrying out the study, the researcher anticipated a number of limitations. There were two limitations to the study. First, Nyeri central sub-county is a vast area with many primary schools which are farther apart. The expanses, accessibility, and other provisions of research constrained the exercise in terms of duration of time and funding during collection of data and therefore, limited the scope of the study. Moreover, the peasant lifestyle together with the overall economic problems of some parents in the sub-county made some of the selected pupils unreachable thus
restricting the outcomes of the study on the available respondents at the time of collection of data.

Owing to the choice of one sub-county for purposes of the study, the findings could not be generalized to the entire Kenyan population.

1.8 Assumptions of the Study
In carrying out the research, it was assumed that the school administration was competent and supportive to the teachers as they applied the peer tutoring strategy to instruction. It was also assumed that peer tutoring was being employed by teachers to teach learners with LD. The researcher also assumed that the respondents would be available to volunteer information without fear or intimidation and that poor performance was caused by learning disabilities.

1.9 Theoretical and Conceptual Frameworks
1.9.1 Theoretical Framework
This research embraced the social development theory which is based around the ideas of Vygotsky (1978). Vygotsky proposed an involvement mode of learning where the incorporation of knowledge is deduced through interaction of individuals socially. All higher mental functions have social origins. They initially occur in communications between people before they are internalized. Vygotsky (1978) argues that children learn concepts and practices that are relevant culturally as they perceive and partake in day-to-day lives of their communities and families. As children contribute to these experiences, they are reinforced by their associates with whom they cultivate mutual understandings. Vygotsky (1978) argues that as children partake
in expressive experiences with more knowledgeable others, there are prospects for children to become more knowledgeable, just like their peers. This theory largely relates to the current study since if the teachers correctly employ peer tutoring, learners with LD may learn many concepts from their peers and their performance be enhanced. This is because pupils understand content taught by peers easily than if it was taught by teachers (Chomsky, 1989).

The Zone of Proximal Development (ZPD) is a key notion within Vygotsky’s theory. Vygotsky (1978) described it as the space between the definite development level as influenced by free problem solving and the level of potential development as decided through problem-solving under the guidance of an adult or partnership with more capable peers. The Zone of Proximal Development recognizes the prospects for education rather than outlining the child’s ability by what they have accomplished developmentally at an exact point in time. The relevance of this theory to the current study is that tutoring by a more proficient peer can be an operative aid in transition through the ZPD (Vygotsky, 1978).

The ideas of Rogoff (1990, 1995) have underwritten the post-Vygotskian discourse and are important in this study. Rogoff (1995) pinpoints a key ground within social-cultural theories through which individual, interpersonal, and cultural progressions are not autonomous entities, rather they are linked. Therefore, analyzing learning children must take into account individual, social, and cultural processes. Rogoff (1990) underlined the significance of the concerted aspect of cognition, as leading to a level of indulgence which children working by themselves are unable to realize. As children interchange towards this level of comprehension, they are involved in a
process which Rogoff (1995) terms as the transformation of participation, in which individuals develop through participation in shared endeavors. The relevance of this theory in this study is that as peers participate in learning experiences, their knowledge is transformed, and their academic performance can easily be improved. This means that lack of regular use of the same can adversely impact on the academic performance as largely so if the pupils in question are LD.
1.9.2 Conceptual Framework

Fig 1.1: Effective learning of a learner who has LD adopted from CDO strategy model.

This conceptual framework explains the interaction between independent variables and the dependent variable. The independent variables in this study are teachers’ preparedness, identification of learners with LD, peer tutoring activities, types of peer
tutoring. The dependent variable is pupils’ performance in class. The conceptual framework was adopted from De La Paz et al. (1998); Graham, (1997) CDO strategy model that basically means Compare, Diagnose, and Operate. The CDO is a multistep procedure that helps pupils decide whether their stretches and clauses meet their projected anticipations and benefits them in making meaningful alterations to those sentences. To compare, the student asks, "Does my sentence match what I really wanted to say?" To diagnose, the student picks a diagnostic card (e.g., "This sentence is too long or too short" or "This sentence lacks detail.") To operate, the student makes the change and then evaluates by asking, "Was the change effective?" The process is then repeated at the paragraph level using appropriate diagnostic cards.
1.10 Operational Definition of Terms

**Dropout:**
According to Merriam-Webster Dictionary, dropout is a person who has stopped going to school or college before completion. Another meaning from the dictionary states that a dropout is a person who stops being involved in society because he/she does not believe in its rules, customs and values. Based on this study, dropout denotes any pupil who leaves school before the completion of a given stage of education.

**General education classroom:**
Merriam-Webster defines it as any place where one learns or gains experience. For the purpose of this study, classroom denotes ordinary classroom comprising of learners of different abilities.

**Hyperactive behavior:**
According to United States National Library of Medicine, hyperactive behavior refers to a constant activity being easily distracted, impulsiveness, inability to concentrate, aggressiveness and similar behaviors such as fidgeting or constant moving. In this study, hyperactive behavior involves exhibiting excessive movements and activity.

**Learning disabilities:**
Learning Disabilities Association of Canada defines learning disabilities as a number of disorders that affect the acquisition, organization, retention, understanding, and use of verbal and non-verbal information. According to the study, these are specific kinds of learning problems which cause a learner to have trouble learning and using certain skills.
Peer tutee:

Free Dictionary state that tutee is a student who learns or takes up knowledge and beliefs. This study defined it as a pupil who is being taught by another pupil.

Peer tutoring:

Free Dictionary defines it as a method of instruction that involves students teaching each other to demonstrate the mastery of content. Based on the study, it denoted a method of teaching where a child is taught by a classmate.

Reading Comprehension:

Merriam-Webster dictionary defines reading comprehension as the ability to read the text, process it and understand the meaning. Under this study, reading comprehension denoted grasping of the meaning of printed text through reading.

Social cognition:

Psychology Glossary states that social cognition describes the focus on the way perceivers encode, process, remember, and use information in social contexts in order to make sense of other people’s behavior. In this study, they are inept at understanding and interpreting social cues and social situations.

Social economic factors:

According to Dictionary.com, socioeconomic factors are those conditions that affect and shape socio-economic processes such as progression or regression based on economic situations. This study defined it as the availability of material things and living conditions of the child in support of his/her education. The way of coming up with the pupils strengths and weakness in his/her learning areas.
**Social skills:**

Psychology glossary states that social skills are skills used to communicate and interact with each other both verbally and non-verbally, through gestures, body language, and appearance. This study defined social skills as skills necessary for meeting the basic social demands of everyday life.

**Zone of Proximal Development (ZPD):**

A term used by Vygotsky, envisioning a range of levels of difficulty for a pupil. The lower level is very easy. The upper end is beyond the pupils’ capacity.
2.0 Introduction

The goal of this chapter was to review the past and present literature related to the study that sought to analyze the determinants of the effectiveness of peer tutoring on the academic performance of standard four pupils with learning disabilities. In this chapter the researcher has discussed identification of learners with LD, teacher preparedness, and training, activities pupils engage in during peer tutoring, types of peer tutoring strategies and academic performance.

2.1 Identification of Learners with Learning Disabilities

The concept of learning disabilities covers an extremely wide range of characteristics. One pupil may have deficits in just one area while another exhibits deficits in several areas, nonetheless together they will be branded learning disabled. Some children will experience intellectual disabilities. Others may have complications with motor skills and still others may display social deficits (Gargiulo, 2009). Lerner and Klines (2006) list of learning and behavioral physiognomies of persons with learning disabilities include disorder of attention, deprived motor abilities, psychological progression deficits and information process difficulties, lack of cognitive plans needed for well-organized learning, oral language disabilities, reading disabilities, written language difficulties, quantitative disorders and deficits of social skills.

More than half of all pupils recognized as suffering from learning disabilities exhibit challenges with reading (Lerner & Kline, 2006). The disabilities experienced by those youngsters are as varied as the children themselves. Some pupils have problems in
reading comprehension; others signal errors in recognizing word; as others still lack
the ability or skill to analyze word or deficit in oral reading (Gargiulo, 2009).
Shortfalls in reading are regarded as a key failure in school; as they also add to loss of
self-esteem and self-confidence (Polloway et al., 2008).

According to Lerner and Kline (2006) scholars guess that about a quarter of pupils
with learning disabilities receive support because of mathematics disabilities. In some
cases, pupils may have disability with computational abilities, difficulties with word,
spatial affiliations or writing numbers and copying shapes (Gargiulo, 2009). Many
individuals with learning disabilities exhibit deficits in writing language, including
spelling, handwriting, and composition (Hallahan, Lloyd, Kauffman, and Weiss &
Martinez 2005). According to Hallahan et al. (2005) investigations have witnessed
that persons with learning disabilities use fewer complex sentence structure,
incorporate fewer ideas, produce poorly organized paragraphs, and write less complex
stories.

Persons with learning disabilities recurrently experience problems with oral
expression which can affect both academic performance and social relations.
(Gargiulo, 2009). Challenges with suitable choice of word, comprehending
multifarious sentence structure and replying to queries are common. Many of the
pupils with difficulties in learning are deficient in social cognition (Gargiulo, 2009).
Some student with disabilities in learning have a plummeted self-esteem and deprived
self-concept as compared to their associates, most probably owing to frustration
stemming from their learning disabilities (McMaster, Fuchs, & Fuchs, 2006). Students
with LDs repeatedly face rejection from non-disabled counterparts and have
difficulties creating friends, perhaps because of misinterpreting emotions and feelings of others (Learner & Kline, 2006). Individuals having learning disabilities frequently experience difficulty attending to tasks and some exhibit excessive movements and activity or hyperactive behavior. Instructors note that some pupils have challenges remaining on a task and finishing assignments, following orders or on concentrating for a continued period of time (Gargiulo, 2009).

There have been several methods of identifying learners with LD. For instance, the impression of using a Response-to-Intervention (RTI) procedure as the method for identifying the presence of a learning disability (LD) has been widely used since the 1980s (Fuchs, Fuchs, & Stecker, 2010). Over the succeeding years, it has been additionally polished and backed by some educationalists and scholars as the principal technique for identifying LD. According to Nyakwara, Wafula, Poipoi, & Wanyama (2012) much of the basis for its application as an LD proof of identity process emanates from the displeasure of countless instructors with the usage of the Intelligence Quotient (IQ) attainment discrepancy model and the overall use of uniform, norm-referenced tests that measure intelligence as well as underlying cognitive courses (like processing speed, short-term/working memory among others). However, there are four worries and reproaches of the existing RTI, all of which proponents of RTI assert can be solved easily: Over-identifying schoolchildren with LD, Over representing the minorities in special needs education, Reliability (too many false positives and too few true positives) and Inconsistency of rates of identifying across settings (Fantuzzo, & Rohrbeck, 2003).
According to Lerner (1981) as cited by Njeri (2012), there exist four distinct but interrelated stages of identifying children with learning disabilities. The first stage entails the child find, which denotes to techniques of locating a child with learning disability in class done regularly by the teacher. The second stage involves screening/sorting by trying to isolate children who require extra study. Duflo, Pascaline, & Kremer (2009) assert that the preference for screening is premised on the fact that it is a temporal, low-cost evaluation of children’s hearing and language, speech and vision, motor skills, self-help skills, social-emotional skills and cognitive development. The third stage according to Lerner & Njeri (2012) is the diagnostic stage that comprises of shaping the scope of developmental interruption and contriving an intervention programme. The prominence lies on methods of comprehensively examining a child through formal and dependable measures to ascertain that the child’s problems permit special services. This is attained through a concerted efforts of a multi-disciplinary team that influences the type of the problem, its asperity, and the interposition and placement that the child wants. The Last stage is the evaluating stage, which focuses on gauging the development and determining whether a child remains in a special education programme and planning for transition. This stage of assessment helps decide whether the child requires special education services, what skills the child has acquired and still lacks, and what new placement will be required (Njeri, 2012).

