PERCEPTION OF TEACHER PREPAREDNESS IN IMPLEMENTATION OF CURRICULUM TO LEARNERS WITH CEREBRAL PALSY IN SPECIAL SCHOOLS IN BUNGOMA COUNTY, KENYA

ARONI JANE FRANCISCAR
E55/CE/22934/2010

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF EDUCATION (EARLY CHILDHOOD AND SPECIAL NEEDS EDUCATION) IN THE SCHOOL OF EDUCATION OF KENYATTA UNIVERSITY

JUNE 2019
DECLARATION

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

Signature…………………………………………… Date………………………….

Aroni Jane Franciscar
E/55/CE/22934/2010

SUPERVISORS

This thesis has been submitted for review with our approval as the university supervisors.

Signature…………………………………………... Date………………………….

Dr. Jessina Muthee
Special Needs Education Department
Kenyatta University

Signature……………………………………………Date…………………………

Dr. Nelly Otube
Special Needs Education Department
Kenyatta University
DEDICATION

To the Almighty God, thank you for seeing me through the whole process of my thesis writing.

To my parents, Mama Bridget and Papa the late Casmil Idiama, you laid the foundation for my success.

To my husband Beda, thank you for supporting me throughout my study. My children Mercy, Anjello, Noel the late Esther, Joshua, Rita and little Remmy you are worth my struggle.

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The teaching staff in my study Schools, Nalondo CBM for the physically disabled, Joy Valley School for the physically disabled, and Bukirimo special school for the physically disabled and Mayanja special Unit for PH. thanks so much for cooperation during data collection.

God bless you all.
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LIST OF ABBREVIATIONS AND ACRONYMS

AAC: Augmentative and Alternative Communication
CRC: Convention on the Rights of the Child
EFA: Education for All
EHA: Education for All Handicapped Children
FPE: Free Primary Education
IDEA: Individuals with Disability Education Act
IDEA: Individuals with Disability Education Act
IEP: Individualized Education Program
KICD: Kenya Institute of Curriculum Development
MDG: Millennium Development Goals
MOE: Ministry of Education
MoEST: Ministry of Education Science and Technology
RMR: Reliable Means of Response
SNE: Special Needs Education
SPSS: Statistical Package for Social Sciences
UDL: Universal Design of Learning
UNICEF: United Nations Children's Education Fund
UPE: Universal Primary Education
NCATE: National Council for Accreditation of Teacher Education
CDCP: Centre for Disease Control and Prevention
CBM: Christadelphian Bible Mission
<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>CP</td>
<td>Cerebral Palsy</td>
</tr>
<tr>
<td>DCCD</td>
<td>Dissemination Centre for Children with Disabilities</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational therapy</td>
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<td>USA</td>
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ABSTRACT

Learners with cerebral palsy experience functional limitations that result from impaired muscles, body movement and significant cognitive deficits. These cause poor coordination of fine and gross motor muscles and sometimes poor cognition. Interaction and manipulation of curriculum materials becomes a challenge making it difficult to access curriculum content. This study purposed to assess the perception of teacher preparedness in implementation of curriculum to learners with cerebral palsy in special schools in Bungoma County. The objectives of the study were to establish whether teachers had skills and knowledge to handle learners with cerebral palsy in schools for learners with physical disabilities, adaption of the curriculum for the learners, use of relevant resources to teach these learners and collaboration of teachers with relevant professionals for service provision. The study was guided by Wolfensberger's theory of Normalization, (1980). This study adopted a descriptive survey design through Concurrent mixed methods and was carried out in three special schools and a special unit for learners with physical disabilities in Bungoma County. The target population consisted of 4 head teachers and 84 teachers in Special Schools and Units for Learners with Physical Disabilities. The sample size was based on a sample size determination formula by Krejcie and Morgan (1970) as cited by Kosomo (2001). The study used mixed methods research approach of inquiry. Data was collected using Questionnaires, interview schedules and observation checklists. Validity was determined by consulting supervisors in Kenyatta University and incorporating their inputs in data collection instruments. Test-retest method was employed to test the reliability of the research instruments. Reliability coefficient between the first and second scores was done using Pearson’s Product Moment Correlation (r). Data analysis was done by transforming qualitative data to quantitative data and presenting it on pie charts, bar graphs and frequency tables and the interpreting it through descriptive statistics. The study established that teachers in Special Schools and Units in Bungoma County had relevant skills and knowledge required to identify and handle learners with cerebral palsy in curriculum activities. That schools lacked appropriate teaching and learning resources and most had minimal collaboration with relevant professionals. The study recommended that schools mount more induction courses to prepare teachers for the pedagogical content and resources that meet the ever changing curriculum demands. There was need to improve collaboration between teachers and stakeholders for proper service provision.
CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction
This chapter presents the background to the study, statement of the problem, objectives of the study, research questions, significance of the study, limitations and delimitations of the study, assumptions, and theoretical and conceptual framework of the study and operational definitions of the terms used in the study.

1.2 Background to the Study
Universal declaration of Human Rights states that everyone has a right to education and education shall be free at least in the elementary and fundamental stages with elementary education being compulsory (United Nations General Assembly, 1948 Article 26). Children with special educational needs and disabilities have equal rights to education, however, they may encounter barriers in accessing education due to their physical or mental disposition which impacts negatively on their physical and academic performance requiring teachers to plan for specific adaptations that address their unique learning needs for optimal access, participation and academic performance (Individuals with Disability Education Act, 2004).

Physical handicaps or disabilities (PH) comprise diverse categories because of the range of diseases and disorders involved (Gargiulo, R.M. 2012). The term physical disability also referred to as orthopedic impairments have sometimes been used interchangeably by some authors, Allan, H., & Philip, V. (2009) however, Sherwood, J. B., Kathryn, W.
H., & June, L. B. (2005) argue that the term physical disabilities is more inclusive of a broader number of categories such as neurological impairments, degenerative diseases, orthopedic impairments and musculoskeletal disorders.

Individual with Disability Education Act, (2004) categorizes Cerebral Palsy (CP) as a physical disability. Sherwood, et al., (2005) contend that CP is a multi-handicapping condition and the most common and severest among children with physical disabilities and for educational purposes they are placed in special schools for learners with physical disabilities (Allan, et al., 2009). CP is a non-progressive brain disorder caused by an injury before, during or after birth resulting in impaired muscle and body movement (Marlin, F. 208). The motor disorders of CP are often accompanied by problems of sensation, cognitive deficits, communication, perception, behavior and sometimes seizure disorders, these individuals may also experience abnormal, involuntary or uncoordinated movements and may be gifted, have normal intelligence or experience significant cognitive deficits (Gargiulo, R.M. 2012).

According to the Federal Government (USA) the Centre for Disease Control and Prevention (2006 – 2008) and Dissemination Centre for Children with Disabilities (DCCD) estimated the birth of children with cerebral palsy to be between 5,000 and 10,000 yearly and around 1,500 for those acquired through illness or injuries. It concluded that an estimated 17 million people had CP in developed countries, Canada alone had an estimate 50,000 and the USA had approximately 800,000 persons with CP (Marilyn, F. 2008). World Health organization (WHO) (2011) estimated 15% of any
population in developing countries to have disabilities and 1 out of 300 children having CP.

In Kenya an estimated 3.5 million people out of an estimated population of over 36.6 million people had disabilities of which 413,698 had physical disabilities and 1.8 million of this population are aged between 0-19 of which 12.5 per cent with physical disabilities have cerebral palsy (MOE, 2006-2011). Current global policies on special educational needs are deeply rooted in international policies and legislations. Education of children with special needs and disabilities has been shaped by policy frameworks organized by the United Nations which outlined the Rights and purposes of education for children with disabilities (UNESCO, 1994).

The Jomtien World Declaration of Education for All (1990), the Standard Rules for Equalization of Opportunities for persons with Disabilities (1994), the Salamanca Statement on Special Needs Education (UNESCO, 1994), the Dakar Framework for Action (2000) and the Convention of the rights of the child (United Nations, 2016) are conventions that placed educational reforms at the top of global agenda. They set a strong tone internationally for the inclusion of children with special educational needs in mainstream schools in member states unless the nature or degree of needs of these children was such that to do so would be inconsistent with the interests of the child.

Most African countries have responded to the global demand of non-discriminatory educational provision for children with special educational needs. This has been observed in the alignment of educational policies with international recommendations.
through improving infrastructure in schools and training of teachers to the required international standards (Maunganidze, L., & Kasayira, J. M. 2002).

Kenya subscribes to the global frameworks on educational provisions for all its citizens and has not therefore been left behind in the improvement of educational infrastructure for all children including those with disabilities. This has changed the focus of special education from simply ensuring access to education, to improving the educational performance of students with disabilities and aligning special education services with the other educational improvement effort including standards assessments and accountability. Since independence educational policies and reforms have seen educational provisions for children with disability continue to improve (MOE, 2009).

The Ominde Report of 1964 recommended the integration of children with disabilities in mainstream schools. The Committee on Care and Rehabilitation (1965) and the Gachathi Report (1976) developed reforms that addressed the education of children with disabilities (MOE, 2006). The Kochung Task Force (2003) appraised the status of special education and Session Paper no 1 (2005) recommended the development of a comprehensive Special Needs Education (SNE) policy that would address all aspects and levels of education in the country, however there is still inadequate provision of curriculum support materials and assistive technology in schools which may cause delay in syllabus coverage and by extension curriculum implementation. This may limit teachers in providing appropriate instructional adaptations for effective curriculum delivery resulting in poor academic performance of learners with disabilities (MOE, 2009). Special schools receive Free Primary Education funds of 2,290 shillings per
child and a special capitation grant for special schools (MOE, 2009). Teachers are trained at certificate, diploma, degree and post graduate level, all these courses except certificate courses are offered through fulltime and school based programs. The Basic Education Act (2013) recommended that special schools receive appropriate personnel, infrastructure, learning material for improved service delivery (Basic Education Act, 2013).

1.3 Statement of the Problem

Cerebral palsy is a multi-handicapping condition and the most common among learners with physical disabilities (Allan, et al.: IDEA, 2004). Individuals with Cerebral Palsy experience abnormal, involuntary or uncoordinated movement. Intellectually they may be gifted, have normal intelligence or experience significant cognitive deficits (Gargiulo, R. M. 2012). Despite their unique and varied functional limitations that results from the physical and mental disposition learners with cerebral palsy are placed in schools for children with physical disabilities who are otherwise regarded to have normal intelligence and subjected to the regular curriculum (Ndurumo, M., 2003; MoE, 2009).

Learners with cerebral palsy experience varied intellectual or physical limitations which are complicated further by other associated conditions like sensory impairment, communication impairment and orthopedic deformities. As a result cognitive, fine and gross motor functions that would otherwise enable learners with cerebral palsy to interact and participate in learning activities become distorted. This makes it difficult for them to access curriculum content they are subjected to.
For teachers to access learners with cerebral palsy to the primary school curriculum they are required to adapt both curriculum content and learning experiences in the primary school curriculum and use differentiated instructional approaches and appropriate resources that address unique individual learning needs so as to enhance their interaction and participation in curriculum activities and at the same time provide optimal instructions to learners with other forms of physical disabilities in the same class.

This study sought to analyze teacher preparedness in implementation of school curriculum to learners with cerebral palsy in special schools for learners with physical disabilities in Bungoma County, Kenya.

1.4 Purpose of the Study

The purpose of this study was to assess teacher preparedness in implementation of curriculum to learners with cerebral palsy in special schools in Bungoma County, Kenya.

1.5 Objectives of the Study

The following were the objectives of the study;

i. To establish whether teachers have skills and knowledge to handle learners with cerebral palsy in schools for learners with physical disabilities.

ii. To determine whether teachers have relevant skills and pedagogical content to adapt the curriculum for learners with cerebral palsy.

iii. To establish whether teachers use relevant resources to teach learners with cerebral palsy in schools for learners with physical disabilities.
iv. To determine whether teachers for learners with cerebral palsy collaborate with relevant professionals for service provision in schools for learners with physical disabilities.

1.6 Research Questions

This study was guided by the following research questions;

i. Are teachers equipped with relevant skills and knowledge to handle learners with cerebral palsy during training?

ii. Do teachers possess skills and pedagogical content to adapt the curriculum for learners with cerebral palsy?

iii. Do teachers use relevant resources to teach learners with cerebral palsy?

iv. Do teachers collaborate with relevant professionals to provide services for learners with cerebral palsy at school?

1.7 Assumptions

The assumption of the study was that all respondents would give honest information from which generalizations would be made. According to the No Child Left (2001) and IDEA (2004) teachers for learners with disabilities should be highly qualified with graduate level education or be fully certified or licensed in the field of special education (Marlin, F. 2008). The study therefore assumed that teachers in schools for Learners with physical disabilities were trained in Special Need Education and therefore possessed the required knowledge and skills needed to develop instructional adaptations that met learning needs of learners with cerebral palsy. The study assumed that all special institutions received FPE funds and therefore availed relevant learning resources.
and assistive devices for individual learners needs (MoE, 2009). Lastly the study assumed that respondents were able to provide required information on the data collection instruments.

1.8 Limitations

The study targeted teachers and head teachers in the sampled schools and special unit for learners with physical disabilities. Some respondents showed reluctance to give accurate information about the availability of Teaching/Learning and Assistive Technology for fear of victimization by the administration or being seen as poor resource managers.

Since many respondents were sampled from same location the researcher decided to work with each group separately without the other group knowing the contents of the instruments. To avoid absenteeism of respondents the researcher visited the schools a day before to assure them of the data collection the following day.

1.9 Delimitations

The study was confined to three special schools and one special unit for learners with physical disabilities. The focus of this study was on teacher preparedness in implementation of the curriculum for learners with cerebral palsy in special schools. The researcher did not address adaptations outside classroom because these were not within teachers’ manipulation or control.
The researcher only collected that literature which informed on teacher preparedness in curriculum implementation and not all information about other services required by these learners. Learners’ participation was a product of teachers’ preparedness so there was no need to collect any information from them.

1.10 Significance of the Study

It was hoped this study would be a key source of information to the Ministry of Education and the Kenya Institute of Curriculum Development (KICD) in recommending and developing curricular that would equip teachers with appropriate pedagogy and skills for handling different conditions categorized as physical disabilities. Teacher training institutions like universities and colleges would also be informed to develop curricular that would equip teachers with appropriate knowledge and skills required to handle diverse categories of conditions categorized as physical disabilities. Lastly this study would make teachers appreciate the importance of accountability as a means of ensuring educational achievement for learners with cerebral palsy.

