

**TEACHERS' AWARENESS AND SUPPORT FOR LEARNERS WITH
LEARNING DISABILITIES FOR EFFECTIVE INCLUSIVE
EDUCATION IN PUBLIC PRIMARY SCHOOLS IN
TRANS-NZOIA COUNTY, KENYA**

GRACE WAMUKOYA GARBUTT

**A THESIS SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE
DOCTOR OF PHILOSOPHY DEGREE IN EDUCATIONAL
PSYCHOLOGY OF UNIVERSITY OF ELDORET**

JULY, 2018

DECLARATION

This thesis is my original work and has not been presented for any other award in any university. No part of this thesis may be reproduced without the prior permission of the author or the University of Eldoret.

Grace Wamukoya Garbutt

EDU/PHD/EP/007/14

Date

This thesis has been submitted for examination with our approval as university supervisors:

Dr. Esther Nyabuto

Department of Curriculum and
Instruction/ Educational Psychology,
University of Eldoret

Date

Dr. Jacob Lolelea Natade

Department of Curriculum and
Instruction/Educational Psychology
University of Eldoret

Date

DEDICATION

This thesis is dedicated to all learners with learning disabilities in primary schools in Kenya for their quest for education in inclusive setting.

ABSTRACT

This research sought to investigate teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County in Kenya. The objectives of the study were to: determine the extent to which respondents' awareness of learning disability influence the support for learners with learning disabilities in public primary schools in Trans - Nzoia County, establish the support strategies teachers use to support learners with learning disabilities in public primary schools in Trans - Nzoia County, establish the support provided by school administration towards the provision of education for learners with learning disabilities in public primary schools in Trans - Nzoia County, and examine the strategies that can be used to improve teachers' support for learners with learning disabilities in public primary schools in Trans - Nzoia County for effective inclusive education. The study was guided by social constructive theory of disability propounded by Vygotsky whose idea on social and cultural context promotes instructional engagement, classroom change and redevelopment of learners with learning disability. In conceptualizing the study the independent variables were teachers' awareness and support for learners with learning disabilities while the dependent variable was effective inclusive education. The study was anchored on pragmatism research paradigm that considers a world where reality is socially constructed, complex and open to change. The study was based on a mixed method research methodology which allowed use of quantitative and qualitative research data. The study design was concurrent triangulation design which allows qualitative and quantitative data to be collected concurrently. The study was conducted in Trans - Nzoia County. Simple random technique was used to select 351 teachers and 34 head teachers. Stratified sampling and purposive sampling techniques were used to select 5 Sub County directors of education. Data was collected by use of questionnaires, interview guides and focus group discussions. Face validity of the instruments was established through expert judgement by involving supervisors and two experts from the school of education. Reliability of the instruments was established through pilot study using test retest method. The instruments were reliable at 0.74 for teacher questionnaire. Data collected was analysed using qualitative and quantitative methods. Quantitative data from questionnaires was analysed with the help of Statistical Package for Social Sciences (SPSS Version 21.0). Quantitative data was presented using descriptive; frequencies, percentages, means and standard deviations. Qualitative data was analysed by content analysis method. The study found out that implementation of inclusive education was low by 46.0% in public primary schools in Trans-Nzoia County. The teachers were found to be moderately aware of pupils with learning disabilities by 59.5%, 58.9% of teachers were aware of the support needed by learners with LD and 61% were aware of the administration support for learners with LD. However, despite teachers' awareness being high, this did not translate to implementation of inclusive education for learners with LD in public primary schools. The study that despite teacher awareness of LD being high, this did not translate to effective inclusion in public primary schools due to inadequate support from school administration members. The study recommends that teachers should be provided with training on LD, school administration need to provide infrastructure support for LD and Ministry of Education should change curriculum to reflect the needs of LD learners.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
ACRONYMS AND ABBREVIATIONS.....	xi
ACKNOWLEDGEMENT.....	xiv
CHAPTER ONE	1
INTRODUCTION OF THE STUDY.....	1
1.1 Overview.....	1
1.2 Background to the Study.....	1
1.3 Statement of the Problem.....	12
1.4 Purpose of the Study	13
1.5 Research Objectives.....	14
1.6 Research Questions	14
1.7 Significance of the Study	15
1.8 Assumptions of the Study	16
1.9 Scope and Delimitation of the Study	16
1.10 Limitation of the Study	17
1.11 Theoretical Framework.....	18
1.12 Conceptual Framework.....	26
1.13 Operational Definition of Terms.....	31

CHAPTER TWO	32
LITERATURE REVIEW	32
2.1 Introduction.....	32
2.2 An Overview of Learning Disabilities	32
2.3 Teachers Awareness of the Learners with LD in Public Primary Schools	36
2.4 Support Strategies Used by Teachers’ for Learners with Learning Disabilities....	66
2.5 Support by School Administrators for Learners with Learning Disabilities	79
2.6 Strategies Adapted to Improve Teachers Awareness and Support for Learners with LD	82
2.7 Research Gap	86
2.8 Literature Summary	87
CHAPTER THREE	89
RESEARCH DESIGN AND METHODOLOGY	89
3.1 Introduction.....	89
3.2 Philosophical Stance	89
3.3 Research Design.....	91
3.4 Area of Study	92
3.5 Target Population.....	93
3.6 Sampling Design, Sampling Procedures and Sample Size	94
3.7 Data Collection Instruments	98
3.8 Validity and Reliability of Research Instruments	105
3.9 Data Collection Procedure	113
3.10 Data Analysis	117
3.11 Ethical Considerations	120

CHAPTER FOUR.....	122
DATA PRESENTATION, ANALYSIS, INTERPRETATION&DISCUSSION	122
4.1 Introduction.....	122
4.2 Demographic Data	123
4.3 Analysis of Research Questions.....	127
4.3.1 Effective Inclusion of Learners with Learning Disabilities in Schools	127
4.3.2 How Respondents Awareness of Learning Disability Influences the Support of Learners with Learning Disabilities	133
4.3.3 Support Strategies Teachers’ Use to Assist Learners with LD in Public Primary Schools	149
4.3.4 The Support Provided by School Administration towards Provision of Effective Inclusive Education for Learners with Learning Disabilities.....	157
4.3.5 Strategies that can be Adapted to Improve Teachers’ Support for Learners with Learning Disabilities in Public Primary Schools.....	171
4.4 Barriers in Inclusive Education for Learners with LD in Public Primary Schools in Trans-Nzoia County	181
4.5 Chapter Summary	186
CHAPTER FIVE	187
SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS....	187
5.1 Introduction.....	187
5.2 Summary of Findings.....	187
5.3 Conclusions.....	191
5.4 Recommendations.....	194
5.5 Suggestions for Further Research	196

REFERENCES.....	197
APPENDICES	222
Appendix I: Consent Letter.....	222
Appendix II: Questionnaire for Teachers’	223
Appendix III: Interview Guide for Head Teachers and Teachers.....	228
Appendix IV: Focus Group Discussion Questions for Teachers’	229
Appendix V: Interview Guide for Sub County Directors of Education.....	230
Appendix VI: Content Validity Scale	231
Appendix VII: Interview Excerpts.....	232
Appendix VIII: Interview Excerpts	233
Appendix IX: Interview Excerpts	234
Appendix X: Focus Group Discussion Excerpts	235
Appendix XI: Research Permit	237
Appendix XII Research Authorisation Letters	240
Appendix XIII: Trans-Nzoia County Map.....	243

LIST OF TABLES

Table 2.1 Learning and Behavioural Characteristics of Children with LD	59
Table 3.1 Target Population for the Study	93
Table 3.2: Sample Frame for the Study	97
Table 3.3: Content Validity Index for Research Instrument.....	108
Table 3.4 Reliability Values for the Research Questionnaire.....	112
Table 3.5 Characteristics of the Sample (Focus Group Discussions).....	116
Table 3.6 Summary of Statistical Data Analysis Matrix	120
Table 4.1 Respondents Response Rate	122
Table 4.2 Respondents Demographic Data.....	124
Table 4.3 Inclusion of Learners with Learning Disabilities in Public Primary Schools in Trans-Nzoia County	128
Table 4.4 Teachers' Awareness and Support for Learners with LD in Schools.....	134
Table 4.5 Teachers Awareness of Learning Disabilities and Inclusion.....	142
Table 4.6 Support Strategies Teachers' Use to Assist LD Learners.....	150
Table 4.7 Teachers Support for Learners with LD and Inclusion in Primary School	154
Table 4.8 Support Provided by School Administration towards the Provision of Inclusive Education for Learners with LD	158
Table 4.9 Administrative Support and Inclusion of Learners with LD in Schools....	164
Table 4.10 Strategies to Improve Teachers' Support for Learners with Learning Disabilities in Public Primary Schools	172
Table 4.11 How Teachers Awareness and Support for Learners with LD can be Improved	178

LIST OF FIGURES

Figure 1.1: Conceptual Framework Showing Interaction of Variables	28
Figure 2.1 An Advocacy Model for Teacher Preparation.....	83
Figure 4.1 Inclusion of Learners with LD in Public Primary Schools in Trans-Nzoia County.....	130
Figure 4.2 Teachers Awareness of Learners with Learning Disabilities (TALLD) ..	141
Figure 4.3 Teachers Support for Learners with LD (TSLLD).....	153
Figure 4.4 Teacher Awareness on Support Given by School Administration.....	162
Figure 4.5 Strategies to Improve Teachers' Support for Learners with LD in Public Primary Schools	177

ACRONYMS AND ABBREVIATIONS

ADHD	Attention-Deficit/Hyperactivity Disorder
A-Level	Advanced Level
ADD	Attention Deficit Disorder
ATS	Approved Teachers
AUSPELD	Australian People with Learning Disabilities
CAST	Centre for Applied Special Technology
CRC	Convention on the Rights of the Child
CWPT	Class-Wide Peer Tutoring
CVI	Content Validation Index
DFID	Department For International Development
DI	Differentiated Instruction
EADSNE	European Agency for Development in Special Needs Education
EARCs	Educational Assessment and Resource Centres
EFA	Education For All
EMIS	Educational Management Information Systems
ESQAO	Education Standard Quality Assurance Officer
FGDs	Focus Group Discussions
fMRI	functional Magnetic Resonance Imaging
FPE	Free Primary Education
GAW	Global Action Week
HT	Head Teacher
ICLD	Interagency Committee on Learning Disabilities
IDEA	Individuals with Disabilities Education Act
IE	Inclusive Education

IEPs	Individualised Education Program
IS	Interview Schedule
IQ	Intensive Quotient
KICD	Kenya Institute for Curriculum Development
KISE	Kenya Institute of Special Education
KNBS	Kenya National Bureau of Statistics
KNCHR	Kenya National Commission on Human Rights
KNEC	Kenya National Examinations Council
LD	Learning Disabilities
LDAA	Learning Disabilities Association of America
LDAO	Learning Disabilities Association of Ontario
LRE	Least Restrictive Environment
MEAL	Manitoba Education and Advanced Learning
MKO	More Knowledgeable Other
MOE	Ministry Of Education
MOEST	Ministry of Education Science and Technology
MRI	Magnetic Resonance Imaging
NASET	National Association of Special Education Teachers
NCAPD	National Coordinating Agency for Population and Development
NCLB	No Child Left Behind
NCLD	National Centre for Learning Disabilities
NCSE	National Council for Special Education
NDCCD	National Dissemination Centre for Children with Disabilities
NG-CDF	National Government-Constituency Development Fund
NIMH	National Institute of Mental Health

NJCLD	National Joint Committee of Learning Disabilities
NPSD	National Survey for Persons with Disabilities
OECD	Organisation For Economic, Cooperation and Development
PALS	Peer Associated Learning Strategies
PCESE	President’s Commission on Excellence in Special Education
PTC	Primary Teachers Certificate
RoK	Republic of Kenya
RPT	Reciprocal Peer Tutoring
RTI	Response to Instruction
SAGAs	Semi-Autonomous Government Agencies
SCDE	Sub County Directors of Education
SDGs	Sustainable Development Goals
SpLD	Specific Learning Disability
SNE	Special Needs Education
SPSS	Statistical Package for Social Sciences
TSC	Teachers Service Commission
TTC	Teacher Training College
UDL	Universal Design for Learning
UK	United Kingdom
US	United States
VDOE	Virginia Department of Education
UNESCO	United Nations Education, Scientific and Cultural Organization
UNICEF	United Nations International Children Education Fund
ZPD	Zone of Proximal Development

ACKNOWLEDGEMENT

My deepest gratitude goes to the Almighty God whose everlasting grace has sustained me throughout this academic journey. I am grateful to the University of Eldoret for offering me an opportunity to study a Doctor of Philosophy Degree in the School of Education, Department of Psychology. I specifically thank my two supervisors Dr. Esther Nyabuto and Dr. Jacob Lolelea Natade for their professional guidance, patience and tremendous support from the very early stages of proposal writing through to the final revisions of the thesis. Their shared knowledge and constant assurance and encouragement made this process manageable. Special regard to my research methods lecturer Dr. Kisilu Kitainge for his instructions and guidance during lectures that added value on this research work.

I would like to extend very special thanks to my colleagues and friends Stella Okemwa, Naomi Musumba, Robert Aminga, Monica Onyango and Mary Musyoki for their constructive feedback, enthusiastic support and understanding throughout the process. I appreciate the support that respondents; teachers, head teachers and education officers accorded me during data collection process, without their input, this thesis would not have been possible.

To my family, thank you for being there for me. I am grateful for your continual encouragement, love and support. In particular, my loving husband Michael Garbutt and children: Antoinette, Mercy and Dickson.

Finally, I appreciate my late parents Dorcas Wamukoya and Dickson Wamukoya Kadima for their dedication to education. It's unfortunate that they never lived to see this day eventuate.

CHAPTER ONE

INTRODUCTION OF THE STUDY

1.1 Overview

This chapter presents the following; background of the study, statement of the problem, the purpose of the study, objectives of the study, research questions, and justification of the study. The chapter also covers the significance of the study, assumptions of the study, the scope and limitations of the study, theoretical framework, conceptual framework and operational definition of the terms.

1.2 Background to the Study

Education is a right and an important investment that a country can make to enhance accessibility to educational services and its development (World Bank, 2014). The vitality to the education right was supported by United Nations Education Scientific and Cultural Organization [UNESCO] Constitutions of 1945; the United Nations Universal Declarations of Human Rights, 1948; The Convention on the Rights of the Child, 1989; A World Fit For Children, 2002 and the 1990 World Conference on Education for All Jomtien, Thailand. Despite having these international mandates, millions of children with disabilities throughout the world are still denied their fundamental right to education (UK Department for International Development [DFID], 2009). Furthermore, the World Bank Report (2004) contends that the situation is worse in developing countries due to injustice and abuse of children's fundamental rights.

In different regions (Sub Saharan, Middle East, East Asia, South America and Caribbean) around the world between 5% and 40% learners drop out of school due to negative learning experience caused by poor performance (UNESCO, 2009). It is

therefore necessary for governments to identify groups of children dropping out of school as a first step in implementing policies that reach out to the excluded. Thus, improve the quality, flexibility and relevance to education for all (Rasugu, 2010). Additionally, there is need for teachers' awareness, understanding and knowledge of learners' diverse needs. This will help them set a path for the future and avoid their learners' dropping out of school (Sawhney & Bansal, 2014; Dapoudong, 2014).

Teaching involves sharing of knowledge between a teacher and a learner (Osero & Abobo, 2015). Therefore, teachers are required to coordinate the teaching and learning process for quality basic education (UNESCO, 2009). This implies coordinating the learning process where the teacher has to have the right skills and mastery of the content for the correct level of learners with diverse needs in inclusive setting (Osero & Abobo, 2015). Strobel, Arthanat, Bauer and Flagg (2007) found out that there are approximately 95% of learners with diverse needs in general education classrooms. Out of these, 46% learners with Learning Disabilities (LD) were identified (Lerner & Johns, 2012).

Learning Disability (LD) is a worldwide problem today (Lerner & Johns, 2009; Gandhimathi, Jeryda & Eljo, 2010). This is because children with learning disabilities are found in every economic, racial and language around the globe (Lerner & Johns, 2012). Learning disability is a general term for a neurological condition that interferes with the learner's ability to store, process, or produce information (National Dissemination Center for Children with Disabilities [NDCCD], 2004). This then, affects the learner's ability to read, write, speak, spell or compute mathematics (National Association of Special Education Teachers [NASSET], 2007; Lerner & Johns, 2012). Moreover, Tormanen, Takala and Sajaniemi (2008) contended that LD

is traditionally synonymous with the concept of underachievement; which interferes with the learners: attention, memory, coordination, social skills, thinking and language (Fletcher, Coulter, Reschly & Vaughn, 2004; McNamara, 2007). Nevertheless, McNamara (2007) argued that learners with learning disabilities have difficulty completing long-term assignments, and keeping track of daily work and events.

Despite learners with learning disabilities appearing 'normal' they are unable to perform and commensurate to their age and ability levels due to a basic psychological problem (Lerner & Kline, 2006; Abosi, 2007; Lerner & Johns, 2009; Kafonogo & Bali, 2013). Therefore, the psychological problem is the cause of a discrepancy between the learner's achievement and their actual intellectual ability in the skills mentioned above (reading, writing, speaking, spelling or computing mathematics) (Kafonogo & Bali, 2013). Furthermore, Lerner and Johns (2009) believed that this could influence an individual's ability to reason and organize information.

According to Saad, Ismail and Hamid (2014), learners with LD are unique, and therefore their needs vary as they show unique profile of strengths and needs. The needs for these learners can be either general or specific in nature (National Council for Special Education [NCSE], 2014). Thus, general learning disabilities can be identified as mild, moderate, severe or profound; while specific learning disabilities are identified as Dyslexia (Reading), Dyscalculia (Math) or Dysgraphia (Writing) (NASET, 2014). If these disabilities are unnoticed, unanswered and, or ignored; the needs of these learners will not be met in the regular classrooms. This then will affect the fulfillment of effective inclusive education, universalisation of primary education and equalization of educational opportunity. It is therefore important for teachers in

regular primary schools to be aware and understand various types of disabilities, appropriate curricular, instructional modifications, support and interventions to assist learners with disabilities in their schools (Saad et al., 2014). Such knowledge and understanding will enable them to develop positive attitude towards learners with disabilities and lead them to acquiring or developing better competences to handle these children in their classrooms (Gandhimathi, 2010; El-Gamelen & El-Zeftawy, 2015).

Additionally, it is vital for pre-service teachers and education administrators to have an opportunity to learn about children with special educational needs in their training (Clark & Artiles, 2000; Saad et al., 2014). This will then help governments establish and maintain a quality educational system of trained and motivated teachers, and administrators to work in the general education (Porter, 2001). One such category of special needs children in general education is that of learning disabilities. Despite these learners being the majority in general education classrooms (Hallahan, Lloyd, Kauffman, Weis & Martinez, 2005), only 60% of them receive information about their needs from general education teachers (Cortiella, 2011).

Researchers in different parts of the world investigated teacher's knowledge and awareness regarding learners with learning disabilities and found out that their success depended on teachers' awareness of their learning needs (Campbell, Gilmore, Cuskelly, 2003; Carroll, 2003; Papadopoulou, Kokarida, Papanikolaou & Patsiaouras, 2004; Koay, Sim & Elkins, 2006). Furthermore, these researchers considered the teachers' role to be of importance in the field of special needs education that required them to know foundational concepts to help learners with LD in regular classrooms. They believed that this would enable teachers to develop positive attitude and

competencies towards learners with LD in general education. In addition, Rowe (2007) regarded teachers as valuable resource to a school. Therefore, he found it vital to invest in teacher professionalism by equipping them with skills that are effective in meeting the development and learning needs of all learners.

Robuck (2009) also agreed that teachers in general education are not equipped with effective skills. He asserted that this is because they have very little knowledge about disabilities in general. Robuck pointed out that this could be because of the following reasons: first, teacher training programs devoting little or no class hours to understanding the challenges learners with particular disabilities face and how to help them learn. Second, general education teachers not undertaking any further studies that focus on effective ways to teach learners with learning disabilities; and third, educational authorities not providing ongoing in-service training for teachers about teaching learners' with LD and others with special needs. This is in line with teachers in Zimbabwe who perceived themselves untrained and ill equipped to assist learners with disabilities in inclusive education and therefore turned them away (Deluca, Tramontano & Kett, 2014).

It is however, important to note that if learners with LD are provided with the right support and intervention they can succeed in school and have a successful and distinguished career in future (Learner & Johns, 2012; Cortiella & Horowitz, 2014). This is possible with the provision of a range of special support services to these learners in school (South Africa Department of Education, 2005). These services may include; the support to develop new skills, understand complex information and interact with other people. In addition, these learners may require adequate support services such as; appropriate teaching and learning materials, and adaptive devices

and software to help them reach their full potential. However, these support services will depend on individual factors, including the severity of the learning disability.

Nevertheless, a critical determinant of the type of support implemented will depend on the age of the learner (Lerner & Johns, 2009). Moreover, Cortiella (2011) argued that the support be determined and provided by trained teachers certified in special education, specifically learning disabilities. However, the U.S. Department of Education (2006) has indicated that 11% of special educators are not highly qualified to teach learners with special educational needs, including those with LD. Similarly, Engelbretch (2006) has stated that in South Africa most classroom teachers found it difficult to support learners with learning disabilities because their in-service training did not train them on how to teach and support these learners.

Manitoba Education and Advanced Learning [MEAL] (2015) also recognized that inadequate training and lack of skills to teach learners with special needs affected teachers experiences in the regular classrooms and inclusive education in general. However, Lerner and Johns (2012) argued that these teachers required support from educational administrators, medical practitioners, and parents to perform to the highest level assisting learners with learning disabilities. In Malaysia for example, there are special needs programmes that have been set to support teachers' provision of educational services to learners with learning disabilities, mild retardation and autism in regular school; and those with visual and hearing impairments in special classes or special schools (Ali, Mustapha & Jelas, 2006).

On the other hand, in Australia support for learners with LD occurs in school environments where teachers value inclusivity and diversity in learning, and collaborate with each other to plan on how to meet the needs for these learners

(Taskforce on Students with Learning Disabilities, 2013). Similarly, in Canada teachers of learners with LD consider components such as; assessment and identification, individualized program plans, collaboration, parent involvement, ongoing assessment, accommodations, assistive technology, self-advocacy, and transition planning before programming support services for them in inclusive education (Price, 2009).

Inclusive Education (IE) is a concept that allows learners with special needs to be placed and receive instruction in general education alongside other peers with no disabilities (Ali et al., 2006). Stubbs (2008) defined inclusive education as a wide range of strategies, activities and processes that seek to make a reality of the universal right to quality, relevant and appropriate education. According to Loreman, Deppler and Harvey (2005), inclusive education involves regular schools and classrooms genuinely adapting and changing to meet the needs of children, as well as celebrating and valuing their differences.

In addition, UNESCO (2004) supported IE as a way of promoting the inclusion of learners with disabilities in general education; as it ensures and realizes the learners' potential in line with the Sustainable Development Goals (SDGs) of 2015. According to United Nations International Children Education Fund [UNICEF] (2009), SDGs required all schools to work in the best interest of the learners entrusted to them by providing safe and protective schools that are adequately staffed with trained teachers, equipped with adequate resources and graced with appropriate conditions for learning. Thus, effective inclusive education entails responding to the diversity of needs of all learners through increasing participation, stimulating discussion, encouraging positive

attributes and improving educational and social frameworks to cope with new demands of education structure and governance.

The drive towards the implementation of inclusive education came from a meeting of special needs education in 1994 in Salamanca, Spain (UNESCO, 1994); which later became to be known as the Salamanca Statement. This statement has intensified the concept of equal and quality education for all in various countries including: Canada, South Africa, Hong Kong, Russia, Finland, Norway, Turkey, U.S., Korea and some developing countries in Asia-Pacific region (Cambridge-Johnson, Hunter-Johnson & Newton, 2014).

In the United States (US) for example, the Individuals with Disabilities Education Act [IDEA] (2004) stated that learners with disabilities should progress and participate in the general education curriculum. Also, the No Child Left Behind (NCLB) Act of 2001 required all states in the US to include learners with disabilities in large-scale assessments aligned with the general education curriculum used to measure adequate yearly progress (King-Sears, 2008). In Australia the concept was considered to refer to the participation of learners with disabilities in regular schools and classrooms (Van Kraayenoord, 2007). In Zimbabwe, the concept was involved in identifying and minimising barriers to learners' participating in schools, homes, communities and workplaces; and maximising resources that support learning and participation for these learners (Mutepfa, Mpofu & Chatika, 2007). In India however, the concept was understood differently in that it indicated:

A tendency to be politically correct by taking on current trends in the West, without a real or common understanding of their meaning, resulting in dilution of service quality (Singal, 2008:1519).

Despite the differences in understanding the concept of IE across the globe, researchers and education authorities have adopted to a broad understanding of this term by referring to it as:

The practice of providing for students with a wide range of abilities, backgrounds and aspirations in regular school settings (Van Kraayenoord, 2007:391).

This is evident from the development of inclusive education which was examined in these countries and found out that resources, manpower, attitude, discrimination, equal learning opportunities and the mode of support prevented the successful introduction of inclusive education (Equal Opportunity Commission, 2012). Additionally, scholars (Kalyva, Gojkovic & Tsakiris, 2007; Fuchs, 2010; Salvica, 2010; Hwang & Evans, 2011; Adoyo & Odeny, 2015) further reported that lack of support by administrators have posed a challenge for inclusive education.

Nevertheless, lack of resources (Gaad & Khan, 2007; Kalyva et al., 2007) and insufficient teachers' preparation and training has hindered the process of inclusion (Ali et al., 2006; Bigham, 2010; Funchs, 2010; Slavica, 2010). Teachers experience and collaboration was further identified as a barrier to inclusive education (Dupoux, Hammond, Ingalls & Wolman, 2006). However, Jitendra, Burgess and Gajria (2011) believed that inclusive education prioritized quality education that enabled all learners to enrich their learning and achieve their full potential without discrimination.

Moreover, Vaugh, Bos and Schumm (2011) alleged that understanding the limits of personal expertise is vital, and knowing when and how to solicit advice from colleagues with specialized training is important to inclusive education. This is

possible if primary school teachers understood the individual strengths and learning needs of all learners; and used the curriculum and teaching methods that are broad and flexible to accommodate the needs, abilities and interests of all learners (NCSE, 2014). Moreover, Vaugh, Bos and Schumm (2011) discussed the importance of understanding the limits of personal expertise, and knowing when and how to solicit advice from colleagues with specialized training in inclusive education. This is however possible if; primary school teachers understand the individual strengths and learning needs of their learners, use the curriculum and teaching methods that are broad, and be flexible to accommodate the needs, abilities and interests of all their learners (NCSE, 2014). Nevertheless, teachers in inclusive education are required to have knowledgeable skills or competencies on special educational needs to be able to identify learners with a learning disability (Gandhimathi et al., 2010).

In the Kenyan context, inclusive education according to the report of the Taskforce on Special Education (MOEST, 2003), is a philosophy build around the belief and understanding that education is a basic human right and the foundation for a just society. In addition, inclusive education is considered a right for all individuals with and without disabilities for overall development in the society (Muuya, 2002; Mukuria & Korir, 2006; Ngugi & Macharia, 2006). These views have taken the agenda of the World Declaration on Education for All [EFA], adapted in Jomtien, Thailand (1990). In addition, the Kenya government has also recognized education as a fundamental right that should be availed to all learners. This has been proven by the government ratifying and signing both national and international policy frameworks in education, including: Education for All [EFA], the Millennium Goals, the Convention on the Rights of the Child and the UN Convention on the Rights of Persons with Disabilities.

Furthermore, the Constitution of Kenya (2010) has fundamentally subscribed inclusive education concept. Moreover, the government since the attainment of independence in 1963 has commissioned various education commissions and committees whose policy recommendations have steered the provision of education of learners with special educational needs towards inclusive education. These include Ominde (1964), Gachathi (1976), Kamunge (1988) and Koech (1999). Additionally, the government has treasured the following national policy and legal mechanisms to recognize the education of learners with special educational needs in inclusive education: Children's Act (2001), Persons with Disability Acts (2003), Sessional Paper No. 1 of (2005) and National Special Education Policy Framework (2009).

Despite the commitment the government has put in place, there are numerous challenges that need to be addressed in regard to the implementation of inclusive education in Kenya (MOE, 2012). Some of these challenges include; lack of clarity in the inclusive education policy, poor implementation of policy, staffing, training, quality assurance, research, examinations, curriculum development and teaching/learning materials (MOE, 2009; Gateru, 2010; Adoyo & Odeny, 2015). Nevertheless, children with Special Needs Education (SNE) face barriers such as; access, equity, quality, relevance, attitude, discrimination, support skills and physical environment/facilities (Mwangi, 2013).

Trans-Nzoia County is not an exception to experiences of learners with LD as statistics show that 24.5% of students in different schools around the county dropped out of school in the year 2013-2014 (Trans Nzoia County Education Report, 2015). This could be due to challenges learners experience in their studies and affect their academic performance, progression to the next class and completion of their

education cycle in primary school. In fact, these challenges could be due to lack of support learners with learning disabilities encounter in regular classrooms in the County. It is also important to note that up to date, there is no known research conducted in Trans-Nzoia County investigating: teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools.

1.3 Statement of the Problem

Several researchers have shown that learning disability presents the largest number of learners in public primary schools compared to other categories of special needs education (Ashman & Elkins, 2005; Abosi, 2007; Jung, 2007; Cortiella & Horowitz, 2014). However, in many schools teachers are offering little or no assistance at all to these learners (Cortiella & Horowitz, 2014). The Kenyan government has made efforts to expand and improve the education of children with special needs as stipulated in the Children's Act (2001), Disability Act (2003) and the Constitution of Kenya, (2010). However, the Ministry of Education seems to focus more on the education of learners in four traditional areas: hearing impairment, visual impairment, mental and physical handicaps; leaving out other categories of disability such as learning disabilities:- dyslexia, dyscalculia, dysgraphia, and auditory and visual processing deficits (Rasugu, 2010; Mwangi, 2013). This sort of discrimination has serious implications on access, equity and quality in the provision of education and training to learners with special needs, especially those with learning disabilities.

Some of the implications include learners failing and dropping out of school (Republic of Kenya, 2005; 2016). This is in line with the report presented by Cortiella (2011) in the United States stating that learners with learning disabilities experienced

the highest dropout rates compared to other categories of special education due to discrimination. Additionally, reports from the Trans-Nzoia County Education (2014); and research findings from Musavini and Mulee (2015) showed that there are high incidences of learners dropping out of various public primary schools in Trans-Nzoia County. Despite these findings, inadequate research has been done in relation to this study and, or the category of learning disability in Trans-Nzoia County.

However, there are research findings from different parts of Kenya showing that teachers are faced with a myriad of challenges towards provision of inclusive education. Such research findings include that of Gateru (2010), Wafula, Poipoi, Wanyama and Begi (2012) and Mwangi (2013). Despite these studies having been conducted in Kenya, they were conducted in other regions other than Trans-Nzoia County. Nevertheless, there is a knowledge gap in teachers' awareness and support of learners with learning disabilities in the studies mentioned above; and yet teachers in inclusive education are required to understand their learners' diverse needs and nature of disability before providing essential support services. This study, therefore investigated teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County, Kenya.

1.4 Purpose of the Study

The purpose of this study was to investigate teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County in Kenya.

1.5 Research Objectives

The specific objectives of the study sought to:

1. Determine the extent to which respondents' awareness of learning disability influence the support for learners with learning disabilities in public primary schools in Trans-Nzoia County.
2. Establish the support strategies teachers' use to assist learners with learning disabilities in public primary schools in Trans-Nzoia County.
3. Establish the support provided by school administrators towards the provision of effective inclusive education for learners with learning disabilities in public primary schools in Trans-Nzoia County.
4. Establish strategies that can be adapted to improve teachers' awareness and support for learners with learning disabilities in public primary schools in Trans-Nzoia County for effective inclusive education.

1.6 Research Questions

The study was guided to the following research questions:

1. To what extent does respondents' awareness of learning disability influence the support for learners with learning disabilities in public primary schools in Trans-Nzoia County?
2. What are the support strategies that teachers use to assist learners with learning disabilities in public primary schools in Trans-Nzoia County?
3. What is the support provided by school administrators towards the provision of effective inclusive education for learners with learning disabilities in public primary schools in Trans-Nzoia County?

4. What strategies can be adapted to improve teachers' awareness and support for learners with learning disabilities in public primary schools in Trans-Nzoia County for effective inclusive education?

1.7 Significance of the Study

The study is significant because it will inform stakeholders in education about teachers' awareness and support for learners with learning disabilities in Trans-Nzoia County. Furthermore, the study will provide useful insights on the inclusion of learners with Learning Disabilities (LD) in public primary schools; and it will help head teachers and teachers to understand the definition, aetiology, characteristics and identification process of learners with learning disabilities.

Through this study educators can also identify and differentiate their learners' diverse needs, develop and adopt appropriate support strategies to assist learners with disabilities in public primary schools. Thus, the findings of this study could enhance effective inclusion for learners with learning disabilities in regular schools and classrooms as teachers will be able to handle these learners based on their specific needs and severity. The study therefore will be helpful to teachers to make these learners more productive in the national development.

The findings of this study will further inform the Ministry of Education, policy makers and planners to generate policy measures that will make concrete decisions leading to the support of learners with learning disabilities in Kenyan public primary schools. The study findings will benefit learners with learning disabilities in public primary schools when their teachers' become aware of their special needs and make a decision to use support strategies to teach them. The parents of learners with LD shall also benefit from the findings of this study as they will feel relieved when their

child/children with learning disabilities are taught by teachers' who are aware of their child/children's special needs and who may apply specialized and up to-date support strategies to help their child/children learn.

It is also envisioned that the findings and recommendations of this study will be used to prepare teachers in public primary schools to appreciate and accept inclusive education. Finally, it is anticipated that this study will contribute to the existing knowledge on learning disabilities in public primary schools in Kenya and that it will stimulate prospective researchers to replicate the study in other parts of Kenya.

1.8 Assumptions of the Study

The study was carried out on the assumptions that learners with learning disabilities are taught in public primary schools in Trans-Nzoia County and that teachers of these learners are involved in teaching them using appropriate support strategies specific to their needs. The study also assumed that the information provided by the research respondents to the questionnaires, Interview Schedules (IS), and Focus Group Discussions (FGDS) were true and honest responses in relation to their knowledge and experiences. It was also assumed that the sample taken for the study would represent the target population adequately, and that the data collection instruments would be valid to measure the desired outcomes for the study.

1.9 Scope and Delimitation of the Study

This study aimed at investigating teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County in Kenya. The study was conducted in five sub counties; Saboti (Trans-Nzoia West), Endebess, Kwanza, Cherangany (Trans-Nzoia East) and Kiminini. The study was delimited to Trans-Nzoia County public primary schools

with Head Teachers (HT), teachers and Sub County Directors of Education (SCDE) forming the target population. The researcher collected data through use of questionnaires, IS and FGD. The period of data collection lasted four months (September 2016 to January, 2017). The findings of the study application to other regions could not be replicated as they reflect the situation in Trans-Nzoia County.

1.10 Limitation of the Study

The researcher acknowledges that the present study may have been limited by several factors including:

1. Time constraint due to the magnitude of the research and instruments to be used. The researcher addressed this by extending the period of data collection. Data was collected for more than three months to ensure that all instruments were administered properly (questionnaire, interview schedules and focus group discussions).
2. Some respondents did not understand who learners with learning disabilities are. To address this, the researcher explained to the teachers the definition of learning disability.
3. Most respondents kept the questionnaires for more than a day due to their busy school schedule. To address this limitation, the researcher had to go back several times to collect the questionnaires and ensure that they were filled.
4. Some respondents failed to participate in interview due to their tight schedules. To address this limitation, the researcher had to alter and lengthen the period of data collection to accommodate rescheduled interviews.

1.11 Theoretical Framework

According to Kombo and Tromp (2014) a theoretical framework is a collection of interrelated ideas based on theories. There are several theories and approaches that have been established to give meaning to different education concepts (Punch, 2009). However, each theory has its meaning and context in which if applied will produce desired outcomes (Chaula, 2014). According to Punch (2009), a theory has its meanings, terms, ideas and a model which elaborates the given phenomenon. In social sciences for example, most theories are associated with social problems existing in the society, among them are those related to learning (Chaula, 2014). Thus, learners with learning disabilities are in this category.

The theoretical framework used in this study is that of social constructivism views of Lev Vygotsky (1896 –1934). Vygotsky was a famous Russian educational psychologist; a founder of cultural and historical psychology (Wilhelm, Baker & Dube, 2001). He is commonly associated with general and developmental psychology, educational psychology, special education, and the psychology of art (Rodina, 2007). He's also recognized as the founder of the psychology of disability and use of inclusive education (Grum, 2012; Patil & Patankar, 2017). This is due to his focus on socio-cultural development and the function of social interaction in the development of the human brain (Grum, 2012).

The researcher chose to work with Vygotsky's idea of social constructivism because of his focus on the education of learners with special needs in inclusive education, specifically learners with learning disabilities. The researcher believed that Vygotsky's views on social and cultural contexts will help ease the difficulties faced by learners with learning disabilities and their teachers in inclusive education. This is

in line with other researchers who viewed the social constructivist learning theory by Vygotsky as central to instructional engagement, classroom change and redevelopment for learners with disabilities (Shambaugh & Magliaro, 2001; Flem, Moen & Gudmundsdottir, 2004).

According to Kozulin, Gindis, Ageyev and Miller (2003), Vygotsky perceived disability as a socio-cultural problem that is not biological. He viewed learners with disabilities as without disabilities (Gindis, 2003); argued that their main problem was not with their sensory or neurological impairment, but with their social implications (Chaula, 2014). The author believed that these learners social-cultural problem is composed of two types of disabilities: primary and secondary (Kozulin et al., 2003; Gindis, (2003). The primary disability is an organic impairment that limits a learner's acquisition and use of some social skills, thus making him or her acquire knowledge at a slower rate (Punch, 2009).

On the other hand, secondary disability is that which arises from distortions of higher psychological functions of negative social factors that are caused by developmental delay (Gindis, 2003; Flem et al., 2004). It's the secondary disability that causes a socio-cultural disability that prevents a learner from mastering social-cultural means and ways of acquiring knowledge in a socially acceptable manner (Grum, 2012). Furthermore, secondary disability can make a learner display behavioural traits such as; passivity, dependence, and lack of social skills (Gindis, 2003). These traits may then result into result a learner's poor access of socio-cultural knowledge, lack of social interaction, and opportunity to acquire psychological tools (Rodina, 2007).

Moreover, learners with secondary disability can develop "compensatory reorganization, that can allow them adopt their higher mental functions in a positive

or negative way (Gindis, 2003). For example, learners with negative adaptive compensatory organization of higher mental functions might develop a series of maladaptive behaviour such as; aggression, dependence, and passivity (Grum, 2012); while those with positive social incentives might develop self-regulated functions that may lead them to positive recognition of higher mental functions (Patil & Pantakar, 2017). Learners with learning disabilities are in the type of secondary disability. This is due to the psychological problems discussed in the background chapter. It's believed that secondary disability can be prevented if teachers change their social attitudes towards learners with disabilities by viewing them as without disabilities (Wilhelm et al., 2003). However, if teachers do not change their social attitudes towards secondary disability it will worsen over time, and affect the learner's future.

Vygotsky has stressed the importance of socio-cultural practice in inclusive education (Kozulin et al., 2003; Patil & Patankar, 2017; Grum, 2012). Furthermore, he's emphasized the significance of social learning with distinctive consideration to learners' with disabilities not being a tragedy in learning (Gindis, 2003). He also stressed on the need of engaging these learners in a social context (Grum, 2012), and criticized parents, teachers and psychologists for using irrational approach and arrangements that hinder the normal socialization of these learners (Gindis, 2003). Moreover, he challenged the teachers who use a disability and, or weaknesses to identify their learners.

Instead, he encouraged them to use positive differential approach to identify these learners' strengths (Grum, 2012; Kozulin et al., 2003). He further recommended that teachers should identify their learners' levels of independence and need for support rather than levels of weakness. He had a great passion of changing negative societal

attitudes toward individuals with disabilities (Gindis, 2003). This the reason to why he identified the society's expectations, attitudes, and the spiritual atmosphere as the things influencing the access of learners with disabilities to socio-cultural knowledge, experiences, and opportunity to participate in activities with peers (Kozulin et al, 2003).

Social constructivist theory also viewed learning as a dual-agentic, between the learner and the teacher, and also learner/teacher within the social cultural context (Silcock, 2003; Amanda, 2014). Lani and Florian (2004) alleged that social constructivism theory is related to active learners participating in the process of learning, making sense of their own experiences and gaining intrinsic satisfaction from learning and solving problems (Davis & Florian, 2004). Thus, Constructivist learning is seen to be a transformative experience which opens up opportunities for further learning as children gain greater depth of understanding and increasingly flexible ways of representing their knowledge and dealing with new information (Davis & Florian, 2004; Woolfolk, 2009).

Moreover, Lamport, Carpenter-Ware and Harvey (2012) argued that constructivist learning approach is related to social constructivism and socio-cultural theory. This is in relation to Vygotsky's views that both social and culture are important contexts in cognitive development of a learner. He viewed the learner's active role in learning in a classroom and a school to create knowledge through engagement in purposeful and valued activities (Davis & Florian, 2004). Vygotsky further believed that culture provides the learner cognitive tools that are required for development in; language, cultural history, and social interaction (Wilhelm et al., 2001). He added that the learner constructed his or her own knowledge by interacting with other individuals

(Woolfolk, 2009). Garner (2008) supported the views of Vygotsky social constructivist theory by stating that they have played an important role in students learning. Also, Woolfolk (2009) believed that social interaction enables learners to learn from each other.

Vygotsky developed several concepts that arose from the social constructivist theory that are important to classroom teaching (Blake & Pope, 2008). These include: Zone of Proximal Development (ZPD), More Knowledgeable Other (MKO), Defectology and Scaffolding (Bruster, 2014; Subban, 2006; Rodina, 2007; Lampton et al., 2012). Out of these, Vygotsky's central topic was that of the ZPD which is believed to use social interaction with others who are more knowledgeable to move development forward (Wilhelm et al., 2001; Lampton et al., 2012). Thus, in ZPD a more capable person such as a teacher or peer provides assistance to the learner to complete a task (Bruster, 2014). In this case, a learner is given a range of tasks to perform with the help and guidance of teachers (Hurst, 2016).

The ZPD provides the gap between what learners are able to do independently, and what they may need help in accomplishing (Daniel, 2007; Daniels, 2001; Schmitz, 2012; Subban, 2006). In relation to this, Wang (2009) identified two levels of development in the ZPD. The first level was that the real level or the level a learner can solve problems independently; and the second was that of the potential development level; which requires the assistance either interactions or support from adults or higher functioning peers. It is actually this second level that is the basis for inclusive education.

Learners who are in this level therefore, need active teaching that promotes Vygotsky's theory idea that what is learned must be taught (Wilhelm et al, 2001).

Additionally, Vygotsky viewed this zone of proximal development as the area where the most sensitive instruction or guidance should occur to allow the learner with learning disability to develop skills to use on his or her own and develop higher mental functions (McLeod, 2014; Hurst, 2016). Thus, the teachers' role becomes one of the purposeful instructions, a mediator of activities and substantial experiences allowing the learner with LD to attain his or her zone of proximal development (Suban, 2006).

Vygotsky's concept of More Knowledgeable Other (MKO) is integrally related to ZPD (McLeod, 2014). The role of MKO is to determine that learners internalize and learn from its ideas, values, strategies and speech patterns (Teaching Times, 2008-2016). Furthermore, Vygotsky claimed that a child has limits to what he/she is able to learn alone with the extension of guidance of an MKO (Hurst, 2016). This concept believes in anyone who has a better understanding or a higher ability level than the learners, particularly in regards to a specific task, concept or process; in this case the teachers. This concept uses peers and learners who have mastered a skill/subject to support others achieve learning (Teaching Times, 2008-2016).

The concept of defectology according to Wang (2009) means the study of defect. The defects include both primary (organic impairment) and secondary, (distortions of higher psychological functions due to social factors) which could cause psychological effects to learners depending on culture and environment factors (Gindis, 2003). This concept was used in Russia to refer to the education of sensory, physically, cognitively, and neurologically "handicapped" children; including the four major domains: hard of hearing and deaf; visually impaired and blind; mental retardation; and speech and language impairment (Gindis, 2003; Smagorinnsky, 2012). It is

therefore defectology that led Vygotsky to note that special education required a systematic approach in an environment that understood and catered for learners needs by adopting specific methods of teaching/ learning (Gindis, 2003). This saw the need for teachers to provide necessary support to learners with learning disabilities in inclusive education (Smagorinnsky, 2012).

The concept of scaffolding is directly related to Zone of Proximal Development because of its support mechanism that enables a learner to successfully perform a task within his or her ZPD (McDevitt & Ormrod, 2002; Hurst, 2016; Daniel, 2001). According to Hammond (2002), scaffolding has been adopted as a general term in education used to describe all types of support and guidance offered in the general classroom. However, the interpretation and operationalisation of the scaffolding metaphor in educational research is highly diverse (Hammond, 2002; Boblett, 2012). For example, scaffolding has been used as a metaphor in teaching and learning to describe a system of temporary guidance offered to the learner by the teacher, jointly co-constructed, and then removed when the learner no longer needs it (Boblett, 2012).

Furthermore, it has also been interpreted as a form of support in the classroom interaction between the teacher and the learner for the purpose of development and learning (Rasmussen, 2001; Boblett, 2012). Also, the term has been used to describe the way teachers or peers supply learners with materials they need for learning (Jacobs, 2001). Consequently, this process is completed when a competent individual (teacher or peer) support the learning of a less competent individual (learner) (Verenikina, 2003).Some of the scaffolding techniques used by teachers to support learners in inclusive education include: dividing a task into simpler steps; providing guidelines; keeping attention focused (McDevitt & Ormrod, 2002); providing

examples and questioning; and breaking content into manageable pieces (Berk, 2002; Krause, Bochner & Duchesne, 2003).

Vygotsky's theory is therefore, important to this study because it has proven to be successful to matters concerning learners with special needs in inclusive education in the following ways: (i) advocated for teachers to incorporate teaching strategies that increase learner achievement in inclusive classroom settings (Turnbull, Turnbull & Wehmeyer, 2007); (ii) advocated for teachers understanding of learners needs before offering support; (iii) emphasised on the social and cultural context that require teacher-learner interaction (Verenikina, 2008; Daniels, 2001); (iv) emphasised teacher collaboration and co-construction with others (Verenikina, 2008); (v) emphasised active position of the learner for the development of life-long learning skills (Duhaney & Duhaney, 2000; Verenikina, 2008); and (vi) Understood teachers' active role in listening, observing and engaging in interactions with learners (Silcock, 2003; Amanda, 2014).