Other studies on early identification of children with LDs in class three conducted by Wafula (2010) found that several teachers lack adequate training in special needs education, hence, their ability to isolate and gauge children with learning complications is hampered. Consequently, children with learning disabilities are not
helped using modified methods that would address their needs. Wafula (2010) further established that teachers who have a close contact and interaction with their pupils have the ability to provide early identification for intervention and individualized attention. The close teacher-pupil interaction enables the teacher to closely observe and identify the learning difficulties the child has. On the other hand, Njeri (2012) findings regarding her study on learners with LDs in class five revealed that though teachers insisted that they have knowledge of identifying learners with LD, they did not have any identification tool. Consequently, they were not able to establish whether certain characteristics existed in children with LDs. Burks (2004) states that an important first step in recognizing children with learning disabilities is to spot the behaviors that they typically display. However, this seems to be quite confusing since there are numerous diverse behaviors that a child with a learning disability can display. The global argument of Burks is that traditional methods of identification can be used to identify learners with LD. This position is however criticized by Fuchs and Fuchs, who argue that this largely dictates and advocates for unprofessional methods of identification of learners with LD. This study sought to examine the methods of identifying learners with LDs professionally.

2.2 Teacher Preparedness and Training

According to Murphy, Delli and Edwards (2004), effective teachers are patient, respectful to students and organize the classroom well to make their students enthusiastic. In addition, skillful teachers have refined picture of what they teach, are able to unravel glitches without affecting the schoolchildren personally. Hattie (2002), states that professional teachers can prepare the ideal classroom temperature through scanning errors, giving feedback and monitoring learning. He explains that expert
teachers are able to monitor student’s problems and assess their understanding whilst providing feedback at the same time. They can also see the difficulties facing their students and build strategies and the extents to which they are working by measuring student’s outcomes and exercise responsibility for their students as well as exerting a positive influence on their students.

In their study investigating the perception of 4659 students from preschool, Klinger and Vaughn (1999) found that there was unanimous recognition that teacher should suit their way of teaching according to the individual student’s ability. Further, they found that a teacher who slows down instruction makes the concepts clear and teaches using learning strategies. On inclusive classroom, an effective teacher is one who has the ability to plan for the content coverage and takes into account the differences between students by scope and sequences their objectives. Moreover, effective teachers have good presentation skills including the variables which might influence the teaching process thus, keeping the students actively engaged, monitoring the academic practices with frequent questioning and giving immediate feedback (Mastropieri et al., 2004; Westwood, 2003). In a state survey by Darling (2000), it showed that there was a significant relationship between student’s achievement and teacher preparation and qualifications, especially in reading and mathematics. Further, the survey found that a teacher’s experience, creativity, enthusiasm, questioning skills, knowledge of content, intelligence, planning for using time and cooperation with colleagues contributed to an increase in student’s achievement (Darling, 2000). This study sought to evaluate teacher training and preparedness with respect to helping learners with LDs.
Dinham (2004) conducted a case study which included 19 effective teachers and high achievement grade 12 students in Australia and found that the factors that influence student’s achievement include school background, personal qualities, classroom climate and teaching strategies (Dinham, 2004). This was emphasized by Vandervoort et al. (2004) who assert that the quality of the teacher in the classroom is the single most important factor in determining how well a child learns. Other researchers who concur with this assertion include Sogomo (2001) and Howell and Nollet (2000) posited that an effective teacher generates the greatest opportunity for students to learn and technically manage instruction by teaching methods that allow student participation. There is also a general feeling among the authors on this subject that the cornerstone of good teaching is establishing appropriate academic instructional objectives and designing intervention programmes that maximize opportunities for students to work successfully on tasks related to objectives. In Kenya, the main concern of all stakeholders in education is poor performance. This is because it leads to tragic wastage of human, social and economic potential of countries worldwide. Many indicators such as lack of facilities in school, lack of teachers, unfavorable home environment, absenteeism and repetition, low intelligence and anxiety do cause poor academic achievement (Sifuna & Sawamura, 2008). As such, expert teachers are mandated to ensure that the availability and the use of teaching aids / resources in schools are geared towards helping the pupils with learning disabilities improve their academic performance as they contribute to quality education (Sifuna, 1980).

In her study to identify reading disabilities and teacher-oriented challenges in teaching reading in class five pupils, Runo (2010) while quoting Wheelock (1995) asserts that there must be effective teacher training and in-service programmes to help pool
solicitous programme development with hard work to transform the most embedded classroom practice and conventional routines. She says that it is imperative to focus on the teacher preparedness and training component and how it affects the performance of learners with LDs. Runo (2010) avers that enhanced learning hinges on knowledgeable teachers who are aware of the academic content and are in a position to employ a variety of teaching methodologies to help all students master that content. Quoting Newmann & Wehlage (1993), Runo (2010) asserts that authentic instruction from highly prepared and trained teachers should meet the standards of the following areas: higher-order thinking, depth of knowledge, connectedness to the world, substantive conversation, and social support for the student achievement.

According to the Bureau of Labour Statistics U.S.A (2010-2011), as quoted by Njeri (2012), children with learning disabilities should be taught by teachers that are well-equipped with skills and knowledge on appropriate teaching strategies. Further, special needs education teachers must complete a four-year bachelor’s degree programme that includes general and specialized coursework in special education. If a teacher is required to obtain a specific specialization, he or she must complete an additional year of training at the graduate level. Alternative programmes are open to anyone with an undergraduate degree in any field. These candidates must complete a year of supervised preparation and instruction and pass an assessment test to begin teaching. These teachers must have acquired teaching methods like small group learning, problem-solving assignments and intensive individual instruction related to the learners disability. Communication and cooperation are also essential skills special education teachers must have because they spend a great deal of time interacting with parents, school faculty, and administration (Bureau of Labor Statistics
USA). This study, though, sought to evaluate the preparedness and training of teachers and how these aspects of teaching affected the academic performance of learners with learning disabilities.

2.3 Activities Peers Engage in During Peer Tutoring

In Wood and Frid’s study (2005) the teachers modeled appropriate and effective peer interactions, they supported the children peer learning through direct guidance and questioning and they used choice as a means of guiding children in their problem solving. The authors concluded that effective learning was dependent on teacher’s ability to develop productive discussion amongst children using an inquiry process (Runo, 2010).

According to (Mercer et al., 2011) for peer tutoring to occur in a positive and supportive environment, the teacher should teach social skills such as accepting the partner, giving and accepting corrective feedback and praising a partner. The teacher reminds the students that the school rules apply during peer tutoring. The teacher also schedules the peer tutoring sessions (Wafula, 2010). Mercer et al (2011) state that teachers must supervise the sessions, evaluate progress and make periodic revisions. Initially, the teachers need to supervise the peer tutoring session closely and provide corrective and positive feedback. Once the students become proficient in their respective tutor-tutee roles, the teacher can scan the tutoring sessions while working with a small group or individual students.

According to (Mercer et al., 2011) suggestions for managing misbehavior during peer tutoring sessions include; ignore misbehavior unless it persists, if misbehavior is chronic, reassign the pair to other partners, do not get involved in minor disputes,
praise pairs for appropriate behavior and develop a signal to remind the class to work quietly. The teachers evaluate the peer tutoring program. The achievement of tutees should be evaluated by examining the daily progress sheets completed by tutors. Weekly quizzes on the skills or content covered in peer tutoring also help monitor progress. Social skills can be monitored through systematic observation of the tutoring pairs and affective domains can be evaluated through interviews or questionnaire (Friend & Bursuck, 2002).

Mercer et al., (2011) states that the procedures instruct the tutor how to present the academic task, score the tutee responses, provide feedback for correct and incorrect responses and record the total performance of the tutee. The procedures instruct the tutee how to respond to the academic task. The procedures detail the rewards for the tutor and tutee for the achievement of the specified goals. This current study focused on the activities that peer engaged in during peer sessions in class.

Peer tutoring programs are included in most tutor training procedures. The duties typically include introducing the material, presenting items, correcting errors, prompting and praising correct answers, testing and recording progress and assigning points for progress (Abrami, Carlson & Chambers, 2004). Tutor training procedures include a combination of the following. An orientation to the rationale and goals of the tutoring, a description of the tutoring skills, tutor imitation and role playing of procedures and feedback, intermittent guidance when needed and praise for to do the tasks presented by the tutors. Specific duties include following directions, receiving feedback appropriately and maintaining attention (Buchs, Butera & Mugny, 2004).
A study by Bukhala (2012) investigated the effects of peer tutor training programme on the physical activity level of athletes and partners engaged in unified programme in Nairobi County, Kenya. The study involved 106 youth with and without intellectual disabilities in equal number to participate in the unified programme. Peer tutors were trained in four days in specific physical activities and motor abilities and also other aspects of teaching methodologies. The study employed pre-post quasi-experimental design. The target population was 250 youth with intellectual disabilities registered in the four Special Olympics programme in the county of Nairobi. Data was collected through questionnaires, observation checklists, and physical fitness test protocol. The study findings showed that trained tutors had positive attitudes towards coaching children with and without intellectual disabilities. There was a significant improvement in motor performance for both participants with and without disabilities. One of the conclusions made from the study was partners can be valuable, readily available sources of support for teachers who work with students who have severe disabilities.

According to Mercer et al., (2011), peer tutoring strategy enhances the learning process in that, it provides; tutee with an opportunity to practice and learn a targeted academic skill until mastery is achieved, an opportunity to review and learn subject content. It also provides tutors and tutees with an opportunity to develop appropriate social skills. Finally, it enhances the self-concepts of tutors and tutees by making positive statements about their skills or abilities.
2.4 Types of Peer tutoring

Cross-age tutoring is a peer tutoring approach that joins students of different ages with older students assuming the role of a tutor (Hall & Stegila, 2003). Students pairing may include a variety of combinations such as elementary students or older students with disabilities with younger students with disabilities ((Hall & Stegila, 2003). CAT enhances the social skills of the students involved in the session (Topping, 2005). Students benefit academically through practice and communication. Self-esteem increases through social interaction and contribution to classroom learners. (Marius, 2000). CAT enhance self-esteem among older students who provide individualized instructions to tutees and result in a more cooperative classroom and improved school atmosphere (Marius, 2000).