1.11 Theoretical Framework

This study was guided by Wolf Wolfensberger’s theory of Normalization, (1980). Normalization is a rigorous theory of human services and one of the strongest and longest lasting integration theories for people with disabilities. The principle of normalization means making available to all persons with disabilities patterns and conditions of everyday living which are as close as possible to the regular circumstances and ways of life. Normalization has a significant effect on the way services for persons with
disability are structured throughout the world. According to Wolfensberger the goals had two dimensions; client normalization, which aimed at increasing the functional independence of learners so that they may be more easily assimilated in the community and Environmental normalization; which aimed at modifying the environmental structures in order that individual differences among learners can be accommodated into the community. This normalization theory was in tandem with the basic principles of special needs education as articulated in Education for all handicapped Children Act 1975.

The theory of Normalization requires that Learners with disabilities are provided with supports and accommodations in all areas of their curriculum needs rather than protection or discrimination as this will enhance their participation curriculum content in all life activities.

Students with cerebral palsy experience inability to perform educational functions due to different compounding factors caused by the disability and the psychosocial and environmental factors imposed upon them by the condition resulting in functional limitations in educational activities. According to the normalization theory, teachers are supposed to create a learning environment that recognizes individual learning needs of these learners, plan for learning activities that have inbuilt adaptations, supports and accommodations so as to enable learners with cerebral palsy despite their functional limitations to access the intended curriculum content.
They should understand the learners underlying right to equal opportunities to quality education and a differentiated curriculum that provides multiple pathways of accessing the school curriculum through flexible instructional and content adaptation.

1.12 Conceptual Framework

![Conceptual Framework Diagram]

Figure 1.1: Conceptual Framework

Education policies and reforms developed have advocated for teacher possession of appropriate skills and knowledge in understanding and applying the knowledge base in handling individual learning needs among learners with disabilities.
The success of the implementation of the school curriculum to learners with cerebral palsy is influenced by such factors as teacher preparedness; teachers’ possession of skills and knowledge to handle learners with cerebral palsy, ability to adapt curriculum to address individual learning needs of learners with cerebral palsy, use of relevant resources to teach learners with cerebral palsy and teachers’ collaboration with relevant professionals in providing services to these learners (Gargiulo, R. M. 2012).

The theory of normalizations requires that learners with cerebral palsy are offered the same learning conditions as offered to other learners in regular schools but which encompass appropriate resources for adaptation of instructional strategies and supports during learning so as to enhance their participation in curriculum activities.

In this study the independent variables were possession of skills and knowledge by teachers in the area of special needs education, skills and knowledge in curriculum adaptation, use of relevant resources and teacher collaboration with relevant professionals in providing services for learners with cerebral palsy. The dependent variable was successful implementation of the primary school curriculum for learners with cerebral palsy.

The intervening variable in the study was the attitude of school community towards learners with cerebral palsy.
1.13 Operational Definition of Terms

**Teacher Competencies**- Possession of knowledge and skills that enable teachers to adapt the curriculum, use relevant resources and collaborate with relevant professional in the provision of services to learners.

**Accommodation**- These are supports provided to students with disabilities to aid their access to the general curriculum.

**Adaptations**- These are a primary way of meeting the unique needs of children with disabilities. They are strategies that teachers use to help these children participate in classroom activities and routines more easily.

**Curriculum Adaptation**- Changes permissible in educational environment which allow the student equal opportunity to obtain access, results, benefits and levels of achievements.

**Physical Efficiency Area**- Students motor ability in naturally occurring activities.

**Related Service**- A service a child needs in order to benefit from his or her specially designed instruction environment.

**Supplementary Aides and Services**- Those aids, services and other supports that are provided to enhance or allow the students’ placement in the least restrictive environment.

**Generic Reading Display**- Messages that allow students to participate in reading process across a wide variety of stories.
Reliable Means of Response- The most reliable, accurate and consistent way the student can respond.

Assistive Technology- Any item, piece of equipment or product system, whether acquired commercially of the shelf, modified or customized that is used to increase, maintain or improve functional ability of a child with a disability.

Augmentative and Alternative Communication- The combination of all methods available to an individual including any speech, vocalization, gestures and communication behaviors as well as specific communication methods and devices.

Curriculum Access- The extent to which an individual is able to participate in same breath of the curriculum as other children of the same age and at a level appropriate to their needs.

Collaboration - Work with other service providers to achieve an objective.

Instructional Strategies- Approaches, methods and material teachers use to teach learners with cerebral palsy.

Learning Environment- This is the classroom setting and organization.

Occupational Therapist- A professional specializes in helping individuals with developmental or physical skills that aid in daily living activities.
Physiotherapist- A specialist who provides exercises that strengthen muscles promote functional control of the body by increasing motor function.

Guidance and Counseling- A personal intimate interview or dialogue between a person experiencing a challenge and a professional counselor.

Primary school curriculum- Curriculum designed for primary schools in Kenya.

Relevant training- Training that equips teachers with appropriate knowledge and skills required to handle learners with cerebral palsy.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter discusses related literature on teacher preparedness and its effects on the implementation of school curriculum to learners with cerebral palsy in special schools. The following subtopics based on objectives were discussed: skills and knowledge for teachers of children with cerebral palsy, relevant skills and pedagogical content in adaptation of the school curriculum to learners with cerebral palsy, use of relevant resources to teach learners with cerebral palsy and collaboration between teachers and other relevant professionals’ services provision to learners with cerebral palsy.

2.2 Skills and Knowledge for Handling Learners with Cerebral Palsy

For teachers to provide relevant educational services to learners with physical disabilities the training they receive should empower them with appropriate knowledge and skills to enable them handle the different conditions categorized as physical disabilities. In a research study by the Center for the Study of Teaching and Policy (Mitchel, D. 2005) a summary of the findings indicated that subject matter and pedagogical preparation were key issues in teacher competency that led to curriculum implementation that ensured student achievement in the regular curriculum.

Educational reforms by IDEA (2004) and the No Child Left behind Act (2011) required that teachers of children with disabilities should be highly trained (Marilyn, F. 2008). The federal policy research on teaching and learning of children with disabilities recommended a shift in perception on how to prepare quality teachers and suggested
that teachers should master an increasing complex knowledge base and sophisticated repertoire of instructional practice instead of a one suit fits all (Ashby, C. M. 2008).

According to UNESCO (1994) teacher training at pre-service and in-service should be improved to include mentorship and team building, alternative methods of teaching and orientation on diversity and different learning styles among children with disabilities ((Lipsky, D. K. & Garther, A. 1998).

In a study conducted by The National Academy of Education (US based group of scholars) on quality teacher preparedness, findings revealed that a teacher who was well trained acquired knowledge and teaching skills which enabled them to develop quality teaching instructions and learning activities that produced high students achievement (Allan, Hodkinson., & Philip, Vickerman. 2009). Another study by Centre for The Study of Teaching and Policy concluded that effective teaching required teachers with deep knowledge of subject matter, an understanding of how people learn and an ability to use principles of learning and teaching to stimulate student achievement. There was a positive connection between teacher training in subject matter and learners’ performance in the classroom (Darling, H. L. 2006).

The Standard Rules for Equal Opportunities for persons with disabilities (1994) states that all children including those with cerebral palsy have a right to an education that is geared towards the development of their personality, talents, mental and physical abilities to their fullest. That teachers of children with cerebral palsy should possess knowledge and skills that equip them with specific competencies that encompass
instructions, physical management of student and educational environment, health maintenance, use of assistive technology and adaptation of the curriculum. In addition they should collaborate and consult within the education system and with relevant professionals (Sherwood et al. 2005).

Teachers who possess appropriate knowledge and skills have the ability to design learning activities that are student centered and which embrace participatory dialogue technique that engages learners with varying needs, interests and aptitudes to respond to the curriculum in various modes by designing learning strategies that are relevant in meeting the diverse needs of learners both at school and in their everyday life (Ashby, C. M. 2008).

For teachers to appropriately prepare instructions that effectively access children with cerebral palsy to the primary education curriculum two components are critical during teacher training; acquisition of relevant knowledge in subject matter and skills in how to teach that subject matter (Mitchell, A., Allan, S., & Ehrenberg, P. 2006).

Effective teachers should understand and be able to apply differentiated teaching strategies that help learners increase achievement. They should apply knowledge of child and adolescent development to motivate and engage students, diagnose the learning needs of children and make inbuilt adaptations and accommodation to increase learners’ participation in class activities and develop a positive climate in the classroom so as to make a stimulating learning environment (Darling, H. L. 2006). Effective teacher training therefore requires that teachers are taught to adapt learning instructions
and activities in the primary school curriculum for learners with cerebral palsy and at the same time providing optimal instructions for the whole class of learners with physical disabilities by doing both instructional and content adaptation (Vaughn, S., & Schumm, J. S. 1994).

Teachers need to know when and how to plan for behavioral supports like rest breaks and how to address the effects of medical implications for individual learners. They should make accessibility of every individual learner to curriculum content their responsibility and not a problem to be dealt with, and should therefore be flexible and willing to make accommodations and adaptations to the curriculum, instructional materials and instructions approaches (Gargiulo, R. M. 2012). Teachers should realize that although learners with cerebral palsy may not conventionally perform learning activities and skills to the teachers’ expectations because of physical and communication barriers which may sometimes cause them frustration, it is still valuable to teach them (Ashby, C. M. 2008).

Many countries in the world subscribe to international policies and recommendation on the Rights of children with disabilities to quality education and benchmark their expectations of an appropriately trained teacher for children with disabilities with the International Standards. The Salamanca Statement for Action (1994) on knowledge and skills expected of a teacher for these children and which are complimented in the standards promulgated in the NCLB (2001) and IDEA (2004) teachers for children with disabilities should be highly qualified with graduate level education or be fully certified or licensed in the field of special education (Marilyn, F. 2008). According to Gargiulo,
R. M. (2012) pre-service teacher training in knowledge of teaching and learning, subject matter knowledge and experience are leading factors in teacher effectiveness. That Pre-service teacher preparation helps trainee teachers develop the knowledge and skills they need in the classroom leading to higher student achievements.

Well trained teachers in the area of physical disabilities outperform those not trained because the latter are equipped with knowledge and skills about specific physical conditions and are therefore able to provide developmental teaching (teaching based on student functional level) and strategic teaching (teaching skills that enhance student success) and at the same time teach children with single or multiple disabilities in one classroom setting by adapting content and individualizing teaching procedures, utilize assistive technology and cooperating with other service providers (Sherwood et.al., 2005).

A research study by National Council for Accreditation of Teacher Education (NCATE) as cited by Gargiulo, R. M. (2012) established that teachers who acquired appropriate subject matter knowledge, skills and experience with the diverse disabilities and appropriate set of qualifications measured by teacher licensure during training were likely to be effective in implementing the desired curriculum. Marilyn F. (2008) pointed out that training of teachers in both pre-service and in-service prepares teachers to work with children of diverse needs and argues that teacher preparedness in handling educationally diverse learners has been cited as some contributing factors to academic success of these children.
Children with cerebral palsy are expected to benefit from comprehensive long term services from skilled and empowered teachers so as to reach their potential (Kirk, S. A., Gallagher, J. J., & Anastasion, N. J., 1977).

Sherwood, et al., (2005) expressed fear that despite high prevalence of children with cerebral palsy little has been done in drawing attention to view different forms of cerebral palsy as unique areas requiring unique instructional attention so as to enhance levels of teacher preparedness through training.

This view is shared by The National Council for Accreditation of Teacher Education (NCATE) which requires a parallel development of teaching knowledge that is specific to the content being taught as well as general pedagogical knowledge of the child being taught (Mitchell, et al., 2006). Few teachers have been trained in the area of physical disabilities and these are the teachers who handle learners with cerebral palsy. In a study done to establish the level of competence in teaching children with orthopedic impairments, 91.6% to 94.5% agreed or strongly agreed that special education teachers should be trained in characteristics and educational implications of handling specific conditions among learners with physical disabilities and health impairments through provision of relevant instructional adaptations and assistive technology (Stafford, A. M., Williams, A.F., & Heller, K.W., 2001).

NCATE recognizes that acquisition of subject matter knowledge alone does not adequately prepare teachers for the challenges they face in today’s classrooms, teachers need to prepare for learning differences that are prevalent in class. Currently most
teachers who handle children with cerebral palsy are trained in general methodology (Stafford, et al., 2001), further Imhof, M., Picard, C. (2009) assented that teachers trained in general methodology may lack relevant technical skills and knowledge and may face a lot of challenges in handling these children especially in specialist areas that require adaptation of teaching materials and training of mobility.

In the United States of America and in England policy development and amendments strengthened subsequent education Acts giving practical guidance on suitable curriculum for teacher training in special needs education. Teachers were required to be highly qualified with graduate level education and be fully certified or licensed in the field of special education (Gargiulo, R. M., 2012; Marilyn F., 2008: Michael, F., 2001) were required to be trained in at least one general course that equips them with knowledge and skills on identification of children with cerebral palsy special educational needs. The USA Bureau of Statistics notes that teacher knowledge in identification of children with cerebral palsy is a prerequisite in ability to plan for individualized learning instructions. In India and Singapore teachers are trained at diploma, graduate and post graduate levels. Degree level training has a standardized syllabus and in-service courses are frequently offered however in Singapore pre- service training of teachers involves a ten week special education practicum in a special school setting (Patanjali, M. 2005), for the purpose of gaining experience on coping with occupational stress that comes along with handling these children (Nonis, K.P., & Jaernice, Y. 2011).
Most African countries have aligned education policies with international recommendations through improved educational infrastructure and training of teachers (Maaungamidze, L., & Kasayira, J. M. 2002). Teachers in Zambia undergo one year certificate courses and a two-year diploma courses in special needs education (Mnkandla, M., & Mataruse, K. 2002: Mpopfu, E. 2004). In Kenya policies and reforms in the education sector have led to improved training opportunities for teachers of children with special educational needs. Teacher training courses are offered through in-service and pre-service at certificate, diploma, graduate and post graduate levels. Until recently training of teachers in the area of special needs education was based on the four traditional categories of disabilities: Physical Disabilities, Mental Handicaps, Visual Impairments and Hearing Impairment. In response to Global Policy frameworks that have outlined the Rights and purposes of education for all children including those with disabilities, training of teachers for children with special educational needs has been expanded to include other areas like Deaf blind, Learning Disabilities, Emotionally and Behaviorally Disordered and Inclusive Education however training of teachers to specifically handle learners with cerebral palsy has not been started (MOE, 2009).

2.3 Adaptation of Curriculum for Learners with Cerebral Palsy

Cerebral palsy is a disorder of movement and posture that is due to non-progressive abnormality of the immature brain and is classified in several ways: by location, (the limb affected), neurologically (the area of the brain affected) and by function (severity). It can also be classified by specific motor patterns like spasticity (stiff muscles), athetoid (uncontrollable muscle movement) and ataxic (affecting balance and motor
coordination). When the brain is damaged messages from the brain to other parts of the body become distorted or miss out completely causing severe body dysfunction (Sherwood, et al., 2005). As a result, functions related to movement, sensation or cognition is affected. The severity of this condition is complicated further by associated conditions occurring alongside it such as sensory impairment, communication impairment, orthopedic deformities and learning disabilities. The importance of these classifications is to make teachers understand the individual nature of each physical condition and be able to plan for appropriate instructional strategies and adaptations that meet their specific learning needs.