These views can be helpful to learners with learning disabilities low self-esteem and repeated failure if they are given a chance to express what they know before teachers introduce new ideas that might be overwhelming and frustrating to them (Boblett, 2012). This is in line with Vygotsky's views that learning disability is coherent with the socio-cultural context of the development of human mind (Gindis, 2003). Thus, teachers should view learning disability as a social-cultural and development problem and not a biological one (Kozulin et al., 2003). Learning disability problem can be determined in the social context (environment), which is the school environment. Therefore, these learners require an institutional framework (inclusion policy) that will support them learn (Daniels, 2012; Daniels, 2007).

Based on the teaching and learning of learners with LD, social constructivism is important to this study because it requires teachers to: (i) focus on the learners' strengths other than weaknesses or disabilities; (ii) collaborate and co-construct knowledge with learners for better transformation of knowledge; (iii) understand that they are directors, governors and facilitators of the social interactions between the educational process and the learner in the classroom environment; (iv) understand that in the social cultural context learning is between the learner and the teacher; (v) inspire learners through modelling and transforming their social environment; (vi) introduce concepts that are above the ZPD by providing scaffolding and modelling to the learners within the social interaction and cultural context in the school environment; (vii) use the ZPD to support learners' active learning and assist them become self-regulated learners; (viii) assist learners in a given assignment, or scaffolding to accomplish the assignment; and (ix) allow learners to access more knowledgeable peers and models as well as scaffolding for higher-level tasks.

It's important to note that teachers who follow Vygotsky's views of social constructivism towards learners with LD play a significant role in restoring these learners' inner motivation for learning. Thus, teachers' in inclusive education need to successfully incorporate this theory to achieve a positive impact on learners with learning disabilities' academic achievement.

1.12 Conceptual Framework

Kombo and Tromp (2014) defined conceptual framework as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. In line with the above definition, this study was guided by a conceptual model that shows the interaction of independent, intervening and dependent variables

that are based on Vygotsky's social constructivism ideas for learners with special needs. The independent variables consist of teachers' awareness and support for learners with LD. In this case, the teachers' awareness entails knowledge and understanding of the definition, aetiology, characteristics and identification process of learners with learning disabilities.

On the other hand, the support for learners with learning disabilities entails the teaching strategies teachers use in assisting these learners to learn. The administrative or leadership support entails the support teachers receive from the school and the county government administration to facilitate the education of these learners in inclusive settings. The adopted strategies involve the changes put in place to support learners with learning disabilities in the regular classroom.

The study further conceptualizes that the independent variables may be affected by the intervening variables such as: teacher training, class size, teaching learning resources/materials, Educational Assessment and Resource Centres (EARCs), Least Restrictive Environment (LRE), government policies and legislation changes, curriculum adaptations and funding. This will then affect the dependent variable, which is the effective inclusive education for learners with LD in regular classrooms.

The conceptual model is presented in Figure 1.1.

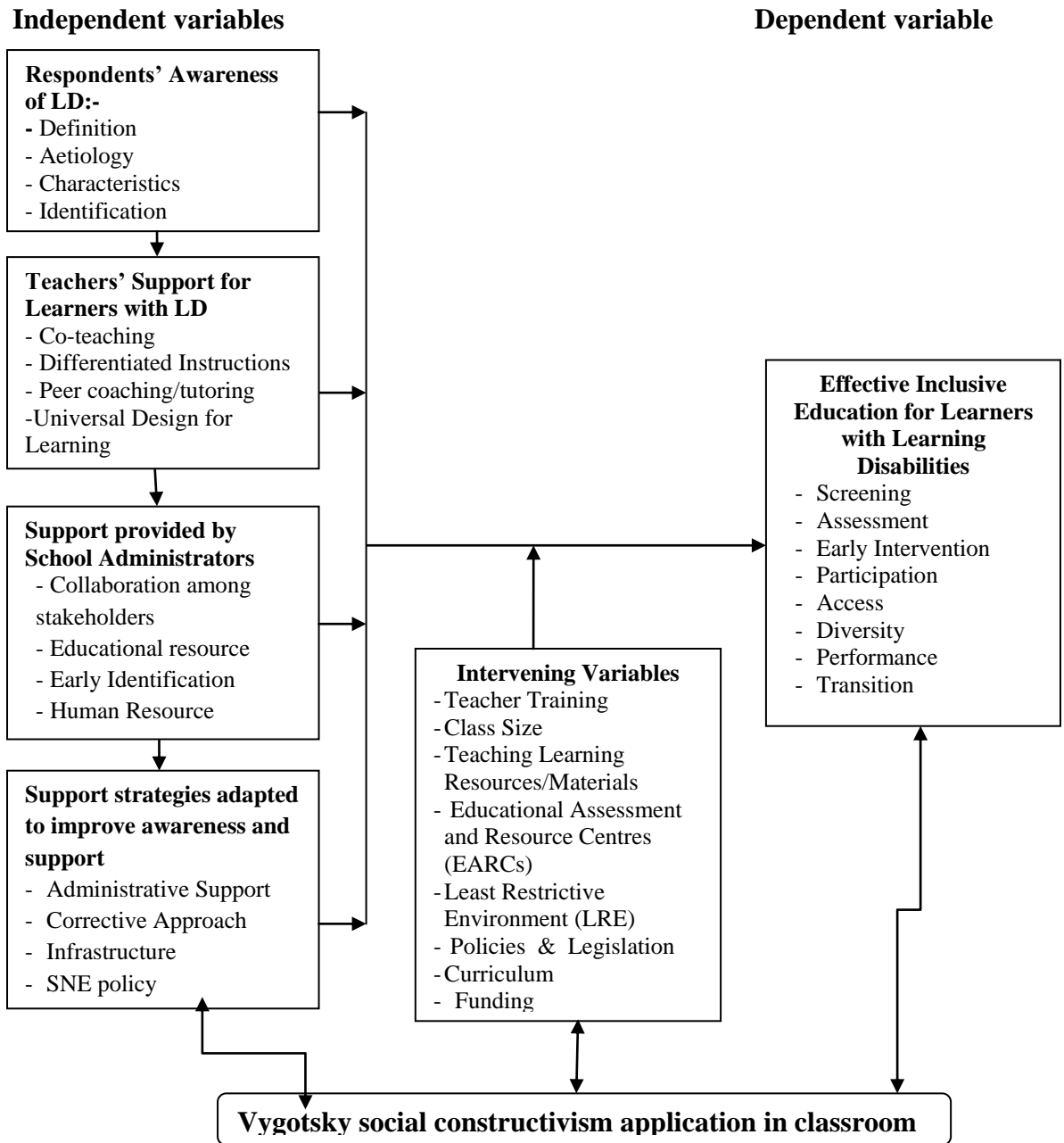


Figure 1.1: Conceptual Framework Showing Interaction of Variables

Source: Researcher (2016)

Figure 1.1 shows the relationship between independent variable, dependent variable and intervening variable based on Vygotsky's social constructivism theory on improving inclusion of learners with learning disabilities in regular primary schools. The first independent variable views teacher's awareness as a way of having knowledge and, or understanding of learning disability in terms of its definition, aetiology, characteristics and identification procedures that influences the effective

implementation of inclusive education for learners with learning disabilities. The study therefore, conceptualizes that a teacher who is aware of his or her learners' learning disabilities will apply appropriate support strategies that will suit his or her learners' needs for effective inclusive education. Such support strategies include: co-teaching, differentiated instruction, peer coaching and Universal Design for Learning (UDL).

The study further conceptualizes that the perceived nature and level of support teachers receive from administrators (head teachers and sub county directors of education) influences the implementation of inclusive education. Thus, administrators and other education stakeholders need to collaborate with teachers to support the learning of learners with learning disabilities for effective inclusive education. Administrators can do these through provision of educational resources and supplies that suit the needs of learners with LD in inclusive education. Teachers also require to be supported in the process of identifying learners with LD in early years for the purpose of intervention in learning problems for effective inclusive education. Also, qualified human resources to handle learners with LD are required to be availed.

Moreover, the study conceptualizes that support strategies such as administrative support, corrective approach, infrastructure, SNE policy can be adapted to suit the needs of learners with LD for effective inclusive education. It is therefore necessary for school administrators (head teachers' and sub county directors of education) to make sure that teachers are supported by providing them with clear policy guidelines and legislation, equipment and the curriculum. They also need to provide them with adequate funding, teacher training, appropriate class size, EARCs teaching/learning

resources/ materials, and Least Restrictive Environment (LRE). These will help to improve and make inclusive education for these learners effective and achievable.

The intervening variables for this research were controlled through the following methods. Research instruments did not capture intervening variable indicators during instrument designing and administration. Furthermore, the study was conducted in schools that had the same characteristics (resources, curriculum and policies) thereby ensuring uniformity on the inclusion of learners with LD.

1.13 Operational Definition of Terms

Effective Inclusive Education: It is an approach in which learners with disabilities and special needs, regardless of age and disability, are provided with appropriate education within regular schools. It was measured through assessment, early intervention, participation, access, diversity, performance and transition.

Learning Disabilities: It refers to a disorder in one or more of the basic psychological processes involved in pupils understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. It is the independent variable of the study.

Learner support strategies: refers to assistance that pupils with learning disability receive while at school from their teachers and school administration.

Public primary schools: It refers to schools owned by the government to provide basic education curriculum to learners. It formed the target population for this research in Trans-Nzoia County.

Teacher Awareness: It refers to the ability to understand or to be conscious of what is happening in a learning environment especially in teachers' identifying the needs of pupils with learning disabilities in primary schools. It is one of the independent variable in the study.

Trans-Nzoia County: It is an administrative region in Kenya located in the North Rift region. It formed the location of the study.

Teachers Support: Instructors or teachers employed by the government to implement education curriculum in public primary schools in Kenya. This is a independent variable.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on the teachers' awareness and support for learners with disabilities. This is done under the following sub-sections: An Overview of learning disabilities, teachers' awareness of learners with learning disabilities in primary schools in relation to their; (i) definitions (ii) aetiology (iii) characteristics and, (iv) identification process. The chapter also reviews literature on the support strategies teachers' use to support learners with LD in primary schools, the support provided by school administrators towards the provision of inclusive education for learners with LD, and the strategies adapted to help learners with LD to learn effectively in an inclusive setting. Lastly, research gap and a summary of the literature reviewed are given.

2.2 An Overview of Learning Disabilities

Learning Disability (LD) is a universal, dynamic and expanding condition that occurs across all ages, cultures and nations (Hallahan, Lloyd, Kauffman, Weiss, & Martinez, 2005; Abosi, 2007; MEAL, (2015). Despite learning disability being universal, Kamala and Ramganes (2013) argued that it's under recognized in most developing countries, including India due to lack of awareness and diagnosis. This therefore, has led to these learners' poor school attendance and performance, class repetition and even dropping out of school in developing countries like Ghana, India and Zimbabwe (Karande & Kulkarni, 2005, Abosi, 2007; Karande, 2008).

Furthermore, learning disability is presumed to arise from dysfunctions in the brain that are considered to significantly influence and interfere with academic achievement

of learner's ability to read, write, spell, listen, speak, reason, organize information, or do mathematical calculations (Sideridis, 2007; Lerner & Johns, 2012; Cortiella & Horowitz, 2014). It's also known as a condition that rises to learning disabilities (Favre & Erin, 2011). A learner can therefore have a learning disability condition that is either general or specific in nature (NCSE, 2014).

The term Learning Disabilities (LD) was first introduced in 1963 in a meeting in Chicago with a small group of parents and educators who were concerned about children who were academically underachieving (Lerner & Johns, 2009). This term further refers to a neurological disorder in one or more of the basic processes involved in understanding spoken or written language (Lerner & Johns, 2012; MEAL, 2015), but it does not include children with visual and, or hearing impairments because there are specific methods for managing and training such learners to cope with their impairments (Lerner & Kline, 2006; Lerner & Johns, 2009). The term neurological disorder in this context applies to any condition that is caused by a dysfunction in part of the brain or nervous system that results in physical and/or psychological symptoms that causes learning disabilities (Child Neurology Foundation, 2017)

According to Integra (2009), learning disabilities emanates in different forms and affects learners in different ways that are related to: getting information into the brain (Input), making sense of that information (organisation), storing and retrieving the information (memory) and getting the information back out (output). This is because LD varies from mild to moderate to severe (Learning Disabilities Association of Ontario [LDAO], 2001); therefore exposing these learners to a number of different types of difficulties in different areas at different levels of severity or complexity (Lerner & Johns, 2009; 2014). Despite the severity, LD does not include those

learners with mental retardation, sensory deprivation or other cultural or environmental factors (Sternberg & Grigorenko, 2007).

After the approval of the term LD in 1963, the organization known as today as “Learning Disabilities Association of America [LDAA]” was formed (Lerner & Johns, 2009). Reports from this organization and other researchers’ indicated that LD is the largest category of learners with special needs in inclusive education. For example, Cortiella and Horowitz (2014) estimated that there are 2.4 million children with LD in American public schools; Connecticut State Department of Education (2010) reported that there was 34.6 percent learners’ with LD in USA in the school year 2007-2008. In addition, Uppal, Kohen and Kahn (2006) found out that four out of five children require special education services in Alberta (Canada) had LD; and in Australia, the Australian People with Learning Disabilities [AUSPELD] (2015) estimated that there are at least 20 percent Australian children who are struggling with learning disabilities. Nevertheless, Cortiella (2011) conquered with these findings and further stated that learning disability is the most common form of disability in the United Kingdom [UK] with an estimation of 1.5 million people having learning disabilities.

Apparently, there are three (3) common types of learning disabilities (Lerner & Johns, 2009; Connecticut State Department of Education 2010; Cortiella & Horowitz, 2014; AUSPELD, 2015). These are:

Dyslexia- a language-based disability in which a learner has trouble understanding written words. It is commonly referred to as reading disability or disorder.

Dyscalculia- is a mathematical disability in which a learner has difficulty solving arithmetic problems and grasping math concepts.

Dysgraphia- is a writing disability in which a learner finds it hard to form letters or write within a defined space.

In addition, Lerner and Kline (2006); and Cortiella and Horowitz (2014) agreed that the following five (5) areas of information processing are commonly associated with LD.

- (i) Auditory Processing Deficit (or Auditory Processing Disorder) - is a weakness in the ability to understand and use auditory information.
- (ii) Visual Processing Deficit (or Visual Processing Disorder) - is a weakness in the ability to understand and use visual information.
- (iii) Non-Verbal Learning Disabilities - is used to describe the characteristics of learners who have unique learning and behavioural profiles that overlaps with dyslexia, dyscalculia and dysgraphia.
- (iv) Executive Functioning Deficits - is used to describe the weaknesses in the ability to plan, organize, strategize, remember details and manage time and space efficiently.
- (v) Attention Deficit/Hyperactivity Disorders (ADHD) - This is a brain-based disorder that results in significant inattention, hyperactivity, distractibility or a combination of these characteristics. It is estimated that one-third of learners with LD also have ADHD (Lerner & Johns, 2009). Thus, there is a comorbidity of LD and ADHD (Price, 2009; Cortiella & Horowitz, 2014; Lerner & Johns, 2014). Apart from ADHD, learners with LD can also be formally diagnosed with other social skill deficits and emotional or behavioural disorders such as; Attention Deficit Disorder (ADD) and Giftedness (NCSE, 2014; MEAL, 2015).

According to Australian Psychology Society (2015), learning disabilities is invisible; but it is not synonymous with reading difficulty or dyslexia. However, researchers have argued that many learners with LD have reading deficits (Lyon, 2003; Lerner & Johns, 2009; 2012; 2014). Consequently, research from several researchers has also shown that many children with LD experience phonological processing disabilities that may manifest in other areas such as; visual spatial processing, executive functioning and reasoning, directionality and mathematics (Lyon, 2003; Hallahan et al., 2005; Lerner & Kline, 2006; Kafonogo & Bali, 2013). Nonetheless, it's believed that if these disabilities are identified early enough, they may be able to understand and manipulate smaller components in spoken language and other phonological difficulties they experience (Lyon, 2003; Cortiella, 2011; MEAL, 2015).

Learners with LD are also often considered to have memory problems (Lerner & Kline, 2006; Lerner & Johns, 2009; 2014). This is due to the difficulties they encounter to encode, process, hold, retrieve and manipulate information for a long time (Kafonogo & Bali 2013). Moreover, these learners have difficulties holding and maintaining attention to a task, remembering instructions, keeping track of complex tasks (Lerner & Johns, 2009; Price, 2009). Therefore, it is necessary that teachers understand and be aware of who these learners are; to be able to assist them in inclusive classroom settings.

2.3 Teachers Awareness of the Learners with LD in Public Primary Schools

As mentioned earlier in the background of this study, there are several studies conducted in different parts of the world which found that teachers acceptance of inclusion may be promoted by their awareness about the definitions, causes, characteristics and identification procedures of learners with special needs (Caroll,

2003; Koay et al., 2006; Papadopoulou et al., 2004). Unfortunately, DeSimone and Parmar (2006) indicated that there are teachers in regular education who feel that both pre-service and in-service education programs did not adequately prepare them for teaching learners with learning disabilities in inclusive education. This inadequacy of knowledge by the teachers may lead to negative attitudes towards learners with disabilities (Saravanabhavan & Saravanabhavan, 2010).

Probably, this is the reason to why several researchers found it relevant for teachers to have certain knowledge and understanding about the needs of different learners, learning techniques and curriculum strategies (Paul, 2000; European Agency for Development in Special Needs Education [EADSNE], 2010; Ingrid & Sunit, 2013; Saad et al., 2014). It is therefore vital that pre-service and in-service teachers learn about children with special needs in their training (Mile, 2002; Ellis, Tod & Graham, 2008; Ingrid & Sunit, 2013). This will then assist them to improve the quality of teaching and contributing to learners' achievement as they engage in professional development on throughout their career (Black-Hawkins, Florian & Rouse, 2007; Scheerens, 2010; Forlin, Chambers, Loreman, Deppeler & Sharma, 2013).

There are numerous studies in the category of LD that have been conducted on the role of classroom teachers' in promoting and achieving inclusive education in primary schools (Naylor, 2005). One such study is that of Jordan and Stanovich (2002), which showed that the role of a classroom teacher is a key variable to the successful inclusion of learners with disabilities. They believed that the success of learners with disabilities included in regular classes depends on the teachers' awareness of the teaching factors. The results from their study indicated that learners may fare better in classroom performance depending on teachers' awareness of different patterns of

instructional interactions, their beliefs, and attitudes towards learners with learning disabilities. Although teacher capacity is convincingly linked to success of inclusive education (Naylor, 2005) as stated earlier in this chapter, there are many teachers who believe that they were inadequately prepared to teach learners with disabilities in inclusive education. Similarly, Smith, Tyler, Skow, Stark and Baca (2003) found out that even though greater numbers of pupils with special needs were included in regular classroom settings, regular teachers had received little or no training in special education.

This is supported by the reviewed research on professional development undertaken by Waitoller and Artiles (2013) for teachers in inclusive education published between 2000 and 2009 which highlighted that it's critical for school systems to nurture and develop teachers who have knowledge and ability to provide quality educational access, participation and outcomes for all learners in inclusive education. It's therefore important to nurture these teachers through training to enable them deal with invisible disabilities like LD (Campbell et al., 2003). This is the reason to why Saravanabhavan and Saravanabhavan (2010) argued that it is critically important to assess the knowledge level of LD among teachers in inclusive education.

However, this is not the case when Kamal and Ramganes (2013) reported about the findings from previous studies on lack of knowledge about LD among teachers in India. Furthermore, they have given evidence from the following studies (Crawford, 2007; Karande, 2008; Karande, Mahajan & Kulkarni, 2009; Saravanabhavan & Saravanabhavan, 2010) that teachers in primary schools in India exhibited lack of awareness about LD. Similarly in India, Shukla and Agrawal (2015) investigated awareness of learning disabilities among teachers of primary schools in fifteen

schools which were selected based on the lottery method in Haridwar region. Data was collected from 60 primary teachers from these schools. They concluded that in spite of the teachers' gender and teaching experiences, the level of awareness about LD among primary school teachers' in India is low.

Similarly, Al Khatib (2007) investigated the Jordanian regular education teachers' knowledge of LD; and whether their knowledge differed as a function of selected variables. The sample consisted of 405 regular classroom teachers teaching 1st - 6th grade students in thirty schools in three Jordanian districts. These teachers completed a 40-item test designed by the researcher, which had adequate psychometric properties. The results of the study revealed that teachers had a moderate level of knowledge of LD. Female teachers were found to be significantly more knowledgeable than male teachers. The teachers' level of knowledge was unrelated to teachers' age, teaching experience or academic qualifications.

Saludes and Dante (2009) also conducted a study on the knowledge and perceptions on learning disabilities in the cities of region XI of the Philippines and a region in New York City, USA. The objectives of the study were to find out the knowledge and awareness on learning disabilities, and the level of perceptions on remediation program and treatment services given to learners with LD. The findings of the study revealed that the majority of parents, teachers, and members of the local school board had low knowledge and awareness on learning disabilities

Moreover, Gandhimathi, Jeryda and Eljo (2010) studied awareness of learning disabilities among primary school teachers. The study consisted primary school teachers working in 80 schools in Triuverumbur block, Tiruchirappalli in India. Based on lottery method 16 schools were selected and the data was collected from 71

teachers in these 16 schools. They found out that majority of the respondents (66.2%) had low level of overall awareness about LD.

Additionally, Sawhney and Bansal (2016) studied awareness of learning disabilities among elementary school teachers. It was a descriptive survey type of study conducted on fifty elementary teachers teaching in schools in Chandigarh in India. A 20-item test was prepared by the investigators to test basic awareness of learning disability among these teachers. They concluded that there is a great need to generate awareness among teachers regarding LD; since a small group of teachers have basic knowledge regarding LD and are not able to distinguish LD learners from slow learners.

In addition, Kafonogo and Bali (2013) conducted a study on exploring classroom teachers' awareness of pupils with learning disabilities by focusing on public primary schools in Tanzania. The study targeted standard three and four pupils and teachers from public primary schools in Kibondo District, Kigoma region. The study revealed that 15% of pupils in regular classrooms had learning disability characteristics, but teachers had little awareness. As a result these learners constantly endured stereotypes and 'name calling' such as; impossible, problem or dull pupils. This study determined the level of teacher awareness in Trans-Nzoia County comparing it with the situation reported by Kafonogo and Bali (2013) in Kigoma, Tanzania.

In Kenya, Gateru (2010) assessed the teachers' awareness and intervention for pupils with LD in inclusive education in Makadara Division, Nairobi Kenya. The study concluded that teachers were aware of inclusive education in their schools; teachers had different interventions in place to ensure the success of inclusive education e.g. corrective approaches, direct instructions, systematic phonics and using connectivity'

with pupil's individual learning and that teachers were not professionally prepared to cope with learners with LD in inclusive education. It is therefore, evident from the above mentioned studies that teachers' awareness of learners with LD is necessary to ensure they are effectively included in mainstream primary school classroom setting. It is also important that teachers become aware and understand the uniqueness of these learners, their strengths and weaknesses before determining ways of assisting them in classroom. This therefore prompted the researcher to investigate the teacher level of awareness of learners with learning disabilities in their schools as inadequate research studies have been conducted on the same on the local scene (Trans-Nzoia County in particular).

2.3.1 Teacher Awareness of Definition for Learners with Learning Disabilities

The term learning disabilities is and has been controversial for many years (Bryan, Wong & Donahue, 2002; Lerner & Kline 2006; National Association of Special Education Teachers [NASSET], 2007; Abosi, 2007). However, several researchers believe that there are three widely accepted definitions for LD around the globe, namely; the Federal definition, the National Joint Committee of Learning Disabilities (NJCLD) definition, and the Interagency Committee on Learning Disabilities (ICLD) definition (Abosi, 2007; Sideridis, 2007; Cortiella, 2011; Lerner & Johns, 2014).

According to Lerner and Johns (2009), the federal definition is the first definition of learning disabilities that was first introduced in 1975 in Public Law (PL) 94-142, in the Education for all Handicapped Children Act in the US. They further argued that this law has been incorporated in the following revised laws: (i) the Individuals with Disabilities Education Act of 1990 (IDEA) (Public Law 101-476), (ii) the Individuals with Disabilities Education Act of 1997 (IDEA-1997) (Public Law 105-17), and (iii)

the Individuals with Disabilities Education Act of 2004 (IDEA-2004) (Public Law 108-446).

Furthermore, Fletcher, Lyon, Fuchs and Barnes (2007) noted that the federal definition of LD formed the basis of many other definitions used in US schools today. Subsequently, these views are supported by other researchers in other countries such as Canada, Australia, New Zealand and the UK (Wilhelmina & Woodcock, 2011; Disabilities Association of Canada, 2002; Elkins, 2002). As the basis of the LD definition, the Individuals with Disabilities Education Act of 2004 (IDEA, 2004) in Lerner and Johns (2009) defined learning disabilities as:

Specific learning disability” - meaning a disorder in one or more of basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities; of mental retardation; of emotional disturbance; or of environmental, cultural, or economic disadvantage (10).

According to NASET (2007), the IDEA-2004 definition remains the same as that incorporated in PL 94-142 focusing on learner-age recipients of public education. The U.S. Department of Education (2004) further reported that this definition has regulations that indicate if a learner has a specific learning disability. These regulations included: one, if a learner does not achieve at proper age and ability levels in one or more specific areas when provided with appropriate learning experiences; and two, if a learner has severe discrepancy between achievement and intellectual ability in one or more of the following areas: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculations and mathematics reasoning.

In addition, the National Joint Committee of Learning Disabilities [NJCLD] (2010) noted that it's the IDEA (2004) definition that has led to changes in educational practice, including; educational planning, accountability, research-based interventions for identifying learners with LD, assessment and evaluation. Moreover, Taylor (2009) argued that this definition is broad enough to consider a variety of learners' with learning disabilities; because it has included both inclusion criteria, (for example, the disability can be due to brain injury or dyslexia), and exclusion criteria, (such as the disability cannot be due to emotional disturbance or environmental disadvantage that children face).

However, there are several researchers who have criticized this definition citing three major concepts they consider to be controversial (Cortiella, 2011; Lerner & Johns, 2012; 2014, MEAL, 2015). These concepts are: (i) the individual with LD has a disorder in one or more of the basic psychological processes; such as, mental abilities, such as memory, auditory perception, visual perception, oral language, and thinking; (ii) the individual with LD has difficulty in learning, specifically, in speaking, listening, writing, reading (word-recognition skills and comprehension), and mathematics (calculation and reasoning); and (iii) LD problem does not occur due to other causes, such as visual or hearing impairments; motor disabilities; emotional disturbance; or economic, environmental, or cultural disadvantage.

Cortiella and Horowitz (2014) criticised this definition's exclusionary clause and reported that there is a high incidence of LD among individuals living in poverty. They argued that LD can be caused by poor nutrition and environmental toxins such as lead; tobacco and alcohol can also cause Specific Learning Disabilities (SpLD) such as; reading (dyslexia), math (dyscalculia) and written expression (dysgraphia).

Several researchers agree that dyslexia is the most common and known form of SpLD (Hallahan et al., 2005; Price, 2009; Runo, 2011; Lerner & Johns, 2012; 2014). *Dyslexia* is a disorder manifested by difficult in learning to read despite conventional instruction, adequate intelligence and socio-cultural opportunity (Cortiella & Horowitz, 2014; MEAL, 2015).

Despite the inadequacies in this definition, it is believed that it can be used as a basis for guidelines of school programs in the US (Wilhelmina & Woodcock, 2011). Moreover, it can be used to offer a new approach for determining learner's eligibility for LD services compared to the previous Public Laws in 1975, 1990 and 1997, consecutively (Taylor, 2009). The second definition for LD is that of the National Joint Committee of Learning Disabilities (NJCLD). NJCLD is an organisation of representatives from several professional organisations and disciplines involved in learning disabilities (Learning Disabilities Online, 2016). The NJCLD definition was first proposed in 1981 and it has undergone consecutive revision in 1988 and in 1997 (NJCLD, 2010). This definition is reported to be frequently used by teachers, educators, psychologists and clinicians around the globe (NASSET, 2007; Lerner & Johns, 2009; Taylor, 2009). The NJCLD definition reviewed in 1997 defined learning disabilities as;

.a heterogeneous group of disorders manifested by significant disabilities in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. The disorders are intrinsic to the individual and are presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviours, social perception, and social interaction may exist with learning disabilities but do not, by themselves, constitute a learning disability. Although learning disabilities may occur concomitantly with other disabilities (for example, sensory impairments, mental retardation, serious emotional disturbance), or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (2).

According to NASET (2007), this definition supports the idea that learning disabilities are not primary and direct result of other disabilities and therefore should not be confused with other disabilities such as mental retardation, and visual and hearing impairments. However, NJCLD (2010) noted that LD may occur concomitantly with other disabilities; and therefore they should be served through different educational modes that would not result in inappropriate assessment, identification and educational instruction and deny them direct or indirect professional services (Gargiulo, 2004).

Lerner and Kline (2006) on the other hand have considered this definition inadequate because of the exclusion of the problems associated with social interactions that define characteristics of learners with LD. Also, Sternberg and Grigorenko (2007) disagreed with the views of this definition because of its omission of the environmental component which is viewed as an important representative of an interaction between an individual learner with LD and the environment. Similarly, Taylor (2009) noted that this definition has eliminated the psychological deficit requirement and instead redefined the exclusion aspect in the IDEA (2004) definition stating that a learning disability cannot be as the result of other disabilities or extrinsic factors, but that they can coexist.

Nevertheless, Lerner and Johns (2014) reported several concepts that were added in this definition and yet they were not in the IDEA (2004) definition. These concepts included: (i) learning disabilities are related to a central nervous system dysfunction and have a biological basis, (ii) learning disabilities may occur or co-exist along with other disabilities or conditions, and (iii) the problem is intrinsic to the individual and is due to factors within the person rather than to external factors, such as the

environment or the educational system. Wong (2008) further argued that this definition is too broad. An idea that is consequently supported by Lerner and Kline (2006) that broad definitions should be suspended as they tend to produce different results.

Despite the limitations in this definition, researchers have identified and highlighted important points in relation to the definition of LD (NASSET, 2007; Taylor, 2009; Cortiella & Horowitz, 2014; Lerner & Johns, 2014; MEAL, 2015). The researchers highlighted that: LD results from a child having difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, and mathematical skills; it is intrinsic; it's related to central nervous system dysfunction, and that it may occur alongside other disabilities or conditions. They further argued that a child can only be considered as having LD if he/she has a severe discrepancy between achievement and intellectual ability in one or more of oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculation, and mathematics reasoning.

Although both the NJCLD and IDEA (2004) definitions had limitations, Taylor (2009) noted that they both define learning disabilities as involving deficits in a number of academic and cognitive areas. Furthermore, he agreed that NJCLD definition represents the concerns of professionals about the IDEA (2004) definition. On the contrary, Smith (2004) and NASSET (2007) highlighted key differences between the IDEA (2004) definition and the NJCLD as follows: the federal definition is older and has a medical orientation; the NJCLD definition allows for coexisting disabilities (like learning disabilities and ADHD, learning disabilities and visual impairment); the NJCLD definition acknowledges problems many of these learners

have with social skills; and NJCLD does not use the phrase “basic psychological processes,” which has been so controversial, and does not mention perceptual handicaps, dyslexia, or minimal brain dysfunction which have been difficult to define.

The third definition of LD is that of the Interagency Committee of Learning Disabilities (ICLD). According to Lerner and Johns (2014), ICLD is a US government committee that was commissioned in 1987 by the Congress to develop a definition of learning disabilities. They further report that it’s a committee comprising of representatives from the Department of Health and Human Services and the Department of Education in the US. According to the interagency report to the US Congress (1998) in Lerner and Johns (2009), ICLD identified four problems with the NJCLD definition. First, they argued it does not indicate clearly enough that LD are a heterogeneous group of disorders. Second, they claimed that it fails to recognize that LD frequently persist and are manifested in children as well as in adults. Third, they contended that it does not clearly specify that, whatever causes LD has inherent alterations in the way information is processed, and fourth, they claimed that it does not adequately recognize the persons with other handicapping or environmental limitations may have on an LD concurrently with other disabilities.

According to NJCLD (2010) and Learning Disabilities Online (2016), ICLD assisted in the modification of the present NJCLD definition. They both revealed that ICLD included the following social skills deficits in its definition as a characteristic of learning disabilities: the child with LD can have disabilities in listening, speaking, reading, writing, reasoning, mathematics, or social skills; LD can occur concomitantly with other conditions; and LDs are intrinsic to the individual and are presumed to be

caused by the central system dysfunction of the body. As stated earlier, these were later incorporated in the NJCLD definition.

After viewing these definitions of learning disabilities, numerous researchers have identified several elements that are in common in all of them (Hallahan et al., 2005; NASET, 2007; Wong, 2007; Lerner & Johns, 2012; MEAL, 2015). These elements include: neurological factors, cognitive processing factors, difficulty in including; central nervous system dysfunction, cognitive processing differences, difficulty in academic and learning tasks, discrepancy between a learners potential for learning and academic achievement, and exclusion of other causes. Despite having these definitions; researchers, legislators, parents and professionals have continued to debate on the best way forward to define learning disabilities (Elkins, 2002; Hallahan, et al., 2005; Abosi, 2007; NASET, 2007; Lerner & Johns, 2014; Cortiella & Horowitz, 2014; MEAL, 2015). This has therefore, led to other countries like Canada, Australia, New Zealand and the UK to formulate their own definitions (Elkins, 2002; Disabilities Association of Canada, 2002; Purdie & Ellis, 2005; Wilhelmina & Woodcock, 2011).

Purdie and Ellis (2005) found out that the terms used to describe learners with LD vary from state to state and from school to school in Australia. Unlike in the US, they also learnt that Australia uses the term Learning Difficulties other than Learning Disabilities in its definitions of LD. Their views are supported by Elkins (2002) who noted that that Australian states and territory have not differentiated between learning difficulties and learning disabilities. This is contrary to Learner and Johns (2009) stand that the definition of learning disabilities is the only one recognised in the categories of disabilities identified under the special education law IDEA (2004).

They argued that learning difficulties has emerged from new philosophies and policies by different professionals and organisations helping learners with learning difficulties to be successful in their learning, as well as in their life.

Despite other countries around the globe coming up with their own definitions of LD, such an effort has not been reached by African counties; including Kenya (Abosi (2007; Mwangi, 2013). Instead, many African countries, Kenya included have continued to use the IDEA (2004) definition and the NJCLD definition convectively, to define learners with LD in schools (Abosi, 2007; Gateru, 2010; Rasugu, 2010; Kofonogo & Bali, 2013). In spite of the controversy in LD definitions, it is clear that learners with LD experience diverse challenges which are often hidden and differ in terms of severity and the areas affected (NASSET, 2007). This is probably the reason to why different scholars have different views on definition of these learners in schools. This research therefore investigated primary school teachers understanding of definition of learners with LD in public primary schools in Trans-Nzoia County, Kenya.

2.3.2 Teacher Understanding of Aetiology for Learners with Learning Disabilities

At present there are no exact known causes for LD and its nature (Jung, 2007; Sideridis, 2007; Lerner & Johns, 2014; Learning Disabilities Online, 2016). However, research is ongoing (Saskatchewan Learning, 2004; MEAL, 2015); and researchers have identified the following as contributing factors to the cause of LD; brain damage and neurological dysfunction, heredity (difficulties that are genetically based), environmental factors, psychological factors and educational (Hallaahan & Keogh, 2001; Saad et al., 2014; Saskatchewan, 2014). These causes are believed to have been

caused by the broad and controversial definition of LD in 2.3.1 above (Hallahan et al., 2005; MEAL, 2015).

The neurological causes of LD are implied to the IDEA (2004) definition of LD which states that the problem may be neurological in nature; in other words, it may be related to a deficit in the central nervous system. Moreover, these deficits may be due to minimal brain injury, brain development, or brain structure. Murray and Zoe (2011) believed that minimal brain injury is one of the early terms used for learning disabilities to suggest a loss of brain functioning due to damage.

Cortiella (2011) noted that learning disabilities arise from neurological differences in brain structure and function and affect an individual's brain ability to store, process, and, or communicate information. In addition, in some of the researches, they proposed that learning disabilities are caused by lags in neurological development as opposed to the loss of neurological function (Wadsworth et al., 2000; Weeks & Erradu, 2013). In other words, the problems are due to a slowly developing brain, and not an injured one. This has been proved by recent researchers who have been interested in the structural brain differences between individuals with and without learning disabilities (Saskatchewan Learning, 2014).

Researchers and experts in education, psychology, speech-language and medical communities have also used advanced imaging techniques, such as functional Magnetic Resonance Imaging (fMRI) to explore the brain, the origins of disorders and how the brain activity maps onto behaviours such as learning how to read, paying attention, organization and memory (Cortiella, 2011; Saskatchewan Learning, 2014). The fMRI studies by these experts have further been used to demonstrate how particular parts of the brain specialize in particular activities (Lerner & Johns, 2014);

and demonstrated that individuals with dyslexia have a smaller planum temporal, a section of the temporal lobe of the brain, than do individuals without dyslexia (Miller, Sanchez, & Hynd, 2003). Research has also shown that individuals with reading and language disabilities show different brain activation patterns during specific tasks than do individuals without disabilities (Richards, 2001).

Studies have also shown that LD are hereditary (genetic) and tend to run in families especially severe reading disability (Hallahan & Keogh, 2001; Rasugu, 2010; Runo, 2010; Kafonogo & Bali, 2013). Also, the evident from research reports conducted on identical twins indicates that when one identical twin has a reading disability, the other one is also likely to have it (which is not the case with fraternal twins) (Wadsworth, Olson, Pennington & DeFries, 2000). Furthermore, there are research reports indicating that the prevalence of dyscalculia is 10 times higher in families of individuals with the problem compared to the general population (Shalev, Maner, Kerem, Ayali, Badichi & Friedlander, 2001). Additionally, Harlaar, Spinath, Dale and Plomin (2005) argued that word recognition problems have a primarily heredity or genetic basis.

Research has further provided evidence that environmental factors can cause LD. These factors are grouped into those that occur prenatally, perinatally, and postnatally (Carr, 2006; Murray & Zoe, 2011). For example, prenatal factors are known to harm a foetus, and they include; maternal drug use, alcohol consumption, and smoking during pregnancy (Hallahan & Keogh, 2001; Hallahan et al., 2005). The maternal uses of drugs and alcohol during pregnancy are usually associated with more severe problems than learning disabilities, such as foetal alcohol syndrome (National Institute of Mental Health [NIMH], 2001); and, their use can result in various degrees of

disability, depending on the amount of alcohol or other drugs consumed, and when or how long they were consumed during the pregnancy (Murray & Zoe, 2011). It is however, evident that mothers who smoke during pregnancy are more likely to have smaller babies (under 5 pounds) who are subsequently at risk for a number of problems including learning disorders (NIMH, 2001).

Perinatal factors that cause LD occur at birth or very shortly thereafter birth (Sousa, 2001; Hallahan et al., 2005). These include; complications during child delivery, such as the umbilical cord becoming twisted, leading to anoxia, loss of oxygen, and which in turn may lead to LD. It is also possible that some slight injury may occur to the brain as the child passes through the birth canal and this can lead to severe learning problems. On the other hand, postnatal factors that cause LD occur after the child is born (Hallahan et al., 2005). Essentially, these factors can cause neurological problems that can lead to learning problems with medical conditions such as; meningitis and ingestion of substances, such as lead-based paint, which can cause brain damage (Cohen, 2001).

Moreover, learning disabilities can be caused by trauma, injury or infection of the brain, which may occur before, during or after birth (NIMH, 2001). They also argued that when these effects occur, they may affect the neuro-motor system of a learner that could lead to having problems in perception, thinking and emotional behaviour. These views are supported by Cortiella (2011) judgements that trauma can interfere with the learner's normal learning process in the classroom. Additionally, Lerner and Johns (2012) reported that there were a significant number of children with learning problems who have a history of traumas that are caused by prolonged labour, anoxia, prematurity and injury from medical instruments such as forceps. However, the

Virginia Department of Education [VDOE] (2014) believed that these causes can be managed if teachers take necessary intervention measures for the affected children to benefit from education.

Psychological factors can also cause LD (Cortiella & Horowitz, 2014). A psychological factor refers to an interference with senses that are used to transfer information leading to disorders in functions like receiving and recalling information (Westwood, 2006; Westwood, 2008). Children with LD are victims of psychological factors. This is because they exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language (Lerner & Johns, 2009; 2012; 2014); which may later manifest itself in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic (VDOE, 2014). These conditions include those referred to as; perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia, among others in the definition of learning disabilities discussed in 2.3.1 above (Cortiella, 2011; Kofonogo & Bali, 2013; Cortiella & Horowitz, 2014).

Some researchers have argued that there are factors within the educational system that can cause learning disabilities (Kakabaraee, Arjmandia & Afrooz, 2012; Cortiella & Horowitz, 2014; Onwuka, Obidike & Okpala, 2015; VDOE, 2014). These factors include; inappropriate teaching, use of poor teaching methods, lack of motivating or stimulating activities, use of materials and curriculum that is too difficult for the children to learn, frequent absence from school as a result of illness, lack of encouragement from parent/guardians, and financial problems causing absence of learners in schools.

Kenya is unexceptional to these factors because researchers have identified Kenya's education system as highly examination – centred as schools are keen on how much of the curriculum they need to cover within a given time to pass exams (Rasugu, 2010; Gateru, 2010, Mwangi, 2013). In the process of doing this, learners who are unable to cope with the pressure of preparing for examinations develop learning problems with some of them eventually dropping out of school due to frustrations (Musavini & Mulee, 2015; Trans-Nzoia County Education Report, 2015).

Also, Sternberg and Grigorenko (2007) noted that there are many children who are labelled LD not because of anything wrong with their perception, synapses, or memory; but because they have been seriously mis-taught. Concurring with these views, Cortiella and Horowitz (2014) consents that learning disabilities are made, and not born. The above literature therefore confirms that causes of learning disabilities range from children educational system, psychological factors, trauma or injury, neurological causes and hereditary (genetic factors) among others. Based on the review of aetiology of learning disability from conceptual, contextual and empirical perspective, this research sought to find out the level of teachers awareness of the aetiology for learners with LD in public primary schools in Trans-Nzoia County.

2.3.3 Teachers Awareness on Characteristics for Learners with Learning Disabilities

There are many different characteristics associated with learning disabilities. Smith, Polloway, Patt and Dowdy (2001) believed that it is important for teachers' to understand the characteristics of learners with learning disabilities before developing pre-referral interventions, making appropriate referrals, and identifying effective accommodations and intervention strategies. Similarly, Taylor (2009) findings

reiterated that teacher understanding of learners' characteristics helps them to prepare to address any number of academic and non-academic areas when planning and implementing instruction for learners with LD. In other words, instruction for learners with LD must be based on specific characteristics (Lerner & Johns, 2009).

According to VDOE (2014), researchers have made tremendous attempts to identify major characteristics of learners with LD. For example, Taylor (2009) identified ten (10) commonly exhibited characteristics of learning disability. These are: (i) hyperactivity, (ii) perceptual-motor impairments, (iii) emotional liability, (iv) general coordination deficits, (v) disorders of attention, (vi) impulsivity, (vii) disorders of memory and thinking, (viii) specific learning disabilities, (ix) disorders of speech and hearing, and (x) equivocal neurological signs. However, he noted that none of these characteristics specifically address the academic skill deficits of learners with LD. Other researchers also identified characteristics associated to learners with learning disabilities definitions; such as: language; perceptual and motor; and social-emotional and behavioural problems (Lerner & Johns, 2009; Taylor, 2009; Cortiella & Horowitz, 2014). Furthermore, they identified academic and non-academic characteristics that are associated with learning disabilities as; reading, mathematics, writing and written expression, expressive and receptive language, and cognitive related characteristics.

However, these characteristics vary greatly from one learner to the other, thus there are no two children with LD that are alike (Sternberg & Grigorenko, 2007; Taylor, 2009; Cortiella, 2011). In United States, Lerner and Johns (2012) noted that some of these characteristics are more likely to be exhibited at certain age levels than others. They further explained that an underlying language disorder may appear as a delayed

speech problem in the pre-schooler, as a reading disorder in primary pupils' and as a writing disorder in the secondary students. Furthermore, they established that young children are more likely to be hyperactive compared to adolescents. In addition, there are researchers who have reported that preschool children are more likely to display characteristics such as inadequate motor development, language delays, speech disorders, and poor cognitive and concept development (Addelizzi & Goss, 2001; Lerner & Johns, 2009) while those in primary school are likely to present failure in reading, mathematics, writing, or other school subjects (Lerner & Kline, 2006; Taylor, 2009; VDOE, 2014).

Nevertheless, Lerner and Johns (2012) reported that there are more boys than girls with LD in schools today. They further explained that this could be because more boys are wrongly identified with LD than girls due to: biological causes (male may be more vulnerable to LD), cultural factors (more males maybe identified because they tend exhibit more disruptive behaviours that are troublesome adults), and expectation pressures (the expectation for success in school may be greater for boys than girls).

Moreover, researchers have also identified that boys and girls with LD have different characteristics (Hallahan, et al., 2005; Shaywitz, 2003; Siegel & Smythe, 2006). For example, boys tend to exhibit the following characteristics: more physical aggression and less control, visual-motor abilities, spelling ability and written language mechanical aptitude; while girls' exhibit: more cognitive, language and social problems, severe academic achievement deficits in reading and mathematics, and tend to be more verbal and display less physical aggression.

Despite the presumption that learners with LD have average or above average intelligence (Lerner & Johns, 2014), they often fail to perform academic tasks at a

level commensurate with their potential or equal to that of their peers (Abosi, 2007; Lerner & Johns 2009; Kafonogo & Bali, 2013; Cortiella & Horowitz, 2014). This discrepant performance usually involves problems with reading, writing, spelling and mathematics, which often results in these learners in the early years of primary school displaying behaviours such as: inability to attend and concentrate; poor motor skills and difficulty in learning to read (Sideridis, 2007; NASET, 2007; MEAL, 2015).