The research literature on the subjects of peer and cross-age tutoring is extensive. There are three commonly cited benefits of peer and cross-age tutoring: the learning of academic skills, the development of social behaviors and classroom discipline, and the enhancement of peer relations (Robinson, Schofield, & Steers-Wentzell, 2005). Researchers such as Kalkowski (1995) have also identified improvements in self-esteem and one of its components internal locus of control. It is important to note that all such benefits accrue to both tutor and tutee as it creates a more cooperative, pleasant classroom atmosphere and promising future teachers into the profession. Still other potential benefits are better-adjusted students with skills transferable to parenting when they mature.

Basing their studies on Cohen and Kulik’s meta-analysis, Robinson et al, (2005) used strict methodological criteria to sample more than fifty studies that described cross-
age tutoring effects on test scores. The findings indicated a moderately beneficial effect on tutees' achievement and a smaller but significant effect on their attitudes toward the subject matter. Looking at the effects on tutors, the researchers found a small but significant effect on academic outcomes and for self-concept and a slightly larger effect on attitudes toward the subject matter. Tutees' achievement improved more in more structured programs of shorter duration and when lower level skills were taught and tested on locally developed examinations.

Peer assisted learning strategy offers a specific program in Math and reading. Reading PALS is available for pre-school through 6th grade and for 9th grade through 12th grade with variations available for some grade levels (Lerner, 1995; 2006). There are three parts of PALS sessions in which the partners take turns reading and describing what they read to each other. The higher achieving student reads aloud while their partner follows along correcting mistakes after five minutes the students switch role and re-read the same selection (Budge, 2006).

The program uses peer-mediated instruction, a process whereby students work in pairs or small groups to provide tutoring in three reading strategies: retelling, paragraph shrinking, and prediction relay. In addition to being trained in each of the reading strategies, students are taught to correct their partners' reading errors, award points for correct responses, and provide consistent encouragement and feedback. Developers recommend that tutoring sessions last approximately 35 minutes and be conducted three to four times a week (Boud, Cohen, & Sampson, 2014).

Math PALS can be applied to many diverse learners. According to Mc Master, et al., (2006), this approach uses structured instructions between students to encourage high-
level feedback while in pairs. This participation increases the level of participation on topical areas through verbal rehearsal until the process becomes routine and verbal rehearsal is no longer needed. The tutoring sessions are reciprocal with students taking turns as tutor and tutee (McMaster, Fuchs, and Fuchs, 2006).

The effects of a 15-week PALS program were assessed in a sample of 120 students from 40 classrooms in grades 2 through 6 in 12 schools in a southern state (Fuchs et al., 2010). Schools were then randomly assigned to PALS (20 classrooms) or No-PALS (20 classrooms) groups. The 12 schools were equally divided between PALS and No-PALS assignments and were equally divided across high-, mid-, and low-level socioeconomic designations. Pre-test analyses revealed no significant demographic differences among the groups, no significant differences in Comprehensive Reading Assessment Battery (CRAB) scores among the groups, and no significant interaction effects between treatment group and student type. The CRAB was used to assess student outcomes. The study established that significant growth effects were found on all three CRAB scores (words read correctly, questions answered correctly, and a number of items correctly replaced in a maze-based activity). For each CRAB, growth in test scores among students in PALS classrooms averaged across student type was greater than among students in No-PALS classes. The effectiveness of the PALS treatment was not affected by the type of student.

Reciprocal peer tutoring is an intervention strategy combining self-management methods, group inter-dependent reward contingency, and reciprocal peer teaching to promote academic and social competency. RPT is a collaborative learning in which students alternate between the role of a tutor and a tutee. RPT may involve more one
to one relationship. Student’s alternate roles while in pairs or groups. RPT has a structured format where students promote, teach, monitor, evaluate and encourage each other.

A variety of studies has shown that students with disabilities benefit from being tutored. One broad review of studies of both regular and special education students and across a variety of subject areas concluded that reciprocal peer tutoring strategies were as effective as or more effective than the traditional teacher-mediated practices to which they were compared (Sutherland, & Snyder, 2007). Studies addressing specific categories of disability have also found academic and affective benefits, specifically improvements in mathematics, social skills, and time-on-task (Blanch, Duran, Valdebenito, & Flores, 2013). Fantuzzo & Rohrbeck (2003) aver that RPT has been used with students with mild disabilities in the regular education setting and pull out programs to meet the individualized needs of students (Maheady, 2001). This study, however, sought to establish the types of peer tutoring strategies used by teachers to improve the performance of learners with LDs.

Class-wide peer tutoring is another strategy used to enhance the learning capabilities of learners with LDs. It was developed in the early 1980s to improve the developmental outcomes of children with learning disabilities in low in some areas. It is an instructional model based on reciprocal peer tutoring that addresses both the school and home settings of the learners (Bowman-Perrott, 2009). Class-wide peer tutoring is utilized within a classroom or grade level. It is very popular and well-researched form or Peer Mediated Instruction for students with low academic
achievement who are from poor, culturally diverse backgrounds (Greenwood & Delquadri, 1995).

Class-wide peer tutoring is considered an emphatically sound strategy for improving academic, behavioral and social outcomes of a student with and without disabilities (Bond & Castanera, 2006). CWPT incorporates teamwork increases opportunities to respond to instructions and high level of engaged learning. These features have been proven individually to be effective instructional strategies (McMaster Fuchs & Fuchs, 2006). Studies done showed that Classwide Peer Tutoring helps students learn better and more quickly. Researchers Kamps, Greenwood, Arreaga – Mayer, Veer Kamp, & Utley (2008) did a study that looked at reading. They found that students who read only 24 words correctly were able to read 48 words correctly after their teachers started using Classwide Peer Tutoring. Students with learning disabilities read more quickly and correctly after their teacher started using Classwide Peer Tutoring. Cook (2014) and a team of researchers also studied whether Classwide Peer Tutoring helps students in spelling. They found that students who scored the lowest on weekly spelling tests (getting 8 or more words wrong), started scoring as well as other students in the class (getting fewer than 3 words wrong) after their teacher started using Classwide Peer Tutoring.

Other studies in the 1980s and 1990s showed that Classwide Peer Tutoring increases the amount of class work that students finish. In a study by Greenwood, Arreaga-Mayer, Utley, Gavin, & Terry, (2001), students who did not have Classwide Peer Tutoring finished only 3 of their 10 assignments. But when their teachers started using Classwide Peer Tutoring, they finished 8 of their 10 assignments. Classwide Peer
Tutoring helps students with Attention Deficit Hyperactivity Disorder pay attention longer and stay in their seats to finish assignments.

The benefits of Classwide Peer Tutoring have been found to last even when a student moves into a classroom where the teacher is not using Classwide Peer Tutoring. One group of students participated in Classwide Peer Tutoring during grades 1–4. Tapia, Greenwood, & Bowman-Perrott (2007) and a team of researchers found that in 6th grade, two years after they had stopped peer tutoring, these students were still making more progress on some parts of a basic skills test than students who had not been in classrooms with Classwide Peer Tutoring.

2.5 Peer Tutoring Strategies and Academic Performance

Topping (2000) states that when peer tutoring is well implemented considering what form of organization best fits the target purpose, context, and population, and with reasonably high implementation integrity academic performance greatly improves. Both ancient and current research evidence support the premise that peer tutoring strategies dictate significant gains in academic achievement. Topping (2000) felt that both tutees and tutors can gain. Consequently, he argues that engagement in peer tutoring is not a “waste of time.”

Topping and Bamford (2004) states that in recent years the literature has demonstrated that learners who themselves have educational challenges can act effectively as tutors to other learners. This very well relates to the current study. These researchers described reciprocal peer tutoring between ordinary standard four pupils and students from a school for children with severe learning disabilities. The
pupils with learning disabilities served as tutors and/or tutees in academic, social, and daily living/self-help skills. The results were that both improved.

Baumrid (2009) states that there is enough research showing the benefits of peer tutoring as a supplement to traditional instruction, and as such, improving academic performance among the pupils with learning disabilities. “Peer tutoring has been used across academic subjects and has been found to result in improvement in academic achievement for a diversity of learners within a wide range of content areas” (Adams et al, 2003). Extensive research documents positive outcomes of peer tutoring in reading classes like improvements in key reading skills as well as gains in self-concept and competency in reading. Woolfolk, Hoy, & Davis (2009) contend that by explaining concepts in detail, high-level questioning, and the use of supportive communication skills, peer tutors can help low-performing students master material previously introduced in a traditional classroom setting and build on their knowledge using higher-ordering thinking skills. She also feels that peer tutoring strategies have a positive effect on students’ sense of internal responsibility for their achievement.

Mayer (2008) conducted a study and found that peer-assisted learning strategy has a significant impact on academic performance of pupils with learning disabilities. More research in regard to peer assisted learning entails student roles, a student training to act as a coach or tutor, and a game format. Other research by Falchikov & Goldfinch (2000) investigated the effectiveness of peer tutoring with primary school pupils with learning disabilities, specifically focusing on operant conditioning. Again, Fuchs, Fuchs, Mathes, and Simmons (1997) focused their research on the effectiveness of a classwide peer tutoring program for low achievers with and without disabilities and
average achievers. The findings were that regardless of the environment, place or age of pupils, peer tutoring has demonstrated the potential effectiveness of the approach to strengthening student achievement.

One reason peer tutoring works may be that tutors and tutees speak a more similar language than do teachers and students. As Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller (2003) aptly put it, unlike adult-child instruction, in peer tutoring the expert party is not very far removed from the novice party in authority or knowledge; nor has the expert party any special claims to instructional competence. Such differences affect the nature of discourse between tutor and tutee because they place the tutee in a less passive role than does the adult/child instructional relation. Being closer in knowledge and status, the tutee in a peer relation feels freer to express opinions, ask questions, and risk untested solutions. The interaction between instructor and pupil is more balanced and livelier. This is why conversations between peer tutors and their tutees are high in mutuality even though the relationship is not exactly equal in status.

According to Bowman-Perrrott, Davis, Vannest, Williams, Greenwood, & Parker (2013) Peer tutors may simply be "good teachers." Teaching behaviors that were found to be positively related to response rates and academic gains in the research include on-task behavior, prompting and guiding, praise and encouragement, adjusting to the child's needs, managing behavior problems, allowing autonomous performance, bonding, cooperation, go-faster prompts, and help.

2.6 Summary of the Literature Review
The literature reviewed covered all the thematic areas of the study and specifies that child with learning disabilities experience snags in certain areas of learning including
writing, reading, spelling, comprehension and arithmetic. The literature reviewed also outlined methods teachers use to identify children with LD, preparedness and training that teachers have in regard to the teaching of children with LD, activities peers engage in during peer tutoring sessions, and types of peer tutoring strategies and their effects on performance of learners with LD. Limited scholarly research has been conducted in developing countries with the consequences of having teachers that may not have the skills and knowledge in identification and teaching of children with learning disabilities. Consequently, this hampers early and apt intervention. Most of the studies conducted in Kenya focus mainly on roots of LD, occurrence of LD and teacher-parent partnership in curbing the condition of LD. Considering that LD is regarded as a complex emerging area in the country, most teachers are therefore not well-equipped with proper knowledge of identification and teaching of LD and hence do not employ those teaching and learning strategies that would conclusively address the needs of these learners. This study was thus, an attempt to analyze the determinants of the effectiveness of peer tutoring strategy on academic performance of standard four pupils with LDs.
CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction
The aim of the study sought to analyze the determinants of effectiveness of peer tutoring on academic performance of standard four pupils with learning disabilities. This chapter focuses on the researcher’s scope of methodological procedures to be employed in the study. These include research design, variables, location of the study, target population, sampling techniques and sample size, research instruments, data collection techniques, and data analysis.