Children with cerebral palsy can be placed in special schools, special units in mainstream schools or inclusive settings; the choice of placement is dictated by the severity of the condition and the learners’ educational needs. Sherwood, et al., (2005) argues that for learners with physical disabilities focus should be on the content and the instructional methods and not necessarily where teaching occurs. It is the methodologies the teachers’ employs that remove the barriers to the primary education curriculum by planning for instructional strategies that encourage individual participation in learning activities.

Today the trend of educational provisions for children with disabilities calls for accountability in curriculum implementation. Teachers are required to prepare children for high achievements in the general educational curriculum just like their non-disabled counterparts by delivering data driven instructions using research based strategies (Gargiulo, R. M. 2012). Data driven instructional planning informs the direction of
instructional implementation and it involves teachers being knowledgeable about types of disabilities represented in the classroom, behavioral patterns of learners, their backgrounds, the challenges they experience in accessing the curriculum, present level of achievement and academic achievement and the relevant learning aids and assistive technology (Ashby, C.M. 2008).

According to Marilyn, F. (2008), good teacher instructional preparations start with deciding what to teach, however the most crucial concern is identifying the methods and approaches of presenting the curriculum content so that every individual with their unique learning needs as evidenced in the data collected is helped to access and participate in the learning activities. Rogoff, B. (2003) reiterates that a more responsive way to achieve participation of these children in class activities is to plan instructions that encourage active participation of learners in class activities rather than organizing instructions according to teachers’ convenience. Teachers should address individual functional limitations and psychosocial and environmental barriers to participation in learning activities by providing the necessary instructional adaptations and assistive technologies and equipping these children with psychosocial adjustment skills like self-efficacy, self-concept, social competence all woven into one instructional preparation.

Implementing the primary school curriculum for children with cerebral palsy may be negatively affected by several compounding factors that bar them from accessing the primary education curriculum. Learners with cerebral palsy who are among the severest in the category of physical disabilities particularly experience problems accessing the curriculum due to functional limitations resulting from their disability and its associated
conditions, psychosocial and environmental factors (Sherwood, et al., 2005). These limitations include; motor limitations, restricted communication, visual problems, fatigue and endurance, health factors, experiential deficits and concept development, cognitive impairments and the interactional effects of these disabilities. Psychosocial and environmental factors include motivation, self-concept and self-esteem, social competence, behavioral and emotional functioning, ineffective learning environment and inaccessible physical environment. These factors vary from one individual to another depending on the severity of the resulting interactional effects (Sherwood et al, 2005).

Lack of teacher consideration of different learning capabilities among learners with cerebral palsy during preparation of instructional activities has been cited as a possible contributory factor for limited participation of learners in learning activities. These have played a big role in causing low academic achievement for these learners (Marilyn, F. 2008). Understanding of individual learner educational needs, abilities, interests and individual medical implementations are crucial factors that teachers need to consider during planning for instructional activities (Gray, D.B. 2007).

Teachers of learners with cerebral palsy need to make deliberate attempts to ensure that all learners despite their different learning capabilities due to severity of their handicapping conditions participate in learning activities at their individual levels. In the USA and England policy development strengthened the education sector which in turn gave practical guidance to special educators on their teaching functions by
providing a range of strategies and resources for teaching learners with disabilities (Michael, F. 2001).

Learners with cerebral palsy need support in task performance and an environment that is stimulating for the enhancement of classroom participation. According to Wolfensberger’s theory of Normalization (1980) persons with disabilities need to be offered the same conditions of life as are offered to other citizens and these includes schooling and employment among others. According to these theory learners with cerebral palsy should not be seen as incapable individual requiring institutionalization rather they should be provided appropriate supports during learning to enhance and promote their participation in learning activities and academic achievement.

Differentiation of instructions involves responding constructively to students learning by providing them appropriate opportunities commensurate to their capacity through appropriate pedagogy (Lewis, A. 1995). Westwood, P. (2004) states that differentiation describes adaptive approaches that meet individual learning needs of learners. It involves using different strategies to accommodate individual differences. Teaching learners with cerebral palsy requires adaptations in a number of areas. This involves modification of skills being taught, varying the environment to create an appropriate setting and changing the content by lowering its complexity to the ability level of learners and introducing technology that enhances and maximizes their participation in learning activities.
In differentiation of instructions strategies, teachers may use learning contracts and tiered lessons to address both learning needs and individual preferences. When using learning contracts teachers and students tailor the content of the instruction to the level of the learners’ ability and preference. For example, in a reading lesson for learners with cerebral palsy the teacher may discuss with individuals the content to be learned and give them the opportunity to pick the task of their preference, what they will want to focus on and how they will wish to provide the feedback, they can choose to draw, paint, rewrite or provide oral or written answers as the teacher only guides (Marilyn, F. 2008).

One way of ensuring access to the primary school curriculum for learners with cerebral palsy is by encouraging them to participate in learning activities via the concepts like Universal Design for Learning (UDL). UDL allows teachers the flexibility necessary to re-design curriculum, instructions and evaluation procedures capable of meeting the needs of all learners by planning for instructional strategies that allow learning goals to be achieved by individuals with wide differences in their abilities to see, hear, speak, move, read, write, organize, engage or remember or by providing them with multiple pathways through which to access and participate actively in learning activities. (Marilyn, F. 2008). Multiple pathways are such as video clips, sign language drawing or write only activities. Those with visual problems can access the content through discussions, role play, Braille, manipulation, or read only activities. These adaptations are built into the instructional activities during planning, rather than being added as an afterthought.
Tiered lessons strategy uses cooperative learning or scaffolding approaches. In this approach, pupils learn socially, in pairs or in small groups through a variety of structured activities. Cooperative learning does not encourage competition; rather it encourages learners with varying abilities and strength to work towards achieving a common goal. The teacher is only required to structure the task in such a way that every individual learner significantly contributes to the completion of the learning task through active participation in the learning activities. In a mathematics lesson for example, the teacher using cooperative learning strategy will put learners into groups, provide all the necessary learning aids, use task analysis to break the task into components for each group, encourage active participation from each learner and only move to the next component when the previous one has been achieved (Gargiulo, R.M. 2012).

Scaffolding is an instructional strategy that teachers employ to teach learners with cerebral palsy who are inactive and passive. This strategy is used at the level of the learner. This strategy encourages independence and proficiency in problem solving in learning tasks. It is most appropriate for learners who have inability focusing on a task, for example the teacher may use colored line prompting strategy. The teacher makes stripes of colored paper and places beneath the words to be read by a learner. The Teacher adds more support by swiping a finger under the words as the learner reads. These supports are withdrawn gradually as the learner gains mastery of the task (Sherwood, et al., 2005: Verity, D.P. 2005).
Direct learning strategy emphasizes on maximizing the quality and quantity of instructions a learner receives. Teacher gives small segments of new information which demand immediate feedback from learners and provides practice while demonstrating each step. In a reading lesson for example, the teacher may plan to teach the letter sounds by blending sounds to form words, reading the words and making sentences using the words. In using direct instruction strategy the teacher will first model the activity for the learners; the teacher will perform the activity with the learners and lastly ask the learner to perform the activity independently and at every stage giving corrective feedback to the learners (Gargiulo, R. M. 2012).

Task analysis is another teaching strategy found to be very useful for learners with cerebral palsy. Sherwood, et al. (2005) reports that learning activities can be broken into tasks and analyzed through observation during the lesson, tasks giving difficulty may be taught in small parts until the whole concept is mastered.

Guided participation in the classroom is another important strategy teacher’s use to ensure active participation of learners with cerebral palsy in learning task. According to Ghan, M. Z., & Ahmed, A. C., (2012) learners with disabilities perform independent learning activities better when teachers assist them promptly during class activities. Mitchel, D. (2005) contends that it is in order when teachers give more assistance to these learners because it is easier and faster to provide help rather than watch learners struggle with tasks. Teachers can assist leaners in several ways ranging from physical to verbal prompts.
Teachers may also use shaping; this is done through verbal instructions. The teacher tells the learner how a task is performed, demonstrate how it’s done and ask the learner to do alone.

**Learning Environment**

An appropriate learning environment encourages independence, self-motivation, self-direction, personal empowerment and academic achievement. Its organization is supposed to enhance free movement and interaction of the learners with the classroom routines like moving to the blackboard to demonstrate an activity or write on the blackboard. These freedoms consequently influence children’s expectations to participate in the learning activities (Granlund, R., Berglund, E., & Erickson, H., 2000). How space is managed significantly impacts students’ behavior, attitude and performance, when the room is comfortable resources and opportunities for instruction become accessible. This encourages appropriate behavior and student frustration is reduced while performance is promoted (Schwartz, D. 2005). Teachers should focus on making the class a physically, emotionally, socially and academically inclusive by facilitating the development of a healthy balance of the relationships among learners, learning materials and content to be learned while recognizing and understanding unique individual challenges that result from varied physical dispositions, academic abilities, pace of learning of different learners and how these impacts on participation and access to the general education curriculum.
Several types of environmental modifications may be needed to accommodate a student with cerebral palsy. Fatigue or endurance may necessitate medication which may require that children get rest breaks between lessons. Classrooms should be located in close proximity, pavements and ramps should be at all entrance for easy access for those with wheelchairs. Room arrangement should have a balanced structure, organization, freedom of movement so as to explore and interact (Schwartz, D. 2005).

In the classroom learners with wheel chairs may require preferential seating in order to attend better to learning activities. In some cases learners may require specially designed chairs and tables to accommodate their physical state. Storage of teaching and learning materials should be accessible by all learners and the ones in use stabilized on working surfaces to prevent them from falling (Gargiulo, R. M. 2012). There should be cordial relationship between teachers and all those professional involved with the learners in the classroom. A healthy attachment between the learning environments with learners promotes positive interaction in the classroom (Rye, H. 2005).

2.4 Resources for Teaching Learners with Cerebral Palsy

According to Sherwood, et al., (2005) students with physical disabilities can participate in an array of the general curriculum elements when provided with appropriate accommodations; extension of time, lowering the complexity of the concept, rest breaks etc. Assistive technology; communication boards, typewriters, word cards, picture schedules etc, and Augmentative and Alternative communication; gestures, object manipulation, picture cards etc. Lewis, A. (1995) shares this view and states that opportunities for children with individual learning needs are enhanced if the relevant
resources are clearly organized, individualized and accessible to the learners. Provision of teaching and learning resources and assistive technologies give learners a level playing field and allows them to demonstrate competence and participation on an equal basis enhancing their independence and quality of life. Gericke, T. (2006). Provision of appropriate seating facilities improves their posture and movement during class participation and enhances their receptiveness to learning; they also become physically receptive in taking in new information. Children with cerebral palsy may have very stiff muscles, in the case of spastic cerebral palsy, loose, contorted, abnormal and purposeless muscle movements like those with athetoid cerebral palsy and poor body balance and uncoordinated voluntary movement like those with ataxic cerebral palsy, Sherwood, et al., (2005). This severity may range from mild to severe causing problems with communication, fine and gross motor coordination and positioning which negatively affects their participation in learning activities and acquisition of skills and knowledge required for their academic achievement and success.

When planning for instructional strategies for these learners, teachers have to take into account the following factors; barriers to participation in learning that result from multi-handicapping condition of cerebral palsy, possible adaptations and individualization of instructional approaches and an appropriate learning environment that might enhance the learners access to the curriculum content and the provision of relevant teaching/learning aids and assistive technologies that will maximize participation (Marilyn, F. 2008).
Children with cerebral palsy experience problems developing speech because of poor coordination of speech muscles that may be too tight or too loose. This speech constraint is a significant barrier to acquisition of knowledge and skills since the learner is denied meaningful interaction with learning materials, curriculum content and the teachers. Lack of speech may lead to children’s individual learning needs going unmet, and isolation and frustration may set in. Augmentative and alternative communication is needed for these children to communicate. Teachers need to assess these children to establish their most reliable mode of response (RMR) to facilitate an accurate and consistent way of communicating their responses in class and socially. They use gestures, pointing and vocalization, head nod (for yes), eye gaze, or giving written or oral answers using a multimodal AAC convention with a Generic reading display. Once teachers identify the RMR for children they are then able to plan for individualized instructions (Sherwood, et al., 2005).

Proper positioning and seating is an important aspect of consideration in planning for instructions. Poor positioning may impede accessibility required to enhance the quality and precision of movement and ability to accomplish tasks. Proper position will increase access and participation in learning activities by enabling learners to manipulate learning materials on work surface and improve their writing skills. It also reduces deformities. This is achieved through a wide range of special chairs and inserts that can go into a chair or wheelchair to achieve optimal positioning. Children with moderate or severe cerebral palsy may require mobility devices like; walkers, powered scooters, manual wheelchairs, grab bars with rails, canes or crutches to move freely in
the environment. This gives them the independence they need to locate and access learning materials and participate in learning and other curriculum activities in school.

2.5 Collaboration of Teachers and Other Professionals in Service Provisions to Learners with Cerebral Palsy

Establishing collaborative practices within the school, the classroom and with other relevant professionals is advocated as the best practice in meeting children’s complex educational needs and has been proved to help teachers of learners with cerebral palsy achieve the desired educational goals. Sherwood, et al., (2006) contends that teachers’ roles continue to evolve to include increased collaboration and consultation within education and related disciplines. This can be achieved through consolidated initiatives and support from a multidisciplinary team that may comprise: physiotherapist, occupational therapists, speech and language pathologists, counselors teacher aids, parents school nurse and regular school teacher among others.

Physiotherapists

Learners with cerebral palsy experience problems of varying degree with mobility, function, posture, and balance (Gargiulo, R. M. 2012). Physiotherapy has been regarded as an important service for persons with cerebral palsy whose fundamental role is to work closely in partnership with learners with cerebral palsy and teachers for the purpose of evaluating their muscle tone, strength and gait and treatment of problematic conditions including muscle atrophy or tightness, loss in joint range of motion, muscle spasticity, pain in muscle and joints, joint inflammation and contractures for the purpose of rehabilitating them by training and strengthening the
muscles involved, Law, et al., (2007). Physiotherapy focuses on basic mobility such as standing, walking, climbing, sitting, reaching out for things it’s a key element in a multidisciplinary approach to increasing a learner’s mobility. Access to physiotherapy service are based on individual needs rather than diagnostic category whose goal is to maximize function control of the body by developing coordination, building strength, improving balance, maintaining flexibility, optimizing physical function and maximizing independence, Mayston, M. (2004). Through physiotherapy learners are trained to use adaptive equipment which empowers their physical and emotional wellbeing setting the stage for interaction within the class and school enhanced participation in learning activities as independent individuals (Asbornslett, M. & Hemmingsson, H. 2008).

**Occupational therapists**

Occupational therapy (OT) is the profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of daily activities (occupations). Gericke, T. (2006) contends that occupational therapy practitioners have a holistic perspective in which the focus is on adapting the environment and/or tasks to fit the person, the person is the integral part of the therapy team, it is an evidence based practice deeply rooted in science.