Most researchers have agreed that the most comorbid conditions displayed by learners with LD are ADHD (Hallahan & Keogh, 2001; Lacey & Porter, 2005; Abosi, 2007; Taylor, 2009). According to Bryan, Wong and Donahue (2002), learners with LD also have memory, attention, and organizational disabilities which hinder their ability to master academic content. Despite having reading problems, these learners may be proficient in some content areas but experience disabilities with others (Runo, 2010). Runo (2010) further stated that when comorbid reading disabilities occur the learner with LD may present: mispronounced vowels and consonants, substitution, reversals, omissions, faulty knowledge of the alphabet, slow overall reading rate, poor word attack skills, and difficulty in comprehending text and predicting possible textual content.

There are also a number of learners with LD who experience problems in mathematics due to problems in knowledge of basic facts and in performing more complex procedures; and problems in writing due to deficits in the areas of idea generation and text organization (Bryan et al., 2002; Taylor). This therefore affects the learners learning process and performance in inclusive education (Lerner & Kline, 2006). Taylor (2009) also found out that learners with LD may have language problems that are less proficient than their peers on phonological, semantic, syntactic,

and communicative tasks. This therefore, means that these learners may use immature speech patterns, experience language comprehension problems and have trouble expressing themselves (Cortiella, 2011). This will then lead to social and behavioural problems that are likely to make these learners present signs of poor self-concept, task avoidance, social withdrawal, frustration, and anxiety (Taylor, 2009). Additionally, these learners may display social-emotional traits that may lead to learned helplessness, which might result into classroom failure (Lerner & Johns, 2014).

Furthermore, Lerner and Johns (2009) found out that learners' with LD experience problems in fine motor coordination which marks their writing difficulty, resulting in faulty manipulation of writing tools, poor letter formation, and poor-quality penmanship. They further stated that these learners' problems in written expression might result in confused tense patterns, poorly-sequenced ideas and lack of textual cohesion. Also, Cortiella (2011) revealed that these learners perceptual and motor problems affected their recognition, discrimination, and interpretation of visual and auditory stimuli. Cortiella and Horowitz (2014), specified that these problems may berelated to: (i) lack of awareness of writing strategies, steps in the writing process, presentation of expository ideas, procedures for selecting and integrating information from multiple sources, lack of ability to monitor the quality of written texts; and (ii) poor basic mathematical computational skills, difficulty in sequencing procedures and difficulty in interpreting and utilising mathematical concepts.

However, if these learners' problems are left unattended, they are likely to affect them in discriminating shapes and letters, copying from the blackboard, following multiple-step directions, associating sounds with letters, paying attention to relevant stimuli, and working on a task for a period of time (NASSET, 2007). Moreover, Cortiella

(2011) has warned that if these learners are not identified early and continue to be underserved in the inclusive setting, they are at risk for long term academic, social and emotional difficulties. The characteristics of children with LD are summarised in Table 2.1.

Table 2.1 Learning and Behavioural Characteristics of Children with LD

Characteristic	Description
Disorders of attention	Does not focus when a lesson is presented; short attention span, easily distracted, poor concentration, may display hyperactivity
Poor motor abilities	Difficulty with gross motor abilities and fine motor coordination (exhibits general awkwardness and clumsiness)
Psychological processing differences	Problems in processing auditory or visual information (difficulty interpreting visual or auditory stimuli)
Poor cognitive strategies for learning	Does not know how to go about the task of learning and studying; lacks organizational skills; passive learning style (do not direct their own learning)
Oral language disabilities	Underlying language disorders (problems in language development, listening, speaking, and vocabulary)
Reading disabilities	Problems in learning to decode words , basic word-recognition skills, or reading comprehension
Writing disabilities	Performs poorly in tasks requiring written expression, spelling, and handwriting
Mathematics disabilities	Difficulty with quantitative thinking, arithmetic, time, space, and calculation facts
Poor social skills	Does not know how to act and talk in social situations; difficulty with establishing satisfying relationships and friendships

Source: Lerner and Johns (2009:8)

2.3.4 Teachers Identification for Learners with Learning Disabilities

Although learning disabilities are often less obvious and more difficult to identify, Taylor (2009) believed that identification for learners with LD should be the first step in the assessment process that would lead to eligibility for learning disability services. Further, Mukuria and Obiakor (2006) noted that when identification of learners with LD is poorly and prejudicially administered, the other process of assessment, categorization, and instruction would yield prior or prejudicial results. Probably, this is the reason to why Connecticut State Department of Education (2010) felt that the initial identification of learners with LD should be made by either the general education teacher or the parents. However, before the identification is made, Taylor (2009) stated that informal procedures such as observation, screening, listening, questioning and classroom performance should be used to identify a learner with LD. Taylor goes on to say that after a learner has been identified by the teacher as having a possible learning disability, he or she should be evaluated to determine whether eligibility criteria were met.

According to NJCLD (2010), the identification process of learners with LD includes: screening, examination for the presence of risk indicators and protective factors, systematic observations, and, if indicated, a comprehensive evaluation. NJCLD (1997) further stated that an effective identification program must take into account numerous biological, environmental, and cultural factors that may influence the course of a learner's development. Nevertheless, Taylor (2009) has reported on the federal regulations related to LD requiring specific guidelines to help teachers clarify the identification process to enable them make decisions about the need for further services and supports.

In recent years, however, there has been an increasing concern in the U.S. about common definitions and procedures for identifying learners with LD (Fletcher et al., 2004). These concerns have involved the following four components of LD definitions that serve as the foundation for identifying learners with LD: (i) discrepancy (difference between aptitude and achievement); (ii) heterogeneity (multiple domains in which LD occurs); (iii) exclusion (the orientation that LD should not be identified as the primary cause); and (iv) achievement problems (due to neurological factors). These concerns are not new because they have eventuated before in the reauthorization of the No Child Left Behind Act of 2001 and the Public Law 107-110 (NCLB, 2001). This reauthorization was preceded by four consensus reports on special education which suggested for changes in the federal regulatory approach to the identification process of learners with LD (Fletcher et al., 2004).

These reports are: (i) the National Research Council report on minority overrepresentation in special education (Donovan & Cross, 2002), (ii) a report entitled *Rethinking Special Education* by Fordham Foundation and the Progressive Policy Institute (Finn, Rotherham & Hokansen, 2001), (iii) the Learning Disabilities Summit by U.S Office of Special Education Programs (Bradley, Danielson & Hallahan, 2002), and (iv) the President's Commission on Excellence in Special Education [PCESE] (2002). According to Fletcher, Coulter, Reschly and Vaughn (2004), each of these reports was significantly influenced by research on the classification and identification of individuals with LD. They further stated that all the four reports suggested that the number of individuals identified with LD could be reduced if more effective reading instruction was in place, noting that many learners in general education lack adequate instruction. They also reported about the observation of these reports indicating that current regulations for the identification of LD lacked a

research base, which constituted obstacles to the implementation of better instructional approaches to learners with LD.

Furthermore, these reports recommended abandoning the IQ-discrepancy model and the use of IQ tests for identification, and instead recommended the incorporation of Response to Instruction (RTI) as one of the identification criteria (Taylor, 2009; Connecticut State Department of Education, 2010). Response to intervention (RTI) is a process to determine possible learning disabilities based on the learner's response to scientific, research-based interventions in the general education before a special education referral is considered (National Association of School Psychologists, 2010a; 2010b). The idea of using RTI process as the method for identifying the presence of a learning disability in learners has been around since the 1980s (Fuchs & Fuchs, 2006).

Over the years, RTI has been refined and championed by some educators and researchers as the primary method for identifying learners with LD (Fuchs, Mock, Morgan & Young, 2003; Hughes & Dexter, 2016). This could be due to its appearance in the IDEA (2004) definition as response to scientific, research-based intervention. The rationale for RTI to be used as an LD identification process stemmed from the dissatisfaction of educators and researchers with the use of the IQ-achievement discrepancy model; and general use of standardized, norm-referenced tests that measured intelligence as well as underlying cognitive processes such as; processing speed, short-term/working memory (Fuchs, Mock, Morgan & Young, 2003; Fuchs & Fuchs, 2006; Lerner & Johns, 2014). These researchers further identified the following four concerns and criticisms from the IQ-discrepancy method of identification, that they thought RTI would address: (i) over identification of

learners' with LD; (ii) over presentation of minorities in special education, reliability of IQ measuring instruments; (iii) and variability of identification rate across settings.

According to Fuchs, Mock, Morgan and Young (2003) over identification of learners with LD has been a long standing issue in special education. However, many researchers have argued that this is caused by the IQ-discrepancy method of identification (Harris-Murri, King & Rostenberg, 2006; Fuchs et al., 2003). Probably, it is due to this reason that Hughes and Dexter (2016) presented two aspects of RTI to address the issue of over identification. The first aspect is that of access to effective instruction and curricula for all. Thus, it rules out ineffective instruction as the cause of LD. The second aspect is that of early intervention. It means that learners with LD should receive increasingly intensive intervention as soon as learning deficits are demonstrated.

It is due to these reasons that Fletcher et al. (2004) believed that identification models that incorporate RTI represent an opportunity to provide early intervention and/or pre-referral services to reduce inappropriate referral and identification, and to establish a prevention model for learners to eliminate the wait to fail model in place in many schools. In addition, it is probably for these models that the US federal regulatory definition of LD allowed states options for: (a) not using IQ-discrepancy or even not giving IQ tests as part of the standard identification process, and (b) allowed states to include RTI criteria as part of the identification process (IDEA, 2004).

Despite these changes embracing many professionals and researchers (Fletcher et al., 2004); and the National Centre for learning Disabilities (2005) found that 54% of parents and 72% of teachers felt that current identification methods for LD took too long to identify learners in need. Based on the literature reviewed, several studies

reported reductions of special education referral and placements (Bollman, Silbergliitt & Gibbons, 2007; Callender, 2007; Marston, Myskens, Lau & Canter, 2003; O'Connor, Harty & Flumer, 2005; Peterson, Prasse, Shinn & Swedlik, 2007; Van Der Heyden, Witt & Gilbertson, 2007).

Bollman et al. (2007) examined the effect of an RTI model on the rate of identification from special education service and reported that placement rates dropped from 4.5% to 2.5% over a 10 year period. They further indicated that the state wide prevalence rate over the same period dropped from 4% to 3.3%. Callender (2007) reported that placements decreased by 3% for districts with at least one school implementing an RTI model, whereas the state rate decreased by 1%. Marston and colleagues (2003) indicated that special education placement rates stayed constant over time for Minneapolis RTI schools, as did the rates for the district as a whole. Peterson et al. (2007) reported similar information: Referrals and placements stayed relatively stable over time after RTI implementation.

O'Connor et al. (2005) examined the effect of the tiers of reading interventions model on placement rates. They found that during the four (4) years of implementation, rates fell to 8% compared to historical contrast group (same schools, same teachers) for which the rate was 15%. Finally, Van Der Heyden and colleagues (2007) reported that for the four (4) schools included in their study, there was a decrease in referrals and an increase in placements. They interpreted this pattern as an induction of more appropriate referrals.

In the Kenyan context, the literature reviewed did not indicate any use of RTI model in identifying learners with special needs; including those with learning disabilities. However, the literature indicated that IQ-discrepancy method of identifying learners

with special needs is used by Education Assessment and Resource Centres [EARC's] (Mwangi, 2013; Elimu Yetu Coalition, 2014). Furthermore, literature indicated that there is misidentification of LD by reporting that the category is seen as a “catch all” for any youngster who is not meeting the expectation of parents and teachers (Wekesa, Poipoi, Wanyama & Nyakwara, 2012; Runo, 2010; Rasugu, 2010; Gateru, 2010). For example, Wekesa et al. (2012) studied early identification of learning disabilities among standard three pupils of public primary schools in Butere district in Kenya. It was a descriptive survey type of study targeting standard three teachers and head teachers from the 126 public primary schools found in Butere district. They concluded that about 24% of standard three pupils from the sampled schools had learning disabilities. However, most teachers lacked training in special needs education to identify learners with LD. Moreover, the classes were crowded with high teacher-pupil ratio; which made successful early identification and intervention of learning disabilities a far dream.

Runo (2010) conducted a study aimed at finding out whether teachers can identify the causes of reading disabilities in learners. The study adopted both qualitative and quantitative research approaches where mixed method design was used for collecting and analysing data for both teachers and learners. The study embarked on interviews for learners by use of structured interview schedule. It emerged that teachers assessed their learners reading ability but they did not use proper methods of assessment; teachers were able to identify children who could not read at class level as non-performers but were not able to identify the specific reading disabilities. Non-readers ranged from 0 to 27.1% for Nairobi and 0 to 53.6% in Nyeri districts respectively. Almost half of the teachers in the study neither taught reading nor did they know the methods to use in teaching reading. The study indicated that there were more boys

(103) than girls (78) who could not read. The study by Runo (2010) involved identifying learners with reading disabilities only while this study will determine the different types of learning disabilities common among pupils in trans-Nzoia County.

Nonetheless, there are studies indicating the efforts being made by the Government of Kenya to offer early identification through assessment and intervention to children with various kinds of disabilities. This can be inferred from the numerous commissions of education established to look into issues pertaining to disabilities from independence to date (KISE, 2002; 2008). Nevertheless, Elimu Yetu Coalition (2014) during the Global Action Week (GAW) reported that despite Education Assessment and Resource Centres (EARC's) being the focal point of early identification of disabilities; there is lack harmonization of institutional and identification codes between the Ministry of Education and its Semi-Autonomous Government Agencies (SAGAs) / parastatals. This therefore has caused a challenge in accountability and reliability of data rendering the Educational Management Information System (EMIS) functionally ineffective (Elimu Yetu Coalition, 2014).

2.4 Support Strategies Used by Teachers' for Learners with Learning Disabilities

According to Weeks and Erradu (2013), learners come to school with a wide range of strengths and weaknesses that are likely to impact on their potential to learn. Therefore, it is necessary for schools to provide a wide range of strategies to help meet individual needs of these learners. Apart from the school, classroom teachers are also required to take responsibility for learning needs of all learners, including those with learning disabilities (Murray & Zoe, 2011). This can be done if schools and teachers: (i) foster schools and classrooms where all learners have a sense of personal belonging and achievement; (ii) engage in practices that allow learners with a wide

range of learning needs to be taught together effectively; and (iii) enhance learner's abilities to deal with diversity (MEAL, 2017). However, as discussed in chapter 1.2 and 2.3 of this study; researchers across the globe have indicated that most teachers feel inadequately prepared to include learners with special needs in their classrooms.

Although learning disabilities cannot be cured (Cortiella & Horowitz, 2014; NASET, 2007; Taylor, 2009), researchers have identified instructional strategies that can be used by teachers for learners with learning disabilities in inclusive education (Skrtic, Harris & Shriner, 2005; National Centre for Learning Disabilities [NCLD] (2006); Lerner & Johns, 2014; Hallahan et al., 2005). Some of these strategies include: Universal Design for Learning (UDL), Differentiated Instruction (DI), Co-teaching and Peer Coaching.

Universal Design for Learning (UDL) is a model for designing all aspects of the learning environment, materials, and devices to address the wide-ranging variation of learners' in an inclusive educational system (Dalton, Mckenzie & Kahonde, 2012; MEAL, 2015). It's also a framework and guideline that provides change to the way teachers teach, learners learn, and the way barriers to education for all learners can be overcome (Centre for Applied Special Technology [CAST], 2011; Blanton, Pugach & Florian 2011). It is a framework that is highly relevant for learners with learning disabilities (Rose & Meyer, 2002) and therefore teachers of learners with LD are required to understand and implement it in their classrooms (Dalton et al., 2012). However, before implementing it teachers are required to plan for curriculum design, integrate support strategies and tools for teaching and learning for these learners' (Dalton, 2005). This will then enable them prepare a class profile that will assist in identifying learners with LD in their classrooms (MEAL, 2015). A class profile is the

information gathered about the learners' learning styles, multiple intelligences, interests, strengths, and needs (Tomlinson & Cindy, 2003). This information therefore helps teachers to eliminate learning barriers, and build flexibility that makes the classroom instruction usable to individual learners (Rose & Meyer, 2002).

Universal design is also known for promoting accessibility to curricular content that gives all learners equal opportunities to learn through flexible technology that makes education more inclusive and effective for all learners with diverse needs (CAST; 2011). This then enables UDL instructional planning to give diverse learners multiple options for: (i) acquiring information and knowledge (multiple means of representation); (ii) demonstrating what they know (multiple means of action and expression); and (iii) being motivated, challenged, and interested (multiple means of engagement) (MEAL, 2015; Hall, Strangman & Meyer, 2003; Blanton et al., 2011).

Additionally, UDL has guaranteed all learners' access to instruction through the following principles: (i) equitable use (all learners within the classroom use equipment, materials and technology); (ii) flexibility in use (activities and instruction accommodate a large variety of abilities and choices) (iii) simple and intuitive (lessons easily understand by learners from all backgrounds); (iv) perceptible information (information is perceived by all learners regardless of skill or ability); (v) tolerance for error (learners have opportunity in ongoing assignment and projects); (vi) low physical effort (learners have access to all materials and activities without great physical effort); (vii) size and space for approach and use (all learners participate in learning) (Lerner & Kline, 2006; Flores, 2008). Moreover, educators and researchers have continued to develop instructional support strategies that allow integration of UDL practice, integration of technology supports, and one that reduce

barriers to education for learners with diverse needs (CAST 2011; Maryland State Department of Education [MSDE] 2011; Meyer & Rose 2005; Sherlock, 2011).

Apart from UDL, there is also Differentiated instruction that is used as a support strategy for learners with LD. Differentiated instruction is a method of instruction and assessment that alters the presentation of the curriculum for the purpose of responding to learners' diversity, as well as interests and strengths (Ministry of Education Saskatchewan, 2009; MEAL, 2015; Manitoba Education, Citizenship & Youth, 2006). Furthermore, Tomlinson and Strickland (2005) described differentiated instruction as: instruction that acknowledges and responds to diversity among learners; a wide range of instructional strategies, techniques, and approaches that can be used to support learners learning and help each one of them achieve high expectations; an offer to learners multiple options to each stage of the learning process; a method that recognizes many avenues to reach a learner learning outcomes potential; and a method concerned with establishing a supportive learning environment for all learners learning requirements.

Compatible with the principals of UDL mentioned above, differentiated instruction has taken into account each learner's preferences, learning styles, and multiple intelligences (MEAL, 2015). Moreover, educators using differentiated instruction have gathered information through class profile and used it in the following areas: (i) *content* (what is taught, access to relevant information and ideas provided); (ii) *Process* (how teachers select activities and processes that help learners' to understand the knowledge, skills, and topic or outcomes); (iii) *Product* (how a learner demonstrates what he or she knows, understands, and does); (iv) *Affect* (how a learner links thought and feelings in the classroom); and (v) *Learning Environment*

(the feelings and functions in the classroom) (Lerner & Kline, 2006; Hallahan et al., 2005; King Shaver & Hunter, 2003).

Moreover, researchers have considered differentiated instruction as a means of meeting the individual needs of learners with learning disabilities in inclusive education (Anderson, 2007; Ellis, Gable, Gregg & Rock, 2008). These researchers further recommended that teachers should provide multiple learning pathways that are appropriate to learning opportunities that commiserate with the learning capacity of learners with LD. They also stressed that teachers should use Response to Intervention (RTI) approach to respond constructively to what these learners know other than to what they know. RTI is a form of differentiation that caters for the needs of learners with LD capacity to provide instruction that is subsequent to the teaching taking place in the classroom (Vellutino, Scanlon, Small & Fanuele, 2006). Thus, teachers are required to match this approach to learning with the instruction, curriculum goals, and opportunities that display the knowledge gained in the classroom.

Another critical support strategy used for learners with LD is that of co-teaching (Stuart, Connor, Cady & Zweifel, 2006; Parker, 2010; Johnson, 2012). This strategy can sometimes be used interchangeably with collaboration (Friend, Cook, Hurley-Chamberlain & Shamberger, 2010). Although co-teaching should be highly collaborative, the latter term refers to how professionals and others interact in meetings, teams and parent conferences. This therefore narrows the meaning of collaboration to apply to just the classroom settings other than the school as a whole (Kochhar-Bryant, 2008). Co - teaching is a model for collaboration, cooperative learning, and a form of inclusion that impacts student achievement (Johnson, 2012).

Essentially, it's a model of instruction used in school systems to meet the requirements of No Child Left Behind (NCLB, 2001) and Individuals with Disabilities Education Act (IDEA, 2004). Co-teaching is defined by Cook and Friend (1995) in Murawski and Swanson (2001) as two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space. This therefore implies that co-teaching occurs when two or more teachers deliver instruction to a diverse group of learners in a general education classroom (Lerner & Johns, 2009).

Hence, co-teaching intends to make it possible for learners with disabilities, including those with LD to access the general curriculum while at the same time benefiting from specialised instructional strategies necessary to nurture their learning (Friend, 2008). Although this method is mutually satisfying, teachers must be willing to share and accept responsibility (Lerner & Johns, 2014). Probably this is the reason to why Lerner and Johns (2009) identified the following activities that teachers can use to promote co-teaching for learners with LD: (i) making time for co-teaching activities (teachers to make time to work without interruptions), (ii) recognising that the skills in co-teaching are learned through developmental process (co-teachers to go through developmental stages as they learn to understand each other and to work together), (iii) use coaching strategies (teachers to take on the role of a coach by giving instruction or demonstrating a specific skill), (iv) encourage open communication (teachers to communicate face-to-face with learners to avoid dissatisfaction and misunderstandings; teachers to give and ask for continuous feedback).

Furthermore, there are several types or approaches of co-teaching that teachers can use to plan and deliver instruction based on the learners' needs and instructional intent

(Friend & Cook, 2010; Sileo & van-Garderen, 2010; Lerner & Johns, 2009). These approaches are described in table 2.2 below.

Table 2.2 Showing Types of Co-teaching

Type	Description
<i>One teaches, one supports</i> One group: One lead teacher, one supportive teacher	One teacher has primary instructional responsibility. The other teacher serves in a supportive role such as observing, tutoring and managing behaviour
<i>Station supportive teaching</i> Two groups: Each teacher teaches one group	Divide the content into two parts; then divide groups into two groups (A and B). Teacher 1 teaches half of the content to Group A, while teacher 2 teaches the rest of the content to Group B. Then the groups switch. Teacher 1 teaches the rest of the content to Group A, and teacher 2 teaches half of the content to Group B
<i>Parallel teaching</i> Two groups: Two teachers: Each teacher teaches one-half of the class	Each teacher instructs half of the class. Both teachers use the same instructional material. Teachers may differ in their instructional styles. Essentially, the class is smaller, so students have more opportunities to participate.
<i>Alternative teaching</i> Two groups: One small, one large	The class is divided into two groups. A large group and a small group. One teacher teaches a large group; and one teaches a small group. More intensive and direct instruction is usually used in the small group.
<i>Team teaching</i> Both teachers share leadership in teaching the group	Both teachers are equally engaged in the instructional activities. For example, Teacher 1 may begin the lesson by introducing vocabulary while Teacher 2 provides examples to place the words in context.

Source: Lerner & Johns (2009:139)

Murawski and Dieker (2004) argued that one of the major benefits of co-teaching is that teachers bring different areas of expertise. These diverse skills are helpful during planning stage, as both educators can find ways to use their strengths to ensure that lesson is appropriately differentiated for a heterogeneous class. Additionally, Villa, Thousand and Nevin (2004) identified six (6) benefits of co-teaching for learners with special needs in an inclusive class. These are: (i) learners develop better attitudes about themselves, academic improvement, and social skills; (ii) teacher-student ratio

is increased, leading to better teaching and learning conditions; (iii) teachers are able to use research-proven teaching strategies effectively; (iv) a greater sense of community is fostered in the classroom; (v) co-teachers report professional growth, personal support, and enhanced motivation; and (vi) increase job satisfaction can be experienced because needs for survival, power, freedom or choice, a sense of belonging, and fun are met.

Since collaboration can be used interchangeably with co-teaching it is defined as, “the interactions between professionals who offer different areas of expertise yet share responsibilities and goals” (Murawski & Hughes, 2009:269). Thus, cooperative teaching is the process by which a general educator and a special educator teach together in an inclusive classroom (Stuart et al., 2006; Austin, 2001; Lerner & Johns, 2012). Meaning it’s a process that requires teachers to consult and collaborate together to plan and be both responsible for the instructional process in the inclusive classroom (Stuart et al., 2006).

Furthermore, cooperative teaching is considered to be essential for effective inclusive education (Friend & Hurley-Chamberlain, 2011; Blanton et al, 2011; Lerner & Johns, 2009). This is because it minimizes the problems with pull-out programs such as learners missing academic instruction, insufficient communication and coordination among professionals, and fragmentation of the curriculum (Friend & Hurley-Chamberlain, 2011; Friend & Cook, 2003). In addition, research has indicated that collaborative teaching enables general educators to coordinate their work to support learners with LD in diverse classrooms, (Johnson, 2012; Austin, 2001; Villa et al., 2004). This is because the model is focused on providing services to learners with special needs in the least restrictive environment (Parker, 2010), and has therefore

required the general education teachers to prepare and participate collaboratively in an Individualized Education Program (IEP) for learners with LD (Friend & Bursuck, 2006).

The IEP is a written statement for each child with a learning disability that creates an opportunity for teachers, parents, school administrators and students to work together to improve educational results for learners with learning disabilities (Lerner & Johns, 2009). Therefore, the IEP is the cornerstone of a quality education for each child with a learning disability. According to Friend and Cook (2003), successful collaboration requires elements such as: mutual goals, voluntary participation, equality among participants shared responsibility for participation and decision making, shared responsibility for outcomes, and shared resources.

However, teachers might encounter several problems that may limit the effectiveness of cooperative teaching (McLeskey & Waldron, 2002). These problems may include: teachers lack of time to plan and implement programs, lack of administrative support, resistance from colleagues, concerns about grading, increased workloads, and increased responsibilities (Johnson, 2012; Rice & Zigmond, 2000; Walther-Thomas, Korinek, McLaughlin & Williams, 2000). Furthermore, Deshler, Schumaker, Lenz, Bulgren, Knight and Ehren (2001) argued that scheduling students with disabilities in general education classrooms and assigning two teachers does not accomplish the purpose of both co-teaching and cooperative teaching. They warned against equating placement with success (Deshler et al., 2001).

Peer tutoring is an instructional method that facilitates access to the general education curriculum for learners with learning disabilities (Lerner & Johns, 2014). According to Rohrbeck, Ginsburg-Block, Fantuzzo & Miller (2003), peer tutoring are systematic,

peer-mediated teaching strategies. In support of these views, Hott, Walker and Sahni (2012) stated that peer tutoring is a flexible, peer-mediated strategy that involves the learners serving as academic tutors and tutees. The peer tutor therefore helps the tutee to learn, practice, or review an academic skill that the classroom teacher has planned (Lerner & Johns, 2009). Since these learners work in pairs, it supports one-to-one teaching in the general education classroom. Thus, both the tutor and the tutee benefit from the peer-tutoring experience.

Lerner and Johns (2014) argued that the tutee could gain in academic achievement by being able to learn more effectively from a classmate whose thinking processes are closer to him or her as a tutee than that of a teacher. They further argued that there are also academic benefits to the tutor; as he or she learns something in the process of teaching the tutee. They went on to say that, this experience would also offer the tutor a sense of accomplishment. Nevertheless, the tutor serves as a model of appropriate academic and non-academic behavior and the relationship between the two peers will provide opportunities for establishing additional social relationships in the classroom (Harper & Maheedy, 2007).

There are several types of peer tutoring (Access Centre, 2017, Hott et al., 2012; Lerner & Johns, 2009; Greenwood, Maheedy & Delquardi, 2002). These include: (i) Same-age Peer Tutoring (in which one learner in the classroom tutors a classmate); (ii) Cross-age Peer Tutoring (in which the tutor is several years older than the tutee); (iii) Class-Wide Peer Tutoring [CWPT] (in which the organization involve the entire class as tutor-tutee pairs work together on a class-wide basis); (iv) Peer Assisted Learning Strategies [PALS] (in which one learner is paired with another learner of the same skill level, without a large discrepancy between abilities); and (v) Reciprocal

Peer Tutoring [RPT] (in which higher performing learner is paired with low performing learner to alternate between acting as the tutor and tutee during each session, with equitable time in each role).

According to Hott, Walker and Sahni (2012), peer tutoring is widely preferred because: (i) it is a widely researched practice across ages, grade levels and subject areas; (ii) the intervention allows learners to receive one-on-one assistance; (iii) learners have increased opportunities to respond in smaller groups; (iv) it promotes academic and social development for both the tutor and tutee; and (v) learners engagement and time on task increases. In addition, peer tutoring is favored because it increases self-confidence and self-efficacy in learners (Spencer, 2006). Furthermore, peer tutoring strategy is supported by researchers such as; (Calhoun, Al Otaiba, Cihak, King & Avalos, 2007; Kunsch, Jitendra & Sood, 2007; Vasquez, Slocum, 2012). Moreover, peer tutoring has incorporated research-supported practices with individualized instruction, which can be adapted to meet individual student needs (Access Centre, 2017). Although much of the research on the effects of peer tutoring indicated that it does not improve academic achievement as learners involved outperform controlled groups (Mastropieri et al., 2007; Van Zant, 2002); there is often significant improvements in learner's attendance, attitude and behaviour (Ministry of Education Saskatchewan, 2009).

Apart from the strategies mentioned above. There are research studies on support strategies used by teachers for learners with learning disabilities. One such study is that mentioned in 2.3 above, Gateru (2010) which found out that teachers have different interventions and teaching strategies in ensuring the success of inclusive education for learners with LD. The support strategies included; use of corrective

approaches, direct instructions, systematic phonics, and using connectivity with pupils individual learning needs. In another study conducted by Ford (2013), pointed out that there are several support strategies that teachers can use to educate learners with LD in inclusive classrooms. These included: co-teaching, differentiated instruction, peer-mediated instruction and interventions.

Additionally, the Taskforce on students with Learning Disabilities (2013) stated that learners with LD in inclusive settings can be supported to learn by use of a tiered teaching strategy to improve their outcomes during early identification, decision making and early intervention. However, Saad et al. (2014) argued that tiered strategy can only succeed if teachers can be able to identify these learners early for adequate provision of support services in schools. Although early intervention support services are vital for learners with LD, they do not address potential problems in core general education practices such as the use of an inadequate curriculum, ineffective instructional strategies or inconsistencies in practices across teachers (Connecticut State Department of Education, 2010).

Teachers of learners with LD can also use Response to Intervention (RTI) support strategy to assist these learners receive responsive and high-quality instruction as required by their needs (Taskforce on Students with Learning Disabilities, 2013). As mentioned in 2.3 above, RTI is based on the principle of prevention and early intervention that uses ongoing assessment to inform teaching and allocate instructional resources to teachers to be able to provide appropriate, evidence-based interventions (British Columbia Ministry of Education, 2011). Furthermore, teachers can also analyse their classroom environment in relation to their learners' academic and social needs and make necessary adaptations to enable these learners succeed in

the classroom (UNESCO, 2004; Friend & Bursuck, 2006; British Columbia Ministry of Education, 2011). However, Weeks and Erradu, (2013) argued that inclusiveness of the curriculum and support of the teaching and learning process of learners with LD is possible if teachers know and understand these learners needs in inclusive education.

Simonsen, Farbanks, Briesch, Myers and Sugai (2008) suggested that the following practices may be used by teachers to support children with LD in reading, mathematics and written expression in inclusive education: Teachers can use explicit classroom routines and minimize crowding and distractions as much as possible; expectations for behaviour and social-emotional learning should be positively stated, posted in a prominent location and should be taught directly in the same manner as academic skills. Use methods of promoting active engagement by increasing the number of opportunities that learners have to respond, for example through choral responding, providing choices and ensuring that work is at an appropriate level of challenge (not too easy and not too difficult); use a continuum of strategies to acknowledge appropriate behaviour strategies for increasing desirable behaviour include: delivering specific, contingent praise, implementing group contingencies and/or token economies and constructing behaviour contracts. This study also determined if the respondents would provide same recommendations as the ones proposed by Simonsen et al. (2008).

According to a study conducted by Al Khatib (2007), inclusion of learners with LD is more complex than it might appear to general education systems. This is because for these learners to succeed in school, they need a range of special support services. In Jordan where this study was conducted, these services are provided in specialized

resource rooms to meet individual needs of each student. In fact, the resources rooms are the only available service-delivery for learners with LD in Jordan. Although LD cannot be cured, persons with LD can learn strategies that can diminish their disabilities' negative impact (Hallahan et al., 2005). These strategies include; cognitive training (which includes procedures such as self-monitoring or self-instruction), mnemonics (which includes the use of key words and other ways of assisting memory). It also involves direct instruction (which includes careful sequences of instruction, rapid and frequent responding, and immediate feedback and correction of errors), meta-comprehension training (which provides students with strategies for thinking about remembering the major points in the material being read), and scaffold instruction (which includes gradual reduction of assistance and reciprocal teaching (Slavica, 2010).

2.5 Support by School Administrators for Learners with Learning Disabilities

Strong administrative leadership and understanding of special education have been identified as essential to meeting the diverse needs in today's classrooms (Price, 2009). However, research has indicated that administrative training for prospective principals in the United States often neglects preparation for the unique challenges of administrating in schools with special education programs or inclusive classrooms (Torgeson, 2003). Additionally, a survey was conducted on Canadian school principals investigating their perceptions of their leadership roles and responsibilities in special education (Zaretsky, Moreau & Faircloth, 2008). They found out that principals felt that their leadership training provided minimal training for issues unique to special education programs, and expressed a need for more emphasis on special education issues to better prepare them to properly understand and support teachers in all settings working with students with LD.

Administrative support has also been cited as a significant factor in determining teacher attitudes toward inclusion, as the teacher feels reaffirmed if the school principal fosters a positive learning environment for both teachers and students. Teachers believe that the support of the principal and other school leaders is critical in order for them to implement inclusive practices (Daane, Beirne-Smith & Latham 2000; Hammond & Ingalls, 2003). Thus, principals need to accept ownership of all learners and support inclusive placement. The National SNE Policy Framework (2009) indicated that there was glaring lack of guidance to support inclusive education, implementation and data on learners with special needs and LD in schools. The report further shows that there was inappropriate infrastructure, inadequate facilities and lack of employment for the learners with learning disabilities. Other challenges included the current examination system which is limiting and rigid, denying the majority of learners with LD education, lack of coordination among service providers and inadequate supervision and monitoring of SNE programme (National SNE Policy Framework, 2009).

Fuchs (2010) also reported that lack of support by administrators posed a challenge for inclusive education. However, lack of resources (Gaad & Khan, 2007; Kalyva et al., 2007) and insufficient teacher preparation and training was noted as a hindrance to the process of inclusion (Ali, Mustapha & Jelas, 2006; Bigham, 2010; Fuchs, 2010; Slavica, 2010). Teachers experience, education, and collaboration was further identified as a barrier to inclusion (Jelas et al., 2006; Bigham, 2010; Dupoux et al., 2006; Hwang & Evans, 2011; Slavica, 2010). According to Vaughn, Bos and Schumm (2011), understanding the limits of personal expertise is vital and knowing when and how to solicit advice from colleagues with specialized training is important to inclusive education.

The appraisal exercise on SNE Kochung Report (2003) noted that learners with learning disabilities in Kenya required a barrier free environment to maximize their functional potentials. It is important therefore that learners with learning disabilities operate in educational environments with minimum support. This is in line with Lerner and Johns (2014) requirement that learners with learning disabilities should have more conducive material resources for their education than their non-disabled peers. Moreover, these resources should be at individual and school level depending on the nature and extent of disability.

The high cost of special equipment remains a hindrance to the government's goal to provide education for all in line with the goal of Universal Primary Education (UPE) (Ali et al., 2006). Thus, teachers and support staff in schools and units which have learners with learning disabilities and other disabilities should be in-serviced on needs assessment and maintenance of specialized equipment and technological devices (Cortiella, 2011). Yet, there is inadequate provision of appropriate teaching/learning materials for special needs education because most of the materials available in the market are mainly developed for regular curricula and regular learners (Hallahan, et al., 2005). They further argued that limited availability of curriculum support materials also limits the ability of the teachers and head teachers' in SNE to employ a variety of content, teaching/learning activities for effective curriculum delivery.

The National SNE Policy Framework (2009) noted that apart from the funds allocated to every learner in the primary schools/units in Kenya, those with special needs and disabilities get a top up capitation to cater for specialized teaching/learning materials and other assistive devices. However, this capitation has not been formalized as it is usually done on informal basis. The capitation is also inadequate for purchase of

teaching/learning materials in these institutions and yet learners with learning disabilities require teaching learning aids that are real objects or artificial materials (Mwangi, 2013; Gateru, 2014). These include; tape recorders, maps, pictures, computers, visual, auditory, tactile and perceptual training materials, physiotherapy and occupational therapy equipment, music and art therapy equipment.

The issue of human resource is of significant concern in the provision of special needs education services (Dapoudong, 2014). This is so because the success of SNE services requires specialized human resources. They include; specially trained teachers, support staff ranging from teacher aides to professionals providing related services in SNE such as assessment teachers, counsellors, paramedical and medical professionals, social workers, parents and the community. Thus, County governments through the Ministry of Education in Kenya should make sure that schools have trained teachers, especially in special education areas.

2.6 Strategies Adapted to Improve Teachers Awareness and Support for Learners with LD

Strategies are measures that can be adopted by governments, schools among other institutions in addressing teacher awareness and support of learners with LD in schools. According to research studies reviewed, teacher awareness issues on inclusion of learners with learning disabilities are high on policy agenda in many countries including Australia, United States, New Zealand and Sub Saharan Africa countries (Abosi, 2007; Elkins, 2002; Osero & Abobo, 2015). Additionally, there is increasing attention to teacher education for inclusion in mainstream classroom in these countries. In the advocacy model (Figure 2.1) Peters and Reid (2009) proposed

a model for teacher education based on principles for promoting quality inclusive education in schools.



Figure 2.1 An Advocacy Model for Teacher Preparation

Source: Peter & Reid (2009:556).

The model places *agency* at the centre to show that it involves both individual and collective advocacy. The model shows the *knowledge/ideology* and *agency* circles interacting. Both circles (*agency* and *knowledge/ideology*) are interacting with *exercising power* circle. Hence, it makes the three circles (*agency*, *knowledge/ideology* and *exercising power*) to exist in harmony. According to Peter and Reid (2009), advocacy cannot be accomplished without understanding *disturbing knowledge*. They argue that *disturbing knowledge* is necessary for *transforming practice*; and therefore, *transforming practice* cannot be transformed without understanding *exercising power*. Furthermore, they argued that advocacy essentially involves acting individually and collectively to effect social justice through equity in teaching and learning in primary schools. They believed that advocacy builds on a foundation of knowledge and awareness. This is the reason why teachers need to be effective advocates in inclusive education, teacher training programmes must advance the knowledge of inclusion.

Despite the differences in national contexts the following are the principles of inclusive policies agreed upon by agency member countries in the report, *Key Principles for Promoting Quality in Inclusive Education (2009)*: (i) widening participation to increase educational opportunity for all learners; (ii) education and training in inclusive education for all teachers; (iii) organizational culture and ethos that promote inclusion; (iv) support structures organised so as to promote inclusion; flexible resourcing systems that promote inclusion; and (v) policies that promote inclusion and legislation that promote inclusion.

To meet the needs of learners with LD, governments should therefore be committed to a policy of inclusion, whereby learners with special needs are taught in ordinary schools, but with various forms of special support (Barrett, Ali, Clegg, Hinostroza, Lowe, Nickel, Novelli, Oduro, Pillay, Tikly & Yu, 2007). Ballard (2003) believed that inclusive education is concerned with the issues of social justice, which means that graduates entering the teaching profession should understand how they create classrooms and schools that address issues of respect, fairness and equity. Furthermore, Garcia-Huidobro (2005) pointed out that equity must be at the centre of general policy decisions and not limited to peripheral policies oriented to correct the effects of general policies that are not tune with the logic of justice or prevention.

According to Savolainen (2009), teachers play an essential role in quality education, than any other factor including; class size, class composition or background. Therefore, there is need for “high quality” teachers to meet the needs of all learners in an inclusive society. Reynolds (2009) added that it is the knowledge, beliefs and values of the teacher that create an effective learning environment. However, this is possible if governments concentrate on teacher education. This will then create a new

generation of teachers who will ensure that there is successful implementation of inclusive policies.

In another view on measures to address inclusion of learners with LD, McInerney and McInerney (2006) maintained that there is need for adoption of a constructivist approach in the classroom which will involve a shift from predominantly teacher-directed methods to pupil-centred, active discovery learning and immersion approaches via cooperative group work, discussion focused on investigations and problem solving activities. This will ensure that LD learners engage purposeful and successful in classroom.

In a study conducted in Kenya, Gateru (2010) suggested that to promote inclusion of pupils with LD, teachers should enhance pupils ability to follow instructions by: getting pupils attention before giving directions, using alerting cues, giving oral and written directions, giving one direction at a time, quietly repeating the directions to the students after they have been given to the entire class, checking for understanding by having the students repeat the directions, breaking up tasks into workable and obtainable steps and including due dates, providing examples and specific steps to accomplish the tasks, and listing or posting requirements necessary to complete each assignment and checking assignments frequently.

Furthermore, Runo (2010) opined that teacher training syllabus on reading, whether in mother tongue, Kiswahili or English be adequately developed to cater for individual learners and equip the teachers with methods for teaching reading proficiently. More time should be given to teaching reading, assessing reading and remediating reading disabilities both at the primary teacher education colleges and at primary schools. She stressed that reading is an ongoing process that should be taught as a subject

throughout the primary levels (standard 1 to 8). She suggested that reading readiness curriculum should be developed within the developmental stages of reading for early childhood and primary levels. She argued that such policy should ensure smooth transition of pupils' movement from home, preschool and primary schools. Finally, the study recommended that for adequate development of teacher training syllabus on reading in mother tongue, English or Kiswahili be given more time.

2.7 Research Gap

The chapter also reviewed several empirical studies and identified the following research gaps; Gateru (2010) conducted a research on teacher awareness and intervention for primary school pupils with learning disabilities in inclusive education in Makadara Nairobi. The sample size for the study was small (involving 10 schools) while this study involved participation of head teachers from several sub counties in Trans-Nzoia county. Moreover, data in Gateru study was collected during the holidays and this affected the return rate since not all teachers were in schools during school holidays and teachers strike.

Wafula, Poipoi, Wanyama and Begi (2012) investigated selective factors that influenced early identification of children with learning disabilities amongst standard three pupils of Butere District, Kenya. The study by Wafula et al. (2012) looked at factors influencing identification of children with learning disabilities while this study looks at teachers' awareness. The study moreover failed to identify factors influencing identification of children with learning disabilities in Butere Sub County. Runo (2010) study intended to establish whether teachers have adequate knowledge of identifying learners with reading disabilities, and wanted to determine the proportion of non-readers in class five. She conducted a comparative study involving two regions

Nairobi and Nyeri which are distinct in terms of education development and access to education which ultimately results to difference in teachers' identification mechanism. The study was conducted in a rural setting to determine the extent to which teachers identify pupils with learning disabilities and not only those with reading disabilities.

Given the identified characteristics of LD, it's clear that these learners are not confined to any one region of the world. In addition, limited research has been conducted in developing countries with the consequence that teachers may not be aware of the manifestations or the prevalence of learning disabilities. Furthermore, most of the research that has been conducted, for example, in Kenya is mainly on reading disabilities. Additionally, the literature reviewed highlights a number of support measures and challenges teachers face in the inclusion of learners with LD. Also, by considering that LD is regarded as a complex emerging area in Kenya; its definition, aetiology, characteristics and identification are hardly known. This study therefore attempted to fill the apparent research gap on teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in the Kenyan context and especially, Trans-Nzoia County.

2.8 Literature Summary

The literature reviewed confirms that the definition of learning disabilities is controversial and debatable. Despite this, there is evidence from the literature that learning disabilities indeed exist among learners who appear capable but experience extreme difficulty in some areas of learning such as reading, writing, spelling, comprehension, and arithmetic. Owing to controversies surrounding the definition, it's evident that identification of these learners has been compromised and its causes of learning disabilities. However, the literature outlines a number of possible causes,

which include: educational factors, environmental factors, psychological factors, and physiological factors.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

In this chapter, the main focus is the research methodology. It focuses on research philosophical stance, design, area of study, study population, sample size and sampling techniques, instruments for data collection, validity of the research instrument, data collection procedures, data analysis and ethical considerations of research.

3.2 Philosophical Stance

This study was based on pragmatist research paradigm. Methodological choices made in research do not exist within a philosophical void but are driven by philosophical (ontological, epistemological, axiological and methodological) assumptions which constitute the research paradigm. According to Crotty (2003), philosophical stance informs the methodology and provides a context for the process forming the basis for its logic and criteria. Kothari (2004) said that methodological decision reflects epistemological frameworks. Thus, epistemology provides a philosophical basis for deciding what kinds of knowledge are possible and how to ensure that they are both adequate and legitimate (Crotty, 2003). In order to understand the research design, it is important to explain researchers' ontological and epistemological stances. Fraenkel and Wallen (2009) informs that ontology is the study of being (what is the nature of existence) while epistemology is a way of looking at the world and making sense of it which involves knowledge.

Pragmatism is defined as a philosophy that allows the researcher to study what is of interest and of value in ways he/she deems appropriate and to use the results in ways

that can bring about positive consequences within the values system (Teddlie & Tashakkori, 2009). As a philosophy, pragmatism has been hailed as the foundation of mixed methods research and, depending on the nature of research, can be adopted to yield better research outcomes than any known research philosophy (Pansiri, 2005).

Pragmatists argue that regardless of circumstances, both quantitative and qualitative methods may be used to complement each other in a single study (Tashakkori & Teddlie, 2010). Such mixing of methods provides completeness, adequacy and solidity to the research findings (Onwuegbuzie & Johnson, 2006; Tashakkori & Creswell, 2007). As a philosophy, pragmatism views knowledge as both socially constructed and based on either reality of the world we experience or reality of the world we live in and endorses a view that current beliefs and research conclusions are rarely, if ever, viewed as perfect, certain and absolute (Onwuegbuzie & Johnson, 2006).

Furthermore, pragmatism views truth, meaning and knowledge as tentative and as changing over time. It argues that what we obtain on a daily basis in research should be viewed as provisional truth that works at that time and that needs to be refined according to changes in the conditions of our daily lives (Onwuegbuzie & Johnson, 2006; Creswell, 2007). By accepting the compatibility between quantitative and qualitative methods, pragmatism as a philosophy provides a number of claims about the nature and purpose of reality and knowledge (Creswell & Plano Clark, 2011; Creswell, 2013). First, it claims that in a study, individual researchers have the freedom of choice to choose the methods, techniques and procedures of research that best meet their needs and purposes. It allows the researcher to work with participants from either an objective and/or subjective point of view. Therefore, through teachers'

perceptions on awareness and support for learners with LD, this study has gained insight on how learners with LD are taken care of in public primary schools in Trans-Nzoia County. This is the reason why pragmatism was chosen to investigate teachers' awareness and support for learners with learning disabilities for effective inclusive education in Trans-Nzoia county public primary schools.