3.1 Research Design
The study adopted the descriptive survey design utilizing both qualitative and quantitative research approaches. The combination of both approaches provides a better understanding of the variables under study. The qualitative data supplemented any bias that would have been in quantitative data. Research questionnaire with likert scale was used to get quantitative data. Survey is the most frequently used method for collecting information on a variety of educational or social issues (Orodho, 2005). This study adopted survey design because it is useful in gaining insight on the general picture of a situation without utilizing the whole population (Mugenda & Mugenda, 2003). Qualitative and quantitative approaches were used in converging data in order to provide a comprehensive analysis of the research problem (Creswell, 2003). In this study the researcher conducted a survey on determinants of effectiveness of peer tutoring strategies on academic performance of pupils with learning disabilities and
how it can be made more effective and beneficial to the children with learning disabilities.

3.2 Research Variables

Variables have different roles in helping researchers pursue correct information to address the purpose of their studies (Creswell, 2005). They may influence other variables, thereby determining the value of the affected variables. As such, Mugenda and Mugenda (2003) describe different classifications of variables such as dependent, independent, intervening, confounding, and antecedent. This study considered the dependent and independent variables.

3.2.1 Dependent Variable

The dependent variable for the study is academic performance of pupils with LD.

3.2.2 Independent variables

The independent variables of the study were the methods used by teachers to identify learners with learning disabilities, preparedness, and training of the teacher and the activities that peers engage in during peer tutoring sessions as well as types of peer tutoring strategies used to affect performance of learners with LDs.

3.3 Location of the Study

The study was done in Nyeri central sub-county in Nyeri County, Kenya. The Sub-County comprises of Nyeri town which is the headquarters of Nyeri County. The district was selected by the researcher on proximity grounds, besides the district’s relatively moderate climate conducive for commuting during the survey. The primary schools in Nyeri town had a high enrolment. The Sub-County was also noted to have
a diversity of community residents, making it possible to get the required number of learners with learning disabilities as other rural areas.

3.4 Target Population

The population of the study constituted all the 40 head teachers, 538 teachers both male and females in Nyeri central sub-county and the 2038 class four pupils. The purpose of gender distribution is based on the fact that most teachers in the sub-county are comprised of females. Class four was selected for the study because the learners had developed language skills and hence could communicate effectively as they engage in peer interaction during peer tutoring sessions. In addition, the learners in this class were not under pressure to sit for the KCPE which is done at the completion of class eight in Kenya. Hence, the two factors did not exert undue influence on the findings of the study.

3.5 Sampling and Sampling Technique

3.5.1 Sample Size

The sample of the study comprised of 4 head teachers of the schools involved, subject teachers of class four in the sampled schools and the learners with learning disabilities identified by the researcher. Table 3.1 shows the composition of the sample.

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3.5.2 Sampling Techniques

The researcher adopted purposive sampling to select four schools and head teachers in Nyeri central sub-county. Purposive sampling was used because of access and communication to the sampled schools. The rationale of purposive sampling in the case of the current study was to enable the researcher find out whether the nature of peer tutoring in the schools was a factor that could explain their differences in academic achievements. The researcher used a reading tool and a mathematics tool to identify learners with LD from the low scoring students. The researcher used simple random sampling to select 2 pupils with LD from the group identified as having LD and 58 subject teachers of class four of the sampled schools owing to their small and manageable number.

3.6 Research Instruments

The study used three research instruments which are interview schedule for head teachers, questionnaires for teachers and observation checklist. According to Orodho (2003), the questionnaire that was used in the study, had the ability to collect a large amount of information in a reasonably quick space of time. It also ensured confidentiality of the information collected. The questionnaire contained both open and closed ended questions designed to gather information on all the variables of the study. The questionnaires were administered to all the subject teachers of class four in the sampled schools. Finally, the researcher carried out observation on all the 8 learners with LD, 2 from each school, during a peer tutoring session and filled in the data in prior designed observation checklists. The observation was carried out during peer tutoring sessions in the natural classroom settings by the researcher with help
from research assistants. The information gathered during observation included the type of the peer tutoring, the class physical arrangement, and the teacher/pupils activities during the peer tutoring sessions. In this study, the peer tutor and peer tutee engaged in a cooperative, active process of constructing knowledge. The peer tutors supported peer tutees with whom they developed shared understandings. The information gathered during observation included effectiveness of peer tutoring, the type of the peer tutoring and the teacher/pupils activities during the peer tutoring sessions.

3.7 Pilot Study

The researcher conducted a pilot study in one school in Tetu sub-county. The school was selected for pilot study because it consisted of similar features as study schools. According to Orodho (2008), the number in the pre-test should be small, about 1% of the entire sample size. The purpose of piloting was to discover any weaknesses in the instruments, like unclear questions cited by the respondents which were corrected by deleting or adding items prior to the main study to maintain clarity of the items and elicit comments from respondents during the actual study. The population in the pilot study consisted of 1 head teacher, 1 teacher, and 2 pupils. The head teacher and the teachers were selected using purposive sampling while the pupils were selected by identifying two using mathematics and reading tools. The school was not included in the main study. The procedures that were used in the piloting were the same as that which were used in the actual study. Data was collected using questionnaires, interview guides, and observation checklists.
3.7.1 Validity of the Research Instruments

Validity is the degree to which a test measures what it purports to measure (Orodho, 2005). In this study the instruments were validated during the pilot study, which took place at Miagayu-ini primary school in Tetu sub-county where 1 head teacher, 1 teacher and 2 pupils who participated helped to make clear items in the research instruments. The teachers also advised the researcher to refine the checklist that was to be used by researcher to identify learners with LD. The validity was determined through consultations with the supervisors.

3.7.2 Reliability of the Study

According to Mugenda and Mugenda (2003), reliability is a measure of the degree to what extent a research instrument yields consistent result or data after repeated trials. An instrument is reliable when it measures a variable correctly and obtains the same results under same conditions over a period of time. The internal consistency of the instruments was tested by the test – retest method. The reliability of the research instrument was tested by administering the same instrument twice to the same group of subjects in a period of one week between the first and the second one. This method helped the researcher to obtain a coefficient of reliability using Pearson product moment correlation between pre-test and post test scores obtained. A correlation coefficient of 0.75 was considered high enough for the research instruments to be considered reliable. According to Orodho (2003) a correlation coefficient of about 0.75 should be considered high enough to the reliability of the instrument. This was confirmed by the help of the supervisors.
3.8 Data Collection Techniques

The researcher visited the sampled schools and sought the authority to conduct research from the school head teachers on a later date. On obtaining permission, the researcher administered the questionnaires to the subject teachers through a drop-and-pick-later technique, then collected them after a week as the researcher visited the schools again to observe the pupils with learning disabilities. Interviews were conducted on the head teachers. The researcher then scheduled another day for carrying out learners observations. On the scheduled day of observation of pupils, the researcher in the company of two previously inducted research assistants visited the school and observed the pupils with learning disabilities during a peer tutoring session. The observation was based on the certain aspects that included peer tutor/tutee socialization, motivation of the tutee, reduction of task time, effect of teacher reward system, impacts of learning materials, type of peer tutoring, academic performance, and time management of learners with LDs. Data was recorded in the observation checklist for each pupil being observed. On the other hand, the researcher collected the completed questionnaires from both the subject teachers. The data gathered was therefore both qualitative and quantitative and was gathered from primary as well as secondary sources thereby reducing errors due to biased responses.

3.9 Data Analysis

Both qualitative and quantitative methods were used to analyze the data. Quantitative data came from the Likert scale. The scores were analyzed using descriptive statistics and inferential statistics. The data was presented in tables and graphs. Descriptive statistics calculated included frequencies, means, percentages, standard deviations,
modes and median. Inferential statistics involved the Pearson Correlation analysis. Qualitative data such as data from open ended questions in the questionnaire as well as data obtained through the interview schedule were analyzed to identify the common themes and categories between them.

3.10 Logistical and Ethical Considerations

The researcher sought permission from the Ethical committee for research at Kenyatta University and National Commission for Science Technology and Innovation (NACOSTI) before collecting data. The researcher also went through the Sub-County Director of Education Nyeri central sub-county, heads of schools sampled before interacting with the teachers. Consultations were further made with the teachers regarding what lessons the researcher would observe. Good rapport was established with all the respondents to ensure that they honestly responded to the questions. They were assured that all information given would be treated with utmost confidentiality. Since this study involved minors, the researcher got informed consent from their teachers and parents upon full explanation of their participation requirements. It was made clear that they could leave any time they felt or suspend participation without any pressure whatsoever.
4.0 Introduction

The aim of the study was to analyze the determinants of effectiveness of peer tutoring on academic performance of standard four pupils with learning disabilities. This chapter presents data analysis, findings and discussions for the data collected from a sample of 58 subject teachers, 4 head teachers and 8 learners with LD. Data was analyzed using descriptive and inferential statistical methods. Information processed was tabulated. The findings of the research study were discussed under the following themes derived from the objectives; to examine the methods used by teachers to identify learners with learning disabilities among class four pupils, to establish how the preparedness and training of the teacher affects peer tutoring, to identify the activities that peers engage in during peer tutoring sessions and to establish types of peer tutoring strategies that affect academic performance among standard four pupils with LD. The results included response rate, and demographic information of the respondents in the study.

4.1 Response Rate

The questionnaires were given to a sample of 70 respondents from four selected primary schools in Nyeri central sub-county. Only 66 out of the 70 questionnaires were received from the respondents. This indicated that this research had a response rate of about 94.3%. The response rate demonstrated a willingness of the respondents to participate in the study and allow for analysis as shown in the Figure 4.1.
4.2 Demographic Information

The demographic information of respondents such as age, gender, and teaching experience, and education level were used to characterize the determinants of effectiveness of peer tutoring on academic performance of class four pupils.

4.2.1 Gender of the Respondents

The gender distribution of the respondents was analyzed and the results represented in the Figure 4.2.
Figure 4.2: Gender distribution of the respondents

From the findings in the figure above the study indicated that 53% of the respondents were female while 47% were male. It is thus clear that a majority of the participants were female.

4.2.2 Age of the Teachers

A descriptive analysis of the average ages of the respondents was conducted and the results as shown in the Table 4.1.