OT practitioners enable people of all ages to live to their fullest potential by helping them promote health, and prevent injuries, illness and disabilities. This includes individualized evaluation during which the client and therapist determine the child’s goals. They customize interventions to improve the child’s ability to perform daily
activities to reach the desired goals by evaluating the outcomes to ensure the goals are being meet and/or make change to the interventions. These therapeutic interventions include helping children with disabilities to participate fully in school and social situations by helping children recovering from injury to regain skills and provide supports for those experiencing physical and cognitive challenges.

Cerebral palsy affects muscle tone which interferes with voluntary movement and delays gross and fine motor development (Marilyn, F. 2008). This voluntary movement is crucial in the performance of tasks that require the use of hands and other body parts. For a learner with cerebral Palsy to participate fully in learning activities fine motor skills have to be rehabilitated. Occupational therapists increase and maximize the learners’ participation in learning activities by providing advice to the teachers on how to adapt learning tasks and environment, advising on structural building and equipment and advising teachers on ways of reducing fixed postures over time by providing advice on appropriate equipment and technique to maintain postural alignment Law, et.al., (2007)

Guidance and Counseling
Counseling is a personalized intimate interview or dialogue between people experiencing some emotional, social, educational, physical or vocational problems with a professional counselor (Denga, D. I. 2009). According to Hall, J. G. (2015) the counselor and the counselee interact in a professional setting which is initiated and maintained as a means of facilitating a meaningful understanding of oneself and the environment and results in changes in the behavior of the counselee. Children with
physical disabilities and in particular those with cerebral palsy experience a myriad of problems that have become increasingly complex including academic, personal-social, vocational, financial, sexual, family and emotional. These challenges are experienced at home and school and may interfere with the unfolding of the inherent unique potentialities and capabilities limiting their optimum functionality (Gysbers, N., & Henderson, P. 2001).

Learners with cerebral palsy find it difficult to comply with the demands of school and society possibly because of their perceived lack of performance or lack of potential and are often treated with little or no interest and sometimes with sympathy, fear, embarrassment and even disgust, (Holcomb-McCoy, C. 2007). With an ever changing society, it is difficult for these children to adjust and adapt themselves to society, work, family and school (Denga, D. L. 2009). The stresses they face from all aspects of life may be positive, pushing them to higher levels of performance, but as stress builds up and goals are not achieved due to functional limitations children with disability may feel inadequate. They become traumatized by psychological pressures such as shock, disbelieve, anger, denial, grief and bargaining in relations to their disabilities (Obiozor, W.E. 2009).

Robert, L. A., Bouknight, T. M., & Karan. O. C. (2010), state that counseling is an important support service for learners with disabilities although counselors have no direct experience or training to work with specific handicapped persons. However legislation encourages greater school counselor involvement with students with physical disabilities so as to remove these emotional, psychological, personal and social
roadblocks placed in their way by the ever changing society. Guiding and counseling services assist and support children with disabilities to learn to behave with consideration towards others and to understand themselves better, to learn manners and etiquette, to pursue leisure time activities, to practice social skills and understand social roles and responsibilities and to help these learners to adjust to the curriculum and to school life just like in mainstream schools, (Nweze, et al., 2014). Guidance and counseling has proved effective in fostering positive attitudes, knowledge, skills and understanding that contributes to effective and efficient teaching and learning in schools as it holistically develops their optimum functionality (Milsom, A. (2007).

In the United States of America school counselors who lacked professional development were found to be ineffective in managing and administering school guidance services in multicultural schools as they lacked skills and techniques (Hall, J. G. 2015). Burnham, J. J., & Jackson, C. (2000) adds that many school counselors are not up to date with theories and practices of guidance and counseling.

Kenya is a step forward in formal school guidance and counseling training of teachers. This means that all schools should be staffed with trained guidance and counseling teachers, however the policies that enforce this need have continued to be weak (KESSP, 2005-2010).

Parents of learners with cerebral palsy

According to Ozozi, E. D. (2005) a family is a system in which each individual member has an effect on the family as a whole. He describes a family as an interacting
communicative network in which every member influences the nature of family system and is in turn influenced by the system. A family is the most important institution to any child, it is here the child learns his / her initial experiences and learns to interact from the parents and siblings. Parents therefore have the most important influence on their children, disabled or not (Richardson, S. A. 2009).

Parents play very important role in the promotion of autonomy and participation of their children in daily life activities and in learning. Current studies have shown that parental involvement in child development is a strong predictor of a positive education trajectory and the style of parental involvement can be a promoter of more or less autonomy and participation in learning and other activities (Ferrel, J. 2012). Sheldon, S. B. (2009) reports that good cooperation between schools, homes the communities can lead to academic achievement for students, as well as to reforms in education, further successful students have strong academic support when their parents are involved. Sanders, M. G., & Sheldon, S. B. (2009) add that effective schools with positive school climate have made a real effort to their student families in order to bring about good cooperation.

For learners with cerebral palsy parental participation in their education is even more essential because these children struggle with difficulty in school, being prone to develop poor school engagement. According to Mackichan, D.M., & Harkins, M. (2013) they have a high level of school absenteeism that is frequently involuntary due to health issues. Ferrel, J. (2012) explains that this absenteeism constitutes a really barrier to the progression in the learning process and in school participation and that when
parents of children with disabilities actively participate in the education of their children, achievement is higher and fewer problems occur. Teachers require an enthusiast, supportive learning community and a cooperative parent community can provide this. Schools are supposed to create meaningful parent participation enhanced through provision of information about school activities and occurrences and how these relate and affect children. Teachers should help parents develop optimistic but realistic view about their children’s illness and encourage them to ask questions about their implications on the education of their children (Asby, C. M. 2008).

**Teacher aides**

Teacher aides are people who provide assistance to students with moderate and severe disabilities in an organized school setting. They are sometimes referred to as; personal aide, instructional assistants or Para educators, (Huang, H. H., & Diamond, K., E. 2009).

A teacher aide is a school employee who provides instructional or other direct support services to students and works under the supervision of a certified licensed teacher (Bourke, P. 2008). Teacher aides’ support teaching and learning in schools. They work closely with teachers collecting or developing teaching resources, assisting students with homework, implement teaching lesson plans, maintain class records, enforce behavior management in class and set up equipment to be used during learning. They undertake administrative and student supervision duties participating in teaching activities under the direction of the teacher. Teacher aides support learners who may need additional assistance to achieve particular learning outcomes (Lindsay, S., &
McPherson, A., C. 2012). Learners with cerebral palsy are categorized as having significant difficulties in acquiring literacy and numeracy skills due to individual, social and environmental factors (Huang, et al., 2009) and therefore require the services of teacher aides to manage the unique individual challenges faced by these learners especially during learning. As the teachers provides learning instructions the teacher aides needs to deal with other organizational activities in the class for better learning outcomes.

2.6 Summary of Literature Review

The ultimate aim for teachers of learners with cerebral palsy is to prepare them for high achievements in the general education curriculum just like other learners in the regular schools. Current global trends in education recommend that children with disabilities should be taught in mainstream schools unless the nature or the degree of the needs is such that to do so would be inconsistent with the best interests of the child.

Global Educational reforms guided by IDEA (2000) and the NCLB (2011) recommended quality teacher preparation which should equip teachers with increased complex knowledge base in pedagogical and technological content for sophisticated instructional practices that address divers abilities of learners with disabilities. Ashby, C.M. (2008).

Most of the literature reviewed generally addressed the educational needs of learners with disabilities and particularly those with physical disabilities which included children with cerebral palsy in developed countries. However there was little evidence
documented on how developing countries including Kenya prepared teachers for specific divers’ disability conditions like cerebral palsy in schools. Training institution lumped courses of study in the areas of special needs minimizing the possibility of specialization for heterogeneous conditions like physical disabilities Gargiulo R. M. (2012). The literature revealed that the severity of the condition of learners with cerebral palsy was not a critical consideration in determining the type of educational curriculum provided for them. As a result both the mild and severe categories of cerebral palsy though placed in different educational setups undertook the same school program like the learners in the regular schools despite the fact that these learners experienced varied learning challenges (Merilyn, F. 2008).

It was revealed from the literature reviewed that for teachers to provide quality curriculum instructions that accessed these learners to the general educational curriculum, they should possess knowledge and skills that help them to identify their individual learning needs, adapt both curriculum content and instructional approaches, adapt the learning environment, provide relevant instructional resources and collaborate with relevant professionals in the provision of relevant services for these learners (Sherwood, 2005: Gargiulo, 2012).

The literature review reveals that other studies have been done in the area of curriculum for learners with cerebral palsy. Kingori, (2015) sought to establish if teachers trained in the area of physical disabilities were able to distinguish leaners with cerebral palsy in a class of learners with physical disabilities and therefore provide their learning needs appropriately. The study findings revealed that ability of teachers to identify learners
with cerebral palsy was important in planning for individualized instructions. For teachers to access learners to the general education curriculum they are required to adapt both curriculum instructions and learning activities and use relevant instructional resources to enhance learner participation.

A study by Ogono, S. A. (2008) sought to establish how teachers individualized instructional strategies and adapted the learning environment for learners with cerebral palsy. The study findings established that learners with cerebral palsy have individual learning needs and teachers should employ teaching approaches that address their individual needs in an environment that enhances participation.

From the literature reviewed, many other factors contribute to access to the curriculum by these learners: use appropriate learning and assistive resources and collaborate with all relevant professionals in providing services that maximize performance of every individual learner. Kanana, J. N. (2015) sought to analyze the instructional challenges faced by learners with cerebral palsy. From the study findings teachers used teacher centered approaches rather than child-centered approaches and this may not be applicable and appropriate to learners with CP. The few studies done in the area of cerebral palsy have not effectively established the possibility of high academic achievement of learners with cerebral palsy in special schools for learners with physical disabilities. The literature reviewed in this study sought to help the researcher analyze how teacher competency in implementation of the primary school curriculum for learners with cerebral palsy.
CHAPTER THREE

RESEARCH DESIGN METHODOLOGY

3.1 Introduction

This chapter explains how the research was carried out. It consists of subsections which include research design, variables, location of the study, target population, sampling technique and sampling size, research instruments, validity and reliability, data collection techniques, data analysis procedures and ethical considerations of the study.

3.2 Research Design

Creswell, J. W. (2009) defines research design as plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. Creswell, J. W. (2014) defines research design as a type of inquiry within qualitative, quantitative and mixed methods approaches that provide specific directions for procedures in a research design.

This study adopted descriptive survey design conducted through concurrent mixed methods. This design involved the researcher converging or merging qualitative and quantitative data and connecting it. In this study the researcher collected data from the sampled population in the three special schools and a special unit for learners with physical disabilities in Bungoma County through questionnaires, interviews and observations and connected in data analysis for the purpose of providing a comprehensive analysis of the research problem. In this study the researcher collected both forms of data at the same time, integrated the information and interpreted the overall result.
3.2.1 Variables

The independent variables in this study were teacher training, curriculum adaptation, use of relevant resources and collaboration between teachers and relevant professionals. Dependent variable was the successful implementation of the primary school education curriculum to learners with cerebral palsy and intervening variable was attitude of school community towards learners with cerebral palsy. Teacher preparedness was viewed in terms of teacher readiness in terms of having skill and knowledge to teach learners with cerebral palsy, pedagogical content to adapt curriculum, use appropriate resources and collaborate with relevant professionals.

3.2.2 Research Design and Methodology

This study employed mixed methods research approach of inquiry. This approach combines both qualitative and quantitative forms of data collection in tandem so that the overall strength of a study is greater than either qualitative or quantitative research (Creswell, J. W. 2009). The researcher used the following data collection methods; observation checklists, interview schedules and structured questionnaires making this study a mixed methodology.

A mixed research is an approach to inquiry that combines both qualitative and quantitative forms. It involves integration of philosophical assumptions, the use of both quantitative and qualitative approaches and the mixing of both approaches in a study. It also involves the use of both approaches in tandem so that the overall strength of a study is greater than either one of the two approaches (Creswell, J. W. 2009).
3.3 Location of the Study

The study was carried out in three special schools and a special unit for learners with physical Disabilities in Bungoma County. These are; Sister Denise Libolina special school, Joy Valley Special School, Nalondo Christadellphian Bible Mission (CBM) Special school and Myanga Special Unit. Cerebral palsy is a condition categorized as a physical disability (IDEA, 2004) for educational purposes therefore these learners are placed in special schools for learners with physical disabilities. Bungoma County has only three special schools for learners with physical disabilities. The researcher established the existence of learners with cerebral palsy in schools for learners with physical disabilities through consultation with the teachers in the schools and examining the pupils registers for confirmation.

3.4 Target Population

Target population refers to the total number of subjects or total number of environments of interest to the researcher (Oso, Y. W., & Onen, D. 2008). In this study the target population consisted of 4 head teachers and 84 teachers in special schools and units for children with physical disabilities who were specialized in the area of physical disabilities. Cerebral palsy is categorized as a physical disability; teachers of learners with physical disabilities are professionally trained to handle learners with cerebral palsy (IDEA, 2004).

3.5 Sample Size and Sampling Techniques

Maree, K. (2007) defines sampling as “the process used to select a portion of the population for study”. This implies the selection by the researcher, of participants for a
particular study he/she deems in the best position to provide the relevant information needed for such a study. This section provides the sampling process adopted for this study.

3.5.1 Sample Size

Patton, M. (2002) argues that the sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what is useful, what will have credibility and what can be done with available time and resource. The sample size for this study was based on a sample size determination formula by Krejcie and Morgan (1970) as cited by Kasomo, D. (2001). The formula is given as:

\[
n = \frac{X^2 \times N \times P(1 - P)}{(ME^2 \times (N - 1)) + (X^2 \times P \times (1 - P))}
\]

Where:

- \(n\) = Sample size
- \(X^2\) = Chi-square for the specified confidence level at 1 degree of freedom
- \(N\) = population size
- \(P\) = population proportion
- \(ME\) = Desired Margin of Error (expressed as a proportion)

For teachers, the sample size was;

\[
= 3.841 \times 84 \times 0.5 (1 - 0.5) / 0.05 \times 0.05 (84 - 1) + 3.841 \times 0.5 (1 - 0.5)
\]

\[
= 80.661 / 71.16779
\]

\[
= 69
\]

Table 3.1 presents the sample size of this study;
Table 3.1: Sample Size

<table>
<thead>
<tr>
<th>Category</th>
<th>Population size</th>
<th>Sample size</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>84</td>
<td>69</td>
<td>82.14</td>
</tr>
<tr>
<td>Head teachers</td>
<td>4</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>73</td>
<td>82.95</td>
</tr>
</tbody>
</table>

Source: Field Data, 2016

3.5.2 Sampling Technique

Sampling is the process of selecting a number of individuals for study in such a way that the individuals selected are representative of the large group from which they are selected. The selected individuals from the sample and the large group from which they are selected from are the population, (Oso, Y.W. & Onen, D. 2008).