3.3 Research Design

This study employed a concurrent triangulation (mixed) research design which was considered suitable to collect data that describes accurately the nature and extent of teachers' awareness and support for learners with learning disabilities in Trans-Nzoia County. The researcher therefore used concurrent triangulation design to collect information about participants' knowledge, opinions and perceptions about learners with LD in inclusive setting. The concurrent triangulation design involves collecting quantitative and qualitative data concurrently (Creswell, 2012; Tashakkori & Teddlie, 2010). In this design, no phase between quantitative and qualitative is prioritised over the other as priority can be given to either phase (Creswell, 2009). Data can be integrated during either the analysis or the interpretation phases, with the interpretation taking note of either a lack or presence of convergence that either weakens or strengthens knowledge claims (Onwuegbuzie & Johnson, 2006).

The concurrent triangulation design is meant to investigate whether respondents give similar responses on both quantitative and qualitative methods. The primary purpose of the concurrent triangulation design is confirmation, corroboration or cross-validation within a single study (Tashakkori & Teddlie, 2010). According to Onwuegbuzie and Johnson (2006), the strengths of the concurrent triangulation design are multifaceted. First it is a research design familiar to many researchers and being

familiar, it can easily be used by even beginning researchers. Second, it requires a shorter data collection time when compared to the sequential designs since the two phases of data collection and analysis are done concurrently. Lastly, the triangulation design offsets the weaknesses inherent in one approach by using the strengths inherent in the other. Both questionnaires and interview guides are mostly used in collecting data for concurrent triangulation research design (Punch, 2009; O'Donoghue, 2017). Thus, the researcher deemed the usage of concurrent triangulation design useful in investigating teacher awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County.

3.4 Area of Study

This study was carried out in Trans Nzoia County which is made up of the five sub counties (XIII). It is a county located in the North Rift region of Kenya and borders Uganda to the North West, West Pokot County to the North, Elgeyo-Marakwet County to the East, Uasin Gishu and Kakamega Counties to the South and Bungoma County to the West and South West. The head quarter of the county is Kitale town. The county is divided into five sub counties; Cherangany (Trans-Nzoia East), Endebess, Kwanza, Kiminini and Saboti (Trans-Nzoia West). According to Kenya Population and Housing Census (2009), the county covers an area of 2,495Km². The county has got 525 primary schools (336 public and 189 private), 178 secondary schools (163 public and 15 private) and 20 tertiary institutions. The main economic activity of residents living in Tran-Nzoia County is agriculture. It is the mainstay of the 95% of the households in the county. It is also one of the main country's (Kenya) grain baskets due to production of maize and wheat in plantations (Trans Nzoia County Education Report, 2015).

3.5 Target Population

According to Orodho (2004), all items or people under consideration in any field of inquiry constitute a universe or target population. The target population for this study consisted of 336 head teachers, 4107 teachers, and 5 Sub County Directors of Education [SCDE] in Trans-Nzoia County. The teachers were chosen because they are the key implementers of inclusion policy in classrooms; while head teachers were chosen to provide more data on the facilitation of teacher support to learners with LD in their schools, behaviour characteristics, dropout cases and transition records in their schools. The SCDE were chosen to provide information on government policy and the implementation plan on ensuring quality education is provided to learners with LD in public primary schools in Trans-Nzoia County. Table 3.1 shows the target population for the study.

Table 3.1 Target Population for the Study

Sub counties	Respondents		
	Head- teachers	Teachers	Sub-County Director of Education
Cherangany (Trans-Nzoia East)	80	978	1
Endebbes	49	599	1
Kwanza	62	758	1
Kiminini	58	709	1
Saboti (Trans-Nzoia West)	87	1063	1
Total	336	4107	5

Source: Trans Nzoia County Education Report (2015)

Table 3.1 shows that 336 public primary schools head teachers, 4107 teachers, and 5 SCDE formed the target population for the study. The SCDE are the ones who monitor the implementation of inclusion policy in schools. Moreover, the researcher

chose to involve 18 teachers in focus group discussion and 16 teachers to participate in the interview process. According to the table, most head teachers (87) and teachers (1063) were from Saboti (Trans-Nzoia West) Sub County which is mostly urban located, while least respondents are from Endebess Sub County with 49 schools and 599 teachers. This sub county is rural located.

3.6 Sampling Design, Sampling Procedures and Sample Size

Sampling helps to inform the quality of implications emanating from the key finding (O'Donoghue, 2017). Kombo and Tromp, 2014 pointed out that an effective sample population should be diverse, representative, accessible and knowledgeable on the topic being investigated. This is because a sample is a finite part of a statistical population whose properties are studied to gain information about the whole (Punch, 2009). This section describes the method used in selecting the study sample.

3.6.1 Sampling Design

The sampling design describes the methods and procedures of selecting a representative of a population. In this study, probability and non-probability sampling methods were applied in selecting respondents to participate in the study. The difference between probability and non-probability sampling is that in probability sampling, all respondents have a chance of being selected and results are likely to accurately reflect the entire population, while in non-probability sampling, respondents do not have equal chance of being selected (Punch, 2009). The probability sampling method used was stratified random sampling and non-probability one was purposive sampling. Since the common goal of survey research is to collect data representative of a population (Bartlett, Kotrlik & Higgins, 2001); the

researcher used the information gathered from the survey to generalize findings from a drawn sample back to a population within the limits of random error.

3.6.2 Sampling Procedure

It refers to the methods and techniques through which respondents for this study were selected from the target population based on the sampling design. There were three groups of respondents selected in this research; sub county directors of education, primary school head teachers and teachers. These respondents were selected through probability and non-probability sampling methods. The sub-county directors of education were selected using purposive sampling technique. The researcher chose this method in selecting the education officers because they hold important information with regard to monitoring and inspection of the implementation of inclusion policy in public primary schools. Patton (2002) avers that one of the greatest values of purposive sampling is being able to select cases that are information rich. In addition, Bartlett, Kotrlik and Higgins (2001) added that this method is used primarily when there is limited number of people that have expertise in the area being researched.

On the other hand, the teachers and head teachers were selected using stratified random sampling method. Considering that the teachers and head teacher are distinct respondents, each one of them was selected separately using the mentioned sampling method. This method was preferred by the researcher because it allows each member of the population an equal probability of inclusion in the sample without bias (Bryman & Bell, 2011). The first step in stratified random sampling in this research was to split the population into strata. This method involves combining stratified and simple random sampling technique in selecting respondents. In this case, the

researcher sampled the head teachers into five stratas based on the sub county they came from. The stratas were then chosen to divide a population into important categories relevant to the research interest (Fraenkel & Wallen, 2009). The second step involved the researcher to take a random sample within each stratum. By doing this way, a randomised probabilistic sample of head teachers and teachers was selected within each sub county.

For instance, in selecting head teachers from Cherangany (Trans-Nzoia East) Sub County, 80 names were put in a trough (container one) and mixed thoroughly (churned) and the researcher picked the sample size until a population of 8 was achieved. The same procedure (step 1 and 2) was repeated for other sub counties and also in selecting teachers to participate in this research. Agresti and Finlay (2008) support the stratified random sampling because they believe it ensures each respondent has an equal chance of being selected based on the strata population.

3.6.3 Sample Size Determination

Considering the target population for head teachers and teachers is too large; a sample size was selected to act as a representative of the population. Cohen, Manion and Morrison (2007) maintained that a researcher must resist the temptation to generalise to the wider population; especially where the sample is either too small evidence exist regarding its representativeness relating to the context of the study. There are various formulae, propositions and even table for determining sample size. To determine the sample size for head teachers, 10% of the total population was used to act as the sample size; which then led to the selection of 34 head teachers. Considering the expansiveness of the study area and for easier data collection, the research used

Cochran's (1977) formula to calculate the sample size for teachers to participate in the study.

$$n_1 = \frac{n_0}{(1 + n_0/N)}$$

Where n_1 = required sample size because of sample > 5% of population

n_0 = required return sample size according to Cochran's formular = 384

N = population size = 4107 for teachers

Also the sample size for teachers was:

$$n_1 = \frac{384}{(1 + 384/4107)} = 351 \text{ teachers}$$

The computation of the sample size as per the proportion of their target is given in Table 3.2.

Table 3.2: Sample Frame for the Study

Sub Counties	Head teachers		Teachers	
	N	S	N	S
Cherangany (Trans-Nzoia East)	80	8	978	84
Endebbes	49	5	599	51
Kwanza	62	6	758	65
Kiminini	58	6	709	61
Saboti (Trans-Nzoia West)	87	9	1063	91
Total	336	34	4107	351

Key: N=Target population and S=Sample Size

Source: Trans Nzoia County Education Report (2015)

Table 3.2 shows that 8 head teachers and 84 teachers were selected from Cherangany (Trans-Nzoia East) Sub County. Endebbes Sub County had a representation of 5 head teachers and 51 teachers Kwanza had 6 head teachers and 65 teachers, Kiminini had 6 head teachers and 61 teachers while Saboti (Trans-Nzoia West) had 9 head teachers and 91 teachers were chosen to represent the whole population. In each sub county, the sub county director of education acted as a key informant. The total sample size

for the research involved 390 respondents who were 34 head teachers, 351 teachers and 5 sub-county directors of education. In addition, 16 teachers and 8 head teachers were to participate in interview schedules, while 18 teachers were to participate in the Focus Group Discussion (FGD) guide. The 16 teachers for interview and 18 for focus group were selected from the 351 teachers.

3.7 Data Collection Instruments

Instruments used in data collection in this study were questionnaires, interview schedules and Focus Group Discussions (FGD) technique. The instruments are described below.

3.7.1 Questionnaire

Berliner (2002) observes that questionnaires are widely used in research because they are advantageous to give similar or standardized questions to the subject. Questionnaires make it possible to compare responses from different subjects on the same questions (Orodho, 2004). It is therefore due to these reasons that the researcher found it appropriate to use a questionnaire for this study. The study involved Phase I Questionnaire for *Teachers' Awareness Scale (TAS)* and *Teachers' Support for Learners with LD Scale (TSLLDs)* to gather information from primary school teachers in Trans-Nzoia County. The study involved two separate yet inter-related phases that used both quantitative and qualitative methodologies. *Phase I* entailed the development of questionnaires for the *Teachers' Awareness Scale (TAS)* and *Teachers' Support for Learners with LD Scale (TSLLDs)*; while *Phase II* involved the development of interview schedules and focus group discussion to collect data pertaining teachers' awareness and support for learners with LD in public primary schools in Trans-Nzoia County. In Phase II, the interview schedules and Focus Group

Discussion (FGD) guiding questions sought to develop a comprehensive account concerning teachers' awareness and support for learners with LD in inclusive setting in public primary schools in Trans-Nzoia County.

3.6.1.1 Phase 1: The Development of the Teachers Awareness Scale (TAS) and the Teachers' Support for Learners with LD Scale (TSLLDs)

In order to investigate teachers' awareness and support for learners with learning disabilities in Trans-Nzoia County, a rigorous process of construction was followed to ensure that the questionnaire reflected the literature on the subject. An initial thorough search of the educational and psychological literature and psychological test corporations did not reveal any instruments currently in existence which specifically examines teachers' awareness and support for learners with LD, particularly in the Kenyan context, specifically in Trans-Nzoia County.

Following this the special education literature pertaining these concepts were reviewed by the researcher. Using the information obtained relating to LD, teachers' awareness and support for learners with learning disabilities in inclusive education 49 items were generated from which a draft instrument was developed. This instrument sought to assess *Primary School Teachers Awareness and Support for Learners' with LD for Effective Inclusive Education*. The instrument was then distributed to an independent panel of four (4) competent researchers in the School of Education at the University of Eldoret to review and scrutinize the instrument for possible inclusion, face and content of items in the draft instrument. The four research experts held a one hour to thirty minutes sessions to discuss with the researcher the possible inclusion of items, the face and content appropriateness to be included in the final instrument in the study. The researcher reviewed the literature and undertook its findings carefully

to draw on the design and construction of the instrument. These processes focused on obtaining an instrument that validly measured what it intended to measure.

3.6.1.1.1 Results of Items in Draft Instrument

Initially there were 49 items generated from the research literature reviewed by the researcher. The items in the draft instrument were subsequently reduced to 40 items by the consultative panel and the researcher. The reduction of the items was based on the ambiguity, duplication and suitability to the research objectives and questions of the study. The instrument was divided into three (3) parts, Part A, Part BI, II and C. Of the 40 items, Part A involved six (6) items that sought information pertaining the participants' background. The background information tried to find from participants about: their gender, age, highest level of education (e.g. Secondary, Primary Teachers College [PI]), Diploma, undergraduate, postgraduate), years of teaching, school responsibility, and teaching level in school (e.g. lower primary, mid primary, upper primary). *Part BI* items reflected *Teachers' Awareness*, while *B II* reflected *Teachers Support for Learners with LD*. Part BI involved ten (10) items that sought information about teachers' awareness of learners with LD; and BII involved seventeen (17) items that were divided into three (3) Sections I, II, and III. Three (3) items in Section I reflected Teachers Support, six (6) items in Section II reflected Administration Support, eight (8) items in Section III reflected Strategies to Improve Teachers Support for LD and (1) item required teachers to state what they thought needed to be done to improve their awareness and support for learners with LD. Part C involved six (6) items that reflected on teachers' inclusion of learners with LD in public schools. This research used one questionnaire of which the final 40 items are presented in Appendix II.

3.6.1.2 Part BI and BII of the questionnaire for Teachers Awareness Scale (TAS) and Teachers Support for Learners with LD Scale (TSLLDs)

The questionnaire comprised of unstructured (Open-ended) and structured (closed-ended) questions. Open-ended questions gave teachers freedom to express their opinion and possibly explore new areas which the researcher had limited knowledge. Moreover, close-ended questions were restricted to avoid unnecessary responses (Fraenkel & Wallen, 2009) since the total sample size in this study was 351. Restriction of responses was necessary to avoid unnecessary answers. The questionnaire enabled the researcher to gather more information from a large number of participants within a short period of time (Creswell, 2013). The questionnaire also enabled the researcher to get responses from those respondents who were not willing to give in face-to face interview (Kothari, 2004).

In terms of structure, the questionnaire reflected the objectives of the study. The questionnaire used both structured (closed ended) and un-structured (open-ended) items. By structured items it means that the questions were accompanied by a list of possible alternatives from which respondents selected the answer that best described their situation (Ogula, 2009). As stated earlier, the questionnaire was in three (3) parts. Part A had questions on background information about each participant; part BI and II, and C used a 5 Likert-scale which had questions to gather information about the objectives of the study. In BI a five-point Likert-type scale was used to allow teachers to select their degree of awareness and support for learners with LD with the statements: *Extremely aware, Moderately Aware, Somewhat Aware, Slightly Aware and Not At All Aware*. In Part BII Section 1, a five-point Likert-type scale was used to allow teachers' select their feelings about supporting learners with LD with statements: *Always, Often, Sometimes, Rarely and Never*. In Section II a five-point

Likert-type scale was used with statements: *Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree*; and Section III used a five- point Likert-type scale for teachers to choose the level to improve awareness and support strategies for learners with LD in public schools with the statements: *Inappropriate, Slightly Inappropriate, Neutral, Slightly Appropriate, and Appropriate*. In part C a five-point Likert-type scale was used to let teachers indicate level of inclusion of learners with LD in regular primary schools with the statements: *Very High, High, Moderate, Low, Very Low*.

In summary, the *Questionnaire for Primary School Teachers' Awareness and Support for Learners with LD for Effective Inclusive Education in Trans-Nzoia County*; entailed of: Part A showed participants background information; part BI covered Teachers Awareness Scale (*TAS*) and BII Teachers Support for Learners with LD Scale (*TSLLDS*). Part BII was divided into three sections. Section I investigated teachers' support of learners with LD; Section II examined the Administrators Support for Learners with LD; and Section III gathered information about Strategies to Improve Teachers Support for Learners with LD. Part C consisted of questions on level of inclusion of learners with learning disabilities in Public Primary Schools (see Appendix II).

3.7.2 Interview Guide

Yin (2003) stated that interviews are one of the most important sources of data and defines the interview as a two-way conversation that gives the interviewer the opportunity to participate actively in the interview. Furthermore, Fraenkel and Wallen (2009) believed that an oral conduction of interview provides an in depth data which is not possible to get when using questionnaire. The researcher conducted two sets of

interviews. The first set was for head teachers and teachers (Appendix III) in public primary schools in Trans-Nzoia County while the second set was for Sub-County Directors of Education in Trans-Nzoia County (Appendix V).

In line with Stewart and Shamdasani (2008) the interview was extended directly from the research questions that were impetus for the research and the instrument developed in *Phase I*. Two head teachers were considered in formulating the interview questions. First, questions were ordered from the more general to the more specific. Second, important questions pertaining to the research questions were placed following each other in the interview guide. This research therefore involved *Phase II* interview guide to develop a more comprehensive understanding of teachers' awareness and support for learners with LD in inclusive education that was not possible to get using *Phase I* questionnaire mentioned in 3.7.1 above.

3.7.3 Focus Group Discussions

The focus group discussion is a qualitative methodology technique frequently used to obtain data about the feelings and opinions of small groups of participants about a given problem, experience, service or phenomenon (O'Donoghue, 2017). According to Kombo and Tromp (2014) a focus group is a group of interacting individuals with common interest or characteristics, brought together by a moderator who uses the group and its interactions to gain information about specific or focused issues. Focus group methodology is popularly used in social research to generate ideas and solutions pertaining to various social problems, and encourage participants to disclose information that they might not reveal in an individual interview situation (Punch, 2009).

Additionally, discussions in focus group produce a lot of information quickly and, help in identifying and exploring focus group beliefs, ideas or opinions (Punch, 2009). Furthermore, the discussions help to assess needs, develop interventions, test new ideas, programmes or improve existing programmes (O'Donoghue, 2017). The optimum number of participants in a focus group is between six (6) and twelve (12) because they are more manageable and able to effectively gather a variety of perspectives (Krueger & Casey, 2000).

In this study, focus group discussions were conducted to gather more information about teachers' awareness and support for learners with LD for effective inclusive education in public primary schools in Trans-Nzoia County (Appendix IV). Apart from the interviews conducted in the five (5) sub counties, the researcher conducted two focus group discussions that involved teachers from four sub counties (Kiminini and Saboti; Cherangany and Endebbes). This was for the purpose of gathering more information that could have been missed in the questionnaire and interview guide. The four sub counties were selected by the researcher because they represented teachers teaching in the urban and rural schools in Trans-Nzoia County.

The eight (8) teachers in Cherangany (Trans-Nzoia East) and Endebbes Sub Counties represented the views of teachers in the rural schools while the ten (10) teachers in Kiminini and Saboti (Trans-Nzoia West) Sub Counties represented the views of teachers in urban schools in Trans-Nzoia County. Teachers in Kwanza Sub County did not participate in the focus group discussions because they were represented by teachers in Cherangany (Trans-Nzoia East) and Endebbes Sub Counties in the rural category.

The focus group discussions for teachers in the four Sub Counties were guided by the same questions used to interview teachers and head teachers in the five Sub Counties. The researcher decided to use the same questions because she wanted to get extensive information on the teachers' views about their feelings, understanding and knowledge on the awareness and support for learners with LD in inclusive setting. This information was also considered important by the researcher to fill the gap that could have been left out by both the questionnaire and the interview guide.

3.8 Validity and Reliability of Research Instruments

This involves the process of ensuring acceptable levels of validity and reliability of the instruments used in the study. It also involves validation of the developed integration framework. According to Punch (2009), validity and reliability of Research Instrument are the appropriate measures of truth and accuracy of the tools used in quantitative and qualitative data collection. This study used computation of validity and reliability of research instruments for mixed method research methodological approach that is concurrent triangulation in which questionnaires, interview guide and focus group discussions were respectively used for quantitative and qualitative data collection.

3.8.1 Validity of Research Instruments

According to Kumar (2014), validity is the extent to which an instrument measures what it claims to measure. It is whether an instrument measures the trait, characteristic, quality or whatever for which it is intended. Additionally, validity is the appropriateness, meaningfulness and usefulness of the specific inferences researchers make in the data they collect. It refers to the degree to which results obtained from the analysis of the data actually represent the phenomena under study.

Best and Kahn (2012) summarized three (3) types of validity of a research instrument: Content, Construct and Criterion validity.

Content validity of a research instrument refers to the degree to which the test in a real sense measures, or specifically related to content, idea or concept for which it was designed (Cohen et al., 2007). Construct validity focuses on how an instrument conforms to a trait or character expected (Kothari, 2004). Criterion validity is the degree to which an instrument shows indication of being compared with another measure of the same construct in which the researcher has confidence (Punch, 2009). Criterion validity can either be concurrent or predictive. It is concurrent when the usefulness of a test is closely related to the present measure of a known validity and it is predictive when it predicts future characteristics or performance (Bryman, 2016).

In this study, the researcher used content validation method to test on the validity of the research instruments (questionnaire, interview guide and focus group discussion). The use of the content validity enabled the researcher to determine the content and amount of information the instrument produced from respondents. Also, the use of content validity in this study assisted in the validation of qualitative and quantitative data in the mixed research survey. According to Creswell and Clark (2007), researchers use validation of quantitative data model when they want to validate and expand on the qualitative findings from a survey by including a few open-ended qualitative questions. Survey questions will have quantitative and qualitative content from the participants.

However, it is important to use judgement by a panel of experts in determining the validity of measuring instruments (Leedy & Ormrod, 2013). Furthermore, Ogula (2009) stressed that, a judgemental procedure of assessing whether a tool is likely to

provide content valid data is to request professionals or experts in the particular field to review it and give suggestions. In addition, Fraenkel and Wallen (2009) posit that the research instruments should be given to individuals who can render an intelligent judgment about the adequacy of the instrument to enable it to be amended according to the experts' comments and recommendations before it is administered.

In this research therefore, the instruments were distributed to an independent panel of four (4) competent researchers in the School of Education and Department of Curriculum and Instruction, and Educational Psychology at the University of Eldoret, who rendered intelligent judgment about the adequacy of the instruments in Phase I and Phase II to ascertain the content validity. The four experts examined the instruments and evaluated the relevance of each item in the instrument to the research questions and objectives. The researcher also involved two (2) fellow PhD researchers to review and critique all question items in both quantitative (questionnaire) and qualitative (interview and FGD) instruments.

The comments of the four experts from the department of curriculum and instruction, and educational psychology at the University of Eldoret facilitated the revision of the questions in the research instruments to be in line with study objectives. The researcher then used rating scale to determine the rate of opinions of the four experts for content validity of the research instrument (questionnaire). According to Oso and Onen (2009), content validity of research instrument is also determined by Content Validity Index (CVI), which is computed by dividing items rated by the four experts by the total number of items in the questionnaire N/n . Thus, the CVI of the research instruments was calculated using the equation in the next page;

$$CVI = \frac{\text{Total number of valid questions in the instrument } (N)}{\text{Total number of questions in the instrument } (n)} \times 100\%$$

The 'n' above shows items rated by all the experts divided by 'N' the total number of items in the questionnaire in Phase I of this study. According to Agresti and Finlay (2008), when a research questionnaire has a CVI of more than 60%, they are considered to be valid for further checks. In this case, the researcher designed questions with 5-point scale items asking the research experts to rate each item according to the parts of the questionnaire (A, BI-II to C). The researcher provided the instructions to assist the experts to rate the items (Appendix VI).

The researcher computed the Item Content Validity Index using the rating opinions of the four experts from the score of the 5-point rating scale (Appendix VI). According to Polit, Beck and Owen (2007), for each item, the I-CVI is computed as the number of experts giving a rating of either 4 or 5, divided by the total number of experts who participated. Table 3.3 shows the computed content validation index for the research questionnaire.

Table 3.3: Content Validity Index for Research Instrument

Items	Expert 1	Expert 2	Expert 3	Expert 4	Item CVI	Statistic	Decision
A (1-6)	5	4	5	4	4.5	0.900	Valid
B-I (7. i-x)	4	4	4	3	3.8	0.750	Valid
B-II Sec I (8. i-iii)	3	3	4	5	3.8	0.750	Valid
B-II Sec II (9. i-vi)	4	4	4	4	4.0	0.800	Valid
B-II Sec III (10. i-viii; 11)	4	5	4	3	4.0	0.800	Valid
C (12. i-vi)	5	5	5	4	4.8	0.950	Valid
Average Proportion	4.2	4.2	4.3	3.8	4.125	0.825	

Source: Adopted from Polit, Beck and Owen (2007); Oso and Onen (2009), using Universal Agreement Method/ UA=70

Table 3.3 shows that the obtained content validation index for the research instruments was 0.825 which implies that 82.5% of the items in the instruments were valid. This is above CVI of 60% threshold that Agresti and Finlay set. Improvements were made in light of the experts' recommendations before testing the instruments for reliability.

3.8.2 Pilot Study and Pre-testing of Instrument

A pilot study and pre-testing of research instruments are logical issues that the researcher addresses before actual data collection. The pilot study was conducted after the proposal was approved by a panel of judges of the School of Education of the University of Eldoret. The researcher in this study understood piloting and pre-testing of instruments to have the same meaning. According to Gall, Gall and Borg (2007), a pilot study can be carried out after a research proposal has been approved by the dissertation committee. Additionally, Cohen et al (2007) agreed that a pilot study is a pre-test done before the main study to determine the accuracy of the research instruments such as a questionnaire or interview guide in order to obtain the required data.

In line with this, the researcher conducted a pilot study in three (3) public primary schools in three (3) sub counties (Kimilili, Tongaren & Mount Elgon) in neighbouring Bungoma County. The piloted schools were not from Trans-Nzoia County. A total sample of 20 participants participated in a pre-test questionnaire for primary school teachers (Phase I) and interview guide for primary school head teachers and teachers (Phase II). Also, two (2) Sub County Directors of Education from Tongaren and Mt. Elgon sub counties also participated in a pre-test interview guide (Phase II).

According to Gall et al. (2007), a pilot study can be done to determine whether the procedure has merit and to correct obvious flaws. The piloting and pre-testing of instruments was for revision purposes to enable the researcher discover the weaknesses of question items and how the respondents responded to the questions by providing in appropriate answers. The results of the pilot study helped the researcher to improve the layout, phrasing and numbering of the items in the questionnaire and the interview guide. The head teachers, teachers and Sub County Directors of Education who participated in the pre-test interview guide gave their thoughts individually when the interview questions were read to them. The participants had no issues with the interview guide wording.

3.8.3 Reliability of Research Instruments

According to Babbie (2010), reliability of a research instrument refers to the degree to which a particular technique applied repeatedly to the same subject's yields the same result each time. Additionally, reliability refers to the consistency or stability in the measurements (Cohen et al., 2007). Punch (2005) believed that there are two (2) main aspects of consistency: consistency over time and internal consistency. Consistency over time is the reliability of a measuring instrument when it is administered to the same people at different time and the researcher is able to get the same score. On the other hand, internal consistency of a measuring instrument is the extent to which the items are consistent to each other by working in the same direction.

In this study, the researcher used the aspect of consistency over time to test reliability of the questionnaire for teachers in Bungoma County [Kimilili, Tongaren and Mt. Elgon sub counties]. The reliability of the research instrument was determined through test retest technique which involved submitting the questionnaires to

respondents for repeated trials (twice). At first, the respondents were given 20 questionnaires to fill for first test. After about a week the 20 questionnaires were re-administered to the same number of teachers who filled the questionnaires in the first test. This was to ensure that there was no big change in respondents' opinion.

According to Sauro (2015), there are four types of reliability measures. First, inter-rater reliability which is used to assess the degree to which different raters gave consistent estimates of the same phenomenon. Second, the test retest reliability was used to assess the consistency of a measure from one time to another. Third, Parallel Form Test Reliability involved the researcher assessing the consistency of the results of two tests constructed in the same way from the same content domain. Fourth, internal consistency reliability was used to assess the consistency of results across items within a test.

The researcher in this study chose to use test retest reliability to determine the correlation of the two sets of score. To compute the reliability index for the study, the data obtained in the 1st test and 2nd test were coded and entered in electronic spreadsheet through Statistical Package for Social Sciences (SPSS) Version 21.0. Thereafter the reliability of the research instrument was calculated using Karl Pearson Correlation. Kimberlin and Witerstein (2008) stated that reliability values range from 0.00 to 1.00, with higher co-efficiency indicating higher levels of reliability. In order to test the reliability of research instrument, Kaufman and Kaufman (2005) suggested that adequate reliability exists when the correlation coefficient is above 0.70; this was used as a decision point for this research. Any reliability value below 0.7 was considered not reliable while any value above it was considered reliable.

The researcher found it appropriate to test reliability of the questionnaire using a sample of 34 close-ended question items from 20 teachers selected from piloted public primary schools in Bungoma County. The test reliability was computed after instruments were pilot tested or pre-tested and the results of Consistency of Test Retest Reliability correlation were generated as given in Table 3.4.

Table 3.4 Reliability Values for the Research Questionnaire

	Cronbach's Alpha	No. of items
B-I (7. i-x)	0.864	10
B-II Sec 1 (8. i-iii)	0.703	3
B-II Sec II (9. i-vi)	0.843	6
B-II Sec III (10. i-viii; 11)	0.850	9
C (12. i-vi)	0.713	6
Total	0.7946	34

Source: Reliability Results (2016)

The result of the test reliability correlation was 0.7946 leading which is above 0.7 thresholds recommended by Kaufman and Kaufman (2005). The researcher also considered the need for determining validity and reliability for qualitative research instruments.

3.8.4 Triangulation of Research Instruments

The researcher used triangulation to determine the dependability and worthiness of data that was collected. Using triangulation, the researcher collected data from various sources: from teachers, head teachers and SCDE. McMillan and Schumacher (2010), hold that triangulation is a strategy for improving the validity and reliability of research. In the view of Patton (2002), the use of triangulation strengthens a study because it involves application of several methods including using both quantitative and qualitative approaches in data collection process.

3.9 Data Collection Procedure

This is the process of administering research instruments to respondent in the field. It involves description of how data questionnaires were administered and interview and focus group discussions were conducted with respondents. Before the process of data collection begun in the respective primary schools in Trans-Nzoia County, the researcher obtained a research clearance letter from University of Eldoret School of Education to facilitate granting of research permit (Appendix XI). Thereafter, the researcher applied for a research permit (Appendix XI) from the National Commission for Science, Technology and Innovation (NACOSTI). The NACOSTI letter (Appendix XI) and research permit (copies) assisted the researcher to get authorization from the County Commissioner Trans-Nzoia.

The researcher was issued with an introductory letter by the County Commissioner Trans-Nzoia County (Appendix XII). The researcher was then given permission by the County Director of Education, Trans-Nzoia (Appendix XII), and the County Director Teachers Service Commission [TSC], Trans-Nzoia (Appendix XII) to move to Sub-County offices and schools. County Director of Education and the County Director TSC provided the researcher with letters of introduction (attached as Appendix XI) which enabled the researcher to get necessary information from Sub County Directors of Education and the schools. The researcher informed the Sub County Directors of Education and head teachers about data collection in the area. The researcher travelled to each Sub County and school under study for familiarization purposes before administering the instruments. The researcher obtained permission from respective school heads and teachers of the sampled schools before administering the instruments.

3.9.1 Questionnaire Administration

In total, 351 *Teachers Awareness Scale (TAS)* and *Teacher Support for Learners with LD Scale (TSLLDs)* questionnaires were distributed to public primary school teachers in five (5) sub counties (Cherangany, Kwanza, Endebbes, Kiminini and Saboti) in Trans-Nzoia County. To be included in the research participants had to be TSC teachers in the selected schools, of the 351 copies of questionnaires distributed 309 were completed and returned to the researcher thereby giving a response rate of 88.3% (see Table 4.1 in Chapter Four). Thus, a total of 309 public primary school teachers participated in answering the questionnaire. Teachers completed the scales in their respective schools.

The schools in the 5 sub counties which participated in this research were located in both metropolitan (urban) and country (rural) areas. This instrument was administered to teachers in their respective schools in Trans-Nzoia County. In some instances teachers wished to complete the instrument at their own time and this was allowed. In both settings standardized written instructions were presented by the researcher before the teachers completed the questionnaire. The questionnaires were administered to the respondents in the schools after signing the consent form. The questionnaires were delivered to the schools in person by the researcher. This gave the researcher an opportunity to clarify the items the respondents' did not understand. It also allowed the researcher to gain acquaintance with teachers so as to return if more information was required. The questionnaires were administered to 351 teachers in the five sub-counties in the study area. The completed questionnaires were collected by the researcher from each school on the scheduled date.

3.9.2 Interview Sessions with Teachers and Head teachers

Interviews formed *Phase II* of this research. Consent for participants to participate in this *Phase* was obtained from NACOSTI, County Director of Education Trans-Nzoia, Director of Education Teachers Service Commission Trans-Nzoia, Sub County Directors of Education Trans-Nzoia, head teachers and participating teachers of the selected schools. Of the 309 teachers who participated in *Phase I* questionnaire for *Teachers' Awareness of Learners with LD Scale (TALLDS)* and *Teachers' Support for Learners with LD Scale (TSL LDS)* (see 3.6.1.3); sixteen(16) teachers were randomly selected and invited to participate in *Phase II* interviews.

From the schools, 34 head teachers were contacted to participate in the interview; however, only 8 did not participate in the interview. The 5 SCDE were selected based on their positions and responsibilities in monitoring the implementation of inclusion policy in public primary schools. The researcher organised to meet the participants in their respective schools and offices prior to the interview and organised interview dates and times that were mutually convenient to the participants. On the day of the interview, the teachers were met at a designated room where interviews were conducted. The head teachers and Sub County Directors of Education interviews were conducted in their respective offices. The interviews were semi-structured allowing the researcher to probe more. Before the interviews were conducted the researcher reiterated the purpose of the research to the participants. Interviews for teachers, head teachers and SCDE were face to face with the researcher. During the interview sessions teachers, head teacher, and SCDE discussed openly how they were aware of learners with LD and how they supported these learners in inclusive education.

The teachers' interview sessions lasted for approximately 45-55 minutes. Both the head teachers and the Sub County Directors of Education were interviewed for approximately 40 minutes in their respective offices. The head teachers' interviews were conducted at the time of collecting the questionnaires from teachers in their respective schools. Appointment was made with Sub County Directors of Education to conduct the interviews in their respective offices.

3.9.3 Focus Group Discussion

In this phase the researcher also conducted two focus group discussions for teachers from four sub counties (Cherangany, Endebbes, Kiminini and Saboti). The researcher randomly selected eighteen teachers from the 309 who had completed Phase I questionnaire and were not among the sixteen (16) who participated in the interview. The participants in the focus group discussions in this study were drawn from schools in Sub counties in the urban area (Saboti and Kiminini) and those in the rural area (Cherangany and Endebbes). The focus group in Cherangany and Endebbes consisted of eight (8) participants while that of Kiminini and Saboti consisted of ten (10) participants. Table 3.5 shows demographic details of the sample.

Table 3.5 Characteristics of the Sample (Focus Group Discussions)

Sub counties where participants were drawn	No. of Teachers	Schools where interview was conducted
Cherangany (Trans-Nzoia East)	4	Primary 1 (In Cherangany)
Endebbes	4	Primary 1 (In Cherangany)
Kiminini	5	Primary 2 (In Kiminini)
Saboti (Trans-Nzoia West)	5	Primary 2 (In Kiminini)

The focus groups discussions were conducted at a central school agreed upon by all participants in the four sub counties. Teachers in Cherangany and Endebbes counties

agreed to meet at Primary school 1 in Cherangany Sub County while those in Kiminini and Saboti Sub Counties agreed to meet in primary school 2. In the focus group discussions, an audio voice recorder was used. Prior to using the recorder, the researcher asked the participants' permission to be recorded. Although some participants accepted to be recorded, others objected the use of the voice recorder. The researcher respected each participant's choice and took notes for both who accepted and objected to be recorded. The focus group questions were the same as those used in the interview (see Appendix IV). The focus group discussions for teachers lasted for about an hour. As issues were raised by the participants during the interviews and focus group, probing questions were asked by the researcher to get more information. Also in situations where the given information was not clear, the researcher asked the participants to clarify.

3.10 Data Analysis

Data collected from the field was edited to identify and eliminate errors made by respondents when answering the questionnaire and interviews. Data was cleaned (edited) to make sure that there were no inconsistencies and incompleteness in the data (Ogula, 2009). Data analysis was done by checking the questionnaire entries and noted information for consistency and accuracy, then it was arranged to simplify coding and tabulation. Quantitative data was analysed through descriptive and inferential statistics while qualitative data was analysed using content analysis method.

3.10.1 Analysis of Data from Questionnaire

Data from questionnaire was analysed using quantitative and qualitative methods. Quantitative data was first coded into numerical forms. Code numbers were assigned

to each answer of survey question and from there coding list or frame was obtained. Data from the questionnaire was entered into files in terms of the response codes (1, 2, 3, 4 and 5). The data analysis involved items representing the teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County. The coding organized and reduced the research data into manageable summaries. The coded items were then analysed with the aid of computer software for analysing data, Statistical Package for Social Sciences (SPSS) Version 21.0. The research used descriptive statistics (percentages, frequencies, means and standard deviation) to analyse data. The analysed data is presented using pie charts, bar graphs, line graphs and tables.

3.10.2 Analysis of Data from Interviews

Analysis of data from interview teachers, head teachers and SCDE was done using content analysis method. According to Orodho (2004), this is a more rigorous approach to analysing the content of a discussion. In this study therefore, the researcher first of all familiarized herself with the data by reading the transcripts several times, and reading any field notes written immediately after the interviews. Major themes then began to emerge during this process. A thematic framework was then identified by writing memos in the margin of the text in the form of ideas or concepts; categories also started to develop. Indexing which includes sifting the data, highlighting and sorting out quotes and making comparisons both within and between cases were also undertaken. Finally, charting (lifting the quotes from their original content and arranging them under the newly-developed appropriate thematic content) were conducted. Additionally, responses to the open-ended questions and interviews were typed verbatim and separate research analysis was conducted. Every sentence, phrase or word relevant to the particular question was used to form a unit of analysis

before similar concepts or events were grouped into themes. They were presented according to the objectives of the study in chapter four.

3.10.3 Analysis of Data from Focus Group Discussions

The study also used content analysis method to analyse data from focus group discussions of teachers. Bryman (2016) informs that content analysis is an approach to the analysis of documents and texts (which may consist of words written or spoken) that seeks to quantify content in terms of unpredetermined categories and in a systematic and replicable manner. In this study therefore, the researcher first of all familiarized herself with the data by listening to the audio tapes several times after focus group discussions. Major themes then began to emerge during the listening process where the researcher had to type what the respondents were discussing during FGDs.

Each response from the focus group discussion was recorded and classified under the themes that it was falling to. Thereafter the researcher lifted each piece of written materials and placed them under the results of the objectives of the study under each section. Orodho (2004) informs that researcher should identify variables and association between them. After determining their associations, the researcher narrated the findings using direct quotations as indicated in Chapter four (4). The advantage of using this method was due to the fact that it is a quick method of analysing a transcript of a focus group discussion data (Kumar, 2014). Table 3.6 shows the summary of data analysis process.

Table 3.6 Summary of Statistical Data Analysis Matrix

Objective	Independent variable	Dependent variable	Statistical Tools
Teachers' awareness of LD	Definition Aetiology Characteristics Identification	Transition Participation Performance Access Diversity	Frequencies, percentages, means and standard deviation, correlation and content analysis
Teachers' support for learners with LD	Co-teaching Differentiated Instruction Peer coaching Universal Design for Learning	Transition Participation Performance Access Diversity	Frequencies, percentages, means and standard deviation, correlation and content analysis
Support provided by administrators' for learners with LD	Collaboration among stakeholders Educational resources Early Identification Human Resource	Transition Participation Performance Access Diversity	Frequencies, percentages, means and standard deviation, correlation and content analysis
Support strategies adapted to improve teachers' awareness and support for learners with LD	Administrative support Corrective approach Infrastructure SNE policy	Transition Participation Performance Access Diversity	Frequencies, percentages, means and standard deviation, and content analysis

3.11 Ethical Considerations

In this research, the researcher considered confidentiality, privacy and informed consent of the respondents. Confidentiality is the right to maintain autonomy on data collected while privacy refers to the control of who accesses personal information. The confidentiality of the school, learners, head teachers, County Directors of Education and all teachers was followed by not disclosing the name and their personal information in the research. Only relevant details that helped in answering the

research questions are included. The researcher owed loyalty to the informants and honoured promises associated with the research.

Ethical issues requires informed consent by all participants agreeing to the research before it commences and are informed what the research is about and their role in the research. The respondents in this research were informed adequately about the procedures followed in the research, expected duration of participation, the context of privacy and confidentiality and the purpose of the research. From this, the respondents were allowed to make decisions to participate in the study based on their adequate knowledge of the study.

Moreover, the researcher protected the respondents against any physical and, or psychological abuse to be involved in the study. The researcher conducted herself with decorum when administering questionnaires or interviewing respondents for the study. Moreover, all respondents involved in the study were treated with respect and dignity to ensure that they were free and willing to participate in answering research questions. This was done by the researcher providing explanations that was satisfying to the respondents. The researcher further reassured the respondents that their participation in the study was important, desirable and to their advantage. Thus, she asked the participants to cooperate. The researcher was also careful to ensure that her explanations did not pre-empt the results of the study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis, interpretation and discussion of findings. The purpose of the study is on teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County, Kenya. The chapter is divided into three main sections. Section one presents the background information for teachers. The second section presents the results of the study of Phase I (quantitative) data. Phase I (quantitative) used questionnaire to obtain data from the sample of public primary school teachers (n=309). The quantitative analysis in this phase was undertaken using the computer program SPSS version 21.0. The third section presents results of Phase II (qualitative). Phase II used interview schedules on primary school teachers (n=16), primary head teachers (n=8), and Sub County Directors of Education (n=5). Phase II also used focus group discussions on primary school teachers (n=2). The results of analysis are presented in figures, tables and pie charts for interpretation. The flow of presentation in each sub section is according to the objectives of the study.

4.1.1 Response Rate

Table 4.1 below shows the responses rate for this study.

Table 4.1 Respondents Response Rate

Instruments	Sample size	Response	Responses rate
Head teachers interview	34	8	23.52%
Education officers interview	5	5	100.0%
Teachers interview	16	16	100.0%
FGDs	2	2	100.0%
Teachers questionnaire	351	309	88.03%
Total	412	343	82.31%

Table 4.1 shows that the instrument return rate was 82.31% which is high as Kaufman and Kaufman (2005) indicated that an instrument return rate of more than three quarters is acceptable in scientific studies. Moreover, the teachers' questionnaire recorded high return rate of 88.03% which was due to researcher's efforts in ensuring that they returned the questionnaire. The low return rate was observed from head teachers who appeared to be committed to other duties and had no adequate time to conduct interviews. According to Cohen et al, (2007), a questionnaire return rate of 80 percent and above is absolutely satisfactory, while 60 percent – 80 percent return rate is quite satisfactory. A return rate below 60 percent is - barely acceptable. The research sought a high number of participants knowing that their demographic information and unique school culture are vital in this study.

4.2 Demographic Data

Demographic data entails determining the biographical information relating to respondents engaged in the research. The researcher requested teachers to give/indicate their gender, age category, academic qualification, teaching experience, classes that they taught and teachers' responsibilities in the school. The results are given in Table 4.2.

Table 4.2 Respondents Demographic Data (n=309)

Variable	Details	Frequency	Percent
Teachers' gender	Male	124	40.1
	Female	185	59.9
	Total	309	100.0
Teachers' age	20-35 yrs	79	25.6
	36-45 yrs	117	37.9
	46-60 yrs	107	34.6
	60 yrs and above	6	1.9
	Total	309	100.0
	Teachers' level of education	Secondary	2
PTC		112	36.2
Diploma		107	34.6
Undergraduate		72	23.3
Postgraduate		14	4.5
ATS4		1	.3
A-Level		1	.3
Total		309	100.0
Teaching experience	0-5yrs	28	9.1
	6-11 yrs	92	29.8
	12-17 yrs	63	20.4
	18 yrs and above	126	40.8
	Total	309	100.0
Respondents teaching level (in terms of classes grouping)	Classes 1-3	54	17.5
	Classes 4-5	31	10.0
	Classes 6-8	185	59.9
	4-8	25	8.1
	All	8	2.6
	Class 1-3 and class 6-8	6	1.9
	Total	309	100.0
Responsibilities of teachers' in school	Class teacher	177	57.3
	Subject teacher	64	20.7
	Deputy	15	4.9
	Games teacher	14	4.5
	Subject and class teacher	10	3.2
	Head teacher	8	2.6
	Senior teacher	7	2.3
	Teacher counsellor	7	2.3
	SNE Teacher	4	1.3
	Class and games teacher	2	.6
	Exam chair	1	.3
	Total	309	100.0

Source: Teachers Questionnaire Data (2016)

Results on gender (Table 4.2) shows that majority 185 (59.9%) were female teachers while 124 (40.1%) were male. The result shows that teaching in primary schools is

preferred by female gender as opposed to male. This coincides with a research done by Wafula et al, (2012) that found that distribution of teachers in public schools was female gender dominated. This is similar to a research conducted by Wagithunu, (2014) in Nyeri-Central district which found out that out of 80 teachers, 35 (43.8%) were males while 45 (56.2%) were females. Even in Philippines, Dapoudong (2014) found out that female teachers 35 (67.3%) outnumbered the male ones 17 (32.7%).

Results on teachers age reveal that 117 (37.9%) of teachers were aged 36-45 years and 107 (34.6%) were aged between 46-60 years. Combined results for teachers aged 36-45 years and 46-60 years therefore shows that most teachers (72.5%) have encountered learners with learning disabilities in their teaching profession. This finding relate with Gateru (2010) who established that most teachers in schools were aged between 36-50 years. In addition, Gandhimathi et al. (2010) who established that majority of respondents (50.7%) fell under the age group of 31-40 years.

Findings on teachers level of education reveal that 112 (36.2%) had Primary Teachers Certificate (PTC), 107 (34.6%) had diploma in education and a significant 72 (23.3%) had undergraduate degree level of education. It's seen that teachers in public primary schools in Trans-Nzoia County have advanced their professional training other than holding the entry PTC certificate. The finding coincides with Wafula et al (2012) who found out that there has been a significant increase in number of PTC teachers enrolling for higher education programmes. The level of education of teachers is important since it would directly translate into awareness, support and inclusion for learners with learning disabilities for inclusion in public primary schools in Trans-Nzoia County. According to World Bank report (2004) qualified teachers feel secure and prepared both in terms of subject content and classroom practices. Thus, the level

of teachers' education and training affects implementation of inclusive education (Naikoloyieu, 2014).