Table 4.1: Age of the teachers

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>22</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>26-30</td>
<td>24</td>
<td>41</td>
<td>41</td>
<td>79</td>
</tr>
<tr>
<td>31-40</td>
<td>9</td>
<td>16</td>
<td>16</td>
<td>95</td>
</tr>
<tr>
<td>&gt;40</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>100.0</td>
</tr>
<tr>
<td>Valid</td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
From the Table above, the study noted that 41% of the respondents were between the ages 26 and 30, 38% of the respondents were between ages 18 and 25, 16% of the participating teachers were between the ages 31 and 40 whereas only 5% of the respondents were above 40 years of age. The study therefore realized that a majority of the respondents were aged between ages 26 and 30.

### 4.2.3 Respondents Teaching Experience

In an effort to establish the experience of teachers, further the study sought views of the participants regarding the number of years they've been teaching and the results shown in the Figure 4.3.

![Teaching Experience Chart](image)

**Figure 4.3: Teachers’ experience**

From the Figure above, the study indicated that 55% of the respondents had between 5 and 10 years of experience, 18% of the respondents had less than 5 years teaching experience, 16% had between 11 and 15 years of experience, 8% had between 16 and 20 years of experience whereas 3% had over 20 years of experience. From the study it
is therefore clear that a majority of the respondents had between 5 and 10 years of teaching experience.

4.2.4 Period for Teaching Standard Four Class

Further the study conducted analysis to establish the number of years the respondents had in teaching class four pupils. The results were the presented in the Figure 4.4.

![Period for teaching class four](image)

**Figure 4.4: Period for teaching class four**

From the bar graph above the study notes that 45% of the respondents affirmed that they had taught class four for a period between 3-7 years, 27% confirmed they had taught class four for a period between 1-3 years, 15% of the respondents had taught class four for less than a year, while 10% of the respondents said they had taught class four for a period between 7 to 10 years. Lastly, 3% of the respondents attested to the fact that they had taught class four pupils for over 20 years. The study therefore noted that a majority of the respondents had taught class four for a period between 3 to 7 years.
4.2.5 Level of Education

The study further analysis was conducted to establish the highest level of qualification for the respondents. The results were as presented in the Figure 4.5.

Figure 4.5: Respondents’ level of education

From the chart above, the study indicated that 50% of them were P1 teachers, while 8% were approved teachers, 19% of the teachers were teachers with diplomas as their highest level of qualification, 15% of the teachers had graduate degrees. Further, 5% had post graduate degrees whereas 3% of the teachers were untrained teachers. From the study, it is therefore evident that a majority of the teachers were trained and had P1 certificates as their highest level of education.

4.3 Identifying Learners with LDs

Objective one in this study sought to identify the methods teachers use to identify learners with learning disabilities among class four pupils. As such, indicators such as
methods used, frequency of identifying learners with LDs was used to help realize this specific research objective.

4.3.1 Frequency of Identifying Learners with LDs

In an effort to know the level of interaction between teachers and pupils with LDs, an endeavor to establish how frequent teachers try to identify learners with LD when they enter a new class revealed findings in the table 4.2

<table>
<thead>
<tr>
<th>Type of Responses</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>rarely</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>sometimes</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>often</td>
<td>33</td>
<td>53</td>
</tr>
<tr>
<td>always</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From the Table above it was indicated that 53% of the respondents stated that they often identify learners with LDs when they enter a new class, 19% sometimes tried to identify the learners with LDs, whereas 18% of the respondents rarely attempted to identify the learners, 8% of the respondents confirmed that they always identified learners with LDs when they entered a new class while 2% of the respondents have never tried to identify learners with LDs whenever they entered a new class. The study therefore evidently noted that a majority of the respondents often try to identify learners with LDs when they enter a new class.

These findings were supported by the results from Lerner and Klines (2006), who confirmed that it is incumbent upon teachers to identify learners with LD whenever
they entered classrooms. They list learning and behavioral characteristics of individuals with LD and conclude that the rationale behind identifying these learners with LD is to offer early intervention measures and assistance.

4.3.2 Methods for Identifying Learners with LDs

The study conducted analysis to establish the most commonly used method to identify learners with LD. The results were then tabulated as shown in the Figure 4.6.

![Methods of identifying learners with LD](image)

**Figure 4.6: Methods to identify learners with LDs**

From the Figure 4.6 above, the study notes that 58% observed pupil characteristics to identify whether they were learners with LDs, 26% of the teachers used information from other teachers to identify learners with LDs while 13% of the teachers identified learners with LDs by use of their continuous assessment tests through low performance marks, as further 3% of the teachers administered testing tools such as reading tests to identify learners with LDs. It was therefore evident that majority of
the teachers employed observation of pupils’ behavioral characteristics as the suitable method of identifying those learners with learning disabilities.

To confirm the teachers’ responses the head teachers of the schools for learners with LDs interviewed, stated that these learners were identified through different methods. The first respondent said,

“In my school, learners are identified through how slow or fast they are in learning mathematics, and having language difficulties in class. Some of them have attention disorders, poor motor abilities, and problems in processing questions.”

Similarly, the second head teacher respondent said,

“In my school, these learners with LDs are identified through the challenges they face in understanding learning problems. Most of these learners have reversals, and omissions.”

The third head teacher had this to report;

“My teachers tell me of misalignments that are not up to the required standards by these learners.”

Generally, the head teachers indicated that learners with LDs had other characteristics such as reading difficulties, having problems in written languages and disorders in oral language.

These findings were supported by the results from other scholars. For instance, according to Bees (2009), it is very important to know the methods that help the teachers and caregivers look for students who may have LD; early identification may prevent some of the emotional distress associated with the student’s early school experiences. In Bees’ experience, a negative emotional response in students who are
Gifted/LD is almost certain once school starts, and may result in depression, anxiety, withdrawal, aggression, or disruptive behavior.

However, the very combination of superior and weak abilities tends to create challenges with the identification of Gifted/LD students. It may be that students’ strengths keep them from receiving appropriate remedial programming for their weaknesses or, more commonly, weaknesses are focused on to the exclusion of programming for superior abilities. In support of this, Pray (2009) found that that most teachers lacked adequate training in special needs education, hence their ability to identify and assess children with learning difficulties is hampered. Consequently, children with learning disabilities are not helped using modified methods that would address their needs. Pray (2009) further posited that teachers who have a close contact and interaction with their pupils have the ability to provide early identification for intervention and individualized attention.

A correlational analysis was thus conducted to establish whether there existed any relationship between the frequency teachers used and the methods they used to identify the learners with LDs, the results are as presented in the table 4.3
Table 4.3: Relationship between frequency and methods to identify learners with LDs

<table>
<thead>
<tr>
<th></th>
<th>which method do you use to identify learners with LD</th>
<th>how often do you attempt to identify learners with learning disabilities when you get to a new class</th>
</tr>
</thead>
<tbody>
<tr>
<td>which method do you use to identify learners with LD</td>
<td><strong>Correlation</strong></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>62</td>
</tr>
<tr>
<td>how often do you attempt to identify learners with learning disabilities when you get to a new class</td>
<td><strong>Correlation</strong></td>
<td>.863**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>62</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

From the correlational matrix above the study noted that there exists a strong positive relationship between the method the teachers use to identify learners with LD and how often they attempt to identify the learners when they get to a new class. The correlation coefficient (.863*) and a significant level .000 shows the p value (P<.05).

4.3.3 Effectiveness of Methods Used

To determine the effectiveness of the methods used, a descriptive analysis was conducted and the results are as presented in the Figure 4.7.
Figure 4.7: Effectiveness of methods used

From the Figure 4.7 above, the study noted that 64% of the respondents often find that the children they have identified have LDs, 23% confirmed that sometimes they find that the child they identified has LDs while 6% of the respondents said that they rarely find the identified child has LDs. A paltry 5% of the respondents also averred that they always find the child they identified has LDs whereas, in 2% of the cases, the children do not have LDs. In this case, the study therefore noted that a majority of the respondents attested that they often find the child they identified with LD.

The finding is supported by Reid, Lienemann, & Hagaman, (2013) who found researchers have developed techniques such as Self-regulation strategy development and morphological instruction to help students with learning disabilities monitor their own learning. For spelling strategies, researchers insisted on using a self-monitoring checklist such as generate-and-test or spelling-by-analogy.
4.3.4 Most Prevalent LDs

Further, a descriptive analysis conducted to establish the most common learning disability identified by the teachers revealed the following results in the Figure 4.8

![LDs mostly found in learners](chart.png)

**Figure 4.8: Most common LDs identified by teachers**

From the chart above, the study noted that 27% rated processing problems as the most common disability, 24% rated attention disorder as most common. 23% of the teachers said that oral language disorder was frequent among children with learning disability as 10% of the teachers rated poor motor abilities as the common learning disability among children. While 8% of the teachers rated reading disability as the common learning disability, the other 8% rated language problems as most prevalent LD. The study therefore noted that majority of the respondents rated 27% as most commonly identified LD among children.

These findings are supported by Wafula (2010) on early identification of children with LDs in class three which found that most teachers had the ability to identify and
assess children with learning difficulties. Consequently, children with learning disabilities are not helped using modified methods that would address their needs. Wafula (2010) further realized that teachers who have a close contact and interaction with their pupils have the ability to provide early identification for intervention and individualized attention. The close teacher-pupil interaction enables the teacher to closely observe and identify the learning difficulties the child has.

4.4 Teacher Preparedness and Training

In objective two, the study sought to find out how the preparedness and training of the teacher affects peer tutoring among class four pupils with learning disabilities. Teacher preparedness and training was gauged by in-service training and special education training.

4.4.1 Service Courses in Peer Tutoring

A descriptive analysis was conducted to establish how many times the teachers have attended service courses in peer tutoring in the year of study. The results are as shown in the Figure 4.9.
Figure 4.9: Number of times teachers attended service courses

From the bar chart above, the study notes that 56% stated that they had attended a service course more than twice, while 16% noted that they had attended a service course twice in the year while. As 15% of the respondents noted that they had attended a service course at least once in the year of study, 13% stated that they had never attended any service course on peer tutoring in the study year. As such, the study evidently realized that majority of teachers have the skills on peer tutoring as they had attended service courses on the same.

The findings are supported by Sayeski (2011) research which indicates that various peer teaching programs have cropped up at universities around the world in the past few decades, promoting the notion of peer-assisted learning. Nearly every institute of higher education in the world provides peer tutoring opportunities for struggling students and teaching assistant positions for advanced students. Peer learning activities typically yield the following results for both tutor and tutee: team-building spirit and more supportive relationships; greater psychological well-being, social
competence, communication skills and self-esteem; and higher achievement and greater productivity in terms of enhanced learning outcomes.

**4.4.2 Training on Special Need Education**

A descriptive analysis conducted to establish whether the teachers had received any form of special need education revealed the following Figure 4.10.

![Figure 4.10: Teachers training on special education](image)

From the figure above, the study noted that 87% of the respondents confirmed that they were well trained in special needs education while 13% stated that they are not trained in special needs education. The study therefore established that a majority of the respondents had undertaken training in special needs.