In this study the researcher used purposive sampling to select 4 head teachers of the special schools and special unit. Purposive sampling technique allows the researcher to use cases that have the required information with respect to the objective of his or her study. The researcher used simple random sampling to select the 69 teachers from the special schools. Simple random sampling technique involves giving a number to every subject member of the accessible population then placing the number in a container and picking any number at random. Subjects corresponding to the numbers picked are then included in the study (Mugenda, O.M., & Mugenda, A. G. 1999).
3.6 Research Instruments

According to Creswell, J. W. (2009), social science commonly uses questionnaires, interview schedules, observational forms and standardized test as research instruments. This study used both quantitative and qualitative data collection techniques. The following instruments were used during data collection.

3.6.1 Questionnaires for Teachers

In this study the researcher used structured questionnaires to collect information from teachers. According to Kothari, C. R. (2008), questionnaires are usually free from the interview bias as the answers are in the respondents own words. Respondents also have adequate time to give well thought out answers. Questionnaires save time and information can be collected from a very large sample. The questionnaire choice is therefore based on the fact that questionnaires are free from bias of the interviewer and respondents have adequate time to give well thought out answers, and is appropriate for literate, educated and co-operative respondents where in this case all respondents of the study were considered to meet this requirement.

The questionnaire was developed on the basis of the objectives of the study and variables as captured in the literature review. The questionnaire had four sections with Section A covering the demographic information of the respondents involved in the study, Section B covered items on the level of teacher competency. Section C covered the instructional strategies employed by teachers in teaching learners with cerebral palsy in schools for children with physical disabilities; Section D covered the availability of teaching/learning resources that enhances teacher competency in special
needs education. The last section covered collaboration between teachers and related professionals. The questionnaires used were marked as appendix 11 in the appendices section.

### 3.6.2 Interview Schedule

Orodho, J. A. (2009) postulates that many people are willing to communicate orally than in writing and they would provide data more readily and fully than on a questionnaire. An investigator is able to encourage subjects and probe them deeply into a problem. In this case, structured interview was administered to head teachers of special needs schools in Bungoma County in order to capture information which was not captured using questionnaires. Interview as a method of research typically involves a face to face meeting in which a researcher (interviewer) asks an individual a series of questions. It is an interaction of the researcher (interviewer) and the interviewee. A great deal of qualitative material comes from talking with people whether it is through formal interviews or casual conversations. The interview guide was marked as appendix 1.

### 3.6.3 Observation Checklists

An observation checklist is a structure and framework containing a list of things to be observed in a classroom, it also serves as a contract of understanding which helps in getting specific feedback on practices of the teacher and specific adaptations during the teaching process. The researcher observed class three mathematics lessons in the four schools selected for the study using an observation checklist. Each observation lasted the entire lesson period (30 minutes). The observation checklist had two sections,
section A was used to observe instructional adaptations put in place for learners with cerebral palsy during the lesson and section B was used to observe the physical and learning environment for the learners. Observation check list was marked as appendix III.

3.7 Pilot Study

The purpose of Piloting is to establish both reliability and content validity of the instrument and to improve questions, formats and scales (Creswell, J. W. 2014). A pilot study was carried out in Lunganyiro special school in kakamega County. This was a school for children with physical disabilities, and was assumed to have the same characteristics as the schools under study; it had learners with cerebral palsy whose degree of severity could have ranged from mild to severe and therefore experiencing challenged accessing the school curriculum like the learners in the schools under study. The researcher selected a total of 10 teachers from the school to participate in the study. The results from the piloting were incorporated in the final instruments with revisions to improve its content validity as well as questions, format and scales reliability (Mugenda, & Mugenda, 1999).

3.8 Validity and Reliability of the Research Instruments

This section presents how validity and reliability of the research instruments was obtained.
3.8.1 Validity of the Instruments

Validity of a research instrument is defined as the extent to which the instrument measures what it purports to measure or the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Creswell, J.W 2009). According to Kothari, C. R. (2008), validity is quality attributed to proposition or measures of the degree to which they conform to establish knowledge or truth. In this situation, the content and structural validity of the instrument was tested by consulting supervisors in Kenyatta University and thereafter incorporating their positive inputs in refining the final data collection instruments.

3.8.2 Reliability of the Research Instruments

Reliability is a measure of the degree to which a research instrument yields consistent data after repeated trials (Creswell, J. W. 2009). To determine the reliability of the research instruments used in this study, the test re-test method was employed to test reliability. The first test was administered to ten teachers. Eight teachers filled the questionnaires, one teacher was observed in a mathematics lesson for fifteen minutes and the head teacher was taken through the interview schedule. After two weeks a second test was given to the same respondents. The two tests were analyzed separately. Corrections and adjustments on areas of weakness were made to the instruments. The Pearson’s Product Moment Correlation (r) was used to calculate the reliability coefficient between the first and second scores. The formula is as shown below:

\[ r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}} \]
Where:

\[ r = \text{Coefficient of reliability} \]
\[ N = \text{Total number of subjects} \]
\[ x = \text{Rated values of 1}\text{st administered test} \]
\[ y = \text{Rated values of 2}\text{nd administered test} \]
\[ \sum = \text{Summation} \]

The coefficient obtained was then converted into an appropriate correlation for the entire test using the Spearman and Brown prophecy shown below;

\[ r_{xx} = \frac{2\text{roe}}{1 + \text{roe}} \]

Where;

\[ r_{xx} = \text{reliability coefficient for two tests} \]
\[ \text{roe} = \text{reliability coefficient obtained by the squares of the 1}\text{st and 2}\text{nd administered tests.} \]

In this study a correlation coefficient of \((r) 0.75\) was obtained and therefore considered appropriate to ascertain the reliability of the instruments as indicated by Orodho, J. A. (2009).

### 3.9 Data Collection Techniques

A permit was sought from the National Council for Science and Technology Innovations (NACOSTI) through the school of Education, Kenyatta University. Upon obtaining the research permit, the researcher sought permission from the County education office to visit special schools. The special schools were visited by the researcher after seeking an appointment with the school administration. Questionnaires
were administered to 69 teachers in special schools and special unit within the County. The researcher scheduled a 30-minute interview with head teachers differently during the visits to their schools. The researcher carried out classroom observation in the sampled schools. A full mathematics lesson was observed in all samples schools. The information obtained from class room observations and interview from head teachers used to supplement what was obtained from interviews and questionnaires.

3.10 Data Analysis

Data analysis was conducted using both the quantitative and qualitative approaches. The researcher transformed qualitative data to quantitative data in pie charts, bar graphs and frequency tables. Analysis and interpretation was based on the descriptive statistics.

3.11 Ethical Considerations

In addition to conceptualizing the writing process of the proposal, a researcher needs to anticipate the ethical issues that may arise during a study (Hesse-Biber, S. N., & Leavey, P. L. 2007). The researcher sought permission from the School of Education Kenyatta University and National Commission for Science, Technology and Innovations (NACOSTI) before undertaking the study. This study deals with people as respondents so the respondents were assured of privacy, confidentiality and anonymity of the information obtained from them. The respondents were informed that the data they gave would only be used for research purpose and that any unused data would be destroyed. They were also informed that they were free to withdraw from the study at any time they deemed fit.
CHAPTER FOUR
DATA ANALYSIS, PRESENTATION, DISCUSSION AND FINDINGS

4.1 Introduction

This chapter presents data analysis and discussion of the study findings. The study assessed the perception of teacher preparedness in implementation of the school curriculum to learners with CP in Bungoma County, Kenya. The objectives of the study were: to establish whether teachers had skills and knowledge to handle learners with cerebral palsy in schools for learners with physical disabilities, whether they had relevant skills and knowledge to adapt the curriculum for the learners, whether they used relevant resources to teach these learners and lastly whether they collaborated with relevant professionals in the provision of services in schools.

This chapter is divided into four sections. Section one covered the demographic information of the respondents involved in the study; section two covered the perception of teacher preparedness, section three covered instructional strategies employed by teachers in teaching learners with CP, section four dealt with the availability of teaching/learning resources that enhanced teacher preparedness and lastly section five covered teacher collaboration with other relevant professionals. Data was collected using questionnaires, interview schedules and observation checklists and were analyzed using descriptive statistics. The chapter opens with a demographic description of the participants involved in the study.
4.2 Return rate of Questionnaires

A total of 63 out of 69 teachers dully filled and returned the questionnaires. Therefore, the return rate for questionnaires used in data analysis was 91.3%, this was considered adequate to provide adequate information on teacher preparedness in the implementation of the school curriculum for learners with CP. It has been argued that potential bias could result from low response, in this study, high response rate was associated with high reliability in information gathered (Brick & Williams, 2013).

4.3 Demographic information of the Respondents

4.3.1 Gender of the Respondents

Respondents were asked to indicate their gender; the results are presented in Figure 4.1.

![Figure 4.1: Gender of the Respondents](image)

Figure 4.1 shows that a majority of the respondents, 33(52.4%) were females while 30(47.6%) of the respondents were male. This is an indicator that there is female dominance on issues of special needs education. According to Lampropoulou et.al
(1997) many African cultures ascribe the care of students with disabilities to female teachers.

4.3.2 Area of Specialization

Further the respondents were asked to indicate their area of specialization. The results are presented in Figure 4.2.

![Figure 4.2: Respondents’ Area of Specialization](image)

Figure 4.2 shows that few teachers 20(31.7%) were specialized in the area of physical disability while a majority of teachers 31(49.2%) specialized in inclusive education. In a study by The National Academy of Education on quality teacher competency, findings revealed that teachers who were well trained possessed essential knowledge and teaching skills which enabled them to develop quality teaching instructions and learning activities that produce high achievements (Allan Hodkinson and Philip Viickermanet, 2009).
4.3.3 Teaching Experience

Further, teachers were asked to indicate their teaching experience. The results of data analysis are presented in Figure 4.3.

![Figure 4.3: Teaching Experience in schools for learners with physical disabilities](image)

**Figure 4.3: Teaching Experience in schools for learners with physical disabilities**

Figure 4.3 shows that of 31(49.2%) teachers had a teaching experience of between 11-15 years, 13(20.6%) had a teaching experience of between 16-20 years, 8(12.7%) respondents had a teaching experience of 6-10 years and 7(11.1%) respondents had a teaching experience of over 29 years. From the responses, it emerged that most of the teachers in special schools in Bungoma County had a teaching experience of 11-15 years.

4.3.4 Highest Level of Qualification

In addition, teachers were asked to indicate their highest level of professional qualifications. The results of data analysis are presented in Figure 4.4.
Figure 4.4: Highest Level of Education

Figure 4.4 shows that 44(69.8%) respondents had diploma in special needs education, 8(12.7%) respondents were P1 holders and 7(11.1%) respondents had certificate in SNE while 4(6.3%) respondents had a degree in SNE.

From the responses, it emerged that majority (69.8%) of the teachers in special schools in Bungoma County had diploma in SNE. The level of teachers’ education has been associated with acceptance of special needs learners as shown by Cheng, (2011) and Ghani & Ahmad, (2012) who highlighted that different types of teachers and their academic qualification do influence their perception of the implementation of the curriculum for learners with special education needs while perception and degree of competence varies with special education teacher having higher degree. This was in line with the NCLB (2001) and IDEA (2004) expectations that teachers for children with disabilities should be highly trained in knowledge of teaching and learning, subject matter.
4.4 Possession of Skills and Knowledge for Teachers of Learners with Cerebral Palsy

The first objective of this study was to establish whether teachers had knowledge and skills required to handle learners with cerebral palsy. To achieve this objective, teachers were requested to rate their level of agreement on a five point likert scale items in the questionnaire on their competency level in handling learners with CP. The results of data analysis are presented in Table 4.1.

Table 4.1: Teachers’ Responses on relevant training of teachers for Learners with cerebral palsy

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>UD</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teachers should be able to identify children with different types of cerebral palsy.</td>
<td>0.0</td>
<td>0.0</td>
<td>6.5</td>
<td>46.0</td>
<td>28.6</td>
</tr>
<tr>
<td>• Teachers should function as a resource.</td>
<td>13</td>
<td>20.6</td>
<td>11</td>
<td>0.0</td>
<td>22</td>
</tr>
<tr>
<td>• Teachers often collaborate with multi-disciplinary team members for effective service delivery to these children.</td>
<td>5</td>
<td>7.9</td>
<td>14</td>
<td>11.1</td>
<td>25.4</td>
</tr>
<tr>
<td>• Teachers should consider barriers to curriculum access as they plan for appropriate adaptations or provision of relevant accommodation.</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>11.5</td>
<td>9</td>
</tr>
<tr>
<td>• Teachers should do instructional adaptations for the whole class and content adaptations for children with cerebral palsy.</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>14.3</td>
<td>33</td>
</tr>
<tr>
<td>• Establishing functional level is important for provision of strategic teaching for learners with cerebral palsy.</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>4.8</td>
<td>12</td>
</tr>
<tr>
<td>• Training of mobility is a role of teachers for children with cerebral palsy.</td>
<td>12</td>
<td>19.0</td>
<td>1</td>
<td>1.6</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Field Data, 2016
Table 4.1 shows that 29(46.0%) of the teachers agreed with the statement that teachers for learners with physical disabilities should be able to identify children with CP in class, 28(44.4%) of the teachers strongly agreed and 6(9.5%) of the teachers were undecided. This findings show that majority of the teachers (90.4%) in special schools and units in Bungoma County believed that teachers of learners with physical disabilities are able to identify learners with cerebral palsy. This contradicts the findings of Kingori et.al, (2015) who found out in their study that majority of the teachers were not aware of the different forms of cerebral palsy, could not distinguish them from other orthopedic complications and could not therefore ameliorate academic performance of these learners. Identifying the unique learning needs of learners with cerebral palsy is a critical part in designing appropriate educational program and providing needed supports for them.

Further, 22(34.9%) of the teachers agreed with the statement that teachers for children with cerebral palsy should function as a resources beyond the field of teaching for families and other stakeholders. Some teachers 17(27.0%) strongly agreed with the statement as fewer teachers 13(20.6%) strongly disagreeing with the view. This findings show that a majority of the teachers (61.9%) believed that it was their responsibility as teachers of learners with cerebral palsy to function as a resource beyond the field of teaching, They were require to constantly consult with the families of these children, other stakeholders and advocate for them. A few teachers 13(20.6%) were undecided on the statement while 11(17.5%) of the teachers disagreed. This findings concur with Sherwood, (2005) who states that the role of teachers of learners with physical
disabilities continue to evolve and include increased collaboration and consultation within education and related services. This implies that the training the teachers undergo should equip them with adequate skills to identify relevant services and supports for leaners with cerebral palsy and collaborate with the service providers.