When asked to indicate their work experience in primary school teaching, 28 (9.1%) had taught for less than 5 years, 92 (29.8%) had taught for 6-11 years, 63 (20.4%) had taught for 12-17 years while 126 (40.8%) had taught for over 18 years. This indicates that more than 61.2% of teacher who participated in the research had been teaching in primary schools for more than 12 years and therefore they had good experience to have encountered learners with learning disabilities in their schools or classrooms. This is important because less experienced teachers might not be exposed enough to matters on inclusive education (Naikoloyieu, 2014). Also, a duration a teacher has in teaching profession determines the level of exposure gained in implementing the inclusive education (Cambridge-Johnson, Hunter-Johnson & Newton, 2014). This is similar to Leyser and Tappendorf (2001) report that teachers with experience in teaching students, particularly those with special needs, intensify their confidence to teach them.

Results on teaching level grouping revealed that most 185 (59.9%) teachers were teaching learners between classes 6 to 8. The reason for majority of teachers teaching this level is due to focus the schools have on upper primary for KCPE examination preparation. Moreover teachers teaching this level, do a lot of remedial work to improve on learners' performance in schools. The findings further shows that majority 177 (57.3%) were class teachers, 64 (20.7%) were subject teachers and 15 (4.9%) were deputy head teachers. This implies that a class teacher has a responsibility to ensure that he/she has information about learners in his/her class relating to their needs, weakness and also strengths. This will then help them determine their learners'

academic needs. The results further shows that the distribution of teachers with special needs education qualification is low (1.3%) in Trans-Nzoia County. Moreover, the results also point out that some school teachers combined more than one role, 3.2% were found to be both class and subject teachers. This could have significant effect on their support to learners with diverse needs in their classes.

4.3 Analysis of Research Questions

This section presents the analysis, presentation, interpretation and discussion of quantitative and qualitative data that was collected from teachers' questionnaire, interviews and focus group discussions. The analysis of findings follows the research objectives. First, is the presentation of teachers' responses on effective inclusive education in public primary schools in Trans-Nzoia County.

4.3.1 Effective Inclusion of Learners with Learning Disabilities in Schools

The study dependent measure was *effective inclusive education* for learners with learning disabilities in public primary schools in Trans-Nzoia County. The study obtained information from education officers, head teachers and teachers. Teachers were asked to rate the level of inclusion of learners with learning disabilities in their schools using a 5-point Likert scale as; very high (5), high (4), moderate (3), low (2) and very low (1). The results are given in Table 4.3.

Table 4.3 Inclusion of Learners with Learning Disabilities in Public**Primary Schools in Trans-Nzoia County (n=309)**

	VH		H		MD		L		VL		M	SD
	F	%	f	%	f	%	f	%	f	%		
Transition to upper classes	11	3.6	37	12.0	125	40.5	77	24.9	59	19.1	2.5599	1.04157
Transition to secondary schools	2	.6	18	5.8	80	25.9	109	35.3	100	32.4	2.0712	.93356
Participation in class activities	11	3.6	33	10.7	130	42.1	93	30.1	42	13.6	2.6052	.97006
Performance in examinations	9	2.9	21	6.8	91	29.4	117	37.9	71	23.0	2.2880	.98917
School attendance patterns	20	6.5	31	10.0	121	39.2	92	29.8	45	14.6	2.6408	1.05548
Level of inclusion	11	3.4	28	9.1	109	35.4	98	31.6	63	20.5	2.4330	0.99797

Key: Very High (VH), High-H, Moderate-MD, Low-L, VL-Very Low, M-Mean and SD-Standard Deviation

Source: Teachers Questionnaire Data (2016)

Result show that teachers rated the transition of learners with LD to upper classes in their schools as moderate 125 (40.5%). Only 37 (12.0%) reported transition as high and 11 (3.6%) as very high respectively. Mean statistics obtained shows that transition of learners with LD to upper classes is on moderate level (M=2.55 and SD=1.04). This indicates that learners with LD regularly face difficulties when transiting to upper classes. On the level of transition to secondary school by learners with LD, 109 (35.3%) of teachers said it was low, 100 (32.4%) said it was very low and 80 (25.9%) reported transition as average. The result therefore shows that transition to secondary schools by learners with LD in Trans-Nzoia County is perceived by teachers to be low (M=2.07 and SD=0.93). This implies that learners with LD tend to perform poorly in

KCPE examinations which deny them a chance to join secondary schools. This therefore affects their social and educational development.

When asked to rate the participation of learners with learning disabilities in classroom activities, most 130 (42.1%) rated as average, 93 (30.1%) rated their participation as low and 42 (13.6%) rated their participation as very low. This shows that participation of learners with LD in their classrooms appears to be on moderate level ($M=2.60$ and $SD=0.97$) in schools. This result implies that learners with LD are not active in their classes and this could affect their acquisition of required skills and competencies.

With regard to their performance in examinations, 117 (37.9%) said that it was low, 71 (23.0%) said it was very low, 91 (29.4%) indicated the performance to be on average, 21 (6.8%) said it was high and 9 (2.9%) said their performance was very high. The result therefore shows that performance of learners with LD in Trans-Nzoia public primary schools is low ($M=2.28$ and $SD=0.98$). This reinforces the problem statement that showed that performance of learner with LD in schools is always poor because they do not receive appropriate support (Rasugu, 2010; Mwangi, 2013).

Result on attendance patterns show that 121 (39.2%) of teachers said it was moderate, 92 (29.8%) said it was low, 45 (14.6%) indicated their attendance as very low, 31 (10.0%) rated it as high and 20 (6.5%) rated their attendance as very high. The result therefore mean that learners with LD attendance to school is on moderate ($M=2.64$ and $SD=1.05$). The non-regular attendance by pupils with LD could be related to their teachers' level of awareness and support measures aimed at assisting them. Figure 4.1 shows the summarised result on the level of inclusion of learners with LD in public primary schools in Trans-Nzoia County, Kenya.

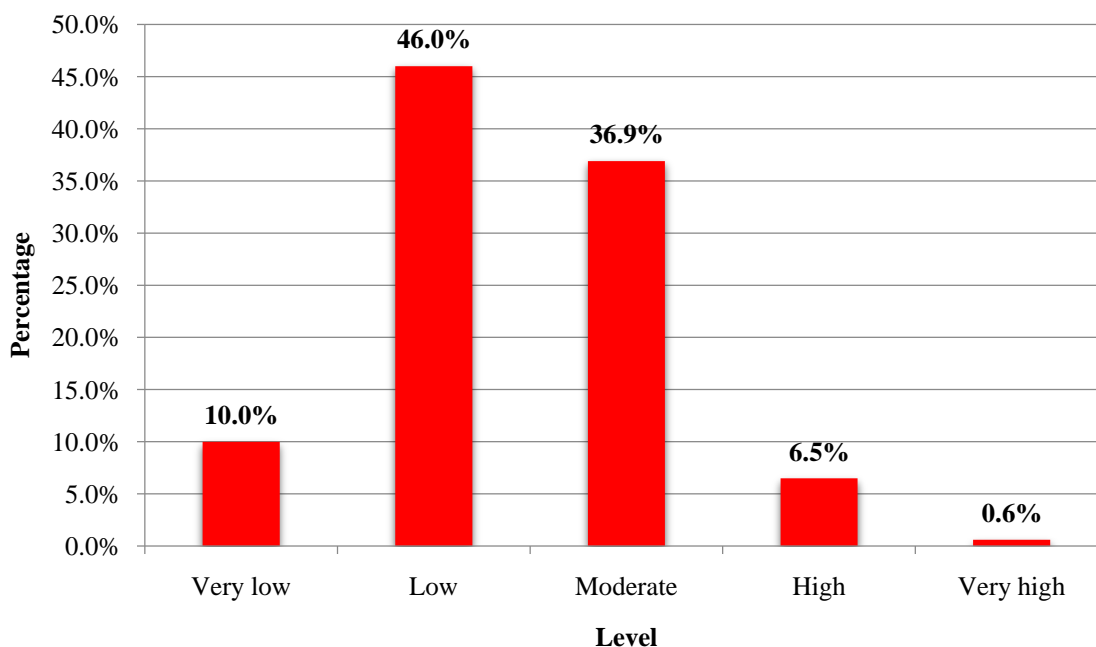


Figure 4.1 Inclusion of Learners with LD in Public Primary Schools in Trans-Nzoia County

Source: Teachers Questionnaire Data (2016)

Findings shows that inclusion of learners with LD in public primary schools was low 46.0%, 36.9% teachers' said it was moderate, 10.0% said it was very low, 6.5% said it was high and 0.6% said it was very high. This shows that level of access to primary education for learners with LD is low. Despite, teachers, head teachers and SCDE belief that education is the right for all children, implementation of inclusive education is low in Trans – Nzoia County.

4.3.1.1 Head Teachers and Teachers Understanding of Inclusive Education

The study also sought information on the level of implementation of inclusive education in public primary schools in Trans-Nzoia County. Inclusive education aims to ensure that all children have access to an appropriate, relevant, affordable and effective education within their community as stipulated in the Salamanca World Conference on Special Needs Education (1994) cited in Dapoudong (2014). Through

interview sessions conducted with selected head teachers and teachers from various primary schools in Trans-Nzoia County, they were asked to explain their understanding of inclusive education. Here are responses received from teachers and head teachers as seen from teacher one (T1) who said:

Having learners with disabilities learning in the same class with normal learners.

Another teacher (T 2) remarked that:

Inclusive education is the kind of education that involves all learners including those with varied disabilities.

Similarly, head teachers had this to say as said by one (HT 9):

It is the education that takes cognisance of pupils' vulnerability.

Another said that (HT 12):

It is supporting learners with disability to adequately learn together with normal children.

From the above responses, it is evident that head teachers understand what inclusive education means. The teachers have also shown understanding that inclusive education is a placement of all pupils including those with disabilities in mainstream classrooms with the necessary support in their classrooms. However, despite teachers understanding of inclusive education, it appeared that inclusive education was low in public primary schools in Trans-Nzoia County, Kenya. The result is different from with Dapoudong (2014) research in Philippines that found out that teachers had moderate knowledge on inclusive education as an integration of SEN pupils in mainstream classrooms.

4.3.1.2 Focus Group Members Understanding About Inclusive Education

The first question that was posed to participants in the focus group discussion was concerned with their understanding of inclusive education. The responses received showed that the group members indicated that inclusion was the process of admitting and teaching all learners with different abilities in mainstream classes (those with and those without disabilities learning together). This process also happens when learners with different abilities in different classes learn in the same class. The participants also said that it the process of teaching of all learners in the classroom irrespective of their disability status. The results coincide with Gateru (2010) found out that inclusive education was referred to as a system of education where all the pupils with or without learning disabilities are taught together in the same classroom regardless of their differences. When asked to indicate which learners are involved in inclusive education, they categorised them as; those who are bright, genius, average, handicapped, mentally retarded, slow learners, gifted and talented. In addition, they mentioned that visual impaired, mild impaired, dumb, mentally retarded, low vision, slow learners are all considered for inclusion in mainstream classroom.

4.3.1.3 How Inclusion is Practiced in Schools

In the interviews, the respondents (head teachers and teachers) were asked to mention how inclusion was practiced in their schools. Teacher No. 2 said that:

Inclusion is practiced by mixing all the learners in one room. No isolation

Another teacher No. 7 had this to say:

Accommodate all the learners in the class, those with learning difficulties and the averaged learners to work together

This shows that efforts are made by teachers to ensure that all learners are included together in learning; they are not separated from the rest. In addition, head teacher No. 6 appeared to have the same opinion by indicating that:

By integrating the learners to the mainstream

Moreover, Head teacher No. 2 had this to say:

Inclusion is practiced by mixing all the learners in one room. No isolation.

The responses therefore show that inclusion of learners with LD in class happens without discrimination or isolation.

4.3.2 How Respondents Awareness of Learning Disability Influences the Support of Learners with Learning Disabilities

The first objective of the study was to determine the extent to which respondents' awareness of learning disability influences the support of learners with learning disabilities in public primary schools in Trans-Nzoia County. The researcher sought information from teachers, head teachers and sub county directors of education to answer the first research question through questionnaire and interviews and focus group discussions. At first, teachers' awareness of LD was measured through respondents understanding the diverse challenges learners with LD experience in learning; number of learners with LD in school; causes of LD; characteristics of LD; effects of LD; and identification of LD. Teachers through questionnaire were asked to rate their level of awareness of learners with LD in their schools. This was done using Teachers Awareness Scale (TAS) as: extremely aware (5), moderately aware (4), somewhat aware (3), slightly aware (2) and not at all aware (1). The results of analysis are given in Table 4.4.

Table 4.4 Teachers' Awareness and Support for Learners with LD in Schools (n=309)

Teacher awareness	EA		MA		SA		SLA		NA		M	SD
	f	%	f	%	f	%	f	%	f	%		
I am aware that learners with LD experience diverse challenges in learning	198	64.1	86	27.8	10	3.2	11	3.6	4	1.3	4.4984	.82818
I am aware that learners with LD are the majority in my school	47	15.2	66	21.4	54	17.5	94	30.4	48	15.5	2.9029	1.32053
I am aware that LD can be inherited	111	35.9	66	21.4	71	23.0	32	10.4	29	9.4	3.6408	1.31318
I am aware that LD can be caused by ineffective teaching	124	40.1	60	19.4	41	13.3	34	11.0	50	16.2	3.5631	1.49894
I am aware that LD can be caused during prenatal, perinatal and postnatal stages	184	59.5	74	23.9	25	8.1	15	4.9	11	3.6	4.3107	1.04784
I am aware that LD can affect learners in the way they receive and recall information	174	56.3	88	28.5	30	9.7	14	4.5	3	1.0	4.3463	.90084
I am aware that learners with LD have short attention span	165	53.4	84	27.2	31	10.0	24	7.8	5	1.6	4.2298	1.02039
I am aware that learners with LD exhibit general awkwardness and clumsiness	105	34.0	86	27.8	67	21.7	34	11.0	17	5.5	3.7379	1.19491
I am aware that learners with LD perform poorly in tasks requiring reading, written expression, spelling, handwriting and mathematics	190	61.5	68	22.0	20	6.5	22	7.1	9	2.9	4.3204	1.06186
I am aware that learners with LD can be identified through observation, screening and classroom performance	218	70.6	54	17.5	23	7.4	10	3.2	4	1.3	4.5275	.86606
Average perceptions	152	49.06	73	23.7	37	12.0	29	9.4	18	5.8	4.0078	1.10527

Key: EA-Extremely Aware, MA-Moderately Aware, SA-Somewhat Aware, SLA-Slightly Aware, NA-Not at all Aware, M-Mean and SD-Standard Deviation

Source: Teachers Questionnaire Data (2016)

The result in Table 4.4 show that most 198 (64.1%) of teachers indicated that they were extremely aware that learners with learning disabilities experienced diverse challenges in learning, only 4 (1.3%) of teachers admitted that they were not aware. This is confirmed by mean statistics which shows that majority of respondents (teachers) were extremely aware ($M=4.49$ and $SD=0.82$) that learners with learning disabilities experienced difficulties during their learning process. The results corresponds with Adebowale and Moye (2013) research in Nigeria that showed that most of the teachers (43.6%) had good knowledge of learning difficulties while another 18.1% had excellent knowledge of what constitutes learning difficulties. However, Kafonogo and Bali (2013) research in Tanzania revealed teachers awareness of the presence of pupils with learning disabilities in regular classrooms was much less in schools. The study revealed that 15% of pupils in regular classrooms had learning disability characteristics. Unfortunately, classroom teachers had little awareness. As a result, these students constantly endured stereotype and 'name calling' such as "impossible", "problem" or "dull" learners. Often than not, they were subjected to physical punishments in attempts to manage symptoms manifesting their learning disabilities such as; hyperactivity, short attention span, and inability to perform class appropriate literacy or numeracy-related activities.

When asked to state their awareness on whether learners with LD were majority in their school, 94 (30.4%) were slightly aware and only 47 (15.2%) were extremely aware. Computed means statistics shows that teachers were somewhat aware ($M=2.90$ and $SD=1.32$) that learners with LD were majority in their schools. The result implies that most teachers are not aware that learners with LD form a significant majority in their schools. This study is different from El-Gamelen and El-Zeftawy (2015) who found out that majority of the studied groups in both rural and urban areas (91% and

75.6% respectively) reported that they had a number of children with learning difficulties in their classes. They further reported that the number of those children with learning difficulties ranged between 5-10 children in one classroom. In Kenya, Rasugu (2010) also found out that LD was affecting a significant number of children in primary schools in Starehe division of Nairobi, 58 out of a total of 135 pupils screened (43%) were reported to have a high risk of LD. However, head teachers and standard 3 teachers reported a total number of 55 pupils out of a total sample of 135 standard three pupils in the five schools as having LD (17.5%). Lerner and Kline (2006) observed that estimates of the prevalence of learning disabilities in developed countries vary widely – ranging from 1 percent to 30 percent of the school population. This therefore shows that the number of learners with LD in schools is high.

Results also revealed that 111 (35.9%) of teachers were extremely aware and 66 (21.4%) were moderately aware that LD can be inherited. The result therefore shows that most teachers seem to be moderately aware ($M=3.64$ and $SD=1.31$) that LD can be inherited. Despite their position, the high standard deviation scores (above 1) reflects that there are some teachers who still believed that LD cannot be inherited but rather it is something that happens during child developmental stage. The finding is different from Shukla and Agrawal (2015) survey in India that showed that only 29% teachers said they were aware of the causes of learning disabilities. This shows that in some schools, some teachers may not actually know what cause learning disabilities among children. Moreover, in Nigeria, Onwuka, Obidike and Okpala (2015) teachers' response showed that they were aware of some of these learning difficulties, bearing in mind the symptoms specified on the items.

When asked to indicate their level of awareness that LD can be caused during prenatal, peri-natal and postnatal stages of child growth and development, 184 (59.5%) were extremely aware, 74 (23.9%) were moderately aware, 25 (8.1%) were somewhat aware, 15 (4.9%) were slightly aware and 11 (3.65) were not aware at all. The result therefore shows that teachers were moderately aware ($M=4.31$ and $SD=1.04$) that LD is caused during child growth and development. Results correspond with Kakabarae, Akbar and Ali (2012) findings of the present study have revealed that 82.1% of teachers achieved a score higher than 10 for awareness of learning disability etiology. In other words, they mainly had an agreeable opinion and identified the proposed reasons for the incidence of learning disability as important. The findings is in contrast with Gandhimathi, Jeryda and Eljo (2010) who found out that majority of the respondents (62%) were found to have low level of awareness about causes of learning disabilities. Therefore, the teachers under study were considered to have unacceptable knowledge about the factors causing learning disability.

Findings also revealed that 124 (40.0%) of teachers were extremely aware that learning disability can be caused by ineffective teaching, 60 (19.4%) were also found to be moderately aware but 50 (16.2%) were not aware at all. The result mean that most teachers appeared to be moderately aware ($M=3.56$ and $SD=1.49$) that ineffective teaching in classrooms could lead to development of learning disabilities to learners in public primary schools in Trans-Nzoia County. To manage the development of LD; Ali, Mustapha and Jelas (2006) study in Malaysia found out that majority of the respondents (78.3%) agreed that special needs students need extra attention and help in the classroom. In another view, Dapoudong (2013) also found out that respondents had partial knowledge on the provision of legislation and

exhibited moderate knowledge on the symptoms of learning disabilities in Philippines.

Results also shows that at least 174 (56.3%) of teachers were extremely aware that LD can affect learners in the way they receive and recall information, 88 (28.5%) were moderately aware, 30 (9.75%) were somewhat aware, 14 (4.5%) were slightly aware and 3 (1.0%) were not aware. The results therefore shows that majority of teachers were moderately aware ($M=4.34$ and $SD=0.90$) that LD affects learners in the way they receive and recall information. The processing time happens to be the key here since teachers argue that learners with LD take a longer period to receive and recall information during classroom learning. This shows that teachers understood that learners with LD had this challenge. The findings corroborate with Saad, Ismail and Hamid (2014) research in Malaysia that showed that teachers had moderate level of knowledge of learning disabilities among their pupils.

When asked as to whether they were aware that learners with LD have short attention span, 165 (53.4%) of teachers were extremely aware and 84 (27.2%) were moderately aware. This shows that majority of teachers level of awareness is moderate ($M=4.22$ and $SD=1.02$) on the issue that learners with LD have short attention span. This is in line with Lerner and Johns (2009) argument that learners with LD have short attention span. Hence, teachers need to be patient and understanding to help these learners acquire knowledge in class. Rasugu (2010) found out that three (3) head teachers and two (2) standard three teachers reported difficulties in specific areas such as reading, spelling, writing, copying accurately and arithmetic; two (2) head teachers and two (2) standard three teachers reported lack of attention span or concentration; and a similar

number of head teachers as well as standard 3 teachers reported dull and unsociable as unique characteristics of learners in their schools and classrooms.

On the statement that “I am aware that learners with LD exhibit general awkwardness and clumsiness”, show that 105 (34.0%) of teachers reported that they were extremely aware, 86, (27.8%) were moderately aware and 67 (21.7%) were somewhat aware. The computed mean statistics shows that teachers were moderately aware ($M=3.73$ and $SD=1.19$) that learners with LD exhibited general awkwardness and clumsiness. This implies that teachers have a great responsibility of ensuring that learners with LD in their classrooms feel less embarrassed participating in various activities in the school.

Majority 190 (61.5%) of teachers were extremely aware and 68 (22.0%) were moderately aware that learners with LD performed poorly in tasks requiring reading, written expression, spelling, handwriting and mathematics. Descriptive statistics also reveal that most teachers appeared to be moderately aware ($M=4.32$ and $SD=1.06$) that learners with LD performed poorly in the above mentioned activities. The result suggests that most teachers understand that learners with LD do not perform well in various class activities, and this signifies the need for their special handling and support to ensure that they perform better. The findings coincides with Kafonogo and Bali (2013) research in Tanzania that showed that teachers could identify learners with learning difficulties based on their characteristics like low achievement on tests and assessments. Unfortunately, they labeled these learners as ‘impossible learners’, ‘dull’, ‘slow learners’ or ‘pupils with unknown problems’. Furthermore, it was not kind at all for teachers to refer to these learners as ‘poor learners’ because it eventually affected their learning and performance in the inclusive classroom.

It was also evident from research findings that most 218 (70.6%) of teachers were extremely aware that learners with LD can be identified through observation, screening and classroom performance. This implies that almost all teachers were exceptionally ($M=4.52$ and $SD=0.86$) aware of various methods of identifying learners with learning disabilities in their institutions. This shows that teachers utilise these techniques to know the proportion of learners with learning disabilities in their classrooms. The finding however contradicts what Shukla and Agrawal (2015) found out that only 11% of the teachers were capable of identifying learners with learning disabilities in their classrooms in India. In addition, Gandhimathi, Jeryda and Eljo (2010) research found out that majority of respondents (78.9%) had low level of awareness about identification of learners with learning disabilities.

Furthermore, Kakabaraee, Akbar and Ali (2012) established that a high percentage (90.0%) of teachers did not have a satisfactory ability in identifying students with learning disabilities. In other words, 90.0% of teachers under study did not have the required knowledge and capability of identifying and diagnosing students with learning disabilities. This shows that in India many classroom teachers in regular mainstream schools have limited knowledge about LD. To determine teacher, overall perceptions on LD in this study, scores on the ten teacher awareness areas on were summed up and average scores obtained based on the rating scale used. Figure 4.2 presents the results of the scores obtained.

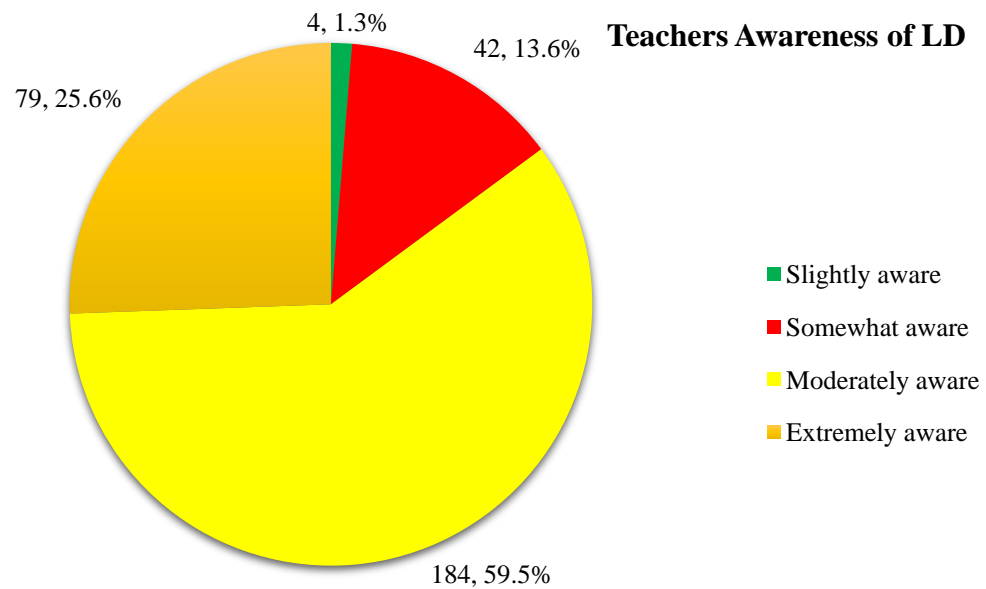


Figure 4.2 Teachers Awareness of Learners with Learning Disabilities (TALLD)

Source: Teachers Questionnaire Data (2016)

Result (Figure 4.2) show that most 184 (59.5%) of teachers were moderately aware of learners with learning disabilities in their schools, 79 (25.6%) were extremely aware, 42 (13.6%) were somewhat aware and only 4 (1.3%) were slightly aware. The result therefore shows that most teachers are fairly aware ($M=4.09$ and $SD=0.06$) of learners with learning disabilities in their schools. The teachers were more aware of the methods of identification and the challenges these learners experience in schools. The study findings coincides with Kakabaraee, Akbar and Ali (2012) who found out that awareness about the nature of learning disability was high and the teachers achieved an acceptable score. The teachers in the study believed to have had a suitable awareness about the nature of learning disability. However, they were found to be least aware that learners with LD were majority in their schools. This is in agreement with Westwood (2008) who found out that early childhood teachers were skilled in noting when children were having learning problems by taking into account their ability to: maintain attention to task for adequate periods of time; work without close supervision; persist with task despite frustrations; listen to and understand

instructions; socialize with peers; and show interest in books and make serious efforts to learn.

To answer the first research question (To what extent does teachers' awareness of learning disability influence the support for learners with learning disabilities in public primary schools in Trans-Nzoia Count?), the researcher correlated combined score of Teachers' Awareness of Learning Disability and level of inclusion of learners with learning disabilities in public primary schools in Trans-Nzoia County. The results are given in Table 4.5.

Table 4.5 Teachers Awareness of Learning Disabilities and Inclusion

		TALLD	INC
TALLD	Pearson Correlation	1	.256
	Sig. (2-tailed)		.028
	N	309	309
INC	Pearson Correlation	.256	1
	Sig. (2-tailed)	.028	
	N	309	309

Key: TALLD-Teachers Awareness of Learning Disabilities and INC-Inclusion

Source: Teachers Questionnaire Data (2016)

The results shows that there exist significant positive relationship ($r=0.256$ and $p=0.028$) between Teachers Awareness of LD in Trans-Nzoia county and effective inclusion of these learners in their schools. The results suggest that teachers awareness of LD is not high, thus leading to low inclusion of learners with learning disabilities in primary education. This implies that teachers' awareness of LD does not translate to inclusion of learners with learning disabilities in public primary schools in Trans-Nzoia County. The findings are in line with Adebowale and Moye (2013) who established that a considerable proportion of the teaching population

under study still had unacceptable level of knowledge (fair and poor) of what learning disability meant. Similarly, Gandhimathi, Jeryda and Eljo (2010) found out that majority of the respondents (66.2%) were found to have low level of overall awareness about learning disability. Majority of the respondents (66.2%) were found to have low level of awareness about concept of learning disability. Therefore, the results suggest that if teachers could improve their awareness of learning disability, the level of inclusion of learners will be high. In conclusion, this objective has found out that although teachers tend to be aware of the characteristics, aetiology and challenges that LD learner's face in schools; does not translate to effective inclusive education of these learners in public primary schools in Trans-Nzoia County. This could be because most schools are understaffed which increases teachers' workload and inability to assess and monitor all learners in their classroom on regular basis.

4.3.2.1 Head Teachers and Teachers Understanding of Learners with LD

Through interview sessions, the teachers and head teachers were asked to indicate their understanding of learners with LD. Their responses are presented thematically in the following sub-sections: HT13 said:

They are learners that cannot perform duties as compared to those without challenges. They have some challenges.

Another head said that (HT7):

They are learners with challenged body parts or organs, mental, hearing impaired and visual impaired.

Both, HT 13 and HT7 appeared not to know or understand who learners with LD are. This could affect their level of awareness and support to both teachers and learners with LD. Also this could affect the HTs intervention measures they provide to support these learners. Moreover, teachers interviewed had this to say (T18):

They are those children who cannot cope with learning under normal learning environment until special attention is given.

Another teacher (T22) said that:

These are learners with special needs.

Both teachers (T18 & T22) had minimal knowledge about learners with learning disabilities. Learners with LD are unique, and their special needs are specific in nature (NCSE, 2014). These learners require special attention in a normal learning environment which has been adapted to suit their individual needs (Lerner & Johns, 2014; NASET, 2014).

From the interview with teachers and head teachers, it was noted that a few of them understood who learners with LD are while majority did not. This therefore could affect their learners' inclusion in normal classroom settings. The findings coincide with a study conducted in India by Shukla and Agrawal (2015) that found out that 67% of teachers had no knowledge of learning disabilities 20 % teachers had little awareness of learning disabilities and only 11% teachers knew about learning disabilities satisfactorily. Robuck (2009) alleged that general education teachers usually had very little knowledge about learning disabilities in general supported this. Nonetheless, Dapoudong (2014) found out that teachers had moderate knowledge on inclusive education as a way of reducing social discrimination, and as integration of special educational needs learners in mainstream classrooms.

4.3.2.2 Focus Group Members Understanding of Learners with LD

The focus group discussion involved teachers from the five sub counties. They were asked about their understanding of learners with learning disabilities. The following are statements recorded from group 1 and 2 of FGDs.

Group 1 reported that:

- Children who come from different homes due to their surrounding making them not to fit in the normal classroom
- Those who cannot get the information from teacher quickly – capability of understanding information takes a lot of time to digest
- Some of them make mistakes e.g. instead of writing + (plus) they write – (minus), when it comes to addition they forget to carry – they are forgetful in summation that involve carrying off. These mistakes may be seen obviously. They can write letter 6 in a reverse way e.g. 6-9, 3-8, I – one , d(b)

Group 2 members reported the following as their understanding of learners with LD.

- Those who have problems in reading and writing, their performance is hindered by several factors which were:
 - o They have problems with conversations
 - o They are low achievers – performing lower in mathematics

The above responses show that learners with learning disabilities are not well known by teachers in public primary schools in Trans-Nzoia County. During the discussion teachers reported that these learners are known as slow learners and, or low achievers in their classes/ schools. Some teachers indicated that these learners' problems could have been genetically inherited from family lineage while others mentioned that it could have been developed from learners not being supported effectively by their teachers in school. The problem of truancy in school and class was also mentioned as a contributing factor to learning disabilities among learners in public primary schools in Trans-Nzoia County. In agreement with the study findings, Gateru (2010) research

found out that most teachers in Nairobi County were aware of inclusive education in their schools for learners with learning disabilities.

4.3.2.3 Sub County Directors of Education Understanding of Learners with LD

The researcher also interviewed five sub county directors of education with regard to their understanding of who learners with learning disabilities were. An education officer EO1 said that:

These are children who cannot learn because they have problem with their vision and hearing. Therefore they fail in class.

This shows that understanding of learners with learning disability was not evident in the above sub county education officer. EO2 had this to say:

These are children that cannot pay attention in class – they are easily distracted and they cannot grasp what is said in class. They cannot even hold a pen.

The response also shows limited understanding by the said officer on who learners with learning disabilities are. EO3 defined learners with learning disabilities as:

Are learners with challenges especially on their body formation.

This shows that the officer lacked understanding of who learners with learning disabilities were. EO4 said that:

These are children with cognitive difficulties. They cannot remember things in class. They are unable to achieve in class.

The above education officer appears to know who pupils with learning disabilities were. While the one from EO5 had this to say:

Are learners whose learning is affected by the nature of their disability i.e. body parts not functioning normally.

The responses from these education officers appeared to suggest that disabled learners are those who have malfunction parts of the body. This could be evident that most people, including the sub county directors of education tend to understand physical disabilities other than intrinsic ones like learning disabilities. Thus, out of the five education officers interviewed, only two were found to understand who learners with learning disabilities were. This shows that education officers have limited knowledge with regard to the pupils with learning disabilities.

Additionally, the researcher also sought education officers' perceptions on the level of teachers' awareness and support for learners with learning disabilities in public primary schools in Trans-Nzoia County. One officer EO5 said the following concerning teachers' awareness level;

Quite a number (average) have undertaken a diploma course in SNE. So, most of them are aware as almost in every school is a trained teacher in SNE.

This shows that the education officer had the assumption that all teachers who had undertaken a diploma course in SNE were aware of these learners and could support them. However, he perceived these teachers' awareness and support to be average. Thus, indicating that it was not enough for effective inclusive education. The Education officer EO1 also indicated:

Teachers are not aware of these children; some of them do not know what learners with learning disabilities are. However, they know that some learners are slow in understanding learners from their training knowledge on teaching methods.

EO1 feedback shows that teacher's level of awareness and support for learners with learning disabilities was low; as perceived by EO1. This is because the teachers were not aware of who these learners are, although they knew from their training that there were learners who are slow in understanding and required different teaching methods.. An education officer EO4 said the following:

There is minimal awareness of children with learning disability. They do not understand who those children are and therefore they do not understand their needs to support them. They are not aware of which support strategies to use.

The finding shows that teachers' level of awareness and support for children with learning disabilities is low in the sub county. This is because teachers did not understand who these children are. Therefore, they could not support them. EO3 had this say:

The teachers in primary schools are aware of children with disabilities as most have undertaken KISE training.

The finding indicates that teachers have gone for training in special needs education. This does not therefore mean that they are aware and can support learners with learning disabilities to learn. However, the sub county director of education assumes that teachers who have undergone training at KISE are aware of learners with learning disabilities and can support them. EO2 said that:

Very little awareness-our office does not deal with teachers directly but we do with head teachers. Zonal officers' contact with teachers is minimal. We talk about general disabilities but not much of learning disabilities because few teachers are aware of this problem. This is especially with our young teachers who are not patient with those children.

Finding shows that most teachers are not aware of learning disabilities and therefore they cannot support them. This is probably because learning disability is intrinsic compared to general disabilities which are physical (non- intrinsic). The response from the education officer suggests that the rate of teachers' awareness on pupils with learning disabilities is low. This could be due to the fact that sub county directors of education are not directly involved with teachers as they tend to use zonal officers and head teachers. The education officer also noted that newly recruited teachers find it difficult to cope with demands by learners with learning disabilities. Generally, the education officer agreed that teachers' level of awareness and support for learners with learning disabilities is low.

4.3.3 Support Strategies Teachers' Use to Assist Learners with LD in Public Primary Schools

The second objective of the study sought to establish the support strategies that teachers used to assist learners with learning disabilities in public primary schools in Trans-Nzoia County. The study obtained information from teachers. The teachers were asked to provide their responses on support strategies they used to aid learners with LD in their classes. The responses were measured using Teacher Support for Learners with LD Scale (TSL LDS) which had the following variables; strategies to educate learners with LD, structuring of learning environment to suit LD learners' needs, and collaborating with colleagues to support learners with LD. The results of the analysis are presented in Table 4.6.

Table 4.6 Support Strategies Teachers' Use to Assist LD Learners (n=309)

Support areas	A		O		S		R		N		M	SD
	f	%	F	%	f	%	f	%	f	%		
I can use several support strategies to educate learners with LD in inclusive education	181	58.6	98	31.7	24	7.8	5	1.6	1	0.3	4.4660	.73611
In order to remediate learning problems of learners with LD, I structure the learning environment to suit their needs	199	64.4	79	25.6	22	7.1	8	2.6	1	0.3	4.5113	.76704
I collaborate with my colleagues to support learners with LD	200	64.7	80	25.9	26	8.4	3	1.0	0	0.0	4.5437	.69005
Average	193	62.6	86	27.7	24	7.8	5	1.7	1	0.2	4.5070	0.73107

Key: A-Always, O-Often, S-Sometimes, R-Rarely, N-Never, M-Mean and SD-Standard Deviation

Source: Teacher Questionnaire Data (2016)

Results on teachers support strategies for learners with LD in Table 4.6 indicate that most 181 (58.6%) indicated that they always used several support strategies to educate learners with LD in inclusive education setting. This statement was reinforced by mean statistics that showed that most teachers always (M=4.46 and SD=0.73) applied various support strategies required by learners with learning disabilities. What is not clear is the effect of teacher awareness on support strategies for learners with learning disabilities and their inclusion in mainstream education setting. In Nigeria, Adebowale and Moye (2013) found out that teachers walked around the class when teaching to locate any pupil with difficulty early enough. Similarly, in Bahamas, Cambridge-Johnson, Hunter-Johnson and Newton (2014) found out that most of the

teachers collectively agreed that they were receptive to teaching students with various disabilities in inclusive setting. In addition, Kafonogo and Bali (2013) research found out that 40% of teachers had adequate knowledge how to adapt teaching to the differing learning styles', 30% had moderate knowledge, 7% was undecided, 20% had limited and only 1% had no knowledge.

It was also clear that 199 (64.4%) of teachers always remediated learning problems of learners with LD by structuring the learning environment to suit their needs. This statement was highly supported by majority of teachers in the county ($M=4.51$ and $SD=0.76$). This shows that teachers always made learning environment to be conducive and supportive for learners with learning disabilities. This finding is exemplified by Weeks and Erradu (2013) who found out that in instances where learners could not be able to write down their responses; teachers accepted them to use oral and pictorial responses, as well as signs and charts to communicate their answers. In Nigeria, Adebowale and Moye (2013) established that teachers placed learners with poor eye sight in vantage position to enable them see the chalk board/magic board and located learners with mild hearing impairments close to the teacher's seat (in front of the class). Even in Kenya, Gateru (2010) found out that teachers accommodated individual differences among the learners through identification of a preferred style of teaching by providing instruction and direction in the preferred style or teaching in a multi-sensory fashion that stimulated both auditory and visual perception.

Research findings also showed that 200 (64.7%) of teachers agreed that they always collaborated with their colleagues to support learners with LD. The finding suggest that most teachers always ($M=4.51$ and $SD=0.69$) worked with their colleagues to

support learners with learning disabilities in their schools. This is because, learners with learning disabilities in upper primary are taught by different subject teachers and it is essential that all teachers are aware of the pupils so that they can implement necessary strategies to assist in their learning. The result shows that most teachers provide support required to assist learners with learning disabilities in public primary schools in Trans-Nzoia County. Results are in agreement with the study conducted by Dukmak (2013) who found that teachers showed supportive attitudes towards inclusion. Similarly, majority of respondents (80%) in Ali, Mustapha and Jelas (2006) study in Malaysia agreed that the collaboration between the special education teachers and regular teachers was vital in the implementation of the inclusive program.

The findings are in contrast with Robuck (2009) who found out that involvement of psychologist or any other educational support service practitioner (teachers in this case) was not found to be popular among the teachers who participated in the study. Otherwise, Robuck suggested that teachers could successfully reduce or eliminate a child's difficult behavior with a simple change in the way they present information, provide assistance, or alter the way the child can demonstrate performance of academic tasks.

Moreover, the researcher in Figure 4.3 shows the summarised result for teachers support for learner with learning disabilities.

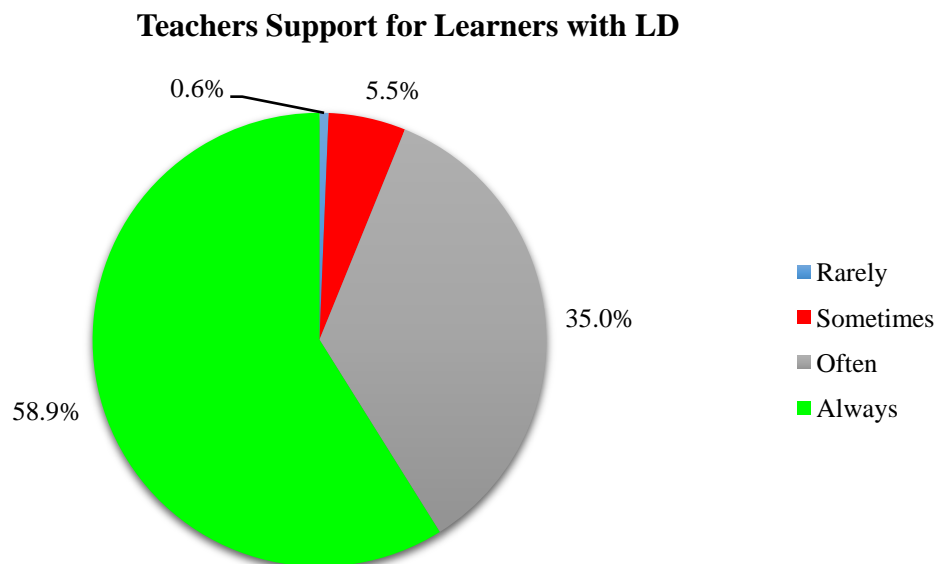


Figure 4.3 Teachers Support for Learners with LD (TSLLD)

Source: Teachers Questionnaire Data (2016)

Result from Figure 4.3 show that most 182 (58.9%) of teachers always supported learners with learning disabilities, 108 (35.0%) often supported, 17 (5.5%) sometimes supported and 2 (0.6%) rarely supported learners with LD in their class. The findings therefore show that teachers always supported learners with learning disabilities in Tran-Nzoia Sub County. The study findings coincides with Weeks and Erradu (2013) who found out that teachers in South African schools provided high levels of support to foundation-phase learners who experienced severe intellectual barriers to learning. In addition, El-Gamelen and El-Zeftawy (2015) research in Egypt found out that majority of the teachers in rural and urban areas allowed active participation of the child, creating cooperative atmosphere, speaking slowly, clearly, and naturally, pre-planning lessons, and identifying strength and weak points of learners. Even in Kenya, Gateru (2010) established that the teachers had internalised inclusive education as they are able to accommodate the pupils with LD. These are teaching strategies that can be used when teaching students with learning disabilities.

4.3.3.1 Teachers Support for Learners with LD and Inclusion in Primary School

The second research question (What are the support strategies that teachers use to assist learners with learning disabilities in public primary schools in Trans-Nzoia County?) sought to establish the support strategies teachers' use to assist learners with LD in public primary schools in Trans-Nzoia County. The researcher correlated combined scores for the two variables and results are given in Table 4.7.

Table 4.7 Teachers Support for Learners with LD and Inclusion in Primary

School		(n=309)	
		TSLLD	INC
TSLLD	Pearson Correlation	1	.462**
	Sig. (2-tailed)		.004
	N	309	309
INC	Pearson Correlation	.462**	1
	Sig. (2-tailed)	.004	
	N	309	309

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

Key: TSLLD-Teacher Support of Learners with Learning Disabilities and INC-Inclusion

Source: Teachers' Questionnaire Data (2016)

Table 4.7 shows that there exist significant positive relationship ($r=0.462$ and $p=0.04$) between teacher support for learners with LD and inclusion in public primary schools in Trans-Nzoia County. However, the relationship appears to be weak positive (less than $r<0.5$) which implies that teachers support for learners with LD has not increased inclusion of these learners in their schools. The findings coincides with Saravanabhavan and Saravanabhavan (2010) research in India which found out that teachers were unable to develop appropriate teaching strategies since they lacked preparation in various instructional models and differentiated instruction. This therefore suggests that teachers need to improve their support for learners with LD so

that inclusion can be high (effective). Therefore, the study has found out that teachers were providing various support services to learners in their classrooms as part of assisting them to learn without any challenges. However, the correlation results between supports that teachers provided on inclusion of learners with LD in public primary schools in Trans-Nzoia County was on average. This implies that teachers need to be at the forefront in implementing inclusion policy in classrooms.

4.3.3.2 How Teachers Assist Learners with Learning Disabilities in Classroom

The teachers were also asked to indicate ways through which they supported learners with learning disabilities in their classroom in the interview. Teacher No. 1 said the following:

Those with LD are made to sit on classroom front desks.

Another Teacher No. 3 indicated that to assist learners with LD they:

Give them less challenging activities, having more time (extra) with these children to help them improve

The above responses by teachers' shows that teachers who have identified learners with LD allow them to sit at the front while others provide them with easier tasks to help them improve and understand concepts gradually.

It is important for all stakeholders within the school to be informed on the need to integrate all learners irrespective of their disability status in the classroom. In the interview, the respondents were asked what they had done to sensitise other teachers on learning disabilities in their schools. Teacher No. 8 who said that:

I have encouraged the teachers to embrace the individual education programme where they single out and help the individual learner.

In addition, Teacher No. 10 remarked that:

Holding seminars and INSETs regularly

The findings by teachers agree with head teachers that adequate awareness and sensitisation is done to all stakeholders on the need to support learners with LD in their schools. The results are supported by Gateru (2010) who found out that teachers got inducted by the head teacher who had the knowledge on special needs education. Some schools supported teachers through invitation of visitors who gave insights on how to handle learners with LD in schools.

Through focus group discussion, the researcher also sought to know how teachers understood the prevalence of learners with LD in their classrooms. According to their responses, majority agreed that the prevalence (proportion) of learners with LD in their classes was high. This is in agreement with Cortiella and Horowitz (2014) who estimated that there were 2.4 million children with learning disabilities in American public schools. Similarly, Australian People with Learning Disabilities (2015) estimated that there were at least 20 percent Australian children who were struggling with learning disabilities.

After the participants in FGDs reported that there was high proportion of learners with LD in their classes, the researcher enquired from them how they provided support to assist these learners to learn. The teachers said that in schools which had fewer number of teachers, they used peer teaching approach to enable the learners with LD learn in groups and discuss together with peers. Other teachers said that they sometimes used follow up activities of what they had taught while others mentioned that they used various method of teaching to ensure that no one was left behind through remedial classes. It was also mentioned in the discussion that teachers

cooperated with each other on matters concerning their pupils' abilities as they looked for ways of assisting them.