The findings are supported by Runo (2010) who asserted that there must be effective teacher training and in-service programmes to help pool solicitous programme development with hard work to transform the most embedded classroom practice and conventional routines. She says that it is imperative to focus on the teacher
preparedness and training component and how it affects performance of learners with LDs. Runo (2010) avers that enhanced learning hinges on knowledgeable teachers who are cognizant of academic content and are in a position to employ a variety of teaching methodologies to help all students master that content.

Further the respondents were asked to state their highest level of education in special needs education and the results were as shown in Figure 4.11.

![Level of education on special needs](image)

**Figure 4.11: Level of education on special needs**

From the pie chart above, the study notes that 49% attained graduate degrees as their highest level of training in special needs education, 27% of the respondents attained diplomas as their highest level of training in special needs education, while 13% of the respondents stated that they have a certificate as the highest level of education in special needs training. Lastly, 11% of teachers attained post graduate degrees as their highest level of education. The study thus realized through the findings that most teachers had certification in special needs education training. The study is supported by Stakes, & Hornby (2012) who stated that the first step to teaching special needs is
having a qualification. Different universities and colleges offer diploma, bachelor's, masters and doctoral degrees in special education depending on requirement of the individual student. Aspiring special education teachers combine knowledge of disabilities such as visual impairment, autism, or Downs’s syndrome with practical procedures for teaching science, math and reading skills to students with special needs. Special education teachers require a teaching license from a certified body in order to teach in their field.

### 4.4.3 Methods employed on LDs

A descriptive analysis conducted to evaluate the effectiveness of the methods used to identify the learners with LD revealed the following tabulated results.

#### Table 4.4: Effectiveness of Methods employed to identify learners with LDs

<table>
<thead>
<tr>
<th>How often do you think methods you use to identify learners with LD are effective?</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>8</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>rarely</td>
<td>20</td>
<td>32</td>
<td>32</td>
<td>45</td>
</tr>
<tr>
<td>sometimes</td>
<td>11</td>
<td>18</td>
<td>18</td>
<td>63</td>
</tr>
<tr>
<td>often</td>
<td>18</td>
<td>29</td>
<td>29</td>
<td>93</td>
</tr>
<tr>
<td>always</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>99</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing System</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

From the Table above the study notes that 32% are of the opinion that the methods are sometimes effective 29% are of the opinion that it is often effective, 18% are of the
opinion that it is sometimes effective while 13% of the respondents are of the opinion that the methods used are never effective. Lastly 7% were of the opinion that it is always effective. The study therefore indicated that a majority of the respondents stated that the methods are rarely effective.

4.4.4 Preparations for Peer Tutoring

A further descriptive analysis was conducted to establish the preparations teachers make before attending a peer tutoring lesson the results were as shown in the Figure 4.12.

![Preparations before peer tutoring lessons](image)

**Figure 4.12: Preparations before peer tutoring sessions**

From the figure above the study notes that 35% arrange the pupils 24% of the respondents stated that they write a scheme of work, while 23% collect the learning materials before attending a peer tutoring lesson. A further 10% of the respondents write a lesson plan while 8% arrange the classroom. The study therefore established that a majority of the teachers arrange the pupils before attending a peer tutoring lesson.
To affirm the teachers’ responses, the head teachers stated that there are several determinants that teachers employ to know how to teach learners with LDs in mathematics. This was the response that the first participant gave;

“In my school, the teachers teach the learners individually looking at what they like most. They also attend to them by always calling them and collecting learning materials from them.”

Another head teacher responded to the interview questions by saying;

“My teachers tell me that they work on what the individual learner knows and build on it. Sometimes they allow the learner to work in pairs and also alone.”

These results were supported by the findings of Runo (2010) on the study to identify reading disabilities and teacher-oriented challenges in teaching reading in class five pupils, realized that there must be effective teacher training and in-service programmes to help pool solicitous programme development with hard work to transform the most embedded classroom practice and conventional routines. She says that it is imperative to focus on the teacher preparedness and training component and how it affects performance of learners with LDs. Runo (2010) avers that enhanced learning hinges on knowledgeable teachers who are cognizant of academic content and are in a position to employ a variety of teaching methodologies to help all students master that content. Runo (2010) asserts that authentic instruction from highly prepared and trained teachers should meet the standards of the following areas; higher-order thinking, depth of knowledge, connectedness to the world, substantive conversation, and social support for the student achievement.
4.5 Activities that Peers engage in during peer Tutoring Sessions

The objective three of this study sought to identify the activities that peers engage in during peer tutoring sessions. It was gauged by usage of peer tutoring coursework, strategies, activities peer engage in during peer tutoring sessions.

4.5.1 Usage of Peer Tutoring Lessons

A descriptive analysis conducted to establish how often the teachers used peer tutoring lessons revealed the following results.

![Bar graph showing frequency of teachers using peer tutoring lessons](image)

**Figure 4.13: Frequency of teachers using peer tutoring lessons**

From the bar graph above the study indicated that 55% confirmed that they often use peer tutoring in their course of work as 19% of the respondents averred that they always use peer tutoring in their course of work 11% said that they rarely use peer tutoring, 10% explained that they sometimes use peer tutoring in their course of work while 5% of the respondents stated that they never use peer tutoring in their course of work. It is thus clear that majority of the teachers interviewed used peer tutoring in their course work.
4.5.2 Whether Peer Tutoring Help Learners

A descriptive analysis was conducted to establish how effective the peer tutoring strategy chosen by the teachers were in helping the learners. The results are presented in the Table 4.5.

Table 4.5: Whether peer tutoring strategies help learners

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Rarely</td>
<td>12</td>
<td>19</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>sometimes</td>
<td>15</td>
<td>24</td>
<td>24</td>
<td>46</td>
</tr>
<tr>
<td>Often</td>
<td>19</td>
<td>31</td>
<td>31</td>
<td>77</td>
</tr>
<tr>
<td>Always</td>
<td>14</td>
<td>23</td>
<td>23</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From the Table 4.5 above, the study notes that 31% of the respondents confirmed that the method was often effective 24% averred that it was sometimes successful in helping learners 23% affirmed that it was always effective. Further 19% of the teachers said that it was rarely effective while 3% of the respondents stated that the peer tutoring strategy was never effective in helping learners. The study therefore realized that the peer tutoring strategy is often effective in helping learners.

4.5.3 Activities Peers Engage in During Peer Tutoring

An analysis conducted to establish activities the tutor and tutee mostly engage in during peer tutorial lessons revealed the results as shown in Figure 4.14.
Figure 4.14: Activities peers engage in during peer tutoring

From the pie chart above the study noted that 29% stated that they mostly concentrate on the task, 23% of the total number of respondents (62) affirmed that they socialize well mostly while 15% of the respondents mostly engage in encouraging the peer tutee. Another 15% said that they ask each other questions mostly, 13% stated that they mostly demonstrate to the peer tutor while 5% of the respondents attested that they seek guidance from the teacher. The study therefore indicated that a majority of the respondents engage in different activities that in most cases the peer tutor and tutee mostly concentrate on the task.

The findings were supported by Klavina & Block (2008) study, which stated that during peer-mediated instructional conditions, the APE teacher initiates tutoring procedures assigning the peer tutor to assist the student with LD. Then, the teacher monitored tutoring activities from about a 3–5 metre distance and ensured a systematic rotation of peer tutors every 10 min so that none of the tutors would get tired or overwhelmed during the tutoring process. The teacher intervened if peer
tutors did not provide instructions correctly to activities done, or if other conditions were detected that might hinder safe and successful participation of any student (e.g., the student with LD demonstrated disruptive behavior). In addition, peer tutors were reminded to call for teachers’ help if they could not manage noncompliant behavior of their tutees.

4.6 Types of Peer Tutoring Strategies

This objective four of the study sought to establish the most commonly used peer tutoring strategies. The results are as presented.

4.6.1 Types of Peer Tutoring Strategies Frequently Used

The study first sought to establish the most commonly used peer tutoring strategies. The results are as presented in the Figure 4.15.

Figure 4.15: Most frequently used peer tutoring strategies
From the chart above, the study notes that 56% stated that class wide tutoring is what they mostly used, 27% of the respondents noted that cross age tutoring is the strategy they mostly use, while 10% of the total (62) respondents said that reciprocal peer tutoring is the strategy they mostly use and 7% of the 62 respondents explained that peer assisted tutoring is the strategy they mostly use. The study therefore realized that class wide peer tutoring is the most used peer tutoring strategy.

On the qualitative results realized through the interviews by the head teachers, they confirmed that there were several peer tutoring strategies that teachers used to teach learners with LDs. The peer tutoring strategies according to all the head teachers included; peer tutoring, cross age, class wide, reciprocal peer tutoring, and peer persisted strategy. However, each responded differently regarding the type of instructional strategy that works best for their schools. Here is what the first respondent said;

“In my school, teachers work together to help the learners. These learners with difficulties are instructed with others in class, then they are sent to the special unit to be helped by teachers trained in special needs education.”

Still on instructional strategies, the second respondent had this to say;

“The learners with LDs are taught together in class but they are allowed to do fewer exercises. They are also allowed to work in pairs with those who are better in the subject.”

The finding is supported by Mitchell (2014) who categorized the types of peer tutoring strategies into incidental and structured peer tutoring. Incidental peer tutoring often takes place, either at school or while students are playing after school or when they are socializing. Whenever children are cooperating, playing, or studying and one guides the others, it may be stated that we have a kind of incidental peer tutoring.
Structured peer tutoring refers to peer tutoring implemented in specific cases and for specific subjects, following a well-structured plan prepared by the teacher. Under these types, falls Cross age peer tutoring, Same age peer tutoring, Whole class peer tutoring (whole class working in pairs for some activities) and School wide peer tutoring (across levels). Mitchell (2014) study stated that through these strategies, the learner has greater control in learning process, learner has opportunities to initiate as well as respond, and receives frequent feedback on responses which helps teacher cater for range of individual needs.

4.6.2 Effects of the Strategies on Class Performance
To rate the effectiveness of the strategy a descriptive analysis was conducted to establish whether the strategy had an effect in average class performance. The results are as shown in the Figure 4.16.

![Figure 4.16: Effect of strategy on academic performance](image)
From the bar chart above, the study notes that 31% rated their performance as good, 24% rated the performance as average while 23% rated their performance as very good. As 19% rated the performance as poor, 3% of the respondents stated that they rated average class performance of class four pupils as very poor. The study therefore noted that a majority of the respondents rated their performance as either very good or good. To establish the effect of peer tutoring strategy, a descriptive analysis conducted showed the following tabulated results.

It is thus indicative that peer tutoring strategy had effect to a certain extent on a learners with LDs. To corroborate the findings of the study, a correlational analysis conducted to establish whether there existed any relationship between the strategy used and the opinion on the effect the strategy had showed the following results.

Table 4.6: Relationship between type of strategy used and effect of the strategy

<table>
<thead>
<tr>
<th>Correlations</th>
<th>how would you rate the effect of type of peer tutoring on learners with LD</th>
<th>which is the type of peer tutoring strategy you most frequently use</th>
</tr>
</thead>
<tbody>
<tr>
<td>how would you rate the effect of type of peer tutoring on learners with LD</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>which is the type of peer tutoring strategy you most frequently use</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
From the correlational matrix Table 4.6 above, the study notes that there exists a strong positive relationship (shown by the Pearson correlation co-efficient value of .935*) between the type of strategy a teacher uses and their opinion on the effectiveness of the peer tutoring strategy as indicated by the significance value (.000) giving us a p value (P<.05).