Similarly, 21(33.3%) of the teachers strongly agreed with statement that teachers of children with cerebral palsy should often collaborate with teachers in regular schools, school nurse, physiotherapists, social worker and psychologist for effective service delivery for learners with cerebral palsy. A lesser number 16(25.4%) agreed with the statement while 14(22.2%) of the teachers disagreed. This study findings showed that majority of teachers (58.7%) believed that teachers for leaners with cerebral palsy needed to collaborate with teachers in regular schools, school nurse, physiotherapist, Psychologist, Social workers and speech therapists among others for effective service delivery for learners however few teachers 14(22.2%) disagreed with statement. This concurs with the findings of Oluseyi (2016) who found out that collaboration between regular and special education teachers should be encouraged as this enhanced regular teachers’ perception towards learners with special needs. Furthermore, Stichter, Clarke and Dunlap, (2004) noted that collaboration among educators, related service providers and families was a promising approach that affected school climates in positive ways thus enabling effective curriculum implementation.

Further, 29(46.0%) of the teachers agreed with the statement that before planning for curriculum instructions teachers should consider the barriers that may impede on students’ performance. A smaller number 18(28.6%) of the teachers strongly agreed and
11(17.5%) were undecided on this view. It emerges from this study that a majority of teachers (74.6%) considered identifying the barriers that impede students’ participation before planning for curriculum instructions and learning activities. Identifying barriers before planning helps teachers to tailor teaching instructions and learning activities to suit each learners need and at same time design appropriate adaptations and accommodation that enhance participation in curriculum activities. When adaptations and accommodations are inbuilt in curriculum instructions all learners individual needs were addressed (Nyga Elliud, Mwaniki, 2012).

According to Sherwood (2005) teachers for learners with cerebral palsy should focus on the content and the instructional methods and design methodologies that remove barriers to the general education curriculum and enhance access. Merilyn Friend (2008) contends that good teacher instructional preparations start with deciding what to teach, however the most crucial concern is identifying the methods and approaches of presenting the curriculum content.

Similarly, 33(52.4%) of the teachers agreed that for learners with cerebral palsy to access the general education curriculum, teachers should do instructional adaptations for the whole class and content adaptations for individual learners with cerebral palsy. A few teachers 11(17.5%) strongly agreed with this while 10(15.9%) of the teachers were undecided on the statement. The study therefor reveals that a majority of teachers (69.9%) in special schools and units in schools for learners with physical disabilities in Bungoma County believed that teachers for learners with cerebral palsy should do instructional adaptations for the whole class and content adaptations for children with
cerebral palsy. Vaughn & Schumm, (1994) noted that for teachers to appropriately prepare instructions that effectively accessed children with cerebral palsy to the general education curriculum they should endeavor to adapt content and instructions for learners with cerebral palsy while at the same time providing optimal instructions to the whole class. This is supported by Ashby, (2008) who reported that teachers should master an increasing complex knowledge base and sophisticated repertoire of instructional practices that address individual learning needs for effective curriculum implementation to learners in special schools and units.

Furthermore 33(52.4%) of the teachers agreed that establishing functional levels of learners with cerebral palsy was important for provision of strategic teaching. A smaller number 15(23.8%) of the teachers strongly, 12(19.0%) of teachers were undecided while 3(4.8%) of the teachers were in disagreement. This study finding showed that a majority (76.2%) of teachers supported establishing functional levels for learners with cerebral palsy as important for provision of strategic teaching. Children with cerebral palsy have varied functional levels which teachers have to understand so as to individualize teaching and learning instructions for effective and strategic instructional planning (Marilyn Friend, 2008).

Lastly, 22(34.9%) of the teachers strongly agreed that training of mobility for learners with cerebral palsy was their role as teachers. Few teachers 21(33.3%) agreed with the statement while 12(19.0%) of the teachers disagreed. The demographic information given by respondents showed that only 31.7% of the teachers had trained in the area of physical disabilities while a majority (49.2%) had specialized in Inclusive education
however a majority of the teachers (68.2%) in special schools and special units in Bungoma County acknowledged that training of mobility was their role as teachers.

Stafford A.M, Williams, A.F & Heller, K.W, (2001) noted that teachers trained in general methodology may lack technical professional competency and may face a lot of challenges in handling these children especially in areas that require adaptation of teaching materials and training of mobility. This implies that teachers became aware of their role as mobility trainers as they interacted with the learners.

All the three head teachers in the special schools in Bungoma County interviewed had undergone training in handing learners with cerebral palsy and were in a position to identify learners with cerebral palsy and attend to their individual needs depending on the learners’ functional levels.

4.5 Curriculum Adaptation for Learners with Cerebral Palsy

The second objective of this study was to determine whether teachers adapted the curriculum for learners with cerebral palsy in schools for children with physical disabilities. To achieve this objective, teachers were asked to give their level of agreement on a five point likert scale items in the questionnaire on instructional strategies they used in teaching learners with cerebral palsy in schools for children with physical disabilities. The results of data analysis are presented in Table 4.2.
Table 4.2: Teachers’ Responses on curriculum adaptation for learners with cerebral palsy

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>F</th>
<th>%</th>
<th>D</th>
<th>F</th>
<th>%</th>
<th>UD</th>
<th>F</th>
<th>%</th>
<th>A</th>
<th>F</th>
<th>%</th>
<th>SA</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing the most reliable means of response for children with cerebral palsy helps teachers plan for appropriate means of accessing the curriculum by active participation in learning activities.</td>
<td></td>
<td>10</td>
<td>15.9</td>
<td>9</td>
<td>14.3</td>
<td>5</td>
<td>7.9</td>
<td>13</td>
<td>20.6</td>
<td>26</td>
<td>41.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers use physical and verbal prompts to aid active participation of learners who experience difficulty expressing themselves in class.</td>
<td></td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>9</td>
<td>14.3</td>
<td>39</td>
<td>61.9</td>
<td>15</td>
<td>23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children with problems of speed, writing, reading, accuracy and poor attention, require reduced workload, more time, and provision of cues to enable them complete class assignment.</td>
<td></td>
<td>1</td>
<td>1.6</td>
<td>11</td>
<td>17.5</td>
<td>8</td>
<td>12.7</td>
<td>21</td>
<td>33.3</td>
<td>22</td>
<td>34.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers address both learning and individual preferences among learners by allowing them to choose their own feedback mode i.e. drawing, painting, rewriting, giving oral or written answers and pointing.</td>
<td></td>
<td>0</td>
<td>0.0</td>
<td>14</td>
<td>22.2</td>
<td>12</td>
<td>19.0</td>
<td>20</td>
<td>31.7</td>
<td>17</td>
<td>27.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing rest breaks during lessons and adjusting class activities are strategies teachers use to achieve maximum participation of children with problem of stamina and endurance.</td>
<td></td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>11</td>
<td>17.5</td>
<td>35</td>
<td>55.6</td>
<td>17</td>
<td>27.0</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: Field Data, 2016

Table 4.2; This study findings show that 26(41.3%) of the teachers strongly agreed with the statement that when teachers establish the most reliable means of response (RMR) for learners with cerebral palsy, learners are able to respond to teachers instructions through active participation in curriculum content. A few teachers 13(20.6%) agreed
while 10(15.9%) strongly disagreed. It emerged that 61.9% of teachers in special schools and units in Bungoma County believed that establishing RMR enabled teachers plan for activities that accommodated all learners. However a significant percentage of teachers (30.2%) believed it was not important for teachers to establish the RMR for leaners. This implies that teachers need to be knowledgeable on the characteristics and functional limitations each type CP imposes on the individuals so as to plan for relevant teaching and learning resources and accommodations. This allows them to providing for alternative means of responding to instructions and interacting with learning materials. According Marilyn Friend, (2008) understanding learners’ needs enables teachers to adequately plan for learning activities.

Similarly, 39(61.95%) of the teachers agreed with the statement that physical and verbal prompts are strategies teachers may use to aid active participation of learners who experience difficulty expressing themselves in class, 15(23.8%) of teachers strongly agreed while 9(14.3%) of the teachers were undecided. This study reveals that majority of the teachers (85.7%) support the view that physical and verbal prompts were appropriate instructional strategies teachers could use to motivate active participation of learners’ with cerebral palsy in class who may be passive. Best and Bigge (2005) concur that teachers may assist learners during class activities using physical and verbal prompts than to watch them struggle with learning tasks.

In addition, 22(34.9%) of the teachers strongly agreed that children with cerebral palsy who experienced problems with writing, speed, accuracy and poor attention required reduced workload, more time, decreased distraction and provision of cues to enable
them complete class assignments. Fewer teachers 21(33.3%) agreed while a small percentage 11(17.5%) of the teachers disagreed with the statement. The study revealed that majority of the teachers (68.2%) in special schools and units in Bungoma County believed that children with cerebral palsy with problems of speed, accuracy and poor attention and therefore require reduced workload, more time, decreased distraction, and provision of cues to enable them complete class assignment. Gray (2007) states that if teachers understand functional limitations of individual learners, teaching instructions and learning activities will be predesigned in a way that every learner’s limitation will be addressed.

Furthermore, 20 (31.7%) of the teachers agreed with the statement that teachers may address both learning needs and individual preferences among learners with cerebral palsy by allowing them to choose their own feedback mode (drawing, painting, rewriting, giving oral answers or written answers), 17(27.0) of the teachers strongly agreed while only 14(22.2%) of the teachers disagreed with the statement. This study findings reveal that while majority of teachers (58.7%) were of the view that they could address both learning needs and individual preferences among learners with cerebral palsy by allowing them to choose their own feedback mode, a significant percentage of teachers (41.2%) did not agree with the view of the majority. According to Sherwood et.al, (2005) and Verity (2005) teachers may use differentiated instructions on learners with cerebral palsy who are passive and inactive in class as a result of functional limitations. These strategies encourage independence and proficiency in problem
solving of learning tasks. Teachers for learners with cerebral palsy need to be well trained on different instructional approaches.

Lastly, 35(55.6%) of the teachers agreed that rest breaks for learners with cerebral palsy during lessons and adjusted class activities were instructional strategies teachers could use to achieve maximum participation of those who experienced decreased stamina and endurance. Fewer teachers 17(27.0) strongly agreed while 11(17.5) were undecided with the statement. It emerged that majority of teachers (92.6%) in special schools and units in Bungoma County supported the idea that rest breaks during lessons and adjusting of class activities were some of the best instructional strategies teachers could use to achieve maximum participation of children who experience decreased stamina and endurance. This concurs with Asby, (2008) who noted that teachers needed to plan for behavioral supports like rest breaks and other consequences of the medical implications to allow learners to concentrate during lessons.

On interviewing head teachers, it was revealed that teachers in special schools and units in the County used various instructional strategies which suited the needs of various learners with different levels of disabilities. There was no single method of instruction which was more effective the other. The head teachers were aware learners with cerebral palsy required different types or resources that could address their individual learning needs but were not able to avail them because of inadequate funding from the Ministry of Education.

In the four schools sampled for this study, the following was observed in standard three Classrooms which were observed for instructional strategies and environmental
adaptations put in place for learners with cerebral palsy. It was observed that teacher had classroom accommodations in place but individual accommodations were lacking. Classroom displays were lacking in classes and the ones available were torn and not current. Teachers attributed this lack of appropriate resources to low funding by the Government.

Most teachers used prompts to elicit participation of learners during learning but did not individualize learning instructions because they lacked appropriate learning resources. As a result these learners did not attempt the written exercises given in the classroom and most learners were passive during the lesson. Ramps were in place. The blackboards were law enough for learners to access. Classrooms lacked storage facilities as the few resources in the classrooms were kept on the floors of the classrooms.

4.6 Use of Relevant Resources in Special Schools and Units for Learners with Cerebral Palsy

The third objective of this study was to establish availability of teaching/learning resources that enhances teacher competency. To achieve this objective, teachers were requested to rate their level of agreement on a five point likert scale items in the questionnaire on availability of teaching/learning resources that enhances teacher competency in teaching learners with cerebral palsy in schools for children with physical disabilities. The results of data analysis are presented in Table 4.3.
Table 4.3: Teachers use of relevant resources in special schools and units for learners with cerebral palsy

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>UD</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>• When teachers identify barriers to participation in curriculum activities they are able to provide assistive devices that enhance participation.</td>
<td>2</td>
<td>3.2</td>
<td>6</td>
<td>9.5</td>
<td>9</td>
</tr>
<tr>
<td>• Children with cerebral palsy to participate actively in curriculum activities when teachers used teaching and learning resources.</td>
<td>2</td>
<td>3.2</td>
<td>10</td>
<td>15.9</td>
<td>5</td>
</tr>
<tr>
<td>• Different types of cerebral palsy require different types of assistive devices.</td>
<td>3</td>
<td>4.8</td>
<td>12</td>
<td>19.0</td>
<td>4</td>
</tr>
<tr>
<td>• Schools have appropriate resources required by learners with cerebral palsy.</td>
<td>15</td>
<td>23.8</td>
<td>29</td>
<td>46.0</td>
<td>7</td>
</tr>
<tr>
<td>• Schools are funded by the Ministry of Education to purchase relevant resources required by learners.</td>
<td>13</td>
<td>20.6</td>
<td>21</td>
<td>33.3</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Field Data, 2016

Table 4.3 According to this study, 31(49.2%) of the teachers agreed that when teachers identified barriers to participation in both academic and functional abilities of learners with cerebral palsy they were able to provide relevant assistive resources that enhanced participation and performance. A few of the teachers 15(23.8%) strongly agreed with this view while a small percentage 9(14.3%) of the teachers were undecided with the view. It emerged from the study that majority of the teachers (73.0%) in special schools and units reported that when they identify barriers to participation in curriculum
activities and functional abilities of children with cerebral palsy they are able to provide assistive devices that enhance participation.

According to Conroy, Dumlop, Clarke and Alter (2005) many learners with disabilities who are not identified early may not be provided with timely appropriate supports in schools. The need for early identification and intervention for children with cerebral palsy is essential; it prevents disabling condition from worsening in severity (Severson, Walker, Hope-Doolitle, Kratochwill, & Gresham, 2007).

Similarly, 31(49.2%) of the teachers agreed that children with cerebral palsy who experience functional limitations could participate actively in learning activities when teachers used appropriate teaching and learning resources. Further 15(23.8%) of the teachers strongly agreed with this view while a few of them 10(15.9%) disagreed. This study shows that majority of the teachers (73.0%) in special schools and units in Bungoma County were of the view that learners with cerebral palsy who experienced functional limitations could actively participate in learning activities when provided with appropriate teaching and learning resources. When teachers used relevant resources during teaching attention and interest of learners was captured and they became more willing to participate in learning enhancing retention. As the learners manipulate learning resources they are able to internalize and remember what was learnt. Provision of relevant teaching /learning aids and assistive technologies will maximize participation of learners with special needs such as cerebral palsy(Marilyn, F, 2008).
Further, 26 (41.3%) of the teachers agreed with the statement that children with different types of cerebral palsy required different types of assistive devices. Few teachers 18(28.6%) strongly agreed and only 12(19.0) disagreed with this statement. The study findings indicated that majority of teachers 69.9% in special schools and units in Bungoma County had knowledge on the heterogeneity of learners with cerebral palsy and understood that children with different types of cerebral palsy require different types of assistive devices. This concurs with Gargiulo (2012) who stated that learners with cerebral palsy experience totally different social and learning needs and therefore requiring different assistive and adaptive devices.