The teachers also discussed how inclusion of learners with learning disabilities was practiced in public primary schools in Trans-Nzoia County. During the discussion, it emerged that various strategies were practiced at class and school levels to ensure that inclusion of learners with LD was effective. However, majority of the teachers had no specific methods of inclusion for learners with LD in their classes. For instance, they reported that they relied on trial and error methods for inclusion of learners with LD in their classes. Moreover, others mentioned that they gave learners with LD leadership roles for inclusive purposes while others mentioned that they encouraged these learners to work hard by giving them positive reinforcement (feedback) regularly in class. Some teachers said that for inclusion purposes, they had to be patient and attentive to these learners.

4.3.4 The Support Provided by School Administration towards Provision of Effective Inclusive Education for Learners with Learning Disabilities

The third objective of the study was to establish the support provided by school administration towards the provision of effective inclusive education to learners with learning disabilities in Trans-Nzoia County. Teachers were therefore asked to give their opinion on how school administrators provided support for learners with learning disabilities in their schools to promote effective inclusive education. Through the teachers' questionnaire Part B, Section II (Administration Support for Learners with LD) [ASLLD], teachers were asked to circle answers that best described their feeling on support given by their school administrators to learners with learning disabilities. The results are given in Table 4.8.

Table 4.8 Support Provided by School Administration towards the Provision of Inclusive Education for Learners with LD**(n=309)**

Administration Support	SA		A		U		D		SD		M	SD
	f	%	f	%	f	%	f	%	f	%		
Administrative support is significant in determining teacher attitude towards the education of learners with LD	189	61.2	86	27.8	22	7.1	8	2.6	4	1.3	4.4498	.83835
Leadership is crucial in implementing inclusive practices for learners with disabilities	181	58.6	80	25.9	36	11.7	9	2.9	3	1.0	4.3819	.87338
It is administrator's duty to facilitate appropriate infrastructure in the school	202	65.4	59	19.1	31	10.0	8	2.6	9	2.9	4.4142	.97531
Training in special education programmes will help teaching learners with LD in regular classrooms	236	76.4	55	17.8	14	4.5	3	1.0	1	0.3	4.6893	.63495
Learners with LD require at least restrictive environment to maximise their potentials	143	46.3	90	29.1	43	13.9	19	6.1	14	4.5	4.0647	1.12051
Learners with LD require specialised educational resources	221	71.5	53	17.2	21	6.8	9	2.9	5	1.6	4.5405	.86929
Average scores	195	63.2	71	22.8	28	9.0	9	3.0	6	1.9	4.4234	0.88530

Key: SA-Strongly Agree, A-Agree, U-Undecided, D-Disagree, SD-Strongly Disagree, M-Mean and SD-Standard Deviation

Source: Teacher Questionnaire Data (2016)

The result (Table 4.8) show that 189 (61.2%) of teachers strongly agreed that administrative support is significant in determining teacher attitude towards the education of learners with LD. This shows that teachers agree ($M=4.45$ and $SD=0.83$) on the role administrative support is supposed to play in addressing the inclusion of learners with learning disabilities in schools/classrooms. The results therefore shows that teachers agree that school administration has the responsibility of ensuring that their school is welcoming and friendly to learners with learning disabilities in their classrooms. This is similar to Gateru (2010) and Mwangi (2013) who found out that school administration has an important role to play in the inclusion of learners with disabilities in mainstream classrooms.

Majority 181 (58.6%) of teachers also agreed that leadership was crucial in implementation of inclusive education practices for learners with learning disabilities. The computed mean scores ($M=4.38$ and $SD=0.87$) signify that teachers were moderately aware that school leadership is crucial for implementing inclusive practices. This shows that teachers viewed successful inclusion and support of learners with learning disabilities in schools to be a crucial role played by school administrators. This is believed to happen when participative leadership style is practiced in schools. For instance, Ali, Mustapha and Jelas (2006) study in Malaysia found out that when the school principal shared decision making process with the school staff, this contributed to more educational accountability and responsibility hence, inclusion of learners with learning disabilities in schools.

When asked as to whether it was school administrators' duty to provide appropriate infrastructure in school, 202 (65.4%) teachers strongly agreed and 59 (19.1%) agreed. Descriptive statistics results revealed that most teachers agreed ($M=4.41$ and

SD=0.97) that school administration has to facilitate construction of appropriate infrastructure to support the learning of all pupils irrespective of their disability status in their schools. This shows that teachers believed that school administration has an important role of ensuring that appropriate infrastructure resources and facilities are in place and in good condition to facilitate their usage by learners with learning disabilities. However, infrastructure resources were not adequate in schools. The findings corresponds to Weeks and Erradu (2013) survey of South African schools where access to other forms of assistive devices via the school administration was minimal. Therefore, teachers were left to source their own devices in accessing the much-sought-after assistive devices. In Bahamas, Cambridge-Johnson, Hunter-Johnson and Newton (2014) established that teachers who had favourable views of inclusive classrooms emphasized the need to address the structural problems and limited resources to facilitate effective implementation of inclusive education. In Kenya, Naikoloyieu (2014) research found out that most teachers (36.6%) believed that availability of learning resources affects how the inclusive education is implemented. Therefore, recommended that schools should have facilities readily available for proper implementation of inclusive education.

Results also revealed that most 236 (76.4%) of teachers strongly agreed that provision of training by school administration was important to teachers to help them assist learners with LD in regular classrooms. Computed mean revealed that teachers strongly agreed (M=4.68 and SD=0.63) with the statement. This shows that for successful support of learners with learning disabilities by teachers, they need to undergo special education training. This will help them understand the needs and requirements for successful classroom instruction which would translate to improved academic outcomes. Similarly, during the focus group discussion, one teacher

commented that, “teachers need to be trained in areas of different learning disabilities, strategies and interventions.” Further, they called for the training on how to develop curriculum materials for their learners’ specific needs. This is concurred by Naikoloyieu (2014) who said that there is need for teachers in school to be trained in special needs education.

When asked on whether learners with LD require least restrictive environment to maximise their potentials, 143 (46.3%) strongly agreed and 90 (29.1%) agreed. The findings shows that most teachers agreed ($M=4.06$ and $SD=1.12$) that learners with LD required least restrictive environment which the school administration has to provide. This is because, when there is restrictive environment, learners with LD tend shy off and lose focus on learning as they fail to cope or match other pupils. Therefore, learning environment in public primary schools need to be less restrictive to ensure the inclusion of learners with learning disabilities. This finding is in agreement with Weeks and Erradu (2013) who found that classrooms were stimulating, spacious and conducive to a culture of learning and teaching. The furniture and desks were arranged in such a way as to make them suitable for the learners’ needs. The seating of learners also took into account their individual needs to optimise learning.

Lastly, 221 (71.5%) of teachers strongly agreed that learners with LD required specialised educational resources while 53 (17.2%) agreed. The result therefore shows that majority of teachers strongly agreed ($M=4.54$ and $SD=0.86$) that learners with LD required specialised instruction to facilitate their learning. The result therefore suggests that for inclusion of learners with LD in mainstream classrooms, the school administration need to make efforts of providing assistive devices that are specialized.

In agreement with the study findings, Gateru (2010) research found out that only four teachers (20%) out of 19 indicated that the school administration supported teacher involvement in inclusive education for pupils with LD by providing teaching-learning resources.

The result shows that most teachers agreed that LD learners need to be provided with training opportunities by school administration ($M=4.6$) so that learners with learning disabilities can be effectively included in mainstream classroom. This shows that most teachers lack adequate training and capacity to handle learners with diverse learning disabilities needs in Trans-Nzoia County. The teachers scored less scores on the level of requirement by learners with learning disabilities to operate in a non-restrictive environment ($M=4.06$). A summary of teachers' perception on support by school administration for learners with learning disabilities was done. The responses are presented in Figure 4.4.

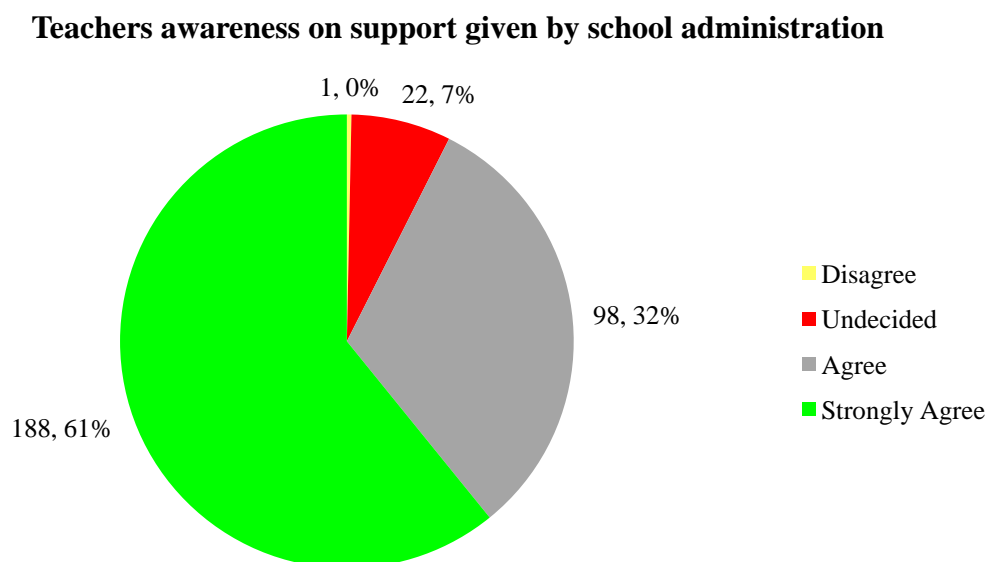


Figure 4.4 Teacher Awareness on Support Given by School Administration

Source: Teachers Questionnaire Data (2016)

Findings reveal that most 188 (61%) of teachers strongly agreed that they were aware of the support the school administration has to provide to learners with learning disabilities in schools and 98 (32%) agreed. The result therefore shows that most teachers were aware of the required support from the school administration for the effective inclusion of learners with learning disabilities in public primary schools in Trans-Nzoia County. This concurs with Fuchs (2010) who said that support by administrators is important for inclusive education. In addition, National SNE Policy Framework (2009) established that provision of adequate facilities and infrastructures aid in implementation of inclusive education. During focus group discussion, teachers who had favourable views of inclusive classrooms emphasized the need to address the structural problems and limited resources to facilitate effective implementation of inclusive education.

4.3.4.1 Administrative Support and Inclusion of Learners with LD in Schools

To answer the third research question (What is the support provided by the school administrators towards the provision of inclusive education for learners with learning disabilities in public primary schools in Trans-Nzoia County?), a Pearson Correlation analysis was computed to check on the relationship between teachers awareness of administrative support for learners with LD and inclusion of these learners in public primary schools in Trans-Nzoia County. The results are given in Table 4.9.

Table 4.9 Administrative Support and Inclusion of Learners with LD in Schools

		(n=309)	
		ASLLD	INC
ASLLD	Pearson Correlation	1	.350
	Sig. (2-tailed)		.030
	N	309	309
INC	Pearson Correlation	.350	1
	Sig. (2-tailed)	.030	
	N	309	309

Key: ASLLD-Administrative Support for Learners with Learning Disabilities & INC – Inclusion

Source: Teachers Questionnaire Data (2016)

Research findings (Table 4.9) shows that there exist significant positive relationship ($r=0.350$ and $p=0.030$) between administrative support for learners with LD and their inclusion in public primary schools in Trans-Nzoia county. The result shows that the administration support for learners with LD is weak ($r=0.350$) and this has led to low inclusion of learners with LD in public primary schools. The result implies that an increase in administrative support would result to increased inclusion of learners with LD in public primary schools in Trans-Nzoia County. These results concur with Mwangi (2013) who found out that provision of specialised teaching and learning resources and other assistive devices by school administrators resulted to increased inclusion of learners with LD in schools.

Furthermore, Rasugu (2010) explained that school administrators including head teachers are required to ensure and supervise that the following measures are used and applied in schools; peer tutoring, individualized attention, motivation, guidance and counselling, and asking parents to assist their children. In conclusion to the objective, it is seen that the support provided by school administration is very weak despite their knowledge and understanding of the needs of learners with LD. This

implies that there is need for improvement in administration support to enable effective inclusion of learners with LD in public primary schools in Trans-Nzoia County.

4.3.4.2 How Head Teachers Assist Learners with Learning Disabilities in School

Administrative support has been cited to be an important factor in determining inclusion of learners in schools (Hammond & Ingalls, 2003). The researcher sought to know how head teachers assisted learners with LD in their classroom. Head teacher No. 1 said that:

We create extra time for them to complete their work.

Another Head teacher No. 4 remarked that:

They are sometimes given extra time to move around and given remedial lessons

The above finding suggests that teachers and head teachers are providing necessary assistance to ensure inclusion of learners with LD happens in their schools.

Through interview, the head teachers were further how they sensitised other teachers about learning disabilities in their schools. Head teacher No. 5 had this to say:

I induct others teachers and advice them on skills of handling learners with LD.

Head teachers No. 6 indicated that:

Sensitising them, allowing them to attend seminars, encouraging teachers to learn much more on special needs.

This implies that head teachers regularly advice teachers on how to handle learners with LD while others encourage teachers to go for training and seminars on LD so as to improve their knowledge and skills in implementation of inclusion policy. In line with the study findings, Zaretsky et al. (2008) research in Canada found out that head

teachers played a unique role in emphasising on special education programme issues on LD in their schools.

4.3.4.3 Head teachers and Teachers' Views about Preparation given to Teachers during Training to Handle Learners with LD

Furthermore, the researcher also sought head teachers and teachers' opinion on what kind of preparation teachers received for the purpose of handling learners with LD in schools and classrooms. To start with instructors, Teacher No. 11 mentioned that:

The training is not adequate. For example, maybe a teacher is trained for visually impaired but in class learners have varied disabilities.

Further, Teacher No. 15 said that:

Preparation given is inadequate.

The above responses shows that teachers are not adequately prepared to handle learners with LD. On their part, Head teacher No. 5 indicated that:

It is insufficient at the initial stage. It is only improved in advanced training.

Moreover, head teacher No. 3 said that:

Some of us who left college early were not prepared fully

The above responses from head teachers coincide with teachers responses showing that the preparing given to teachers in college is not adequate to ensure that learners with LD are integrated well in classrooms in Trans-Nzoia County. This coincides with Gateru (2010) who found out that 58% of the respondents indicated that the preparations were inadequate.

4.3.4.4 Role of Sub County Directors of Education on Inclusion of Learners with LD in Primary Education

The Ministry of Education through Sub County Directors of Education have significant role to play to ensure inclusion of learners with learning disabilities in schools. Therefore, they were asked to state the roles that their office played in ensuring effective implementation of inclusion policy. EO2 had this to say:

Encourage them to go to mainstream schools, our office insists for inclusion, make awareness to parents to retain their children in school, our office insist that kids are not forced to repeat and deal with teachers who want to push these kids out of school.

Another officer EO3 stated that:

The head teachers are encouraged to advise parents to take them for check-up and appropriate assistance is provided by teachers in schools.

Another officer EO4 also remarked that:

Sensitise teachers about learners with disabilities in general, makes sure that with and without disabilities access, make sure that the children go through primary education without repeating and identify those children for early intervention.

The education officer EO1 indicated the following roles;

Make sure that all children have equal education, provide equal access to education for all children and stand up for children who are forced to repeat classes because they are not performing.

The one EO5 indicated the following roles that he played:

Advocate for proper placement for extreme cases and create awareness on learners with disabilities and importance of inclusive learning.

The responses from education officers suggest that they play significant roles to ensure inclusion is implemented in schools. However, action on the ground proved different as inclusion of learners with LD was low in public primary schools sampled.

The study also sought to determine how SCDE officers supported teachers to handle learners with learning disabilities in public primary schools in Trans-Nzoia County, Kenya. EO2 said to be providing the following opportunities to teachers:

We allow our teachers to go for training, we offer training in programmes like Tusome Early Literacy Programme and Priede and we also have de-worming program, funding program especially in special schools.

Finding show that education officers provide opportunities for teachers to train in matters of inclusive education and other programmes related to special education.

Another officer (EO3) said that:

The teachers are in-serviced by the EARC officers. They are also guided by the ESQAO officers on how to handle them.

The finding indicates that education officers at the sub county level coordinate with other officers to provide support for learners with learning disabilities in public primary schools. EO4 indicated that:

Has provided seminars and workshops on special needs in general, to share their views about their learners with us and see how we can help and have internal seminars and workshop for teachers.

The education officers appear to organise seminars and workshops for teachers at sub county level to share their views on how they can help learners with special needs. Through seminars and workshops teachers increase their knowledge and skills in

special needs education matter which would help them identify and assist learners with LD. Furthermore, EO1 had this to say:

We provide opportunities for teachers to train and participate in programmes such as Tusome and Priede. In addition, there are internal seminars/workshops organised by EARC to educate teachers on matters to do with special needs. Further, there are opportunities for training to teachers on their speciality including those interested in SNE.

This response concurs with other education officers who indicated that opportunities for further training are provided to teachers, and that EARC officers take part in educating teachers on special needs education matters. The sub county director of education also stated that teachers are given priority to choose subjects that they feel competent and comfortable to teach. The importance of training is explained by Cambridge-Johnson, Hunter-Johnson and Newton (2014) who said that training plays a critical role in the effective implementation of inclusive education. The sub county director of education EO5 commented that:

I have recommended them for the special allowance, promotions and even being given leadership opportunities to lead in our schools.

The finding shows that education officers from Saboti have recognised and provided avenues for teacher motivation through incentives of allowances, promotions and leadership roles. This is done to ensure teachers support for learners with learning disabilities in their schools.

The study also sought to know from SCDE officers' the support systems provided by Ministry of Education to ensure inclusion of learners with learning disabilities in public primary schools. The officer EO4 mentioned the following support areas:

Have supported teachers to train in programs such as TUSOME, PRIEDE. In some schools with special units, there are feeding programs supported by the ministry. Supports the inspection and supervision of schools to make sure that there is quality education.

Another officer EO3 had this to say:

The Ministry registers the schools with those students and funds them accordingly to purchase equipment and tools.

The other officer EO1 indicated the following:

Supports the assessment of children with special needs by EARC, supports de-worming programs, infrastructure and sanitation support.

The officer EO5 said:

The Ministry in collaboration with other stakeholders has come up with syllabus for SNE, funding of the learners education through new curriculum that will be rolled out.

This officer understood that the Ministry collaboration with other stakeholders in education has helped develop SNE syllabus and funding for the new curriculum. However, the officer was not clear on the support areas that the Ministry of Education was engaged in for learners with learning disabilities in particular. The education officer EO2 had this to say:

We got free primary education fund from the Ministry to all public primary schools where each child gets Kshs. 1290/=. There are also funds for special needs but learners with LD are not included. We get funds for infrastructure and lunch programs based on locations.

The information presented by the education officer shows that little or no support is provided by Ministry of Education to support inclusion of learners with learning

disabilities in public primary schools in Trans-Nzoia County. The officer indicated that learners with learning disabilities like any other child in the school are considered for free primary education fund, but not special needs education fund. Furthermore, the Ministry also provides the schools with infrastructure and lunch programme funds based on locations. The little support provided by the Ministry of Education (school administrators) towards learners with learning disabilities could affect their inclusion in public primary schools in Trans-Nzoia County.

4.3.5 Strategies that can be Adapted to Improve Teachers' Support for Learners with Learning Disabilities in Public Primary Schools

The fourth objective of the study was to establish strategies that can be adapted to improve teachers' support for learners with learning disabilities in public primary schools in Trans-Nzoia County. The study obtained data from the Teachers' Questionnaire Part B, Section III (Strategies to Improve Teachers Support for Learners with Learning Disabilities). Teachers were asked to indicate the appropriate and inappropriate strategies that can be applied to support learners with learning disabilities in schools through statements measured on a scale of five; Inappropriate (1), slightly inappropriate (2), neutral (3), slightly appropriate (4) and appropriate (5). The results are given in Table 4.10.

Table 4.10 Strategies to Improve Teachers' Support for Learners with Learning Disabilities in Public Primary Schools**(n=309)**

Strategies	I		SI		N		SA		A		M	SD
	f	%	f	%	f	%	f	%	f	%		
Governments should be committed to policy of inclusion	19	6.1	6	1.9	10	3.2	28	9.1	246	79.6	4.5405	1.08224
More teachers to be trained in special education programmes	15	4.9	6	1.9	6	1.9	18	5.8	264	85.4	4.6505	.98405
Specialised teaching techniques to be used when teaching learners with LD	16	5.2	6	1.9	6	1.9	25	8.1	256	82.8	4.6149	1.00836
Teachers should recognise areas of strengths and weaknesses of learners with LD	18	5.8	6	1.9	6	1.9	16	5.2	263	85.1	4.6181	1.04592
Teachers to provide regular feedback to learners with LD	16	5.2	12	3.9	21	6.8	35	11.3	225	72.8	4.4272	1.11310
The curriculum should be adopted to accommodate the needs of learners with LD	20	6.5	5	1.6	8	2.6	28	9.1	248	80.3	4.5502	1.08483
More time should be given to teaching reading activities to learners with LD	20	6.5	7	2.3	20	6.5	24	7.8	238	77.0	4.4660	1.13803
Teachers should give short and clear instructions to learners with LD	17	5.5	12	3.9	12	3.9	21	6.8	247	79.9	4.5178	1.10658
Average scores	18	5.7	8	2.4	11	3.6	24	7.9	248	80.4	4.5482	1.07039

Key: I-Inappropriate, SI-Slightly Inappropriate, N-Neutral, SA-Slightly Appropriate, A-Appropriate, M-Means and SD-Standard Deviation

Source: Teachers Questionnaire Data (2016)

Result from Table 4.10 show that most 246 (79.36%) of teachers indicated that it is highly appropriate for the government of Kenya to be committed to adapting the policy of inclusion to suit learners with learning disabilities. Almost all teachers indicated that it is mostly appropriate ($M=4.54$ and $SD=1.08$) that government spearheads the adaptation and implementation of inclusion policy. This implies that government through Ministry of Education should champion the inclusion of learners with learning disabilities in mainstream education setting by amending its policies to suit their individual needs. Naikoloyieu (2014) also supported this finding by indicating that government should be at the forefront in implementing inclusion policy in schools. In addition, Dapoudong (2014) also found out that the policy of providing education for special needs groups was not adapted and clearly implemented in Philippine schools thereby influencing inclusion of learners with learning disabilities in mainstream classrooms.

Most 264 (85.4%) teachers also ranked the statement of more teachers to be trained in special education programmes as appropriate. This means that most teachers perceived the need ($M=4.65$ and $SD=0.98$) for teachers in public primary schools to be trained in special education programmes. This means that efforts should be made by Ministry of Education to adapt ways of ensuring that teachers are given opportunity for training on how to help learners with learning disabilities in their classrooms as it is appropriate to promote inclusion policy implementation in schools. The suggestions concur with Dapoudong (2014) research in Philippines that suggested that there was need for schools to provide more special educational needs training.

Findings further revealed that majority 256 (82.8%) of teachers said that it is appropriate for specialised teaching techniques need to be used when teaching

learners with LD in public primary schools in Trans-Nzoia County. This implies that most teachers perceived the appropriateness ($M=4.61$ and $SD=1.00$) of using specialised teaching pedagogical approaches for learners with learning disabilities during instruction would increase their inclusion in public primary schools in Trans-Nzoia county. This implies that the methods that teachers have been using have not helped learners with learning disabilities to learn in an inclusive setting, and therefore there is need to adapt new methods to meet the needs of LD learners. In consonance with study findings, Rasugu (2010) found out that the most frequently adapted methods of assisting learners with LD was individualized attention, followed by pairing learner with able peers and use of relevant teaching aids. This implies that teachers need to consider using the above mentioned methods to promote the inclusion of learners with LD in their classroom.

When asked as to whether teachers should recognise areas of strengths and weaknesses of learners with LD, 263 (85.1%) said it was appropriate, 16 (5.2%) said it was slightly appropriate, 6 (1.9%) were neutral, 6 (1.9%) said it was slightly inappropriate and 18 (5.8%) said it was inappropriate. The result shows that despite having high standard deviation scores, the mean value ($M=4.61$ and $SD=1.04$) suggest that teachers in the study recommends that there is need for them to adapt a way of recognising areas of strengths and weaknesses of learners with LD in their classrooms. As a way of assisting learners with LD, Rasugu (2010) found out that some teachers reported that pupils suspected to have LD were given simpler tasks in class while some teachers said that the affected pupils were given remediation.

When asked as to whether teachers should provide regular feedback to learners with LD, 225 (72.8%) said it was appropriate. Descriptive statistics indicate that most

teachers considered provision of regular feedback as slightly appropriate ($M=4.42$ and $SD=1.11$). This implies for inclusion of learners with LD to be successful, teacher feedback to each individual is required so that learners' progress can be monitored.

However, during focus group discussion some teachers lamented that they have been failing to give feedback to every learners because of high pupil: teacher ratio in public schools that makes it difficult for teachers to regularly monitor and provide feedback to all learners in schools. This therefore calls for the government to adapt a way of increasing teachers in public primary schools so that teachers would have ample time to provide feedback to learners with LD in their classes. This is in agreement with Abosi (2007) who found out that shortage of experienced teachers and inadequate number of teachers influenced inclusion of children with learning disabilities in Botswana.

The result also showed that 248 (80.3%) of teachers rated appropriate the statement that said "the curriculum should be adapted to accommodate the needs of learners with LD." This implies that most teachers agreed with this strategy ($M=4.55$ and $SD=1.08$) that government through Kenya Institute for Curriculum Development (KICD) should make amendments on how classroom instruction in classrooms can accommodate the needs of learners when reviewing syllabus. This therefore shows the significant role that policy makers have to play to ensure inclusion of learners with learning disabilities in classroom learning as they participate and transit to higher classes. These findings coincides with recommendations made by Cambridge-Johnson et al. (2014) who found out that most respondents suggested curriculum revision to integrate workforce ready skills, and diverse learning activities. Additionally, the review of the curriculum to incorporate the special needs student will also positively

impact the program because it will require teachers to prepare lessons that will meet the needs of all learners. In addition, Adoyo and Odeny (2015) suggested that there is need for curriculum to be revised to consider implementing emerging trends in educational policy approaches in area of disability in Kenya.

Most 238 (77.0%) teachers rated appropriate statement that more time should be given to teaching and reading activities to learners with learning disabilities in schools, 20 (6.5%) rated as slightly inappropriate and 20 (6.5%) rated it as inappropriate. Descriptive statistics shows that most teachers ($M=4.46$ and $SD=1.13$) considered devotion of more time to teaching reading activities as a remedy to inclusion of learners with learning disabilities in classrooms. This implies that teachers should give more time (even remedial) to learners with learning disabilities during exercises to be at par with their peers.

Lastly, 247 (79.9%) of teachers also rated the following statement as appropriate 'teachers should give short and clear instructions to learners with LD'. This implies that most teachers supported the statement as appropriate ($M=4.51$ and $SD=1.10$). This implies that teachers should not rush or be in a hurry when giving out instructions to learners with disabilities since their processing time may be slower. Furthermore, teachers should avoid lengthy and ambiguous instructions or statements (Lerner & Johns, 2009). Figure 4.5 shows the average statistics on the strategies to improve teachers' support for learners with learning disabilities in public primary schools in Trans-Nzoia County.

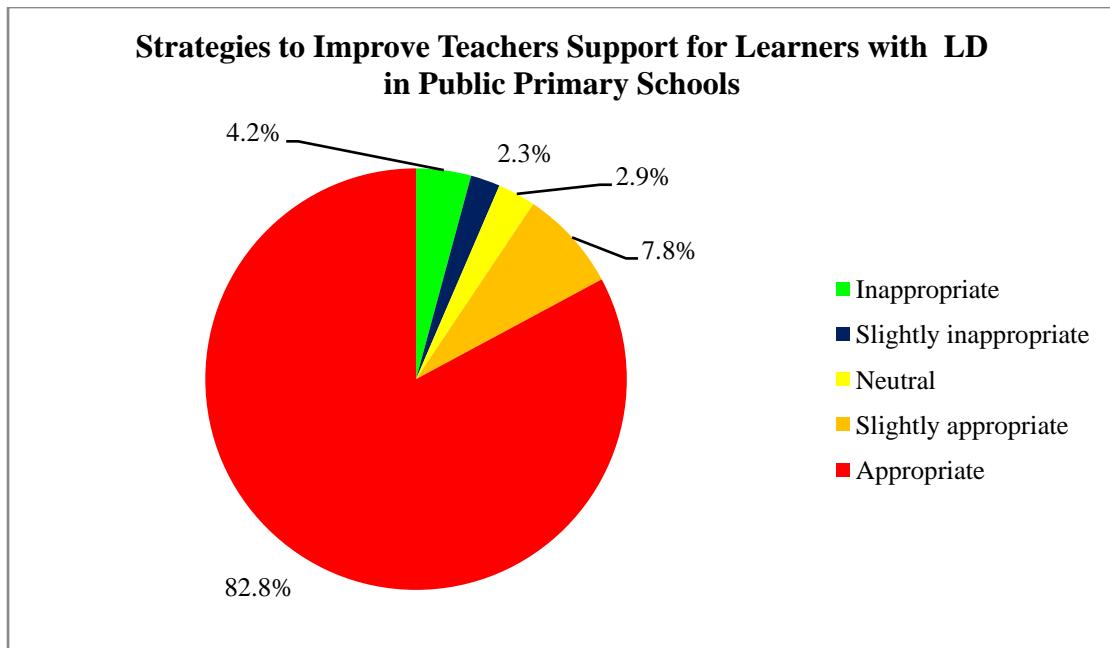


Figure 4.5 Strategies to Improve Teachers' Support for Learners with LD in Public Primary Schools

Source: Teachers Questionnaire Data (2016)

Results shows from Figure 4.5 that majority 256 (82.8%) of teachers considered the strategies presented in the above figure as appropriate towards improving awareness and support for learners with learning disabilities in public primary school in Trans-Nzoia county. Teachers mainly suggested that they should: be undertaken for training in special education programme, recognise areas of strength and weakness of learner, and apply specialised teaching techniques in order to provide necessary support for learners with LD.

Moreover, the teachers were asked to give their responses on an open-ended question, on how teacher awareness and support for learners with learning disabilities can be improved. Their responses are summarised in Table 4.11.

Table 4.11 How Teachers Awareness and Support for Learners with LD can be Improved

Awareness and support areas	Frequency	Percent
Organise seminars for teachers awareness and support for learners with LD	101	32.7
Teachers should be sensitised on how to help and support learners with LD	52	16.8
Terms of payment should be improved for teachers to work hard	32	10.4
The government should provide and facilitate the helping drivers.	32	10.4
Close examination by teachers to identify their children's gifts and talents	25	8.1
Introduce special units for learners with LD	21	6.8
Sensitisation to parents	20	6.5
Curriculum review to include new educational resources	17	5.5
Learning should be more of practical oriented	13	4.2
More teachers to be posted in schools	7	2.3
Learners with LD should be given different exam	4	1.3

Source: Teachers Questionnaire Data (2016)

Results from Table 4.11 shows that teachers need to re-train on how they can support learners with LD in their classrooms to ensure their inclusion. Sensitisation also appears to be captured by the teachers where government institutions and school administration should support the initiatives. The teachers also suggested that teachers' pupils should be examined closely and in detailed to understand more about their learning disability. This finding corresponds with Adebowale and Moye (2013) who saw the need for teachers to have requisite understanding of what constitutes learning disabilities and be able to develop appropriate measures that would be able to assist learner to trap adequate knowledge, skills which will make them function

effectively in the society. In addition, Shukla and Agrawal (2015) recommended that further training to be through group work orientations, programmes, discussions, and lectures. Moreover, workshops to be organized for the teachers, since, learning disability is a complex phenomenon to understand. In Kenya, Rasugu (2010) recommended that using of concrete learning aids, providing schools with special education teachers, pairing pupils with LD with able learners, involving parents and giving affected learners simple activities and more attention can improve teachers awareness and support for learners with LD in inclusive classrooms.

4.3.5.1 How Learners with LD can be assisted in Schools

During interview, the head teachers and teachers were asked to indicate their suggestions on how they assist learners with LD in their schools. They recommended the following measures as presented under the following themes:

Teacher training and professional development: respondents recommended that teachers be provided with opportunities for training in special education, most teachers wanted to be sensitised about learners with LD, head teachers and teachers wanted to familiarise themselves with matters on LD and curriculum adaptation by reading more about LD. The results of the study coincide with Weeks and Erradu (2013) whose respondents recommended that teachers need support in providing high-intensity assistance for learners who experience intellectual barriers to learning.

Stakeholder involvement: respondents recommended that parents to work together with head teachers and teachers to assist learners with LD in school. The head teachers and teachers further recommended that they needed to collaborate with each other, including the EARCs to assist these learners. Gandhimathi, Jeryda and Eljo (2010) established that through community organization programmes, awareness

could be created to reduce confusion in the mind of the public and in the professionals.

Development of facilities: respondents requested the Ministry of Education and the County Government to assist in constructing and modifying classrooms, resource rooms and toilets to suit the needs of their learners. Similarly, Onwuka et al. (2015) had established that modification of facilities in a school makes the environment safe, friendly and stimulating. Furthermore, such environment encourages teaching, thus making learning meaningful or worthwhile.

Instructional resource provision: head teachers and teachers requested the Ministry of Education to purchase instructional resources for schools, provide adequate learning materials for learners with special needs in their schools, and alias with KICD, National Examination Council, Teachers Training Colleges, and all stakeholders to change the curriculum to suit the needs of all learners with special needs, including those with LD. They also asked if TSC could consider posting at least one resource teacher in every public primary school. This will then help in the dissemination of information about learning disabilities to the administrators (head teachers) and teachers through manuals and pamphlets. However, in Philippines, Dapoudong (2014) recommended that learning support programmes and the actual delivery of these programmes to be developed in terms of Individual Education Plan (IEP) provision, curriculum modifications and classroom adaptations that are appropriate for students with special educational needs. He argued that IEP gives the teacher the opportunity to plan, focus, target, teach and evaluate each child according to his/her needs. Furthermore, IEP provides opportunity for teachers' to actively work with the parents.

This therefore means that once the teachers' identify the child learning difficulties, he/she informs the parents on how to give additional help at home.

It later emerged in the focus group discussion that despite the teachers providing the support required; they were overwhelmed with the number of children in their classrooms. They therefore recommended some support strategies that can be improved to enable them assist these learners in inclusive education. These strategies include: TTCs to change curriculum to consider LD children through KICD, teachers to be sensitised about LD children, early identification and intervention of learners with LD and teachers to familiarise themselves with matters on LD. In addition, they suggested that teachers and schools administration should collaborate with other stakeholders (for example EARCs), curriculum adaptation and construction of more classrooms. In agreement with the study findings, Shukla and Agrwal (2015) suggested that special educators can be appointed in normal schools to assist the teachers in handling children with learning disabilities in India. Their study confirmed that there is need for proper provision of adequate instructional support to schools to enable inclusion of learners with LD in public primary schools.

4.4 Barriers in Inclusive Education for Learners with LD in Public Primary Schools in Trans-Nzoia County

Through interviews, head teachers and teachers were asked to identify the barriers in education for learners with learning disabilities in their schools. Here are some of the barriers they mentioned:

Large classroom size: some head teachers and teachers said that large classroom size inhibited teacher assessment and monitoring of learners regularly. Due to the implementation of FPE, the learner enrolment increased in primary schools which did

not commensurate with the number of teachers in schools creating a high pupil: teacher ratio. In agreement with the result, Wafula, Poipoi, Wanyama and Begi (2012) found out that the more children a teacher handled per class the fewer the chances of identifying children with learning disabilities. The fewer the number of children a teacher handled the closer the interaction and hence the easier the task of identifying children with learning disabilities.

Lack of specialised instructional materials and resources: the head teachers and teachers mentioned that there was lack of specialised instructional materials and resources to assist learners with LD in their schools. In agreement with this research, Cambridge-Johnson et al. (2014) found out that funding by government to support inclusive education is necessary because it serves as the foundation for educational programs to be successful. It was discovered that direct funding is not allotted to school teachers for buying equipment and materials, training, and support for the inclusive classroom.

Human resources: head teachers and teachers mentioned that they did not have adequate teachers employed by TSC to assist and support learners with LD in their schools. This therefore led to high pupil: teacher ratio which made classroom assessment and monitoring of learners with LD academic progress difficult. The findings coincides with Onwuka et al. (2015) research in Nigeria that found out that many teachers claimed that they could hardly attend to their pupils individually because of large class size and lack of time,. Hence, this act discriminates against learners because naturally, every child has individual difference and different learning styles that are peculiar and yet most times teachers ignore them. Thus, pupils are at risk of not learning because teachers can only provide solution to a problem when they know the problem other than ignoring it.

School environment: head teachers and teachers mentioned that the school environment in their schools was not supportive for inclusion of learners with LD because some teachers had negative attitudes towards learners with LD. They also mentioned that learners with LD were jeered by other pupils who were gifted in their classrooms/schools.

Additionally, in the focus group discussions, the teachers identified the following as barriers to inclusion of learner with learning disabilities in public primary schools in Trans-Nzoia County.

High mean score: some parents and teachers have very high expectations on mean score, and they therefore tend to push the learners beyond their capabilities. Teachers make these learners to repeat classes if they do not perform; which eventually affects their educational development and they drop out of school. The teachers in the focus group also said that the examination time was uniform across all learners irrespective of those with LD. This was considered unfair for learners with LD who have difficulties with time. Such learners will be struggling in completing examination within the standard time thereby performing poorly in examinations.

Inadequate training: the teachers in the focus groups stated that they were unable to offer maximum support to learners with LD because of the challenges they experienced. First, majority of the teachers complained about the knowledge they acquired during their training. Second, they affirmed that the instructed they received while in college did not prepare them on the ways of assisting learners with LD. This is because the content of training received in TTC was not detailed enough while others said that they left school long time ago. Third, inadequate training on pedagogies for assisting learners with LD was mentioned by every member in the

group discussion. Other barriers influencing inclusion of pupils with LD are outlined below: lack of special materials, manpower, enough time, overcrowding, environment not supportive, not accepting the way they are underperforming (parents and teachers), curriculum (examination time is common) and community. The responses identified the above mentioned barriers in the education for learners with LD in public primary schools in Trans-Nzoia County. They further suggested that these barriers made it hard for effective inclusive education to be implemented in Trans-Nzoia County.

The Sub County Directors of Education were also asked to identify barriers to inclusive education in public primary schools in Trans-Nzoia County.

The education officers mentioned *lack of proper infrastructure* in schools as a barrier to accommodate all learners irrespective of their disability status. Others said that *absenteeism* incidents by learners with learning disabilities were a challenge. *Attitude* of teachers was also found to be a barrier where some teachers labelled learners with LD as in schools “stupid”, “lazy” “slow learners” or “unteachables”. *Parental support* was also mentioned to be a barrier. In many schools, there was inadequate number of *trained teachers* in special needs education to handle learners with learning disabilities in Trans-Nzoia County. In agreement with this result, Naikoloyieu (2014) found out that majority (62.5%) of all teachers were not trained on inclusive education while 37.5 percent were trained. This implies that majority of teachers in public primary schools in Isinya District were not trained on inclusive education. In consonance with study findings, Onwuka, Obidike and Okpala (2015) in Nigeria found out that most teachers did not have the skills required to teach the children and did not create enabling environment for them to learn. They also found out that

teachers had rejected the use of IEP. This is probably because they did not understand how to use it.

The officers also said that there was *lack of teachers' preparedness* to deal with learners with special needs in inclusive education. This showed that a significant number of teachers were not prepared on how to handle and assist children with LD in primary schools. The education officers also mentioned that *inadequate teaching and learning resources* for classroom instruction was also a barrier influencing inclusion of learners with LD in public primary schools in Trans-Nzoia County. In agreement with the study results, Naikoloyieu (2014) findings indicated that 47.6 percent of the public primary schools in Isinya District had inadequate teaching learning resources with 18.3 percent having hardly enough. On the other hand, 34.1 percent had adequate resources to cater for implementation of the inclusive education. They further established *learners being non friendly to teachers* as a barrier. This therefore implied that most learners could not open up about their struggles to their teachers to identify their strengths and weaknesses for the necessary support.

4.4.1 How Barriers can be Addressed to Promote Inclusion of Learners with LD in Public Primary Schools in Trans- Nzoia County.

Head teachers and teachers were further asked to state how barriers in education were to be addressed to promote the inclusion of learners with learners with learning disabilities in their schools. Head teacher No. 2 suggested that:

The government to provide learning materials and to train more teachers on this.

Further, Head teacher No. 5 said that

Providing requiring learning aids, bringing on board more teachers involved and improving the environment to suit them.

The teachers also had their suggestions on improvement of inclusion of learners with LD in schools. Teacher No. 9 said that:

Train more teachers with special needs, sensitise teachers and learners and develop positive attitude to such children.

In addition, teacher No. 3 suggested that:

Give more training to teachers, government to provide these children with the necessary learning equipment.

The finding therefore shows that teacher training is needed, resources to support learners with LD are required and environment should be structured to meet the needs of pupils with LD. In agreement with these recommendations, Gateru (2010) said that more teachers should be trained in handling pupils with LD.

4.5 Chapter Summary

This chapter has presented the results of data analysis from questionnaires, interview and focus group discussion data. The analysis of research findings has been done through use of quantitative and qualitative analysis. Interpretation of the data has also been done together with comparison with previous research studies done on the same. The next chapter presents the conclusion and recommendations for this research study.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings of the study, conclusion, recommendations and suggestions for further studies.

5.2 Summary of Findings

5.2.1 Extent to which Respondents' Awareness of Learning Disabilities Influence Support for Learners with Learning Disabilities

The first objective of the research was to determine the extent to which respondents' awareness of learning disabilities influence the support for learners with learning disabilities in public primary schools in Trans-Nzoia County. According to the study results, 70.6% of teachers perceived that they were extremely aware that learners with LD could be identified through observation, screening and classroom performance ($M=4.52$ and $SD=0.86$). This showed that teachers were aware on the methods of identifying learners with learning disabilities in their classrooms/schools.

In addition, 64.1% of teachers also said that they were extremely aware that learners with LD experienced diverse challenges in their education ($M=4.49$ and $SD=0.82$). These challenges streamed from home, school and even in classroom. However, research results showed that most teachers were somewhat aware that learners with LD were the majority in their schools. However, teachers in the focus group identified that they had a high proportion of learners with LD in the classes/ schools. During focus group discussion, it was established that some teachers were not able to differentiate between learners with learning disabilities and with learners with special needs.

On average, teacher responses showed that 59.5% were moderately aware of who learners with learning disabilities were in their schools. The lack of adequate teacher understanding affected the support that was required to be given to those learners. This was supported by education officers interviewed who said that teacher awareness of learners with learning disabilities was low and this therefore affected the support given to such learners in schools.

5.2.2 Support Strategies Teachers' Use to Support Learners with LD

This objective was to establish the support strategies teachers' used to support learners with learning disabilities in public primary schools in Trans-Nzoia County. Research results showed that only 64.7% of teachers always supported learners with LD through collaboration with their colleagues. This was also evident during interview and focus group discussions where some of them said that they involved other teachers in trying to help learners with LD in their classrooms/schools.

Research results also revealed that 64.4% of teachers always remediated learning problems of learners with LD through structuring learning environment to suit their needs. This is because learners with LD require extra attention, extra support and additional motivation to ensure that they achieve their learning goals in an inclusive setting. Despite teachers indicating to be aware of the support needed for learners with learning disabilities, this was not actually the case in public schools. Since, only 58.6% of teachers reported that they always used several support strategies to educate and support learners with LD in inclusive education.

The lack of regular support was cited by teachers during interview due to high learner: teacher ratio, increased workload, lack of adequate facilities (classroom), lack of necessary instructional resources (human and material) and less parental support.

Composite scores revealed that 58.9% of teachers were aware of the support needed by learners with LD, but this did not translate to actual support. However, during interview, the teachers mentioned that the support given was not to a higher degree. This is against the tenets of ZPD which advocates that learners should be assisted with a more knowledgeable person to complete a task (Burster, 2014). Therefore, teachers have to be mediators in inclusion of learners with special needs to ensure that they attain their zone of proximal development.

5.2.3 Support Provided by School Administration towards the Provision of Inclusive Education for Learners with LD

The third objective of the study was to establish the support provided by school administration towards the provision of inclusive education for learners with learning disabilities in public primary schools in Trans-Nzoia County. Support required by learners with learning disabilities need to come from all fronts including Ministry of Education, parents, school administration and teachers. This study found that the inclusive education programme could be implemented successfully if the level of the teachers' competency was increased. Research results showed that 76.4% of teachers agreed that training in special education will help the support for learners with LD in their regular classrooms, but the support given to them was inadequate as found during interview sessions. Most 71.5% of teachers agreed that learners with LD required specialised educational resources to enable them study well without facing challenges in learning ($M=4.54$ and $SD=0.86$).

Composite scores revealed that 63.2% of teachers agreed that school administration had to support learners with LD to ensure that the goals of inclusive education are achieved in their schools. This explains why during focus group discussion with

teachers revealed that the policy of inclusion had not been adequately achieved in majority of public primary schools in Trans-Nzoia County. Even the education officers from the five sub-counties in Trans-Nzoia reported that support from Ministry of Education through EARCs was not enough thereby affecting the education progression of learners with LD in their schools. In conclusion to this objective, it was clear that school administration provided minimal support to ensure learners with LD were integrated in regular classrooms in public primary schools in Trans-Nzoia County. The reason for low support given to LD learners could be due to head teachers commitment, and their level of awareness that learners with LD require individualised attention and specialised support materials in classrooms/schools.

5.2.4 Strategies that can be used to Improve Teachers' Support for Learners with LD

The fourth objective of the study was to establish the strategies that can be used to improve teachers' support for learners with learning disabilities in public primary schools in Trans-Nzoia County for the effectiveness of inclusive education. There are several strategies that can be employed to enhance the effectiveness of an inclusive programme. The study established that learners with learning disabilities have not been adequately integrated in mainstream classrooms in Trans-Nzoia county public primary schools. This has therefore led to repetition; drop out, truancy and even poor performance of learners with LD in examinations for a period of time. To manage and streamline the implementation of inclusive policy, 85.4% of teachers recommended that more teachers should be trained in special education programmes to enable them provide required instructional support needed in integrating learners with learning disabilities ($M=4.65$ and $SD=0.98$).