These findings are supported by Topping, and Bamford (2004) study that stated that learners who themselves have educational challenges can act effectively as tutors to other learners. These researchers described reciprocal peer tutoring between ordinary standard four pupils and students from a school for children with severe learning disabilities. The pupils with learning disabilities served as tutors and/or tutees in academic, social, and daily living/self-help skills. The results were that both improved.

Baumrid (2009) also supports the findings by affirming that peer tutoring has a supplement to traditional instruction, and as such, improving academic performance among the pupils with learning disabilities. The benefits to peer tutees include more individual teaching gains in learning, gains in social/relationship skills, for example, communicating, accepting help improvement in attitude towards learning, and improvement in self-esteem.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
The aim of the study sought to analyze the determinants of effectiveness of peer tutoring on academic performance of standard four pupils with learning disabilities. This chapter thus presents the summary of the study findings, conclusions arrived at and recommendations of the study. The chapter also covers suggestions for further related studies that could be carried out in future. The study was guided by the following specific objectives which were to examine the methods used by teachers to identify learners with learning disabilities among class four pupils, to determine how the preparedness and training of the teacher affects peer tutoring, identify the activities that peers engage in during peer tutoring sessions and to establish the types of peer tutoring strategies that affect academic performance among standard four pupils with LDs. The summary of findings on each variable was as follows.

5.1 Summary of the Findings

5.1.1 Methods to Identify Learners with LDs
The study made some important findings which went a long way in achieving the objectives. The first significant finding of the study was that a majority of the respondents indicated that the main method of identifying Learners with LDs was from the observation of behavioral characteristics of the child as evidenced by 58% response from the participants. Information from fellow teachers was also given as an important method of identification. Continuous Assessment Tests and Use of testing tools such reading tests were the least important methods for identification of learners
with LDs. The teachers frequently and often identified learners with LDs whenever they entered the classes as occasioned by 53% of the responses. As such, there existed a strong positive relationship between the method the teachers used to identify learners with LD and how often they attempted to identify the learners when they get to a new class.

5.1.2 Effect of the Teacher Preparedness and Training on Peer Tutoring

This study found that majority of the teachers had attended an in-service training as shown by more than 72% of the respondents who confirmed that they had attended the training on more than one occasion. Nearly a quarter of the teachers had attended an in-service training once while it was found that more than 87% of the teachers had trained in special needs education. It was only a few who were not trained in special education. It was found that most teachers prepared the learners for learning through different means including arranging them in class as evidenced by more than 35% response.

5.1.3 Activities that Peers Engage in During Peer Tutoring Sessions

The study found that more than 54% of teachers used peer tutoring methods in their course work which was effective in helping learners with their work. It was realized that 29% of learners generally concentrated on their task as an activity while learning. On the other hand, slightly above 22% of the learners engaged in socializing well. 14% encouraged peer tutee as well as asking questions whereas 12% of the learners engaged in demonstrating to peer tutor while a few 6% sought guidance from the teacher.
5.1.4 Types of Peer Tutoring Strategies and Effect on Performance

The study found that class wide peer tutoring at 56.45% was the strategy learners mostly used as peer tutoring strategy. It was followed by cross age peer tutoring which recorded a response of more than 27% as the strategy learners mostly used for study. Peer assisted learning strategy was the least used strategy with 6% response from the participants. Most learners rated their performance regarding the effectiveness of the strategy employed as good. As such, the study realized that there existed a strong positive relationship between the strategy a teacher uses and their opinion on the effectiveness of the peer tutoring strategy.

5.2 Conclusions

The study concluded that new diverse methods of identifying learners with LDs should be instituted in schools as the current ones are not conclusively satisfactory. This was premised on the fact that most teachers depended on observation of behavioral characteristics of the learners to ascertain whether one had a learning disability or not. This method was complemented by others such as getting information from fellow teachers, reading tests and giving CATs. There has to be a precise way of identifying learners with LDs without fail so as to ameliorate the situations in schools.

Secondly, the teachers must register for an in-service training to keep abreast with emerging trends in the education sector and be able to deal effectively with learners with LDs. This is based on the fact a considerable proportion of teachers had not attended the training which was vital in helping the children with LDs improve on their performance. They also have to maximize on the training they have in special
needs education to handle situations that might jeopardize the smooth learning and performance of these children with LDs.

Peer tutoring methods should be encouraged to be used by all teachers in their course work as it is effective in improving the performance of the learners with LDs. Peer tutee as well as seeking guidance from the teachers should be encouraged as activities that peers engage in during peer tutoring lessons to bring out the best in them.

Lastly, the study concluded that most learners should be motivated to join peer assisted learning strategy and class wide peer tutoring strategy to improve their performance as learners who used these types of strategies attested to. In addition, teachers must strive to use strategies that are effective and that which would get out more from the learners thereby increasing their performance.

5.4 Recommendations for the Study

Based on the results, the following are the recommendations that require short-term and long-term address by different stakeholders:

Government of Kenya, should put in place policy frameworks and structures as well as appropriate mechanism to ensure that teaching and learning strategies address the unique needs of learners with learning disabilities. Inability to employ appropriate peer tutoring strategies for early identification and teaching of learners with LD may impede early intervention. Inappropriate teaching, learning strategies and materials can prevent learners with learning disabilities from realizing their full academic potential.
The trainers dealing with teachers on in-service training should be sensitized on practice of appropriate types of teaching and learning strategies for pupils with learning disabilities to arm the teachers handling these learners with the similar skills. Teachers should work as partners with the pupils to help them realize their maximum potential in education. As such, they should use peer tutoring strategies and sessions to strike a rapport and bond with these pupils to enhance performance of learners with LDs.

5.5 Suggestions for Further Studies

Essentially, although the study dealt with effectiveness of peer tutoring of learners with LDs in public primary schools, it was limited to one class, four, hence, a study can be carried out in the other classes such as class eight to establish whether there are other teaching strategies that can work with candidate class.

Lastly, the study suggests that research be conducted to identify peer tutoring strategies that can address the particular skill shortfalls in learners with learning disabilities.
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APPENDICES

APPENDIX I: INFORMED CONSENT

My name is Kibuthu Anne Njeri. I am a postgraduate student undertaking master of education in the Department of Special Needs Education at Kenyatta University. I am conducting a study on “the determinants of effectiveness of peer tutoring strategy on academic performance of standard four pupils with learning disabilities in Nyeri Central Sub-county, Kenya.” The information may be used by the teachers who may gain an understanding on how peer tutoring may be made more effective in addressing learners with learning disabilities.

**Procedures to be followed**

Participation in this study will require that I ask you to read a passage and also calculate a few sums. I may select you to be observed during a lesson in the normal classroom setting.

You have the right to refuse participation in this study. You will get the same treatment during learning whether you agree to join the study or not and your decision will not change the treatment you will receive from teachers. Your learning will continue as it will for the other pupils.

**Discomfort and risk**

The reading of the passage may be embarrassing or make you uncomfortable. If this happens, you may read only what you choose. You may also speak out on how you feel on reading the passage.

**Benefits**

If you participate in this study you will help us to learn how to provide effective teaching method that can improve the performance of some learners who experience
difficulty because of learning disabilities. You will also benefit because of identification which will enable you to know whether you have learning disabilities.

**Confidentiality**

The identification will be conducted in a private setting within the school. Your name will not be recorded on the observation checklist. The identification tools and observation checklist will be kept locked for safe keeping. Everything will be kept private.

**Contact information**

If you have any questions you may contact Dr. Mary Runo 0721381513 or Dr. Jessina Muthee 0720711896 or the Kenyatta University ethical review committee secretariat on kuerc@ku.ac.ke.

**Participant’s statement**

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely my choice. I understand that my records will be kept private and that I can choose not to participate. I understand that I will still get the same treatment whether I decide to participate or not and my decision will not change the learning services I get from my teachers.

Name of participant ……………………………

_________________________  ________________

Signature or thumbprint  Date

**Investigator’s statement**

I, the undersigned, have explained to the pupils in a language they understand, the procedures to be followed in the study and the risks and benefits involved.

Name of interviewer …………………………………………………

_________________________  ________________

Sign here  Interviewer signature  Date
FOR UNDERAGE PARTICIPANTS

Guardian’s statement

The above information regarding participation of ……………………………………… in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. I understand that the records will be kept private and that my ………………………………… choose not to participate. I understand that he/she will still get the same treatment in learning whether he/she decides to participate in the study or not.

Name of guardian ……………………………

_____________________________   ______________________

Signature or thumbprint          Date

ASSENT FOR UNDERAGE (9 to 12 years?)

Underage Statement

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely my choice. I understand that my records will be kept private and that I can choose not to participate. I understand that I will still get the same treatment whether I decide to participate or not and my decision will not change the learning services I get from my teachers.

Name of underage…………………………

_____________________________   ______________________

Signature or thumbprint          Date
Investigator’s statement

I, the undersigned, have explained to the pupils in a language they understand, the procedures to be followed in the study and the risks and benefits involved.

Name of interviewer ……………………………

________________________________________  ________________

Interviewer signature  Date
APPENDIX II: SUBJECT TEACHERS’ QUESTIONNAIRE

This questionnaire is aimed at collecting data on the effectiveness of peer tutoring approach to teaching learners with learning disabilities. It is hoped that the findings of this study will be found useful by a wide cross section of users and will be instrumental in enhancing effectiveness and efficiency of peer tutoring approach to teaching. Kindly respond to the questions as accurately, completely and as honestly as possible by placing a tick [√] against one choice as appropriate or filling the space provided. Remember that all information will be treated with ultimate confidentiality.