However, 29(46.0%) of the teachers disagreed with the statement that schools had appropriate teaching, learning and assistive resources required by learners with cerebral palsy in their schools. Few teachers 15(23.8%) strongly disagreed with the statement while only 7(11.1%) were undecided. This study revealed that majority of teachers (69.8%) were of the view that their schools lacked appropriate teaching, learning and assistive resources that were required to help them prepare appropriate teaching instructions with learning activities that accommodated learners with varied learning needs. A study by Mushtaq and Shabana, (2012) in schools in Pakistan found out that there was a positive relationship between learning resources and student performance. In this study, the lack of teaching/learning and assistive resources was a possible cause of poor curriculum implementation caused by poor instructional preparation.

In addition, 21(33.3%) of the teachers disagreed with statement that schools received funding from the Ministry of Education for the purchase of relevant resources required
by earners in the schools. Few teachers 13 (20.6%) strongly disagreed with this view and only 11(7.5%) of the teacher agreed that schools receive funding from the Ministry of Education to purchase relevant resources. This study revealed that majority of the teachers (53.9%) in special schools and units in Bungoma County were not aware that the Ministry of Education funded schools to purchase resources required for learners. Interviews conducted for head teachers revealed that schools received funds but were insufficient and schools could not avail all resources required. Head teachers attributed the lack of resources in schools to low funding from the MoE and high cost of required resources. Provision of relevant resources for learners with disabilities enhances their independence, quality of life and performance in the desired activities (Gericke, 2006; Gargiulo, 2012). Lack of resources in schools may therefore lead to inadequate curriculum implementation in schools as it may compromise appropriate instructional preparation by teachers.

Classrooms observed conducted revealed that schools lacked appropriate storage facilities for the few learning resources available. In most classrooms reading and writing materials were kept on the floor, others in torn cartoon boxes in the classroom. Many classrooms lacked adequate space and this denied learners room for proper interaction with curriculum content. Most classes observed had ramps.

4.7 Collaborate with Relevant Professionals in the Provision of Services for Learners with Cerebral Palsy

The fourth objective was to establish whether teachers of learners with cerebral palsy collaborate and consult within education and with other relevant disciplines. Teachers
were requested to rate their level of agreement on a five point likert scale items in the questionnaire on whether teachers collaborated and consulted within education and with other related disciplines. The results of data analysis are presented in Table 4.4

Table 4.4: Collaboration of teachers with other professionals for service provision

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD F</th>
<th>D F</th>
<th>UD F</th>
<th>A F</th>
<th>SA F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy services maximize physical functions of learners with cerebral palsy.</td>
<td>0 0%</td>
<td>2 3.2%</td>
<td>14 22%</td>
<td>16 25.4%</td>
<td>31 49.2%</td>
<td></td>
</tr>
<tr>
<td>Learners with cerebral palsy in Bungoma County access physiotherapy services as regularly as they deserve.</td>
<td>0 0%</td>
<td>30 47.6%</td>
<td>18 28.6%</td>
<td>10 15.9%</td>
<td>5 7.9%</td>
<td></td>
</tr>
<tr>
<td>Guidance and Counseling teachers for learners with cerebral palsy require specialized training in the area of physical disabilities.</td>
<td>0 0%</td>
<td>3 4.8%</td>
<td>30 47.6%</td>
<td>15 23.8%</td>
<td>15 23.8%</td>
<td></td>
</tr>
<tr>
<td>Guidance and counseling programs in schools support learners with cerebral palsy to behave with consideration towards others and to understand themselves better.</td>
<td>0 0%</td>
<td>5 7.9%</td>
<td>30 47.6%</td>
<td>12 19.0%</td>
<td>16 25.4%</td>
<td></td>
</tr>
<tr>
<td>Occupational therapy services help in reducing fine motor challenges among learners with cerebral palsy.</td>
<td>10 15.9%</td>
<td>8 12.6%</td>
<td>24 38.1%</td>
<td>12 19.0%</td>
<td>9 14.3%</td>
<td></td>
</tr>
<tr>
<td>Parental participation in the education of children with cerebral palsy increases chances of academic achievement.</td>
<td>0 0%</td>
<td>15 23.8%</td>
<td>22 34.9%</td>
<td>12 19.0%</td>
<td>4 6.3%</td>
<td></td>
</tr>
<tr>
<td>Teacher aides help learners with cerebral palsy achieve the desired outcomes in learning activities in the classroom.</td>
<td>0 0%</td>
<td>19 30.2%</td>
<td>24 38.1%</td>
<td>10 15.9%</td>
<td>10 15.9%</td>
<td></td>
</tr>
</tbody>
</table>

Source. Field data 2016

Table 4.4 According to this study 31(49.2%) of the teachers strongly agreed that when learners with cerebral palsy are provided with timely physiotherapy services they became physically strong and their functional levels improve, 16(25.4%) of the teachers agreed while 14(22%) were undecided. The findings of this study revealed that
majority of teachers (74.6%) in special schools and special units in Bungoma County supported the view that physiotherapy services maximized functional levels of these learners and improve their participation in curriculum activities.

According to Mayston (2007) the goal of physiotherapy is to improve function control of the body by developing coordination, building strength, improving balance, maintaining flexibility, optimizing physical function and maximizing independence. Gericke, (2006) concurs that many types of physical disabilities require rehabilitation as well as long term therapy support and services. Most studies on physiotherapy for school aged children have focused on specific interventions aimed at the impairment level or activity limitation rather than the impact on the child’s inclusion or participation in learning activities (Asbornslett, M. Hemmingsson, and H. 2008). There is need to have schools organize for routine physiotherapy services which more on developing strategies that optimize a learner’s participation in learning activities rather than focusing solely on the impairment level is essential.

Similarly, 30(47.6%) of the teachers were undecided on whether guidance and counseling teachers for learners with cerebral palsy should be trained in the area of physical disabilities. Few teachers 15(23.8%) agreed with the statement while an equal percentage strongly agreed with the statement. It emerged from the study that majority of teachers (47.6%) lacked knowledge on the importance of guidance and counseling for learners with cerebral palsy its impact of their performance. Learners with cerebral palsy are heterogeneous in nature and face a myriad of problems that have become increasingly complex including academic, personal, social, financial, sexual, family and
emotional requiring qualified experts who understand the interacting effects between their rapid physical, intellectual, emotional and social growth coupled with environmental factors and should therefore be guided and counseled by teachers who are competent in meeting their learning and social needs (Nwenze and Okolie, 2014.)

Further, 24(38.1%) of the teachers were undecided on whether learners with fine motor problems who experienced challenges manipulating learning materials would have their problems minimized when offered occupational therapy services. Few teachers 12(12.0%) agreed with this statement. From the study it emerged that most teachers (38.1%) in special schools and special units Bungoma County lacked knowledge on importance of occupational therapy services for learners with cerebral palsy and its impact on their fine motor functions. According to Mayston, M. (2004) occupational therapy services helps in developing skills necessary for performing activities of daily living and motor tasks including writing and drawing, it also address cognitive and perceptual disabilities. This implies that teachers did not organize for occupational therapy services for learners with cerebral palsy in their schools.

Further, 22(34.9%) of the teachers were undecided on whether parents participation in the education of their children increased chances of academic achievement. Few teachers 12(19.0%) agreed with the statement with a smaller percentage 4(6.3%) strongly agreeing with the statement. This study reveals that majority of teachers (34.9%) were not aware of importance of parental participation in the education of children. According to Lemmer, E.N.(2007) parents, pupils and teachers benefit from increased parental involvement, Fan & William, (2010) have identified several purposes
of parental involvement in schools including motivating schools to function at a higher level by constantly improving teaching and learning practices, creating higher student achievement and success in school and in general development. Special schools for learners with cerebral palsy should encourage parental involvement in school activities. Current studies have shown that parental involvement in child development is a strong predictor of a positive education trajectory (Cheng, Y. 2011) and the style of parental involvement can be a promoter of more or less autonomy and participation in learning and other activities (Rye, H, 2005).

Moreover, 30(47.6%) of the teachers disagreed that learners with cerebral palsy in their schools accessed physiotherapy services as often as was required. Few teachers 18(28.6%) were not sure whether these learners accessed the services. The study findings reveal that (47.6%) of the teachers were of the view that learners with cerebral palsy in Bungoma County did not access physiotherapy services. Many scholars have reported that physiotherapy is a very key service for learners with cerebral palsy. According to Ozozi, E, D. (2005) physiotherapy focuses on basic mobility such as standing, walking, climbing, sitting and reaching out for things and it’s therefore a key element in a multidisciplinary approach to increasing a learner’s mobility. This should be based on individuals need rather than diagnostic category. Through physiotherapy learners are trained to use adaptive equipment which empowers them physically and emotionally setting the stage for interaction within the class and school active participation as independent individuals (Asbornslett, M. & Hemmingson, H. 2008; Gargiulo, 2012).
Similarly 24(38.1%) of the teachers were undecided on whether teachers of learners with cerebral palsy required the assistance of teacher aides. Few teachers 19(30.2%) disagreed with the statement while only 10(15.9 %) of the teachers agreed. From the responses it emerged that a majority of teachers (38.1%) in special schools and special units lacked knowledge on the role of teacher aides played in the education of learners with cerebral palsy.

A teacher aide is a school employee who provides instructional or other direct support services to students and works under the supervision of a certified licensed teacher (Bourke, 2008). Their key role is to support the trained teacher in organizational activities of the class so that learners achieve the desired learning outcomes. Moreover learners with cerebral palsy are categorized as having significant difficulties in acquiring literacy and numeracy skills due to individual, social and environmental factors. This implies that school administrations in special schools for learners with cerebral palsy acquire teacher aides as since their services are vital in improving classroom management and organization.

Similarly 30(47.6%) of the teachers were undecided on whether guidance and counseling services assisted learners with cerebral palsy to behave with consideration towards others and to understand themselves better. A few teachers 12(19.0%) of the agreed while 16(25.4%) of the teachers strongly agreed that guidance and counseling services helped the leaners behave with consideration towards others and to understand themselves better. From the study it emerged that majority of teachers (47.6%) in special schools and special units in Bungoma County lacked knowledge on the role
school guidance and counseling services played in developing the character of learners with cerebral palsy. According to Ashby, C.M (2008) the ever changing demographics of society are the major causes of stress and challenges faced by these learners. Learners with cerebral palsy find it difficult to comply with the demands of school and society possibly because of their perceived lack of performance or lack of potential and are often treated with little or no interest and sometimes with sympathy, fear, embarrassment and even disgust (Fan, W& William, C. M. 2010). Special schools should therefore organize for sustainable school guidance and counseling programs so as to ensure provision of a holistic development for these learners so as to achieve optimum functionality.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is divided into three major sections, namely the summary, conclusions and recommendations. These divisions were informed by the purpose of the study and the results.

5.2 Summary of the Study Findings

The purpose of the study was to analyze the perception teacher preparedness in implementation of the curriculum to learners with cerebral palsy in special schools in Bungoma County.

The following were the objectives of the study;

i. To establish whether teachers have relevant skills and knowledge to handle learners with cerebral palsy in schools for learners with physical disabilities.

ii. To determine whether teachers have relevant skills and knowledge to adapt the curriculum for learners with cerebral palsy in schools for learners with physical disabilities.

iii. To establish whether teachers use relevant resources to teach learners with cerebral palsy in schools for learners with physical disabilities.

iv. To determine whether teachers collaborate with other relevant professional in providing services for learners with cerebral palsy in schools for learners with physical disabilities.
This study used the descriptive survey research design and the target population was 4 special schools and 1 special unit comprising of 84 teachers and 4 head teachers. Data was collected using questionnaires from 69 teachers and interview schedule from 4 head teachers. The analysis involved descriptive statistics and the analyzed data were presented in form of pie charts, bar graphs and frequency tables. The analysis of data through descriptive statistics and summarized as follow;

5.2.1 Knowledge and Skills for Teachers

From the research findings based on the first objective, it emerged that majority of teachers for learners with cerebral palsy had appropriate knowledge and skills and were able to identify learners with CP among those with other physical disabilities. They were able to design appropriate learning activities and put in place needed supports that enhanced participation of learners in curriculum activities. Teachers were aware their duty included functioning as a resource beyond the field of teaching. They were to constantly consult with other stakeholders and families of these learners. They were also advocates of the right to appropriate services for these learners. Similarly, most teachers believed that collaboration between teachers of learners with CP and teachers in regular schools was important as it created understanding between them and the regular learners by creating a favorable learning and social environment. Oluseyi (2016) found out that collaboration between regular and special need educators enhanced regular teachers’ perception towards learners with special educational needs. Stichter, Clarke and Dunlap,(2004) noted that collaboration among educators, related service providers and
families was a promising approach that affected school climate in positive ways thus enabling effective curriculum implementation of the primary school curriculum.

When teachers were asked whether it was important to consider barriers that impeded on student performance before planning for instructions, a majority (74.6%) supported the statement. Teachers believed identifying barrier before planning helped them to tailor teaching and learning activities that suited individual needs. They could also help them to design inbuilt adaptations and accommodations that accessed learners to the curriculum content through enhanced participation. Teachers reported that to successfully access learners to the curriculum they were to adapt the curriculum content and instructional strategies. Ashby, C.M, (2008) noted that teachers should master an increasing complex knowledge base and sophisticated repertoire of instructional practice that address individual learners needs for effective curriculum implementation. More teachers 76.2% further supported establishing of learners functional level as an important provision for strategic teaching.

Lastly 68.2% of the teachers acknowledged that training of mobility for learners with CP was one of their key roles. This helped them to understand the social and emotional challenged these learners’ faces and how it impacted on their performance in curriculum experiences. Stafford, A, M., Williams, A,F.,& Heller, K.W. (2001) and Barch (2004) noted that teachers trained in general methodology may lack technical professional competency and may face a lot of challenges in handling these learners especially where adaptation of teaching material and mobility were required.
5.2.2 Instructional Strategies used in Teaching Learners with Cerebral Palsy

From the research findings based on the second objective, it emerged that a majority of the teachers (61.9%) believed that establishing the most reliable means of response (RMR) enabled teachers plan for teaching instructions that had appropriate inbuilt teaching and learning aids, assistive and adaptive devices that enhanced participation in curriculum activities for learners with cerebral palsy. More teachers 85.7% supported the view that physical and verbal prompts were appropriate instructional strategies teachers could use to motivate active participation during learning. Teachers agreed that individuals with cerebral palsy who experienced problems with speed, accuracy and poor attention could have reduced workload and added more time to complete class assignments.