In addition, 85.1% of teachers also said that they needed to recognise areas of strengths and weaknesses of learners with LD so that they can in cooperate measures that can be undertaken to assist these learners, 82.8% called for specialised teaching techniques (teaching and learning methods) to be used by teachers in public primary schools during classroom teaching and learning process to assist learners with LD. Through interview the head teachers, teachers and education officers also suggested that there is need for early identification of learners with LD so that intervention measures can be applied. For instance, they suggested that teachers and parents need to be sensitised about learners with LD, schools should collaborate with other stakeholders (for example EARCs) to enable identification of the problems that learners with LD have, teachers to familiarise themselves with matters pertaining LD and schools should provide more learning and infrastructural resources to ensure effective implementation of inclusive education. Vygotsky believed that social interaction has to be improved to enhance students learning in classroom. It also enables learners to learn from each other and from a knowledgeable person.

5.3 Conclusions

The study has established that learners with learning disabilities number are high in public primary schools in Trans-Nzoia County. However, they are identified as learners with disabilities or learners with special needs which generally includes other learners with hearing and visual impairments, physical disabilities and mental retardation. Learners with LD were found to be labelled as ‘slow learners’, ‘under achievers’, ‘underperformers’, and ‘rocks’ among others in public primary schools. Through interview, focus group discussions and questionnaires, it was established that teachers were aware of the existence of learners with learning disabilities in their schools. However, the level of inclusion of these learners in public primary schools

was found to be low in the schools that were surveyed. This implied that despite teachers indicating that they were aware of learners with LD in their schools, this did not translate to implementation of inclusive education in their institutions.

Teacher awareness for the support required by learners with learning disabilities was found to be high. Teachers said that they were aware that support for learners with LD needed to be a coordinated effort with other teachers in the schools but responses from them showed that due to high pupil: teacher ratio, assistance to learners by teachers in their schools was minimal. For instance, some classes had more than 85 learners and this made it difficult for teachers to provide individualised attention to these learners. The teachers reported that they were also aware of the support strategies needed to educate learners with learning disabilities. However, interview and FGDs responses showed that the teachers used trial and error method in trying to include learners with LD in their classrooms; this affected the implementation of inclusion policy.

The active involvement and support of the schools' administrators in the implementation of inclusive education programme is critical. Schools with the administrative support for inclusive education demonstrate a significant increase of awareness regarding the concept of inclusion. Teachers reported that they were aware of the administration support needed for learners with LD in their schools. They mentioned the support areas to be through; teacher training, school administration support in changing teachers' attitude through motivation, leadership, provision of infrastructure, provision of least restrictive environment and provision of specialised educational resources. Responses from all respondents indicated that school administration provided minimal support for learners with LD in their classrooms/

schools. For instance, majority of teachers indicated that they were not adequately trained on ways and methods of assisting learners with LD and their schools did not provide opportunities for seminars and in-service training to them.

Moreover, the teachers reported that there was inadequate number of teaching staff in their schools making it difficult for them to regularly monitor the academic progress of learners with LD in their schools. In addition, the resources (instructional) and other assistive devices were not available in public primary schools. The lack of adequate administration support was due to the failure of education officers', quality assurance and standard roles in public schools. Most of them appeared not to understand the support needed to be given to ensure effective implementation of inclusive education.

The respondents made various suggestions with regard to ways of ensuring inclusive education is implemented in full. For instance, teacher training was cited to be a significant requirement as most teachers in public primary schools in Trans-Nzoia County had not been trained on how to assist learners with LD while in TTCs. This therefore made it challenging for them to ensure effective inclusion of learners with LD in mainstream classrooms. The curriculum was also mentioned as a stumbling block towards implementation of inclusive education as pupils with LD are examined same as those who do not have LD yet their reasoning and intellectual capacity (processing of information) is not similar. Class size was also mentioned to be an obstacle to teaching learners with LD who require one to one attention.

5.4 Recommendations

The study has established that teachers are aware of the support needed to assist learners with LD in their schools. In reality however, this support is not available in majority of public primary schools in Trans-Nzoia County. Therefore, the study makes the following recommendations for policy and practical action to different stakeholders on how to improve inclusion of learners with learning disabilities in inclusive classrooms in Trans-Nzoia County.

5.4.1 Teachers

There is need for teachers to provide IEPs as an inclusive practice in all schools. Teachers also need to look for opportunities for further training on issues related with inclusive education and learning disability. Teachers also need to ensure that they work as a team with other stakeholders in helping learners with learning disabilities in their schools.

5.4.2 School Administration

There is need for school administration to look for ways of improving school learning infrastructure to accommodate learners with LD. School administration also needs to be at the forefront in ensuring that inclusive education is fully implemented through classroom instruction in their schools. Moreover, administration should provide a conducive environment for learning that includes teaching and learning materials based on the learners needs. The schools should also ensure that they collaborate with teachers, ministry of education and other stakeholders to ensure that the resources and needs of pupils with LD are provided.

5.4.3 Ministry of Education

The Ministry of Education through KICD needs to improve the curriculum to consider learners with LD. The Ministry of Education need also to provide teachers with in-service training on inclusive education and special needs education. Teachers' Service commission should provide adequate teaching staff in public primary schools to match the set standard of teacher: pupil ratio. Quality assurance and standard officers need to regularly visit schools to listen, advise and help teachers on how to implement inclusive education matters in schools.

5.4.4 Parents and Other Stakeholders

Parents need to collaborate with teachers in ensuring that they provide necessary information to support learning of their children. Teachers should support learners with learning disabilities to identify their strengths and build on them, and improve on their weaknesses. Teachers should help these learners procure assistive devices and other instructional materials required for learning in schools. Other stakeholders like; county government, NG-CDF and other donors such as UNICEF, UNESCO and Danish International Development Agency (DANIDA) should support schools in implementation of inclusive education.

5.5 Suggestions for Further Research

The study investigated teachers' awareness and support for learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County in Kenya. The study suggests the following for further research:

1. A similar research need to be conducted in other counties in Kenya
2. A similar research need to be conducted in secondary schools in Kenya
3. A study on the parents awareness and support for learners with LD in Trans-Nzoia County
4. A study on assessment for learners with learning disabilities in Trans-Nzoia County.
5. A study on the level of teacher preparedness towards implementation of inclusive education is needed.

REFERENCES

- Abosi, O. (2007). Educating Children with Learning Disabilities in Africa. *Learning Disabilities Research & Practice*, 22(3), 196-201.
- Adebowale, O.F. & Moye, G.P. (2013). *Teachers' Knowledge of and Attitude Towards Learning Disabilities*. Online Educational Journal.
- Adelizzi, J. & Goss, D. (2001). *Parenting Children with Learning Disabilities*. Westport, CT: Greenwood.
- Adoyo, P. O. & Odeny, M. L. (2015). Emergent Inclusive Education Practice in Kenya, Challenges and Suggestions. *International Journal of Research in Humanities and Social Studies*, 2(6), 13-16.
- Agresti, A. & Finlay, B. (2008). *Statistical Options for the Social Sciences* (4th Ed.). Upper Saddle River, NJ: Prentice Hall.
- Al Khatib, S. (2007). A Survey of General Education Teachers' Knowledge of Learning Disabilities in Jordan. *International Journal of Special Education*, 22 (1), 72-76.
- Ali, M.M., Mustapha, R., & Jelas, M.Z. (2006). An Empirical Study on Teachers Perception towards Inclusive Education in Malaysia. *International Journal of Special Education*, 21 (3), 36-44.
- Anderson, K. M. (2007). Differentiating Instruction to Include All Students. *Preventing School Failure*, 51(3), 49-54.
- Austin, V. L. (2001). Teachers' Beliefs about Co-teaching. *Remedial and Special Education*, 22, 245-255.
- Australian People with Learning Disabilities (AUSPELD) (2015). *Supporting People with Learning Disabilities: Understanding LD: A Guide for Parents*. Literacy Services, WA. Retrieved on May 15, 2017, from: www.uldforparents.com
- Babbie, E.A. (2010). *The Practice of Social Research* (12th ed.). Belmont, CA: Wadsworth.
- Ballard, K. (2003). The Analysis of Context: Some Thoughts on Teacher Education, Culture, Colonization and Inequality. In Booth, T., Nes, K., and Stromstad, M. (eds.). *Developing Inclusive Teacher Education*, London: Routledge/Falmer.
- Barrett, A., Ali, S., Clegg, J., Hinostroza, E., Lowe, J., Nickel, J., Novelli, M., Oduro, G., Pillay, M., Tikly, L., & Yu, G. (2007). *Initiatives to Improve the Quality of Teaching and Learning: A Review of Recent Literature*. Paper commissioned for the EFA Global Monitoring Report 2008, Education for All by 2015: Will We Make It? UNESCO.

- Bartlett, J.E., Kotrlik J.W. & Higgins, C.C. (2001). "Organisational Research: Determining Appropriate Sample Size in Survey Research", *Information Technology and Performance Journal*, 19(1), 43-50.
- Berk, L. (2002). *Child Development* (5th Ed.). Boston: Allyn & Bacon.
- Berliner, D.C. (2002). Educational Research: The Hardest Science of All. *Educational Researcher*, 31, 18-20.
- Best, J.W. & Kahn, J.V. (2012). *Research in Education*. (10th ed.). New York: Hazry.
- Bigham, T. (2010). *Do Teachers Have A Negative Attitude towards the Inclusion Of Students With Special Needs?* Retrieved on March 27, 2017 from www.cehs.ohio.edu/gfx/media/pdf/tracey.pdf
- Black-Hawkins, K., Florian, L. & Rouse, M. (2007). *Achievement and Inclusion in Schools*. London: Routledge
- Blake, B. & Pope, T. (2008). Developmental Psychology: Incorporating Piaget's Theories in Classroom. *Journal of Cross-Disciplinary Perspectives in Education*, 1(1), 59-67.
- Blanton, L. P., Pugach, M. C., & Florian, L. (2011). *Preparing General Education Teachers to Improve Outcomes for Students with Disabilities*. AACTE & NCLD. Retrieved on October 8, 2016, from www.aacte.org
- Boblett, N. (2012). Scaffolding: Defining the Metaphor. Teachers College, Columbia University. Teachers College, Columbia University Working Papers. *TESOL & Applied Linguistics*, 12(2), 1-16.
- Bollman, K. A., Silberglitt, B., & Gibbons, K. A. (2007). The St. Croix River Education District Model: Incorporating Systems-Level Organization and A Multi-Tiered Problem-Solving Process For Intervention Delivery. In S. R. Jimerson, M. K. Burns, & A. M. VanDerHeyden (Eds.), *Handbook of Response To Intervention: The Science and Practice of Assessment and Intervention* (pp. 319–330). New York: Springer.
- Bradley, R., Danielson, L., & Hallahan, D. (Eds.). (2002). *Identification of Learning Disabilities: Research to Practice*. Mahwah NJ: Erlbaum.
- British Columbia Ministry of Education. (2011). *Supporting Students with Learning Disabilities: A Guide for Teachers*. British Columbia Ministry of Education. Retrieved on May 12, 2016, from http://www.bced.gov.bc.ca/specialed/docs/learning_disabilities_guide.pdf
- Bruster, D.D. (2014). *Comparing the Perceptions of Inclusion between General Education and Special Education Teachers*. Retrieved on May 29, 2017, from [http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1859 & context=doctoral](http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1859&context=doctoral)

- Bryan, T.H., Wong, B.Y.L., & Donohue, M. (2002). *The Social Dimensions of Learning Disabilities: Essays in Honour of Tanis Bryan*. Mahwah, N.J: L. Erlbaum Associated.
- Bryman, A. (2016). *Social Research Methods*. (5th ed.). London: Oxford.
- Bryman, A., & Bell, E. (2011). *Business Research Methods*. New York: Oxford University Press, USA.
- Calhoun, M. B., Al Otaiba, S., Cihak, D., King, A., & Avalos, A. (2007). Effects of APeer-Mediated Program on Reading Skill Acquisition for Two-Way Bilingual First-Grade Classrooms. *Learning Disability Quarterly*, 30, 169-185. doi:10.2307/30035562.
- Callender, W.A. (2007). The Idaho Results-Based Model: Implementing Response To Intervention State-Wide. In S. R. Jimerson, M. K. Burns, & A. M. VanDerHeyden (Eds.), *Handbook of Response To Intervention: The Science and Practice of Assessment and Intervention* (pp. 331–342). New York: Springer.
- Cambridge-Johnson, J., Hunter-Johnson, Y. & Norissa G. L. Newton, N.G.L. (2014). Breaking the Silence of Mainstream Teachers' Attitude towards Inclusive Education in the Bahamas: High School Teachers' Perceptions. *The Qualitative Report*, 19(84), 1-20. Retrieved on March 21, 2017, from <http://www.nova.edu/ssss/QR/QR19/cambridgejohnson84.pdf>
- Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing Student Teachers' Attitude towards Disability and Inclusion. *Journal of Intellectual & Developmental Disability*, 28 (4), 369-379.
- Carr, G. (2006). Who Do You Think You Are? *The Economist*, 23 (12), 79-86
- Carroll, A. (2003). The Impact of Teacher Training in Special Education on the Attitudes of Australian Pre-Service General Teachers towards People with Disabilities. *Teacher*, 30(3), 65-79.
- Centre for Applied Special Technology [CAST], (2011). *Universal Design for Learning Guidelines Version 2.0*, Wakefield. M.A: Center for Applied Special Technology, Author. Retrieved May 28, 2017 from [http://www.udlcenter.org/sites/udlcenter.org/files/UDL_Guidelines_Version_2.0_\(Final\)_3.doc](http://www.udlcenter.org/sites/udlcenter.org/files/UDL_Guidelines_Version_2.0_(Final)_3.doc)
- Chaula, G.J. (2014). *Challenges Teachers Face in Implementation of Inclusive Education in Primary Schools in Tanzania: A Case Study of Two Primary Schools in Tanzania*. MA Thesis, Hedmark University College.
- Clark, M. & Artiles, A. (2000). A Cross-National Study of Teachers' Attributional Patterns. *The Journal of Special Education*, 34(2), 77-89.

- Cochran, W.G. (1977). *Sampling Techniques* (3rd ed.). New York: Wiley & Sons.
- Cohen, L, Manion, L & Morrison, K. (2007). *Research Methods in Education* (6th Ed.). London: Routledge.
- Cohen, N. (2001). The interface between ADHD and language: An Examination of Language, Achievement and Cognitive Processing. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41 (3), 353.
- Connecticut State Department of Education, (2010). *Guidelines for Identifying Children with Learning Disabilities*. Hartford, CT: Author.
- Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for Creating Effective Practices. *Focus on Exceptional Children*, 28(3), 1-16.
- Cooper, D. & Schindler, P. (2013). *Business Research Methods* (12th Ed.). New York: McGraw-Hill/Irwin.
- Cortiella, C. & Horowitz, S.H. (2014). *The State of Learning Disabilities: Facts, Trends and Emerging Issues*. New York: National Centre for Learning Disabilities.
- Cortiella, C. (2011). *The State of Learning Disabilities*. New York, NY: National Center for Learning Disabilities. Retrieved on 28-12-2016 from: http://illinoiscte.org/PDF/research_and_reports/state_of_learning_disabilities.pdf?lbisphpreq=1
- County Government of Trans-Nzoia [CGT] (2015). *Trans Nzoia County Integrated Development Plan, 2013-2017*. Kitale: County Government of Trans-Nzoia.
- Crawford, S.C. (2007). Specific Learning Disabilities and Attention-Deficit Hyperactivity Disorder: Under-recognized in India. *Indian Journal of Medical Science*, 61, 637-8.
- Creswell, J. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed). Thousand Oaks, California: Sage Publications.
- Creswell, J. W. & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research* (2nd Ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design*. New York: Sage Publications.
- Creswell, J.W. & Clark, P. (2007). *Designing and Conducting Mixed Methods Research*. Thousands Oakes, CA: Sage Publications.
- Creswell, J.W. (2009). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*. New Delhi: Sage India.
- Crotty, M. (2003). *The Foundations of Social Research*. London: Sage Publications.

- Daane, C. J., Beirne-Smith, M., & Latham, D. (2000). Administrators' and Teachers' Perceptions of the Collaborative Efforts of Inclusion in the Elementary Grades. *Education, 121*(2), 331-338.
- Dalton, E. M., Mckenzie, J. A., & Kahonde, C. (2012). The implementation of Inclusive Education in South Africa: Reflections Arising From A Workshop For Teachers And Therapists To Introduce Universal Design for Learning. *African Journal of Disability 1*(1), Art.# 13, 7.
- Dalton, E.M. (2005). 'Teaching and learning for all students through differentiated instruction and technology', RI-ASCD Journal of Research and Professional Development: The Leading Edge, RI-ASCD, V1, Coventry, RI.
- Daniels, H. (2001). *Vygotsky and Pedagogy*. New York: Routledge-Falmer.
- Daniels, H. (2007). *The Cambridge Companion to Vygotsky*. Cambridge, MA: Cambridge University Press.
- Dapoudong, R.C. (2014). Teachers' Knowledge and Attitude towards Inclusive Education: Basis for an Enhanced Professional Development Program. *International Journal of Learning & Development, 4*(4), 13-14.
- Davis, P. & Florian, L. (2004). *Teaching Strategies and Approaches for Pupils with Special Educational Needs: A Scoping Study*. University of Cambridge.
- Deluca, M., Tramontano, C. & Kett, M. (2014). *Including Children with Disabilities in Primary School: The Case of Mashonaland, Zimbabwe*. Working Paper Series: No. 26. Leonard Cheshire Disability and Inclusive Development Centre.
- Deshler, D., Schumaker, J., Lenz K., Bulgren, J., Hock, M., Knight, J., & Ehren, B. (2001). Ensuring Content-Area Learning by Secondary Students with Learning Disabilities. *Learning Disabilities Research & Practice, 16*(2), 96-108.
- DeSimone, J., & Parmar, R. (2006). Issues and Challenges for Middle School Mathematics Teachers in Inclusion Classrooms. *School Science & Mathematics, 106*(8), 338-348.
- DFID (2009). 'Education Strategy: Consultation Paper'. Retrieved on June 13, 2016, from <http://consultation.dfid.go.uk/education2017/>
- Donovan, M. S., & Cross, C. T. (2002). *Minority Students in Special and Gifted Education*. Washington, DC: National Academy Press. Retrieved on June 13, 2016, from <http://www.nap.edu/catalog/10128.htm>.
- Duhaney, D. C., & Duhaney, L. M. G. (2000). Assistive technology: Meeting the Needs of Learners with Disabilities. *International Journal of Instructional Media, 27*, 393-401.

- Dukmak SJ. (2013). Regular Classroom Teachers' Attitudes towards Including Students with Disabilities in the Regular Classroom in the United Arab Emirates. *The Journal of Human Resource and Adult Learning*, 9(1), 26- 39.
- Dupoux, E., Hammond, H., Ingalls, L., & Wolman, C. (2006). Teachers' Attitudes toward Students with Disabilities in Haiti. *International Journal of Special Education*, 21(3), 1- 14.
- El-GamelenEbrahim, H. A. E & El-Zeftawy, A.M.A (2015). Teachers' Knowledge, Attitudes and Reported Strategies to Assess and Support the Students with Learning Difficulties. *IOSR Journal of Nursing and Health*, 4(2), 79-92.
- Elkins, J. (2002). Learning Difficulties/Disabilities in Literacy. *Australian Journal of Language and Literacy*, 25(3), 11-18.
- Ellis, E., Gable, R. A., Gregg, M., & Rock, M. L. (2008). REACH: A Framework for Differentiating Classroom Instruction. *Preventing School Failure*, 52(2), 31–47.
- Ellis, S., Tod, J & Graham, L. (2008). Special Educational Needs and Inclusion: Reflection and Renewal. *National Association of Schoolmasters Union of Women Teachers (NASUWT)*. Retrieved on 7 Nov, 2015, from, <http://www.nasuw.org.uk/TrainingEventsandPublications/NASUWTPublications/AccessiblePublications/Education/ReflectionandRenewalSENandInclusion/>
- Engelbretch, P. A. (2006). Promoting Inclusive Education in Primary Schools in South Africa. *British Journal of Special Education*, 13, 121-128.
- European Agency for Development in Special Needs Education, (2010). *Teacher Education for Inclusion- International Literature Review*. Odense, Denmark: European Agency for Development in Special Needs Education
- Favre, L.R & Erin, A. (2011). Recognizing Learning Disabilities in School Age Students: The Importance of a School-Based Team. LD Worldwide. Retrieved on May 19, 2017, from <https://www.ldworldwide.org/recognizing-learning-disabilities>
- Ferguson, D.L. & Ferguson, P.M. (2000). Qualitative Research in Special Education. Notes toward an Open Inquiry of a New Orthodoxy? *The Journal of the Associate for Persons with Severe Handicaps*, 15(3), 180-185.
- Finn, C. E., Jr., Rotherham, R. A. J., & Hokanson, C. R., Jr. (Eds.). (2001). *Rethinking Special Education for A New Century*. Washington, DC: Thomas B. Fordham Foundation and Progressive Policy Institute. www.edexcellence.net/library/specialed/index.html
- Flem, A., Moen, T., & Gudmundsdottir, S. (2004). Towards Inclusive Schools: A Study of Inclusive Education in Practice. *European Journal of Special Needs Education*, 19, 85-98.

- Fletcher, J.M., Coulter, W.A., Reschly, D.J., & Vaughn, S. (2004). Alternative Approaches to the Definition and Identification of Learning Disabilities: Some Questions and Answers. *Annals of Dyslexia*, 54(2), 304-334.
- Flores, M.M. (2008). Universal Design in Elementary and Middle School: Designing Classrooms and Instructional Practices to Ensure Access to Learning for All Students. *Childhood Education*, 84(4), 224-229.
- Ford, J. (2013). Educating Students with Learning Disabilities in Inclusive Classrooms. *Electronic Journal for Inclusive Education*, 3(1), 16-25.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J., & Sharma, U. (2013). *Inclusive Education for Students with Disability: A Review of the Best Evidence In Relation to Theory and Practice*. Australian Research Alliance for Children and Youth (ARACY).
- Fraenkel, J.R. & Wallen, N.E. (2009). *How to Design & Evaluate Research in Education*(6th Ed.). New York: McGraw-Hill.
- Friend, M. (2008). *Co-teach! A manual for creating and sustaining classroom partnerships in inclusive schools*. Greensboro, NC: Marilyn Friend, Inc.
- Friend, M., & Bursuck, W. (2006). *Including Students with Special Needs: A Practical Guide for Classroom Teachers*. Boston: Allyn & Bacon.
- Friend, M., & Cook, L. (2003). *Interactions: Collaborative Skills for School Professionals* (4th Ed.). New York: Longman.
- Friend, M., & Cook, L. (2010). *Interactions: Collaboration Skills for School Professionals* (6th ed.). Columbus, OH: Merrill.
- Friend, M., & Hurley-Chamberlain, D. (2011). *Is co-teaching effective?* Council for Exceptional Children. Retrieved on April 16, 2017, from, <http://www.cec.sped.org>.
- Friend, M., & Bursuck, G.W. (2006). Including Students with Special Needs: A Practical Guide for Classroom Teachers, 4/E. Chapter 5: *Planning Instruction by Analyzing Classroom and Students Needs*. Boston: Allyn & Bacon.
- Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-Teaching: An Illustration of the Complexity of Collaboration in Special Education. *Journal of Educational and Psychological Consultation*, 20, 9–27. Retrieved on June 18, 2017, fromfile:///E:/Friend-et-al-2010_coteaching.pdf
- Fuchs, D., & Fuchs, L. S. (2006). Introduction to Response To Intervention: What, Why, and How Valid Is It? *Reading Research Quarterly*, 41, 93–99.
- Fuchs, D., Mock, D., Morgan, P. L., & Young, C. L. (2003). Responsiveness-to-Intervention: Definitions, Evidence, and Implications for the Learning

- Disabilities Construct. *Learning Disabilities Research & Practice*, 18, 157–171.
- Fuchs, W. (2010). Examining Teachers' Perceived Barriers Associated with Inclusion. *SRATE Journal*, 19(1), 30-35.
- Gaad, E., & Khan, L. (2007). Primary Mainstream Teachers' Attitudes towards Inclusion of Students with Special Education Needs In The Private Sector: A Perspective from Dubai. *International Journal of Special Education*, 22(2), 95-109.
- Gall, M.D., Gall, J.P. & Borg, W.R. (2007). *Educational Research: An Introduction* (8th ed.). Boston, MA: Allyn & Bacon.
- Gandhimathi, U., Jeryda, J.O. & Eljo, G. (2010). Awareness about Learning Disabilities among the Primary School Teachers. *Cauvery Research Journal*, 3 (1 & 2), 71-79.
- Garcia-Huidoblo, J.E. (2005). *La Inigualdad en Educacion como bien democratic y de desarrollo. Ponencia presentada en la Reunion del Comite Intergubernamental del PRELAC, organizada por la UNESCO-OREALC, Santiago de Chile, 6 y 7 de diciembre de 2005.*
- Gargiulo, R.M. (2004). *Young Children with Special Needs*. Clifton Park, NY: Thomson/Delmar Learning.
- Garner, B.K. (2008). When Students Seem Stalled: The Missing Link For Too Many Kids Who Don't "Get It?" Cognitive Structures. *Educational Leadership*, 65(6), 32-38.
- Gateru, W.A. (2010). *Teachers Awareness and Intervention for Primary School Pupils with Learning Disabilities in Inclusive Education in Makadara Division Kenya*. MED Thesis, Kenyatta University, Kenya.
- Gindis, B. (2003). Remediation through Education: Socio-cultural Theory and Children with Special Need. In: Kozulin et al. (Eds). *Vygotsky's Educational Theory in Cultural Context*. (Cambridge University Press.200-255.
- Giuliani, P.G. & Bacon, P.A. (2010). *Social-Emotional Problems*. Retrieved on February 13, 2017, from <http://www.education.com/referece/article/social-emotional-problems>.
- Global Action Week [GAW] & Elimu Yetu Coalition [EYC], (2014). *Equal Rights, Equal Opportunities: Inclusive Education for Children with Disability*.
- Grum, D.K. (2012). *Concept of Inclusion on the Section of Vygotskian Socio-Cultural Theory and Neuropsychology*. Retrieved on March 13, 2017, from <https://www.dlib.si/stream/URN:NBN:SI:DOC-BF8LRMOG/473c6dc1-a740.../PDF>

- Hall, T., Strangman, N., & Meyer, A. (2003). *Differentiated Instruction and Implications for UDL Implementation*, Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved on February 13, 2017 from http://aim.cast.org/learn/historyarchive/backgroundpapers/differentiated_instruction_udl.
- Hallahan, D. P., Lloyd, J.W., Kauffman, J. M., Weiss, M. P. & Martinez, E. A. (2005). *Learning Disabilities: Foundations, Characteristics, and Effective Teaching*. MA, Boston: Allyn & Bacon.
- Hallahan, D.P. & Keogh, B.K. (2001). *Research and Global Perspectives in Learning Disabilities*. Mahwah, NJ: America Psychological Association.
- Hammond, H., & Ingalls, L. (2003). Teachers' Attitudes Toward Inclusion: Survey Results From Elementary School Teachers In Three South-Western Rural School Districts. *Rural Special Education Quarterly*, 22(2), 24-30.
- Hammond, J. (Ed.). (2002). *Scaffolding Teaching and Learning in Language and Literacy Education*. Newtown, Australia: PETA.
- Harlaar, N., Spinath, F.M., Dale, P., & Plomin, R. (2005). Genetic Influences on Early Word Recognition Abilities and Disabilities. A Study Of 7-Year old Twins. *Journal of Child Psychology and Psychiatry*, 46, 373-384.
- Harris-Murri, N., King, K., & Rostenberg, D. (2006). Reducing Disproportionate Minority Representation in Special Education Programs for Students with Emotional Disturbances: Toward A Culturally Responsive Response To Intervention Model. *Education and Treatment of Children*, 29, 779-799.
- Hott, B., Walker, J., & Sahni, J. (2012). *Peer Tutoring*. Council for Learning Disabilities [CLD]. Retrieved on 18 July, 2017 from <https://www.council-for-learning-disabilities.org/peer-tutoring-flexible-peer-mediated-strategy-that-involves-students-serving-as-academic-tutors>
- Hughes, C. & Dexter, D.D. (2016). *The Use of RTI to Identify Students with Learning Disabilities: A Review Research*. National Centre for Learning Disabilities. Retrieved on 27/05/2017 from rtinetwork.org/learn/research/use-rti-identify-students-learning-disabilities-review-research
- Hurst, M. (2016). *Zone of Proximal Development and Scaffolding in the Classroom*. Retrieved on December 27, 2016, from: www.study.com/academy/lesson/zone
- Hwang, Y., & Evans, D. (2011). Attitudes towards inclusion: Gaps Between Beliefs and Practice. *International Journal of Special Education*, 26(1), 136-146.
- Individuals with Disabilities Education Improvement Act [IDEA], (2004). *Public Law 108-446* <http://www.p12.nysed.gov/specialed/idea/108-446.pdf>.
- Ingrid, L. & Sunit, B. (2013). *Teachers for All: Inclusive Teaching for Children with Disabilities*. International Disability and Development Consortium (IDDC).

- Integra, (2009). *A Handbook on Learning Disabilities: Improving the Lives of Children and Youth with Learning Disabilities*. Ontario Ministry of Children and Youth Services, Ontario.
- Jacob, G. (2001). Providing the Scaffold: A Model for Early Childhood/ Primary Teachers Preparation. *Early Childhood Journal*, 29(2), 125-130.
- Jitendra, K.A., Burgess, C., & Gajria, M. (2011). Cognitive Strategy Instruction for Improving Expository Text Comprehension of Students with Learning Disabilities: The Quality of Evidence. *Exceptional Children*, 77(2), 135-159.
- Johnson, C.M. (2012). *Co-Teaching Influence on Teaching And Learning: How Does The Co-Teaching Model Influence Teaching And Learning In The Secondary Classroom*. Retrieved on June 8, 2017, from file:///E:/Johnson_Christina_MP-co%20teaching.pdf
- Jordan, A. & Stanovich, P. (2002). Preparing General Educators to Teach in Inclusive Classrooms: Some Food For Thought. *The Teacher Educator*, 37(3), 173-185.
- Jung, D.Y. (2007). South Korean Perspective on Learning Disabilities. *Learning Disabilities Research & Practice*, 22(3), 183-188.
- K.I.S.E (2002). *Education of Children with Specific Learning Disabilities*. Distance Learning Module 6. Nairobi, Kenya.
- K.I.S.E (2008). *Brochure of K.I.S.E programmes and services*. Nairobi: KISE.
- Kafonogo, F.M., & Bali, T.A.L. (2013). Exploring Classroom Teachers' Awareness of Pupils with LD: Focusing on Public Primary Schools in Tanzania. *Journal of Education Practice*, 4(24), 13-21.
- Kakabaree, K, Akbar, A. & Ali, D.A. (2012). Awareness and Capacity of Primary School Teachers in Identifying Students with Learning Disability in the Province of Kermanshah. *Procedia-Social and Behavioural Sciences* 46, 2615-2619 Elsevier Ltd. Retrieved on February 12, 2017, from www.sciencedirect.com
- Kalyva, E., Gojkovic, D., & Tsakiris, V. (2007). Serbian Teachers' Attitudes towards Inclusion. *International Journal of Special Education*, 22(3), 31-36.
- Kamala, R. & Ramganes, E. (2013). Knowledge of Specific Learning Disabilities Among Teacher Educators in Puducherry, Union Territory in India. *International Review of Social Sciences and Humanities*, 6(1), 168-175.
- Karande, S. (2008). Current Challenges in Managing Specific Learning Disability in Indian Children. *Journal of Postgraduate Medicine*, 54(2), 75.

- Karande, S., Mehta.V. & M. Kulkarni, M. (2007). Impact of an Education Program on Parental Knowledge of Specific Learning Disability, Indian. *Journal of Medical Science*, 61, 398-406.
- Kaufman, A.S. & Kaufman, N.L. (2005). *Essentials of Research Design & Methodology* (3rd Ed.). Bloomington, MN: Pearson, Inc.
- Kearsley, G. (2005). *Social Development Theory. Open Learning Technology Cooperation*. Retrieved on August 10, 2016, from <http://www.educationau.edu.au/archives/CP/041.html>
- Kenya National Bureau for Statistics [KNBS], (2007). *Kenya National Survey for Persons with Disabilities – Main Report*. Nairobi: Government Printers.
- Kimberlin, C.L., & Winterstein, A.G. (2008). Validity and Reliability of Measurement Instruments Used in Research. *Am J Health System Pharm*, 1(65), 2276-84.
- King-Sears, M.E. (2008). Facts and Fallacies: Differentiation and the General Education Curriculum for Students with Special Educational Needs. *Support for Learning*, 23(2), 55-62.
- King-Shaver, B. & Hunter, A. (2003). *Differentiated Instruction in the English Classroom*. Portsmouth, NH: Heinemann.
- Koay, T., Lim, L., Sim, W., & Elkins, J. (2006). Learning Assistance and Regular Teachers' Perceptions of Inclusive Education in Brunei Darussalam. *International Journal of Special Education*, 21(1), 119-130.
- Kochhar-Bryant, C. A. (2008). *Collaboration and System Coordination for Students with Special Needs: From Early Childhood to the Postsecondary Years*. Upper Saddle River, NJ: Merrill.
- Kochung, P. (2003). *Report of the Taskforce on Special Needs Education Appraisal Exercises*. Nairobi.
- Kombo, D.K. & Tromp, D.L. (2014). *Proposal and Thesis Writing: An Introduction*. Nairobi: Paulines Publication Africa.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Kozulin, A., Gindis, B., Ageyev, V., Miller, S. (2003). *Vygotsky's Educational Theory and Practice in Cultural Context*. Cambridge: Cambridge University Press.
- Krause, K., Bochner, S. & Duchesene, S. (2003). *Educational Psychology for Learning and Teaching*. Australia: Thomson.

- Kumar, R. (2014). *Research Methodology: A Step-by-Step Guide for Beginners*. London: Sage.
- Kunsch, C. A., Jitendra, A. K., & Sood, S. (2007). The Effects of Peer-mediated Instruction in Mathematics for Students with Learning Problems: A Research Synthesis. *Learning Disabilities Research and Practice*, 22, 1-12. doi:10.1111/j.1540-5826.2007.00226.x
- Lacey, P. & Porter, J. (2005). *Researching Learning Disabilities*. London: Sage Publications.
- Lampert, M.A, Carpenter-Ware, K & David, W. Harvey, D.W (2012). Learning Disabilities: The Impact of Social Interaction on Educational Outcomes for Learners with Emotional and Behavioural Disabilities. *European Journal of Business and Social Sciences*, 1(8), 67-77. Retrieved on January 22, 2017, from <http://www.ejbss.com/recent.aspx>
- Learning Disabilities Association of Canada [LDAC], (2002). *Putting A Canadian Face on Learning Disabilities* (PACFOLD). Ottawa: LD Association of Canada.
- Learning Disabilities Association of Ontario [LDAO], (2001). *Learning Disabilities: A New Definition*. Ontario, CA: LDAO.
- Learning Disabilities Online, (2016). *National Joint Council on Learning Disabilities [NJCLD] Definition of Learning Disabilities*. Retrieved on October 16, 2016, from <http://www.ldonline.org/pdfs/njcld/NJCLDDefinitionofLD-2016.pdf>
- Leedy, P.D. & Ormrod, J.E. (2013). *Practical Research: Planning and Design*. (11th Ed.). Boston: Chicago.
- Lerner, J. W., & Kline, F. (2006). *Learning Disabilities and Related Disorders: Characteristics and Teaching Strategies* (10th Ed.). New York: Houghton Mifflin.
- Lerner, J. W., & Johns, B. H. (2009). *Learning Disabilities and Related Mild Disabilities: Characteristics, Teaching Strategies, and New Directions* (11th Ed.). Boston: Houghton Mifflin.
- Lerner, J.W., & Johns, B. H. (2012). *Learning Disabilities and Related Mild Disabilities: Teaching Strategies and New Directions* (12th Ed.). Wadsworth Cengage Learning. Retrieved on May 17, 2017, from silvage.com.au/documents/sample-pages/prod1765.pdf
- Lerner, J.W., & Johns, B. H. (2014). *Learning Disabilities and Related Disabilities: Strategies for Success* (13th Ed.). Cengage Learning.
- Lyon, G.R. (2003). Reading Disabilities: Why Do Some Children Have Difficulty Learning To Read? What Can Be Done About It? Perspectives. *International Dyslexia Association*, 29(2), 17-19.

- Leyser, Y., & Tappendorf, K. (2001). Are attitudes and practices regarding mainstreaming changing? A case of teachers in two rural school districts, *Education*, 121 (4), 751-761. Retrieved on July 20, 2017, from <http://www.amazon.com>.
- Manitoba Education & Advanced Learning [MEAL], (2015). *Supporting Inclusive Schools: Addressing the Needs of Students with Learning Disabilities*. Manitoba, Canada. Retrieved on May 15, 2017, from www.gov.mb.ca/k12/docs/support/learn-disabilities/full-doc.pdf
- Manitoba Education, Citizenship and Youth (2006). *Appropriate Educational Programming in Manitoba: Standards for Student Services*. Winnipeg, MB: Manitoba Education, Citizenship and Youth. Retrieved on April 28, 2017, from www.edu.gov.mb.ca/k12/specedu/documents.html.
- Maryland State Department of Education [MSTE], (2011). *UDL Guidelines Learning Wheel*. Retrieved on July 22, 2017, from <http://udlwheel.mdonlinegrants.org/>
- Mastropieri, M.A., Scruggs, T.E. & Berkeley, S. (2007). Peers helping peers. *Educational Leadership*, 64(5), 54-58.
- McDevitt, T.M. & Ormrod, J.E. (2002). *Child Development and Education*. Upper Saddle River, NJ: Merrill Prentice Hall.
- McInerney, D. M., & McInerney, V. (2006). *Educational Psychology: Constructing Learning* (4th ed.). Pearson Education Australia. Frenchs Forrest, NSW.
- McLeod, S. (2014). *Zone of Proximal Development [ZPD]*. Retrieved on November 15, 2016, from www.simplypsychology.org/Zone-of-Proximal-Development.html.
- McLeskey J. & Waldron, N. (2002). School change and inclusive schools: Lessons learned from practice. *Phi Delta Kappan*, 84, 65-72.
- McMillan, J.H., & Schumacher, S. (2010). *Research in Education: Evidence – Based Inquiry* (7th ed.). Boston, MA: Pearson.
- McNamara, B.E. (2007). *Learning Disabilities: Bridging the Gap between Research and classroom Practice*. Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Mercer, C., Mercer A., & Pullen, P. (2011). *Teaching Students with Learning Problems*. Upper Saddle River, NJ: Pearson.
- Meyer, A., & Rose, D. (2005). *The Future is in the Margins: The Role Of Technology And Disability In Educational Reform*, White Paper, American Institutes for Research, US Department of Education, Office of Educational Technology. CAST Inc., Wakefield, MA.

- Mile, S. (2002). *Schools for All: Including Disabled Children In education. Save the Children*. Retrieved on Nov 7, 2015, from schools-for-all.pdf
- Miller, C.J., Sanchez, J., & Hynd, G.W. (2003). Neurological Correlates of Reading Disabilities. In Swanson L. Graham S. editors. *Handbook of Research on Learning Disabilities*. New York: NY: Guilford Press, 242-255.
- Ministry of Education (2009). *The National Special Needs Education Policy Framework*, Nairobi, Government Printers.
- Ministry of Education (MOE, 2008). *Report Presented At The International Conference On Education, Geneva, 25-28 on Inclusive Education: The Way Of The Future*.
- Ministry of Education [MOE] (2002). *The Primary Teacher Education (PTE) syllabus*. Nairobi: Government Printers.
- Ministry of Education National Commission on Special Education (2005). *Commonwealth of the Bahamas National Census of Special Education Population and Related Services Report*. Nassau, the Bahamas: Bahamas Government Printing Office.
- Ministry of Education Saskatchewan, (2009). *Teachers Make Difference: Teaching Students at Middle and Secondary Levels*. Living Document. Retrieved on May 21, 2017, from <http://publications.gov.sk.ca/documents/11/40200-Teachers-Make-the-Difference.pdf>
- Ministry of Education (MOE, 2012). *Taskforce on the Re-alignment of the Education Sector to the Constitution of Kenya 2010 Report: Towards Globally Competitive Quality Education for Sustainable Development*. Nairobi: MOE.
- Ministry of Education, Science and Technology (MOEST, 2003). *Report of the Education Sector Review*. Nairobi: MOEST.
- Mukuria, G. & Obiakor, F.E. (2004). Special Education Issues in Africa Diaspora. *Journal of International Special Education Needs*, 7, 12-7.
- Mukuria, G., & Korir, J. (2006). Education for Children With Emotional And Behavioural Disorders In Kenya: Problems And Prospects. *Preventing School Failure*, 50, 49-54.
- Murawski, W. W., & Hughes, C. E. (2009). Response to Intervention, Collaboration, and Co-teaching: A Logical Combination for Successful Systemic Change. *Preventing School Failure*, 53, 267-77. doi:10.3200/PSFL.53.4.267-277.
- Murawski, W., & Dieker, L. (2004). Tips and strategies for co-teaching at the secondary level. *Teaching Exceptional Children*, 36(5), 52-58.
- Murawski, W.W. & Swanson, H.L. (2001). A meta-analysis of co-teaching research: Where are the data? *Remedial and Special Education*, 22(5), 16-32.

- Murray, A.J. & Zoe, J.H. (2011). Being Grateful: Does it Bring Us Closer? Gratitude, Attachment and Intimacy in Romantic Relationships. *Journal of Relationships Research*, 2(1), 17-25.
- Musavini, G.W. & Mulee, A.Y. (2015). Teachers' Perceptions on the Factors That Influence School Dropout among Upper Primary School Pupils in Trans-Nzoia East, Trans Trans-Nzoia County, Kenya. *Merit Research Journal of Education and Review*, 3(1), 037-075.
- Mutepfa, M. M., Mpofu, E. & Chataika, T. (2007). Inclusive Education in Zimbabwe: Policy, Curriculum, Practice, Family and Teacher Education Issues. *Childhood Education*, 83(6), 342-346.
- Muuya, J. (2002). The Aims of Special Education Schools and Units in Kenya: A Survey of Head teachers'. *European Journal of Special Needs Education* 17(3), 229-239.
- Mwangi, C. (2013). *Special Needs Education (SNE) In Kenya Public Primary Schools: Exploring Government Policy and Teachers' Understandings*. PhD Thesis, Brunel University, London UK.
- Naikoloyieu, LM. (2014). *School Factors Influencing the Implementation of Inclusive Education in Public Primary Schools in Isinya District, Kajiado County, Kenya*. MED Project, University of Nairobi, Kenya.
- National Association of School Psychologists [NASP], (2010a). *Recommendations For The Reauthorization Of The Elementary And Secondary Education Act (ESEA)*. Retrieved on March 13, 2016, from <http://www.nasponline.org/advocacy/nclb/naspccomments.pdf>
- National Association of School Psychologists [NASP], (2010b). *Model For Comprehensive And Integrated School Psychological Services*. Bethesda, MD: Author.
- National Association of Special Education Teachers [NASET], (2007). *Introduction To Learning Disabilities: Definition Of Learning Disabilities*. Retrieved on February 24, 2017, from naset.org/2522.html
- National Centre for Learning Disabilities [NCLD], (2006). *A Parent's Guide to Response to Intervention (RTI)*. Action Network. Retrieved on March 12, 2017, from <https://www.understood.org/~-/media/acc8e8c166c7432582494ece864cb16c.pdf>
- National Council for Special Education (NCSE, 2014). *Children With Special Educational Needs: Information Booklet for Parents*.

- National Dissemination Centre for Children with Disabilities, (2004). *Learning Disabilities Fact Sheet 7*. Retrieved on March 19, 2017, from <http://www.nichcy.org/pubs/factshe/f57/txthtml>
- National Institute of Mental Health (2001). *The Teen Brain: Still Under-Construction*. Washington: NIMH.
- National Joint Committee on Learning Disabilities (2010). *Comprehensive Assessment and Evaluation of Students with Learning Disabilities*. Retrieved on June 13, 2016, from <http://www.ldanatl.org/pdf/NJCLD%20Comp%20Assess%20Paper%206-10.pdf>
- Naylor, C. (2005). *Inclusion in British Columbia's Public Schools: Always A Journey Never A Destination*. Paper Presented At the Canadian Teachers' Federation Conference, "Building Inclusive Schools: A Search For Solutions." Ottawa, Ontario.
- Ngugi, A. & Macharia, D. (2006). *Kenya Education Sector: Policy Overview Paper. Enable Energy For Water-Health-Education*. Retrieved on September 21, 2015, from <http://www.enable.nu/publication/D-1-7-Kenya-Education-Policy-Overview.pdf>
- No Child Left Behind (NCLB, 2001). *Public Law 107–110*. Retrieved on June 31, 2016, from <http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf>
- O'Connor, R. E., Harty, K. R., & Fulmer, D. (2005). Tiers of Intervention In Kindergarten Through Third Grade. *Journal of Learning Disabilities*, 38, 532–538.
- O'Donoghue, T. (2017). *Understanding Contemporary Education: Key Themes and Issues*. London and New York: Routledge Taylor and Francis Group.
- Ogula, P.A. (2009). *A Handbook on Educational Research* (2nd ed.). Port Victoria: New Kemit Publishers
- Onwuegbuzie, A. J. & Johnson, R. B. (2006). The Validity Issue in Mixed Research. *Research in the Schools*, 13(1), 48-63.
- Onwuka, N., Obidike, N.D. & Okpala, O.P. (2015). The Dominant Methods Teachers Use In Assisting Pupils With Learning Disabilities In Public And Private Primary Schools In Awka-South Local Government Area, Anambra State, Nigeria. *Journal of Emerging Trends In Educational Research And Policy Studies*, 6 (6), 439-443.
- Orodho, J.A. (2004). *Elements of Education and Social Science Research Methods*. Nairobi: Masola Publishers.