SECTION A: DEMOGRAPHIC INFORMATION

1) Your gender?
   Male [ ]   Female [ ]

2) Which of the following best describes your age?
   18-25 [ ]  26-30 [ ]  31-40 [ ]  Over 41 [ ]

3) Your teaching experience? __________________________
   Less than 5 years [ ]  5 – 10 years [ ]  11-15 [ ]
   16 – 20 years [ ]  Above 20 years [ ]

4) Indicate the period of time you have been teaching class four pupils.
   Less than 1 year [ ]  1 – 3 years [ ]  3 – 7 years [ ]
   7 – 10 years [ ]  Above 20 years [ ]

5) Qualifications (tick whichever appropriate)
   Post graduate [ ] Graduate teacher [ ] Diploma [ ]
   Approved teacher [ ] P1 [ ] Untrained [ ]
   Others Specify)__________________________________________________________
SECTION B: IDENTIFICATION OF PUPILS WITH LEARNING DISABILITIES

7. How often do you attempt to identify learners with learning disabilities when you get a new class?
   Always [   ] Often [   ] Sometimes [   ] Rarely[   ] Never [   ]

8. Which among the following methods do you use to identify learners with LD?
   Tick one or more.
   (a) Low performers in continuous assessment tests [   ]
   (b) Administer testing tools. e.g. a reading test. [   ]
   (c) Observe the characteristics of the pupils. [   ]
   (d) Information from the other teachers. [   ]

9. After identifying, how often do you find that there are learners with learning disabilities in your class?
   Always [   ] Often [   ] Sometimes [   ] Rarely [   ] Never [   ]

10. How often do you identify learners with the following characteristics in your class?

<table>
<thead>
<tr>
<th>Learning disabilities characteristics</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor motor abilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing problems</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Oral language disorder</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reading disabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written language problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical disabilities</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Other learning characteristics (please Specify) ______________________________
SECTION C: TEACHERS PREPARATION

11. How many times have you attended in-service courses on peer tutoring over the last one year?
   Once [ ]  Twice [ ]  More than twice [ ]  None [ ]

12. Have you trained in special education needs?  Yes [ ]  No [ ]
   (b) If yes, to which level?  Certificate [ ]  Diploma [ ]
                                  Graduate teacher [ ]  Post graduate [ ]

12. In your own evaluation, how often do you think the methods you use to identify learners with learning disabilities are effective?
   Always [ ]  Often [ ]  Sometimes [ ]  Rarely [ ]  Never [ ]

13. Before you engage in a peer tutoring lesson, which among the following preparations do you make? Tick [ ] one or more.
   (a) Write a scheme of work [ ]
   (b) Write a lesson plan [ ]
   (c) Arrange the pupils [ ]
   (d) Collect the learning materials [ ]
   (e) Arrange the classroom [ ]

SECTION D: PEER TUTORING ACTIVITIES

14. How often do you use peer tutoring in the course of your work?
   Always [ ]  Often [ ]  Sometimes [ ]  Rarely [ ]  Never [ ]

15. From your own experience, how often does the peer tutoring strategy succeed in helping learners with learning disabilities learn better?
   Always [ ]  Often [ ]  Sometimes [ ]  Rarely [ ]  Never [ ]
16. From your own observation, to what extent do you think the learners:

(i) Enjoy the peer tutoring strategy to teaching?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(ii) Benefit from the peer tutoring strategy to teaching?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Which of the activities listed below do the peer tutor and the peer tutee engage in most frequently during peer tutoring lessons? Tick one or more.

(a) Socializing well [ ]
(b) Peer tutee demonstrating to the peer tutor [ ]
(c) Peer tutor encouraging the peer tutee [ ]
(d) Concentrating on the task [ ]
(e) Asking each other questions [ ]
(f) Asking guidance from the teacher. [ ]
(g) Any other(specify) ____________________________

18. Which of the activities listed below do you engage in during peer tutoring lessons? (Tick one or more).

(a) Matching learners [ ]
(b) Giving instructions [ ]
(c) Guiding the pair [ ]
(d) Monitoring and assessing [ ]
(e) Evaluating [ ]
(f) Giving feedback [ ]

SECTION E: TYPES OF PEER TUTORING

19. Which is the type of peer tutoring strategy that you most frequently use?

Class Wide Peer Tutoring [ ] Cross Age Tutoring [ ] Peer Assisted Learning [ ]
Reciprocal Peer Tutoring [ ]

20. How would you rate the effect of type of peer tutoring on learners with LD?

Great effect [ ] Average [ ] Little effect [ ] No effect [ ] Not sure [ ]
21. How would you rate the average class performance of class four students with Learning Disabilities in this school?
Very poor [ ] Poor [ ] Good [ ] Very good [ ]

SECTION E: RECOMMENDATIONS

11. Do you have anything to add?

__________________________________________________________________
__________________________________________________________________

   Thank you for your cooperation in completing this questionnaire.
APPENDIX III: INTERVIEW SCHEDULE TO HEAD TEACHERS

1. In your own estimation, what proportion of pupils in your school may be considered to have learning disabilities?

2. Kindly explain how peer tutoring approach has been found to be effective in assisting learners with learning disabilities.

3. From your own observation in your school, which criteria do teachers apply in identifying the learners with learning disabilities?

4. In your own opinion to what extent are the teachers in your school:
   a) Professionally equipped to apply peer tutoring effectively?
   b) Motivated/ demonstrate enthusiasm in applying peer tutoring approach?

5. From your own observation:
   a) Which activities do teachers and learners engage in during peer tutoring sessions?
   b) Which are the challenges faced in applying peer tutoring approach to teaching in your school? How can the challenges faced / managed?
   c) What would be your suggestion in enhancing the effectiveness of peer tutoring strategy on learners with learning disabilities?
APPENDIX IV: OBSERVATION CHECKLIST

SCHOOL CODE ______________________

SECTION A: EFFECTIVENESS OF PEER TUTORING

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Extent of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer tutor/peer tutee socialization</td>
<td></td>
</tr>
<tr>
<td>Motivation to the pair</td>
<td></td>
</tr>
<tr>
<td>Reduction of task time</td>
<td></td>
</tr>
<tr>
<td>Effect of teacher reward system</td>
<td></td>
</tr>
<tr>
<td>Effect of learning materials</td>
<td></td>
</tr>
<tr>
<td>Effect of type of peer tutoring</td>
<td></td>
</tr>
<tr>
<td>Effect on academic achievement</td>
<td></td>
</tr>
<tr>
<td>Effect on time management</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:____________________________________________________________
APPENDIX V: READING TEST FOR LEVEL TWO

AT THE MARKET

Today is a market day. Rwamba and Ikapel are going to the market. Ikapel is going to sell tomatoes. He will also sell vegetables. He is good at growing fruits. Ikapel is carrying fruits and tomatoes in boxes. The boxes are on his ox cart. The oxen are pulling the ox cart. Ikapel is also carrying some maize and beans for Rwamba. Rwamba is going to sell the maize and beans at the market.

There are many people at the market. They have come to buy or sell different things. Some have come to buy sukumawiki or spinach. Others have come to sell pawpaws. Ikapel wants to buy two sheep, two goats and two knives. Rwamba wants to buy some bananas, carrots and potatoes. Some women have bought things from the market. They want Ikapel to carry them. He will carry them on his ox-cart. They will pay Ikapel some money. Then Ikapel will buy school uniform for his children.

Answer the following questions from the passage

(1) Where is Rwamba and Ikapel going?

(2) Where has Ikapel put his boxes?

(3) What is Rwamba going to sell?

(4) What have people come to do in the market?

(5) What will Ikapel buy with the money he will be paid?

Substituted words __________
Omitted words __________
Misprounounced words ______
Added words __________
Time taken in reading _____
No. of correct answers out of 6 ______________________
Total number of words in the passage 162
READING TEST FOR LEVEL THREE

THE MOUSE AND THE LION

One day, the lion was walking in the forest looking for food. He had not eaten for a whole day. He was hungry. He found the mouse and caught him.

The mouse was frightened and she begged the lion not to eat her. “Tell me why I should not eat you, I feel so hungry,” roared the lion.

“Do not eat me lion, I will help you one day,” said the mouse. “You will help me! You are such a small animal. How can you help me?” said the lion. The lion thought a little, then he decided to let the mouse go. She was not big enough to eat anyway.

Many months passed. One day the mouse was walking in the forest when she heard some noise. She went closer to see where it was coming from, she looked closely and saw it was the lion. He was trapped in a net and could not move.

Quickly she decided to help him. She new the hunters might come any time. She cut the net using her sharp teeth. After a few minutes the lion was free.

“Now I understand what you told me,” said the lion happily. “If you do good you get goodness,” added the mouse.

QUESTIONS

1. What was the lion looking for in the forest?

2. How many days had the lion stayed without food?

3. A lion ________________ (bark, shouts, roars)

4. Why didn’t the lion eat the mouse?

5. Why was the lion making noise in the forest?

| Substituted words ___________ |
| Omitted words ___________ |
| Mispronounced words _____ |
| Added words ___________ |
| Time taken in reading _____ |
| No. of correct answers out of 10 ___________ |
| Total number of words in the passage 206 |
6. How did the mouse help the lion? ____________________________

7. Who could have trapped the lion? ____________________________

8. After the help by the mouse what did the lion say? ______________

9. According to the story, if you do good you get _______________________

10. What have you learnt from the story? ____________________________

   (a) Small animals are useless.

   (b) Small animals can help big animals.

   (c) Big animals should eat small animals
APPENDIX VI: MATHEMATICS TEST FOR LEVEL 3

1. \( 24 + 31 = \)
2. 37
3. \( 189 + 520 = \)
4. What is the next number in the pattern? 7, 10, 13, 16, ______
5. \( 74 + \square = 195 \)
6. 97
7. 950
8. \( 5324 - 217 = \)
9. Subtract 136 from 726 = __________
10. 1475 = _____ thousands _____ hundreds _____ tens _____ ones.
11. \( 2 \times 5 = \square \)
12. 7
13. \( 32 = \square \times 4 \)
14. Write the missing number 8, 16, 24, _____, 40, 48.
15. \( 27 \div 9 = \square \)
16. \( \square \times 10 = 70 \)
17. \( 6 \mid 64 \)
18. Draw a square __________
19. Kenga had 9 children. He bought 5 sweets for each child. How many sweets did he buy? __________
20. Mbogo shared 35 bananas equally among 7 children. How many did each child get? __________

<table>
<thead>
<tr>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total sums = 20</td>
</tr>
<tr>
<td>2. Time taken in doing the sum</td>
</tr>
<tr>
<td>3. No. of correct sums</td>
</tr>
<tr>
<td>4. Pass mark 12 20</td>
</tr>
</tbody>
</table>
APPENDIX VII: RESEARCH AUTHORIZATION LETTER

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Date: 15th October, 2014

NACOSTI/P/14/2830/3589

Anne Njeri Kibuthu
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Effectiveness of peer tutoring strategy on performance of class four pupils with learning disabilities in Nyeri Central District, Nyeri County, Kenya,” I am pleased to inform you that you have been authorized to undertake research in Nyeri County for a period ending 14th December, 2014.

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. LANG’AT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Nyeri County.
APPENDIX VIII: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MISS. ANNE NYERI KIBUTHU
of KENYATTA UNIVERSITY, 231-10100
Nyeri, has been permitted to conduct
research in Nyeri County

on the topic: EFFECTIVENESS OF PEER
TUTORING STRATEGY ON PERFORMANCE
OF CLASS FOUR PUPILS WITH LEARNING
DISABILITIES IN NYERI CENTRAL
DISTRICT, NYERI COUNTY, KENYA.

for the period ending:
14th December, 2014

[Signature]
Applicant’s

[Signature]
Secretary
National Commission for Science,
Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and
the County Education Officer of the area before
embarking on your research. Failure to do that
may lead to the cancellation of your permit
2. Government Officers will not be interviewed
without prior appointment.
3. No questionnaire will be used unless it has been
approved.
4. Excavation, filming and collection of biological
specimens are subject to further permission from the
relevant Government Ministries.
5. You are required to submit at least two(2) hard
copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to
modify the conditions of this permit including
its cancellation without notice.