According to Gray, D. B (2007) when teachers understand functional limitations of learners, they may predesign curriculum instructions and learning activities in a way that every individual learners need is addressed. From the study it also emerged that teachers recognized the importance of addressing both individual learning needs and individual preferences. This was done by allowing learners to choose their own feedback mode i.e. responding orally, using written work, drawing or even using communication table.

According to Sherwood, J. B., Kathryn, W, H. & June. L. B. (2005) teachers may use differentiated instructions on learners with cerebral palsy as this provides many avenues for eliciting responses from learners some of who may be passive and inactive. Similarly 92.6% of the teacher acknowledged that providing rest breaks between
lessons was a strategy they could use to maximize concentration and participation of learners with cerebral palsy head teachers of schools with learners with physical disabilities reported that teachers used varied adaptations to maximize participation in learning experiences. Classroom observation however revealed that some learners with cerebral palsy lacked individual adaptation during learning.

5.2.3 Use of Teaching / Learning Resources in Special Schools and Units

This study established that identification of the barriers to participation for learners with cerebral palsy in curriculum activities was an important step in planning for curriculum instructions. This is because teachers would be able to identify appropriate teaching and learning resources to be used during the lesson. According to Conroy, Dumlop, Clark and Alter (2005) learners whose challenges are not identified early may not be provided with timely appropriate supports in schools. For learners with cerebral palsy early identification and interventions is essential as it prevents disabling conditions from worsening Severson, Walker, Hope Doolitle, Kratochwill & Gresham, (2007). Majority of teachers acknowledged the importance of teaching and learning resources as essential in motivating learners and increasing retention in concepts learnt. It was established that teachers were aware of the heterogeneity of learners with cerebral palsy and that different types required different assistive devices to maximize their function and performance.

According to Gargiulo, R.M. (2012) learners with cerebral palsy experience totally different social and learning challenges and therefore required different assistive and adaptive. The study also revealed that a significant number of teachers (68.8%) reported
that they lacked appropriate resources required by learners with cerebral palsy in their schools. This revealed that schools lacked appropriate resources required to plan curriculum instructions that would enhance access learners with cerebral palsy to the primary school curriculum. Mushtag, I & Shabana, N.K. (2012) found that there was a positive relationship between learning resources and performance. It emerged in this study that teachers implemented the primary schools curriculum without the use of appropriate resources, A majority of teachers were not aware that schools received funding from the ministry of education to purchase resources for learners with disabilities.

Head teachers admitted they received but were insufficient. This was confirmed by lack of adaptations during classroom observations. Gerick, T. (2006): Gargiulo, R.M. (2012) state that provision of relevant resources for learners with disabilities enhances their independence, quality of life and performance in the desired activities.

5.2.4 Collaborations of Teachers for Learners with Cerebral Palsy with Relevant Professionals to Provide Services for Learners with Cerebral Palsy

The study revealed that teachers were aware of the importance of physiotherapy services in schools for learners with cerebral Palsy. They supported the view that physiotherapy was a key service for learners with cerebral palsy as it helped to strengthen the muscles and improved their functional level. This concurred with Mayston, M. (2007) who states that the goal of physiotherapy is to improve function control of the body by developing balance, maintaining flexibility and optimizing independence. However teachers disagreed with the fact that learners with cerebral
palsy accessed physiotherapy as regularly as they required. It also emerged from the study that teachers did not regard guidance and counseling services as important for learners with cerebral palsy which could uplift their social and emotional health; in their responses most were undecided. This implies that guidance and counseling services were rarely availed for the learners. Learners with cerebral palsy face a myriad of problems that are very complex including academic, personal social, sexual and emotional requiring qualified experts who understand the interacting effects between their rapid physical growth, intellectual and social growth and how it may impact on education (Nwenze, T and Okolie, U.C. 2014). Teachers were similarly undecided on whether guidance and counseling services helped learners with cerebral palsy to understand themselves better and to behave towards others with consideration. According to Ashby, C. M (2008) the ever changing demographics of society are major causes of stress and challenges faced by these learners. These learners find it difficult to comply with the demands of school and society possibly because of their perceived lack of performance or potential and often treated with little or no interest and sometimes with sympathy, fear, embarrassment and even disgust (Ali, 2012). Most of the teachers also lacked knowledge on the relationship between occupational therapy and fine motor development. According to Winzer, (2009) occupational therapy services helped in the development of skill required in motor tasks like writing, drawing and activities of daily living.

Teachers similarly a majority of the teachers were undecided on the importance of parental involvement in the education of their children. According to Lemmes, E.N
(2007) pupils and teachers benefit from increased parental involvement, Fan & William (2010) have identified several purposes of parental involvement in schools including motivating schools to function at a higher level by constantly improving teaching and learning practices, creating higher students achievements and general development.

Further, teacher lacked understanding of the role and importance of a teacher aide for learners with cerebral palsy. Most of the teachers were undecided whether the support of a teacher aide was required to make learners with cerebral palsy achieve the desired outcomes in learning activities. The key role of the teacher aides is to support the trained teacher in organizational activities of the class so that learners achieve desired outcomes since they are categorized as having significant difficulties in acquiring literacy and numeracy skills due to individual, social and environment factors (Wyatt et.al, 2007).

5.3 Conclusions

The following conclusions were made based on the study findings;

i. Teachers in special schools and units in the various schools in Bungoma County had undergone training in handling learners with cerebral palsy; they could identify them among other learners with physical disabilities, establish their functional levels and prepare teaching/learning instructions that addressed their individual learning needs.
ii. Teachers in special schools and units in the County had difficulties in the use of differentiated instructional strategies that enhanced participation of learners due to lack of appropriate teaching and learning resources.

iii. Teaching and learning materials and assistive and adaptive resources needed by learners with cerebral palsy were lacking in special schools and units in Bungoma County due to lack of knowledge by the teachers in identifying relevant resources for individuals with cerebral palsy and the high cost associated with these materials which was attributed to low funding by the Ministry of Education causing low participation of cerebral palsy learners.

iv. Teachers in special schools and units in Bungoma County did not collaborate appropriately within education and with relevant disciplines in the provision of relevant services required by learners with cerebral palsy for enhancement of their functionality and educational achievement.

5.4 Recommendations

5.4.1 Recommendations of the Study

The following are the recommendations of this study;

i. Ministry of Education should organize for frequent induction courses for continued improvement of skills and knowledge by teachers to meet the ever changing curriculum demands of learners with cerebral palsy.

ii. The Ministry of Education to increase funding for provision of teaching and learning resources to special schools and units.
iii. The Ministry of Education to streamline and create awareness on the collaboration process between special schools and units with other relevant professionals in the provision of services to learners with cerebral palsy.

5.4.2 Suggestions for Further Research

The following suggestions are made for further research;

i. There is need for a study on factors that influence the participation of learners with cerebral palsy in education
REFERENCES

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APPENDICES

APPENDIX I: INTERVIEW GUIDE FOR HEADTEACHERS

Teachers’ professional background

School: class: pupils’ enrolment:

Training area:

Length of service:

Interview schedule

1. What are the different types of cerebral palsy learners in your school?

2. Are you in a position to identify learners with cerebral palsy in a class of learners with physical disabilities?

3. What adaptations are put in place to facilitate easy mobility and interaction for learners in your school?

4. Are learners with cerebral palsy provided with appropriate resources to enhance their participation in class activities?

5. Does your school receive funding from the Ministry of Education?

6. Does the school involve other relevant personnel like the G/C, PT, and OT Parents in the handling of learners with cerebral palsy?

7. What informs the adaptations you put in place for learners with cerebral palsy?
APPENDIX II: QUESTIONNAIRE FOR TEACHERS

This research is meant for academic purposes. It tries to establish teachers’ preparedness and implementation of the primary curriculum for learners with cerebral palsy in Bungoma County. You are kindly requested to provide answers to these questions as honestly as possible. These responses will be treated as confidential. Please tick where appropriate.

SECTION A. General Information.

1. Gender
   (i) Male ( )           (ii) Female ( )

2. Indicate your area of specialization
   (i) Physical Disability
   (ii) Emotionally and Behavioral Disorders
   (iii) Cerebral Palsy
   (iv) Visual Impairment
   (v) Learning Disabilities
   (vii) Inclusive

3. Indicate your teaching Experience in schools for learners with physical disabilities.
   (i) 0-5 years
   (ii) 6-10 years
   (iii) 11-15 years
   (iv) 16-20 years
   (v) Over 20 years

4. Highest level of education
   (i) P1
   (ii) Certificate in SNE
(iii) Diploma in SNE

(iv) Degree in SNE

(v) Any other (specify) 

SECTION B

SA-Strongly agree  A-Agree  UD- Undecided  D- Disagree  SD-Strongly Disagree

Teachers’ Competencies in Handling Learners with cerebral palsy

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<th>Statement</th>
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<tbody>
<tr>
<td>Teachers should be able to identify children with different types of cerebral palsy in class.</td>
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<td>Teachers should function as a resource beyond the field of teaching for families and other stakeholders</td>
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<td>Teachers often collaborate with teachers in regular schools, school nurse, physiotherapist, Psychologist, social workers, speech therapist etc. for effective service delivery to these children</td>
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<td>Teachers should consider the barriers that may impede on students’ performance and plan for appropriate adaptations or provision of relevant accommodation</td>
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<td>Teachers should do instructional adaptations for the whole class and content adaptations for children with cerebral palsy</td>
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<td>Establishing functional level for learners with cerebral palsy is important for provision for strategic teaching</td>
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<td>Training of mobility is an important role of teachers for children with cerebral palsy</td>
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**Instructional Strategies Employed in Teaching Learners with Cerebral Palsy**

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<tr>
<td>When teachers establish the most reliable means of response for children with cerebral palsy they are able to plan for appropriate means through which individual children access the curriculum through active participation in learning activities</td>
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<td>Physical and verbal prompts are strategies teachers may use to aid active participation of learners who experience difficulty expressing themselves in class</td>
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<td>Children with cerebral palsy with decreased writing speed, accuracy and poor attention, require reduce workload, more time, decrease distraction, and provision of cues to enable them complete class assignment</td>
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<td>Teachers may address both learning needs and individual preferences among learners with cerebral palsy by allowing them to choose their own feedback mode i.e. drawing, painting, rewriting, giving oral or written answers and pointing</td>
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<td>Providing rest breaks during lessons and adjusting class activities are strategies teachers use to achieve maximum participation of children who experience decreased stamina and endurance.</td>
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**Use of Teaching/Learning Resources in Special schools and units**

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<td>When teachers identify barriers to participation in academics and functional abilities of children with cerebral palsy they are able to provide assistive devices that enhance participation</td>
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<td>For children with cerebral palsy to participate actively in</td>
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</table>
Learning activities they require the aid of an appropriate assistive device

Children with different types of cerebral palsy require different types of assistive devices

Schools have appropriate teaching and learning resources and assistive technology required by learners in the school

Schools receive funding from the Ministry of Education for purchase of relevant resources required by learners

### Collaboration between teachers and relevant professionals in handling learners with cerebral palsy

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<td>Learners with cerebral palsy can maximize their physical function levels if provided with timely physiotherapy services.</td>
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<td>A Guidance and Counseling teacher for learners with cerebral palsy should be trained in the area of physical disabilities.</td>
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<td>When learners with fine motor problems are offered occupational therapy services, the challenges they experience in manipulating learning materials are minimized.</td>
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<td>When parents of learners with cerebral palsy participate actively in the education of their children chances of academic achievement are higher.</td>
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<td>Learners with cerebral palsy in Bungoma county access physiotherapy services as regularly as they deserve.</td>
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<td>Teachers of learners with cerebral palsy require the assistance of teacher aide to help learners achieve the desired learning outcomes.</td>
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<td>School guiding and counseling services assist and support learners to behave with consideration towards others and to understand themselves better.</td>
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<td>Teachers role in the education of learners with cerebral palsy include collaboration and consultation within education and related disciplines.</td>
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APPENDIX III: OBSERVATION CHECKLIST

A: Classroom observation tool for instructional strategies for learners with cerebral palsy

School: _______________________________________________________

Class: ___________________________ Pupils’ enrolment: _______

1. What is the enrolment of learners with cerebral palsy in the class?
2. Which is the teachers’ area of specialization?
3. How long has the teacher taught in the school?
4. How many learners with cerebral palsy are in the class?
5. What classroom accommodations have been put in place for learners?
6. Which individual accommodations have been put in place for learners?
7. Are learning activities individualized for learners with cerebral palsy?
8. What teaching/learning aids are provided for the learners activities?
9. Are teaching/learning materials accessible to learners?

What are the observable limitations affecting participation of learners with cerebral palsy in the classroom learning activities

10. Are learners with cerebral palsy given equal opportunities to participate in learning activities?
B-Classroom observation: Physical and learning environment for learners with cerebral palsy

1. How is the seating arrangement
2. How appropriate is the furniture in the classroom?
3. Is the classroom spacious to allow free movement and interaction?
4. Are teaching/learning materials accessible to learners?
5. How is the learning atmosphere?
6. Are there rumps on entrances?
7. Is clean water available for students to drink?
8. Are there individual or classroom accommodations or adaptations?
9. Are there classroom displays?
APPENDIX IV: RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Ref: No. NACOSTI/P/17/87085/17525

Date: 4th July, 2017

Jane Francisca Aroni
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Teacher preparedness and implementation of the primary school curriculum for learners with cerebral palsy in Bungoma County, Kenya,” I am pleased to inform you that you have been authorized to undertake research in Bungoma County for the period ending 3rd July, 2018.

You are advised to report to the County Commissioner and the County Director of Education, Bungoma 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.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.
KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
       dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/CE/22934/10
Date: 18th April, 2016

The Director General,
National Commission for Science, Technology & Innovation
P.O. Box 30623,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS. ARONI J. FRANSISCAR - REG. NO. E55/CE/22934/10

I write to introduce Ms. Aroni who is a Postgraduate Student of this University. She is registered for M.Ed. degree programme in the Department Special Needs Education in the School of Education.

Ms. Aroni intends to conduct research for a thesis Proposal entitled, “Teacher Preparedness and Implementation of the Primary School Curriculum for Learners with Cerebral Palsy in Bungoma County, Kenya”.

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/cso
APPENDIX V: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:

MR. JANE FRANCISCA ARONI
of KENYATTA UNIVERSITY, 43844-100
Nairobi, has been permitted to conduct
research in Bungoma County
on the topic: TEACHER PREPAREDNESS
AND IMPLEMENTATION OF THE PRIMARY
SCHOOL CURRICULUM FOR LEARNERS
WITH CEREBRAL PALSY IN BUNGOMA
COUNTY, KENYA
for the period ending:
3rd July, 2018

Applicant's Signature

Date Of Issue: 4th July, 2017
Fee Received: Ksh 1000

Permit No: NACOSTI/P/17/87085/17525

Director General
National Commission for Science, Technology and Innovation