- Osero, P.O. & Abobo, F. (2015). Attitudes of Teachers towards Implementation of Inclusive Education in Nyamira County, Kenya. *International Journal of Education and Research*, 3(3), 16-21.
- Oso, W.Y. & Onen, D. (2009). *A General Guide to Writing Research Proposal And Report*. Nairobi: Jomo Kenyatta Foundation.
- Pansiri, J. (2005). Pragmatism: A Methodological Approach to Researching Strategic Alliances in tourism. *Tourism and Hospitality Planning and development*, 2(3), 191-206.
- Papadopoulou, D., Kokaridas, D., Papanikolaou, Z., & Patsiaouras, A. (2004). Attitudes of Greek Physical Education Teachers toward Inclusion of Students With Disabilities. *International Journal of Special Education*, 19(2), 104-111.
- Parker, A. K. (2010). *The Impacts Of Co-Teaching on the General Education Student*. Retrieved on July 15, 2017, from file:///E:/Parker_Alicia_K_201005_EDD-%20co%20teaching.pdf.
- Patil S. P. & Patankar P. S. (2017). Inculcating Universal Human Values Through Inclusive Education: A Study. *The Compass*, 10 (1), 80-86.
- Patton, M.Q. (2002). *Qualitative Evaluation and Research Methods* (3rd Ed.). Thousand Oaks, CA: Sage.
- Paul, S. (2000). Students with Disabilities in Higher Education: A Review of Literature. *College Student Journal*, 34(2), 200-210.
- Peters, S. & Reid, K. (2009). Resistance and Discursive Practice: Promoting Advocacy in Teacher Undergraduate and Graduate Programmes. *Teaching and Teacher Education*, 25(4), 551-558.
- Peterson, D. W., Prasse, D. P., Shinn, M. R., & Swerdlik, M. E. (2007). The Illinois Flexible Service Delivery Model: A Problem-solving Model Initiative. In S. R. Jimerson, M. K. Burns, & A. M. VanDerHeyden (Eds.), *Handbook Of Response To Intervention: The Science And Practice Of Assessment And Intervention* (pp. 300–318). New York: Springer.
- Polit, D.F., Beck, C.T. & Owen, S.V. (2007). Is the CVI Acceptable Indicator of Content Validity? Appraisal and Recommendations. *Res Nurs Health*, 30(4), 459-467.
- Porter, G. (2001). *Disability And Inclusive Education Paper Prepared for Inter-American Development Bank Seminar on Inclusion and Disability Santiago Chile*. Disability World Issue no.8.
- President's Commission on Excellence in Special Education. (2002). *A New Era: Revitalizing Special Education For Children And Their Families*. Retrieved on December 14, 2016, from [http:// www.ed.gov/inits/commissionsboards](http://www.ed.gov/inits/commissionsboards) RAND.

- Price, A. (2009). *Best Practices In Teaching Students With Learning Disabilities*. Department Of Education, Nova Scotia. Calgary Learning Centre. Retrieved on July 8, 2017, from <http://canlearnsociety.ca/wpcontent/uploads/2017/08/BestPracticesInTeachingLD1-final-201.pdf>
- Punch, K.F. (2009). *Introduction to Social Research: Quantitative and Qualitative Approaches* (2nd Ed.). SAGE Publications Ltd.
- Rasmussen, J. (2001). The Importance of Communication in Teaching: A Systems-Theory Approach to Scaffolding Metaphor. *Curriculum Studies*, 33(5), 569-582.
- Rasugu, G.K.O (2010). *Nature and Prevalence of Learning Disabilities among Standard Three Primary School Pupils in Starehe Division Of Nairobi Province, Kenya*. MA Thesis, Kenyatta University.
- Reddy, G.L. (2006). *Children with disabilities: Awareness, attitude and competencies of teachers*. New Delhi: Discovery Publishing House.
- Republic of Kenya (1976). *Gachathi Report*. Nairobi: Government Printers.
- Republic of Kenya (2002). *The Children Act, 2001*. Nairobi: Government Printer.
- Republic of Kenya (2003). *Persons with Disabilities Act*. Nairobi: Government Printer.
- Republic of Kenya (2005). *Sessional Paper No. 1 Of 2005 On A Policy Framework For Education, Training And Research*. Nairobi: Government Printer.
- Republic of Kenya (2010). *The Kenya Constitution*. Nairobi: Government Press.
- Republic of Kenya (2013). *Basic Education Act No. 14 of 2013*. Nairobi: Government Printers.
- Republic of Kenya (2016). *Trans-Nzoia County Education Report 2015*. Kitale: County Director of Education Office.
- Republic of Kenya, (1964). *Ominde Report*. Nairobi: Government printer.
- Republic of Kenya, (1988). *Kamunge Report*. Nairobi: Government Printers.
- Republic of Kenya, (1999). *Totally Integrated Quality Education and Training (ITQET)*. Nairobi: Government Printers.
- Reynolds, M. (2009). Education for Inclusion: Teacher Education and the Teacher Training Agency Standards. *Journal of In-Service Training*, 27 (3), 16-30.

- Rice, D., & Zigmond, N. (2000). Co-teaching In Secondary Schools: Teacher Reports Of Developments in Australian and American Classrooms. *Learning Disabilities: Research & Practice, 15*, 190–197.
- Richards, T.L. (2001). Functional Magnetic Resonance Imaging and Spectroscopic Imaging of the Brain: Application Of The fMRI and fMRS To Reading Disabilities and Education. *Learning Disability Quarterly, 24*, 189-203.
- Robuck, G. (2009). *Raising a Teacher's Awareness about LD and AD/HD - Parents As Teachers*. Retrieved on November 30 2016, from <http://www.greatschools.net/LD/schoollearning/raising-a-teachers-awareness.gs?content=984>
- Rodina, K.A. (2007). Vygotsky's Social Constructionist View on Disability: A Methodology for Inclusive Education. In Siebert, B. (Hrsg) *Integrative Pedagogik und kulturhistorische Theorie*. Frankfurt a. M.: Peter Lang verlag.
- Rohrbeck, C.A., Ginsburg-Block, M.D., Fantuzzo, J.W. & Miller, T.R. (2003). Peer-assisted learning interventions with elementary school students: A Meta - Analytic review. *Journal of Educational Psychology, 95*, 240-249.
- Rose, D.H. & Meyer, A. (2002). *Teaching Every Student in the Digital Age: Universal Design for Learning*, ASCD, Alexandria, VA.
- Rowe, K., Stephanou, A., & Hoad, K. A. (2007). *The 'Third Wave' Project: A Report Of A Project To Investigate Effective 'Third Wave' Intervention Strategies For Students With Learning Difficulties Who Are In Mainstream Schools In Years 4, 5 And 6*. ACER, Commonwealth Of Australia.
- Runo, M. (2010). *Identification of Reading Disabilities and Teacher-Oriented Challenges In Teaching Reading To Standard Five Learners In Nyeri And Nairobi Districts, Kenya*. Research Thesis, Kenyatta University, Kenya.
- Saad, S., Ismail, K. & Hamid, S.R A. (2014). Knowledge of Learning Disabilities among Pre-Service and In-Service Teachers in Malaysia *IJUM Journal of Educational Studies, 2*(2) 22-39.
- Saludes, M.C. & Dante, A. (2009). The Knowledge And Perceptions On Learning Disabilities In The Cities Of Region XI Of The Philippines And A Region In New York City, N.Y., U.S.A., *The 19th Asian Conference on Mental Retardation, Singapore*, November (2009), 22-26. Retrieved on April 18, 2017, from www.gtid.net/acmr_19/pdf/11.pdf.
- Saravanabhavan, S., & Saravanabhavan, R.C. (2010). Knowledge Of Learning Disability Among Pre- & In-Service Teachers In India. *International Journal of Special Education, 25* (3), 133-9.
- Sauro, J. (2015). "SUOR-Q: A Comprehensive Measure of the Quality of the Website User Experience" *Journal of Usability Studies, 2*(10), 68 – 86.

- Savolainen, H. (2009). Responding to Diversity and Striving For excellence: The Case for Finland. In Acedo C (ed). *Prospects Quarterly Review of Comparative Education*, 39 (3).
- Sawhney, B. & Bansal, S. (2014). *Study of Awareness of Learning Disabilities among Elementary School Teachers*.
- Scheerens, J. (2010). *An Analysis of Teachers' Professional Development Based on the OECD's Teaching and Learning International Survey (TALIS)*. Luxembourg: Office for Official Publications of the European Union.
- Schmitz, S. (2012). *The Concept of Scaffolding in Primary English Teaching*. GRIN Verlag.
- Shalev, R.S., Manor, O., Kerem, B., Ayali.,Badichi, N., & Friedlander, Y. (2001). Developmental Dyscalculia Is A Family Learning Disability. *Journal of Learning Disabilities*, 34(1), 59-65.
- Shambaugh, M. & Magliaro, S. (2001). A Reflexive Model for Teaching Instructional Design. *ETRandD*, 49(2), 56-61.
- Shaywitz, S. (2003). *Overcoming Dyslexia: A New and Complete Science-Based Program for Reading at any Level*. New York: Alfred A. Knopf.
- Sherlock, C. (2011). *Rhode Island Modified UDL Educator Checklist Version 1.3*. Author, Providence, RI.
- Shukla, P. & Agrawal, G. (2015). Awareness of Learning Disabilities among Teachers of Primary Schools. *Online Journal of Multidisciplinary Research (OJMR)*, 1(1), 33-38.
- Sideridis, G.D. (2007). International Approaches To Learning Disabilities: More Alike or More Different? *Learning Disabilities Research and Practice*, 22(3), 210-215.
- Siegel, L., & Smythe, I. (2006). Reflection On Research on Reading Disability with Special Attention to Gender Issues. *Journal of Learning Disabilities*, 38 (5), 473-478.
- Sileo, J. M., & van Garderen, D. (2010). Creating Optimal Opportunities To Learn Mathematics: Blending Co-teaching Structures With Research-based Practices. *Teaching Exceptional Children*, 42(3), 14-21. Retrieved on June 15, 2017, from <http://cec.metapress.com/home/main.mpx>
- Simonsen, B., Fairbanks, S., Briesch, A., Myers, D. & Sugai, G. (2008). Evidence-Based Practices in Classroom Management: Considerations for Research to Practice. *Education and Treatment of Children*, 31, 351-380.
- Singal, N. (2008). Working Towards Inclusion: Reflections from the Classroom. *Teaching and Teacher Education*, 24(6), 1510-1529.

- Skrtic, T., Harris, K. & Shriner, J. (2005). *Special Education: Policy and Practice*. Denver, Colo: Love Pub Co.
- Slavica, P. (2010). Inclusive Education: Proclamations or Reality (Primary School Teachers' View). *US-China Education Review*, 7(10), 62-69.
- Smagorinnsky, P. (2012). Vygotsky, "Defectology," And the Inclusion of People of Difference in the Broader Cultural Stream. *Journal of Language and Literacy Education*, 8(1), 13-25.
- Smith, D.D. Tyler, N., Skow, K., Stark, A, & Baca, L. (2003). *Effective inclusion of students with disabilities in general education classrooms*. Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education (55th, New Orleans, LA, January 24-27, 2003).
- Smith, T. E. C., Polloway, E. A., Patt, J. R. & Dowdy, C.A. (2001). *Testing Students With Special Needs In Inclusive Settings* (3rd Ed.). Boston: Allyn and Bacon.
- Sousa, D. (2001). *How The Brain Learns*. Thousand Oaks, CA: Corwin Press.
- South Africa Department of Education (2005). *Conceptual and Operational Guidelines for the Implementation of Inclusive Education: District Support Teams*. Pretoria: Department of Education.
- Spencer, V.G. (2006). Peer tutoring and students with emotional or behavioural disorders: A review of the literature. *Behavioural disorders*, 28, 77-93.
- Sternberg, R.J., & Grigorenko, E.L. (2007). *Teaching for Successful Intelligence* (2nd Ed.). Thousand Oaks, CA: Corwin.
- Strobel, W., Arthananat, S., Bauer, S. & Flagg, J. (2007). Universal Design for Learning: Critical Needs Areas for People with Learning Disabilities. *Rehabilitation Engineering Research Center on Technology Transfer*, 4(1), 9-23.
- Stuart S.K., Connor, M., Cady, K., & Zweifel, A. (2006). Multi-age Instruction And Inclusion: A Collaborative Approach. *International Journal of Whole Schooling*, 3(1) Retrieved on March 30, 2017, from http://www.wholeschooling.net/Journal_of_Whole_Schooling/articles/3-1%20Multiage_Instruction.pdf
- Subban, P. (2006). Differentiated Instruction: A Research Basis. *International Education Journal*, 7(7), 935-947.
- Tashakkori, A. & Creswell, J. W. (2007). Exploring the Nature of Research Questions In Mixed Methods Research. *Journal of Mixed Methods Research*, 1(3), 207-211.

- Tashakkori, A. & Teddlie, C. (2010). *Sage Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, CA: Sage Publications.
- Taskforce on Students with Learning Disabilities, (2013). *ACT Government*. Retrieved on February 13, 2016, from http://www.det.act.gov.au/__data/assets/pdf_file/0006/483819/taskforce-learning-disabilitiesFAweb.pdf.
- Taylor, S.R. (2009). *Exceptional Students: Students with Learning Disabilities-Chapter 4*. McGraw-Hill Companies Inc.
- Teaching Times (2008-2016). *Knowledge Banks: Vygotsky Lives*. Retrieved on March 29, 2017, from www.teachingtimes.com/kb/71/vygotsky-lives.htm
- Teddlie, C & Tashakkori, A. (2009). *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioural Sciences*. Sage: London.
- The United Nations (1948). *Universal Declaration of Human Rights*. New York: UN.
- The United Nations (1989). *Convention on the Rights of the Child*. Treaty Series, 1577, 3.
- The Virginia Department of Education (VDOE), (2014). *Virginia's Guidelines for Educating Students with Specific Learning Disabilities: Guidelines for Educating Students with Specific Learning Disabilities (SLD)*. Retrieved on April 13, 2017, from www.doe.virginia.gov
- Tomlinson, C. A. & Cindy A. S. (2003). *Differentiation In Practice: A Resource Guide For Differentiating Curriculum, Grades 5-9*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A. & Strickland, C. A. (2005). *Differentiation In Practice: A Resource Guide For Differentiating Curriculum, Grades 9-12*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Torgerson, T. (2003). Leadership Crisis In Special Education: What Can We Learn From Our Current Leaders? *Education Leadership Review*, 4(1), 18-24.
- Tormanen, M.R.K., Takala, M., & Sajaniemi, N. (2008). Learning Disabilities and the Auditory and Visual Matching Computer Program. *Support for Learning*, 23(2), 80-88.
- Turnbull, A., Turnbull, R., & Wehmeyer, M.L. (2007). *Exceptional Lives: Special Education in Today's Schools*. Upper Saddle River, NJ: Pearson Prentice Hall.
- U.S Department of Education (2006). Washington D.C: Government Spring Office.
- U.S. Department of Education. (2004). *The Individuals with Disabilities Education Improvement Act Of 2004 (IDEA-2004)*. Washington, DC: DOE.

- UNESCO (1990). *World Declaration on Education for All*. Jomtien, Thailand: UNESCO.
- UNESCO (1994). *The Salamanca Statement and Framework for Action on Special Education*. Paris: UNESCO.
- UNESCO (1999). *Follow-up on Implementation of the Framework for Action on Special Needs Education*. Paris: UNESCO.
- UNESCO (2000). *World Education Forum: The Dakar Framework for Action*. Paris: UNESCO.
- UNESCO (2004). *An Inclusive Approach to EFA: UNESCO's Role In Enabling Education*, 8, 12-113.
- UNESCO (2005). *Guidelines for Inclusion; Ensuring Access to Education For All*, Paris UNESCO.
- UNESCO (2006). *EFA Global Monitoring Report 2006*. Paris: UNESCO.
- UNESCO (2009). *Towards Inclusive Education for Children with Disabilities: A Guideline*. Bangkok: UNESCO Bangkok.
- UNICEF (2013). *The State of the World's Children 2013: Children with Disabilities*. New York: United Nations. Retrieved on October 9, 2016, from <http://www.unicef.org/sowc2013/report.html>
- United Nations (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development: 17 Sustainable Development Goals*. New York: UN.
- United Nations Convention on the rights of Persons with Disabilities, (2006).
- Uppa, S., Kohen, D. & Khan, S. (2006). *Educational Services and Disabled Child Statistics Canada*. Retrieved on May 16, 2017, from <http://www.statscan.ca/english/freepub/81-004XIE/2006005/disachild.htm>.
- Van Kraayenoord, C.E. (2007). School and Classroom Practices In Inclusive Education In Australia. *Childhood Education*, 83(6), 390-394.
- VanDerHeyden, A. M., Witt, J. C. & Gilbertson, D. (2007). A multi-year Evaluation of the Effects of a Response to Intervention (RTI) Model on Identification of Children for Special Education. *Journal of School Psychology*, 45, 225–256.
- Van Zant, S. (2002). Unlocking peer potential for tutoring. *The Education Digest*, 67 (27), 44-45.
- Vasquez, E., & Slocum, T. A. (2012). Evaluation of Synchronous Online Tutoring For Students at Risk of Reading Failure. *Exceptional Children*, 78, 221-235.

- Vaughn, S. Bos, C., & Schumm, J. (2011). *Teaching Students Who Are Exceptional, Diverse, and at Risk*. Boston, MA: Pearson Education Inc.
- Vellutino, F. R., Scanlon, D. M., Small, S. G., & Fanuele, D.P. (2006). Response to Intervention as a Vehicle for Distinguishing Between Reading Disabled and Non-reading Disabled Children: Evidence for the Role of Kindergarten and First Grade Intervention. *Journal of Learning Disabilities, 39*(2), 157–169.
- Verenikina, I. (2008). Scaffolding and Learning: It's Role in Nurturing New Learners. In Kell, P., Vialle, W., Konza, D and Vogl, G (Eds), *Learning and the Learner: Exploring Learning for New Times*, University of Wollongong.
- Verenikina, I. (2003). *Understanding Scaffolding and the ZPD in Educational Research*. Faculty of Education, University of Wollongong, NSW, Australia.
- Villa, R., Thousand, J., & Neven, A. (2004). Challenges to Analysing Co-teaching Effectiveness. *Inclusive Education Programs, 11*(10), 7-14.
- Vygotsky, Lev Semenovich (1896-1934). *MIA: Encyclopedia of Marxism: Glossary*
- Wadsworth, S.J., Olson, R.K., Pennington, B.H. & DeFries, C.J. (2000). Differential Genetic Etiology of Reading Disability as a Function of IQ. *Journal of Learning Disabilities, 33*, 192-199.
- Wafula, R.W., Poipoi, M.W., Wanyama, R. & Begi S. N. (2012). Early Identification of Learning Disabilities among Standard Three Pupils of Public Primary Schools in Butere District, Kenya. *Journal of Emerging Trends in Educational Research and Policy Studies, 3*(5), 695-700.
- Wagithunu, M.N. (2014). *Teachers Attitudes as a factor in the realization inclusive education practice in primary schools in Nyeri Central District*. Mediterranean Journal of Social sciences, MCSER Rome, Italy.
- Waitoller, F. R. & Artiles, A. J. (2013). A Decade of Professional Development Research for Inclusive Education: A Critical Review and Notes for a Research Program. *Review of Educational Research, 83*(3), 319-356. Retrieved on March 23, 2017, from <http://rer.aera.net>
- Walther-Thomas, C. S., Korinek, L., Mclaughlin, V., & Williams B. (2000). *Collaborating for Inclusive Education*. Needham Heights, MA: Allyn and Bacon.
- Wang, Y. (2009). Impact of Lev Vygotsky on Special Education. *Yan-Bin/Canadian Social Science, 5* (5), 100-103.
- Wanzek, J., & Vaughn, S. (2011). Is a Three-tier Reading Intervention Model Associated with Reduced Placement in Special Education? *Remedial and Special Education, 32*(2), 167–175.

- Watkins, A., D'Alessio, S. (2009). International Comparisons Of Inclusive Policy And Practice: Are We Talking About The Same Thing? *Research in Comparative and International Education Journal*, 4(3), 233-49.
- Weeks, F.H. & Erradu, J. (2013). The Intellectually Impaired foundation-phase Learner – How Can the Teacher Support These Learners? *SA-eDUC Journal*, 10 (1), 1-16.
- Westwood, P. & Graham, L. (2003). Inclusion of Students with Special Needs: Benefits and Obstacles Perceived by Teachers in New South Wales and South Australia. *Australian Journal of Learning Disabilities*, 8(1), 3-15.
- Westwood, P. (2008). *What Teachers Need to Know About Learning Disabilities?* Camberwell Victoria: Acer Press.
- Westwood, P.S. (2006). *Teaching And Learning Disabilities: Cross-curricular Perspectives*. Camberwell, VIC: Australian Council for Educational Research.
- Wilhelm, J., Baker, T. & Dube, J. (2001). *Strategic Reading: Guiding Students to Lifelong Literacy*. Portsmouth, NH: Heinemann.
- Wilhelmina J. V. & Woodcock, S. (2011). *Are We Exacerbating Students' Learning Disabilities? An Investigation of Pre-service Teachers' Attributions of the Educational Outcomes of Students with Learning Disabilities*. University of Wollongong Research Online.
- Wong, B. Y. L. (2008). *Learning about Learning Disabilities* (2nd Ed.). San Diego: Academic Press.
- Woolfolk, A.E. (2009). *Educational Psychology* (11th ed). Alexandria, VA: Prentice Hall.
- Yin, R.K. (2003). *Case Study Research: Design and Methods*. Newbury Park: Sage. CA.
- Zaretsky, L., Moreau, L. & Faircloth, S. (2008). Voices from the Field: School Leadership in Special Education. *Alberta Journal of Educational Research*, 54(2), 161-177.

APPENDICES**Appendix I: Consent Letter**

Grace Garbutt
University of Eldoret
P.O. Box 1125-30100
Eldoret, Kenya

Dear Sir/Madam,

My name is Grace W. Garbutt and I am a postgraduate student, working towards a Doctor of Philosophy Degree in Psychology at University of Eldoret, Kenya. My study title is "*Teachers' Awareness And Support For Learners With Learning Disabilities For Effective Inclusive Education In Public Primary Schools In Trans-Nzoia County, Kenya*". The purpose of this study is to understand teachers' awareness and support of learners with disabilities in promoting effective inclusive education in public primary school in Trans-Nzoia. I have defined inclusive education as a system that serves all learners adequately in regular classrooms with the required support.

Please note that participation in this study is voluntary. If you do participate, you have the right to decline to answer any questions and to withdraw from the study at any time prior. All data will be treated confidentially and anonymity will be preserved at all times.

If you agree to be a part of this research, please sign and return the attached consent form.

Acceptance to participate (signature) _____ (Date _____)

With Warm Regards,

Grace Garbutt
Postgraduate
University of Eldoret

Appendix II: Questionnaire for Teachers'

(Awareness and Support for Learners with Learning Disabilities in Trans-Nzoia County)

Introduction

Dear Respondents,

You are kindly requested to give information by filling in the blank spaces. Do not write your name in the questionnaire. Your cooperation is highly appreciated. Tick the correct alternative and fill in the spaces where applicable.(Please, tick appropriately)

Part A: Demographic Data

1. What is your gender?
 Female [] Male []
2. What is your Age?
 20-35 yrs [] 36-45yrs [] 46-60 yrs [] 60 yrs and Above []
3. What is your highest level of education?
 Secondary (*Form Four*) [] Primary Teachers College (P1) [] Diploma []
 Undergraduate [] Postgraduate []
 Other (*Specify*):-----
4. For how many years have you been teaching?
 0-5yrs [] 6-11yrs [] 12-17yrs [] 18yrs and Above []
5. What is your responsibility in school?
 Class Teacher [] Subject Teacher [] Games Teacher []
 Other (*Specify*):-----
6. What is your teaching level?
 Classes 1-3 [] Classes 4-5 [] Classes [6-8] []

Part B: I: Teachers' Awareness for Learners with LD Scale (TALLDS)

7. Please, circle the answer that best describes your feeling about each statement

Awareness Questionnaire Statement	Responses				
	Extremely Aware	Moderately Aware	Somewhat Aware	Slightly Aware	Not At All Aware
i. I am aware that learners with Learning Disabilities (LD) experience diverse challenges in learning.					
ii. I am aware that learners with learning disabilities are the majority in my school.					
iii. I am aware that learning disability can be inherited.					

iv. I am aware that learning disabilities can be caused by ineffective teaching.					
v. I am aware that LD is caused by environmental factors during prenatal, perinatal, and postnatal stages					
vi. I am aware that learning disability can affect learners in the way they receive and recall information.					
vii. I am aware that learners with learning disabilities have short attention span.					
viii. I am aware that learners with learning disabilities exhibit general awkwardness and clumsiness.					
ix. I am aware that learners with learning disabilities perform poorly in tasks requiring reading, written expression, spelling, handwriting, and mathematics.					
x. I am aware that learners with learning disabilities can be identified through observation, screening, and classroom performance.					

Part B: II: Section I: Teachers Support for Learners with LD Scale (TSLLDs)

8. Please, circle the answer that best describes your feeling about each statement

Questionnaire Statement	Degree of support				
	Always	Often	Sometime	Rarely	Never
i. I can use several support strategies to educate learners with LD in inclusive education					
ii. In order to					

remediate learning problems of learners with LD, I structure the learning environment to suit their needs					
iii. I collaborate with my colleagues to support learners with LD					

Part B: II: Section II: Administration Support for Learners with LD

9. Please, circle the answer that best describes your feeling about each statement

Administration Support	Degree of Agreement				
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
i. Administrative support is significant in determining teacher attitude towards the education of learners with LD					
ii. Leadership is crucial in implementing inclusive practices for learners with disabilities					
iii. It is administrator's duty to facilitate appropriate infrastructure in the school					
iv. Training in special education programmes will help teaching learners with LD in regular classrooms					
v. Learners with LD require at least restrictive environment to maximise their potentials					
vi. Learners with LD require specialised educational resources					

Part B: II: Section III: Strategies to Improve Teachers' Support for Learners with Learning Disabilities

10. Please, indicate whether the following strategies need to be considered to improve awareness and support for learners with learning disabilities in your school

Questionnaire Statement	Level of priority				
	Inappropriate	Slightly Inappropriate	Neutral	Slightly Appropriate	Appropriate
i. Governments should be committed to policy of inclusion.					
ii. More teachers to be trained in special education programmes					
iii. Specialized teaching techniques to be used when teaching learners with learning disabilities.					
iv. Teachers should recognise areas of strengths and weaknesses of learners with learning disabilities.					
v. Teachers to provide regular feedback to learners with learning disabilities.					
vi. The curriculum should be adopted to accommodate the needs of learners with learning disabilities.					
vii. More time should be given to teaching reading activities to learners with learning disabilities.					
vii. Teachers should give short and clear instruction to learners with learning disabilities.					

11. What else do you think need to be done to improve teacher awareness and support for learners with learning disabilities in school?

Part C: Inclusion of Learners with Learning Disabilities in Public Primary Schools

12. Please, indicate your level of inclusion of learners with learning disabilities in your school.

Level of inclusion					
Level of inclusion for learners with learning disabilities	Very high	High	Moderate	Low	Very low
i. Transition to upper classes					
ii. Transition to Secondary schools					
iii. Participation in class activities					
iv. Performance in class activities					
v. Performance in examination					
vi. School attendance patterns					

The end
Thank you

Appendix III: Interview Guide for Head Teachers and Teachers

Dear Sir/Madam,

I am Grace Garbutt, a Doctor of Philosophy of Education student from University of Eldoret. I am carrying out a research on “Teachers’ Awareness And Support For Learners With Learning Disabilities For Effective Inclusive Education In Public Primary Schools in Trans-Nzoia County, Kenya”. Welcome to this interview session. I am going to ask you questions on the above mentioned topic. Please note that the information you provide will be treated with utmost confidentiality and will be only be used for the purpose of these study. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this interview.

Place:

Date:

1. What do you understand about inclusive education?
2. Which learners are involved in inclusive education?
3. Who are learners with learning disabilities?
4. Do you have learners with learning disabilities in your classroom/school? If you do, what do you think about having these learners in your classroom/school?
5. What is the proportion of learners with learning disabilities in your classroom/school?
6. Can you explain how you help or assist learners with learning disabilities in your classroom/school?
7. How do teachers in your school view learners with learning disabilities?
8. What have you done to sensitise other teachers about learning disabilities in your school?
9. What is your comment about the preparation given to teachers during their training on how to handle learners with learning disabilities in inclusive education?
10. How do you practice inclusion in your school? If you do, do you think it’s effective?
11. What are the barriers in education for learners with learning disability in your school?
12. How can the above mentioned barriers be addressed to promote inclusion of all learners including those with learning disabilities in your school?

The end

Thank you for participating in the interview

Appendix IV: Focus Group Discussion Questions for Teachers'

Dear Sir/Madam,

I am Grace Garbutt, a Doctor of Philosophy of Education student from University of Eldoret. I am carrying out a research on "Teachers' Awareness and Support for Learners with Learning Disabilities for Effective Inclusive Education in Public Primary Schools in Trans-Nzoia County, Kenya". Welcome to this focus group discussion session. I am going to ask you questions on the above mentioned topic. Please note that the information you provide will be treated with utmost confidentiality and will be only be used for the purpose of these study. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this Focus Group Discussion

Place:

Date:

1. What do you understand about inclusive education?
2. Which learners are involved in inclusive education?
3. Who are learners with learning disabilities?
4. Do you have learners with learning disabilities in your classroom/school? If you do, what do you think about having these learners in your classroom/school?
5. What is the proportion of learners with learning disabilities in your classroom/school?
6. Can you explain how you help or assist learners with learning disabilities in your classroom/school?
7. How do teachers in your school view learners with learning disabilities?
8. What have you done to sensitise other teachers about learning disabilities in your school?
9. What is your comment about the preparation given to teachers during their training on how to handle learners with learning disabilities in inclusive education?
10. How do you practice inclusion in your school? Do you think it's effective?
11. What are the barriers in education for learners with learning disability in your school?
12. How can the above mentioned barriers be addressed to promote inclusion of all learners including those with learning disabilities in your school?

The end

Thank you for participating in the Focus Group Discussion

Appendix V: Interview Guide for Sub County Directors of Education

I am Grace Wamukoya Garbutt, a Doctor of Philosophy of Education student from University of Eldoret. I am carrying out a research on “Teachers’ Awareness And Support For Learners With Learning Disabilities For Effective Inclusive Education In Public Primary Schools In Trans-Nzoia County, Kenya”. Welcome to this interview session. I am going to ask you questions on the above mentioned topic. Please note that the information you provide will be treated with utmost confidentiality and will be only be used for the purpose of these study. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this interview.

Place:

Date:

1. What do you understand about learners with learning disabilities?
2. What is the role of your office on the inclusion of learners with learning disabilities in primary education?
3. What can you say about the level of teachers’ awareness in public primary schools on support for learners with learning disabilities?
4. What opportunities has your office provided to teachers in public primary schools to help learners with learning disabilities?
5. What are the support systems that the Ministry of Education facilitate to ensure inclusion of learners with learning disabilities in primary education cycle?
6. What are the barriers to inclusive education in public primary schools in this area?

The end

Thank you for participating in the interview

Appendix VI: Content Validity Scale

Please use the following 5-point Agreement Scale to rate each question item to the research questions and the expected data in Part A to BI-V of the questionnaire for public primary teachers in Trans-Nzoia County as shown below: Strongly Disagree=1, Disagree=2, Neither=3, Agree=4, Strongly Agree=5

A 5-Point Rating Scale for Experts for Computing Content Validity Index

Part	Question	Number of Items	Rating Scale				
A	Demographic Information of the Respondents (Questions 1-6)	6	1	2	3	4	5
BI	Teachers Awareness Scale (TAS) (Question 7. i-x)	10	1	2	3	4	5
BII: Section I	Teachers' Support for Learners with LD Scale (TSLLDs) (Question 8. i-iii)	3	1	2	3	4	5
BII: Section: II	Administration Support for Learners with LD (Question 9. i-vi)	6	1	2	3	4	5
BII: Section: III	Strategies to Improve Teachers' Support for Learners with LD (Questions 10. i-viii; 11)	9	1	2	3	4	5
C	Inclusion of Learners with LD in regular schools (Question 12. i-vi)	6	1	2	3	4	5
Average	Rating of CVI =						

Source: Adopted from Oso and Onen (2009:99)

Appendix VII: Interview Excerpts

(Head teachers)

1. What do you understand about inclusive education?
Supporting learners with LD to adequately learn together with normal children
2. Which learners are involved in inclusive education?
Normal children together with children with LD
3. Who are learners with learning disabilities?
Learners who can't adequately learn without support from other people
4. Do you have learners with learning disabilities in your classroom/school? If you do, what do you think about having learners with learning disabilities in your classroom/school?
Yes, I find it appropriate because it encourages them and gives them confidence to meet various challenges in their lives
5. What is the proportion of learners with learning disabilities in your classroom/school?
The proportion is 1/100
6. Can you explain how you help or assist learners with learning disabilities in your classroom/school?
I begin by identifying myself with them, giving them opportunities to be involved all the time in activities with others. And recognising them and their activities always. I call every learners by his/her name to get them involved. I recognise any learners who supports learners with LD.
7. How do teachers in your school view learners with learning disabilities?
Positively, and give them enormous support.
8. What have you done to sensitise other teachers about learning disabilities in your school?
I induct others teachers and advice them on skills of handling learners with LD.
9. What is your comment about the preparation given to teachers during their training on how to handle learners with learning disabilities in inclusive education?
It is insufficient at the initial stage. It is only improved in advanced training
10. How do you practice inclusion in your institution? Do you think it's effective?
By mainly involving specially trained teachers in teaching the detailed techniques e.g. braille to learners with LD. Yes, because learners have been able to write and pass national exams
11. What are the barriers in education for learners with learning disability in your school?
Insufficient provision of the necessary learning aids, understaffing of reliable teachers to handle them and initial environment not yet adopted to learners with LD
12. How can the above mentioned barriers be addressed to promote inclusion of all learners including those with learning disabilities in your school?
Providing requiring learning aids, bringing on board more teachers involved and improving the environment to suit them.

Appendix VIII: Interview Excerpts

For Primary School Teachers

1. What do you understand about inclusive education?
Inclusive education is the kind of education that involves all learners including those with varied disabilities
2. Which learners are involved in inclusive education?
All learners including all with varied disabilities
3. Who are learners with learning disabilities?
These are learners who have difficulties in performing certain activities well as any other normal child
4. Do you have learners with learning disabilities in your classroom/school? If you do, what do you think about having these learners in your classroom/school?
Yes
They should be encouraged to feel normal without being discriminated or labelled. Learning friendly environment should be provided
They are helped according to their varied disabilities e.g. visually impaired are made to use large print, to sit next to the board, the H.I. for example, should for those with mild problem.
5. What is the proportion of learners with learning disabilities in your classroom/school?
1:30
6. Can you explain how you help or assist learners with learning disabilities in your classroom/school?
I have tried to sensitise the teachers on the learning disabilities like dyslexia
7. How do teachers in your school view learners with learning disabilities?
*Initially, they were being labelled but after sensitisation, they've ** of understand them*
8. What have you done to sensitise other teachers about learning disabilities in your school?
The entire teaching fraternity should be taken for a refresher course on how to handle these learners in an inclusive setting
9. What is your comment about the preparation given to teachers during their training on how to handle learners with learning disabilities in inclusive education?
Inclusion is practiced by mixing all the learners in one room. No isolation.
10. How do you practice inclusion in your school? If you do, do you think it's effective?
Its not fully adhered to since the learning environment is not so friendly
11. What are the barriers in education for learners with learning disability in your school?
Some of the barriers include lack of ramps, wide doors for physically handicapped, toilets are also not friendly as well as the teaching and learning materials
12. How can the above mentioned barriers be addressed to promote inclusion of all learners including those with learning disabilities in your school?
The government should provide a kitty for all schools since these learners are now all over.

Appendix IX: Interview Excerpts

Sub County Directors of Education Interview Excerpt

1. What do you understand about learners with learning disabilities?

“These are children who cannot learn because they have problem with their vision and hearing. Therefore they fail in class.”

2. What is the role of your office on the inclusion of learners with learning disabilities in primary education?

Encourage them to go to mainstream schools, our office insists for inclusion, make awareness to parents to retain their children in school, our office insist that kids are not forced to repeat and deal with teachers who want to push these kids out of school

3. What can you say on the level of teachers’ awareness in public primary schools on support for learners with learning disabilities?

On average, as most have undertaken a diploma course in SNE. So most of them are aware as almost in every school is a trained teacher in SNE

4. What opportunities has your office provided to teachers in public primary schools to help learners with learning disabilities?

We allow our teachers to go for training, we offer training in programmes like Tusome Early Literacy Programme and Priede and we also have deworming program, funding program especially in special schools

5. What are the support systems that the Ministry of Education facilitate to ensure inclusion of learners with learning disabilities in primary education cycle?

Have supported teachers to train in programs such as TUSOME, PRIEDE. In some schools with special units, there are feeding programs supported by the ministry. Supports the inspection and supervision of schools to makes sure that there is quality education

6. What are the challenges to inclusive education in public primary schools in this area?

- Large classroom size which inhibits teacher assessment and monitoring of learners regularly

- Lack of proper infrastructure in schools

- Absenteeism incidents by pupils with learning disabilities

- Attitude of teachers is main hindrance in stereotyping of learners

- Lack of parental support

Appendix X: Focus Group Discussion Excerpts

Primary School Teachers'

1. What do you understand about inclusive education?
 - *Including learners with disabilities in normal classes – those with or without disabilities in the same class*
 - *Teaching all the learners in the same class despite their disabilities*
 - *Learners with different abilities in the same class*
2. Which learners are included in inclusive education?
 - *Bright, genius, average, handicapped, mentally retarded, slow learners, gifted and talented.*
 - *Genius – gifted and talented – very fast in doing their assignment*
 - *Slow learners – they have learning challenges – underachievers, underperforming, rocks*
3. Who are learners with learning disabilities?
 - *Children who come from different homes due to their surrounding making them not to fit in the normal classroom*
 - *Those who cannot get the information from teacher quickly – capability of understanding information takes a lot of time to digest*
 - *Some of them makes mistakes instead of writing + (plus) they write – (minus), when it comes to addition hey forget to carry – they are forgetful in summation that involve caring – mistakes may be seen obviously. They can write letter 6 in a reverse way e.g. 6-9, 3-8, I – one , d(b)*
 - *The problem could have come from inheritance where learning is a problem to their families – family lineage (genetics)*
 - *Teachers – a teacher does not attend to all learners through skipping classes. Being too harsh to students e.g. mathematics teachers. Leading to truancy, skipping of class, children stammerer*
4. Do you have learners with learning disabilities in your classroom/school? If you do, what do you think about having these learners in your classroom/school?
 - *Yes, they had. A class to be made for them – separated – in one room*
 - *It is a challenge in inclusive classroom – teacher have to look for way to single out those children by providing additional support.*
 - *Give other pupils chance through group discussion to assist them. Give them responsibility – peer teaching strategy to help them learn. Teacher to recognise their improvement – positive feedback – praise them.*
 - *Attending one to one is a challenge due to overcrowding – 85 pupils for 35 minute lesson.*
5. What is the proportion of learners with learning disabilities in your classroom/school?
 - *A good number / many*
6. Can you explain how you help or assist learners with learning disabilities in your classroom/school?
 - *Through peer-teaching – make them to sit in a group and discuss*
 - *Ensure follow up activity of their work*
 - *Teacher varying the method of teaching – teacher come to their level to pick them up.*
7. How do teachers in your school view learners with learning disabilities?

- *Teachers really don't blame the children but look at their background to understand how parents play their part*

- *We do encourage them despite the environment at home being hopeless hat they can still go ahead.*

- *Teachers provide them with food / breakfast*

8. What have you done to sensitise other teachers about learning disabilities in your school?

- *They discuss when they are together in the staffroom by looking for ways on how to assist them. However, they are many*

- *There is no adequate time for discussion due to heavy workload*

9. What is your comment about the preparation given to teachers during their training on how to handle learners with learning disabilities in inclusive education?

- *They were told to handle them in college – it was there*

- *It was not there during teaching practice*

- *The content of training was not detailed – very minimal and long ago*

- *To provide refresher courses*

- *The register for teaching*

10. How do you practice inclusion in your institution? Do you think its effective?

- *IEP – how many times did a particular learner finished – termly/yearly*

- *Allow all children to learn together – no discrimination*

- *Transition of LD – average*

No – We are trying – because of the number and not enough teachers, teachers have little knowledge about them, parental support

11. What are the barriers in education for learners with learning disability in your school?

- *Lack of special materials, manpower, enough time, overcrowding, environment not supportive.*

12. How can the above mentioned barriers be addressed to promote inclusion of all learners including those with learning disabilities in your school?

- *Meetings, seminars, parents to be welcomed and work together (combined forces)*

- *Parents, county government to contribute in purchase instructional resources*

- *To have a resource teacher.*

Appendix XI: Research Permit



**SCHOOL OF EDUCATION
DEPARTMENT OF CURRICULUM AND INSTRUCTION**

Our Ref: UOE/B/CIM/LA/59 DATE: 21st September, 2016

The Executive Secretary,
National Council for Science Technology & Innovation
P.O.BOX 30623-00100,
NAIROBI.

Dear Sir/Madam,

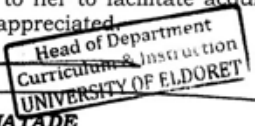
**RE: RESEARCH PERMIT FOR GRACE WAMUKOYA GARBUTT
EDU/PHD/EP/007/14**

This is to confirm that the above named Post Graduate Student has completed Course work of Doctor of Philosophy of Education in Educational Psychology.

She is currently preparing for field work to collect data on the thesis title: ***“Teachers’ Awareness and Support of Learners with Learning Disabilities for Effective Inclusive Education in Public Primary Schools in Trans-Nzoia County, Kenya.”*** The proposal was examined and approved by academic board of examiners of the school of education on 25th May, 2016.

Any assistant accorded to her to facilitate acquiring research permit for data collection will be highly appreciated.

[Handwritten signature]



DR. JACOB LOLELEA NATADE
HEAD, DEPARTMENT OF CURRICULUM & INSTRUCTION /
EDUCATIONAL PSYCHOLOGY

Cc: DVC-ASA
Dean, School of Education

University of Eldoret is ISO 9001: 2008 Certified



University of Eldoret is ISO 9001: 2008 Certified



CC: DVC-ASA
Dean, School of Education

EDUCATIONAL PSYCHOLOGY
HEAD, DEPARTMENT OF CURRICULUM & INSTRUCTION /
DR. JACOB LOLELEA NATADE

[Handwritten signature]





**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying Please quote

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

Ref: No.

Date:

NACOSTI/P/16/15985/13971

11th October, 2016

Grace Wamukoya Garbutt
University of Eldoret
P.O. Box 1125-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Teachers’ awareness and support of learners with learning disabilities for effective inclusive education in public primary schools in Trans Nzoia County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in Trans Nzoia County for the period ending **11th October, 2017.**

You are advised to report to the **County Commissioner and the County Director of Education, Trans Nzoia 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.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Trans Nzoia County.

The County Director of Education
Trans Nzoia County.

THIS IS TO CERTIFY THAT:

**MS. GRACE WAMUKOYA GARBUTT
of UNIVERSITY OF ELDORET, 3124-30200
KITALE, has been permitted to conduct
research in Transnzoia County**

Permit No : NACOSTI/P/16/15985/13971

Date Of Issue : 11th October, 2016

Fee Recieved :Ksh 2000

**on the topic: TEACHERS' AWARENESS
AND SUPPORT OF LEARNERS WITH
LEARNING DISABILITIES FOR EFFECTIVE
INCLUSIVE EDUCATION IN PUBLIC
PRIMARY SCHOOLS IN TRANS-NZOIA
COUNTY, KENYA**

**for the period ending:
11th October, 2017**

[Handwritten Signature]

**Applicant's
Signature**



[Handwritten Signature]

**Director General
National Commission for Science,
Technology & Innovation**

Appendix XII Research Authorisation Letters



THE PRESIDENCY

Telephone: 054 – 30020
Fax No: 054 – 30030

MINISTRY OF INTERIOR
AND
COORDINATION OF
NATIONAL GOVERNMENT

COUNTY COMMISSIONER'S OFFICE
TRANS NZOIA COUNTY
P.O BOX 11 - 30200
KITALE

E-mail: cctransnzoiacounty@yahoo.com
When replying please quote

TNZC/CONF/ED.12/2/VOL.II/154

31st January, 2017

TO WHOM IT MAY CONCERN

RESEARCH AUTHORIZATION

This is to inform you that **Grace Wamukoya Garbutt** of **University of Eldoret** has been authorized by National Commission for Science, Technology and Innovation to carry out research on **“Teachers’ awareness and support of learners with learning disabilities for effective inclusive education in public primary schools in Trans Nzoia County, Kenya ”** in **Trans Nzoia County** for a period ending **11th October , 2017**.

Kindly accord her the necessary assistance she may require.

MUSA OKANGO
FOR: COUNTY COMMISSIONER
TRANS NZOIA COUNTY

MINISTRY OF EDUCATION SCIENCE & TECHNOLOGY
State Department of Education

Telegrams:
 Telephone: Kitale 054-31653 – 30200
 Fax: 054-31109
 Email: transnzoiacde@gmail.com
 When replying please quote:



County Director of Education,
 Trans Nzoia,
 P.O. Box 2024 – 30200
KITALE.

Date: 31st January, 2017

Ref. No. TNZ/CNT/CDE/R.GEN/I/VOL.I/224

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – GRACE WAMUKOYA GARBUTT

The above named has authority to carry out research on **“Teachers’ awareness and support of learners with learning disabilities for effective inclusive education in public primary schools in Trans-Nzoia County, Kenya”** for a period ending 11th October, 2017

This is therefore to authorize the student to collect data and/or carry out activities related to this particular exercise in Trans-Nzoia County. Whoever may be concerned is requested to co-operate and assist accordingly.

Thank you.

DIXON O. OGONYA
COUNTY DIRECTOR OF EDUCATION
TRANS-NZOIA

TEACHERS SERVICE COMMISSION

Email: cdirtransnzoia@tsc.go.ke
transnzoiatsc@yahoo.com

Web: www.tsc.go.ke

When replying please quote

Ref. N^o:

TN/TSC/CD/ATTACH/GEN/VOL.I/16
 and date



TSC County Director
 Trans-Nzoia County
 P. O. Box 4442-30200
KI TALE

DATE: 31ST JANUARY, 2017

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION

GRACE WAMUKOYA GARBUTT

This is to inform you that the above named student of University of Eldoret has been authorized by National Commission for Science, Technology and Innovation to carry out research on **“Teachers’ awareness and support of learners with learning disabilities for effective inclusive education in public primary schools in Trans Nzoia County, Kenya”** in Trans Nzoia County for a period ending 11th October, 2017.

Kindly accord her the necessary assistance possible.

K. TARUS
 FOR: TSC COUNTY DIRECTOR
TRANS NZOIA

/da

Appendix XIII: Trans-Nzoia County Map

