

**EFFECT OF MAINSTREAMING PRACTICES ON RETENTION OF
LEARNERS WITH SPECIAL NEEDS IN REGULAR PUBLIC PRIMARY
SCHOOLS IN LURAMBI SUB-COUNTY, KENYA**

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**A Thesis Submitted to the School of Education in Partial Fulfilment of the
Requirement for the Award of Degree of Master of Education in Special Needs
Education of Maasai Mara University**

2023

DECLARATION AND APPROVAL BY SUPERVISORS

Declaration

This is my original work and has not been presented for the award of a degree in this or any other university.

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ACKNOWLEDGEMENT

To God be the glory, laud and honour for his grace has been sufficient all through. My deepest appreciation and gratitude go to my husband Justus, children Brown. Billy. Dennis and Bruce for your understanding. encouragement. sacrifice and support. To my supervisors. Thank you for shaping my mind and putting me on the academic road of research for I am a researcher in waiting. Thanks to my sisters and brothers who motivated me and my colleagues, who challenged me to take this bull by its horns. To my sons Billy and Dennis, thanks for being excellent typists. I am solely responsible for any shortcomings, errors of commission found in this thesis.

DEDICATION

I dedicate this thesis to my dear parents: my late mother Rebecca Inyanya and my late father Mackenzie Shivachi and my parents in-law, the late Wilberforce Ondere and the late Margaret Omuyonga for having given me the opportunity to excel in my academics. You sacrificed for my education. My life is your vision.

ABSTRACT

Enrolment statistics for learners with special needs at Lurambi sub-county Educational Assessment and Resource Centre are alarming and warrant the need to verify whether these learners receive any mainstream education and whether they are retained in the schools after placement. Therefore, this study sought to determine the effect of mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi sub-county, Kenya. The study was guided by three objectives; to determine the implementation of mainstreamed practices on retention of learners with special needs, to establish the teachers' attitude towards retention of mainstreamed learners with special needs and to evaluate intervention strategies used to support learners with special needs. The study was guided by Michael Oliver's Social Model of disability theory which argues that it is the society that segregates and disables people with special needs. This theory advocates for society with its institutions to adjust their approach to people with disabilities by creating ambient environment as opposed to requiring them to adjust and fit unapologetically in the defined structures by society. It employed Descriptive survey research design. The study targeted 406 teachers from 29 regular public primary schools with resource rooms and 5 education officers out of which 15 headteachers, 3 education officers and 214 teachers were sampled through Sample Proportionate Stratification Approach. Validity and reliability of the research instruments was ascertained through piloting of study in Shanyinya Primary School which was outside the study area with similar characteristics as those of regular public primary schools in Lurambi sub-county. Reliability was ascertained by Cronbach' Alpha technique which yielded Cronbach' Alpha Value of 0.735. Questionnaires and interviews were the main instruments of data collection. Document analysis guide was used for collecting data on learners' performance in the year 2016 to 2020. The study yielded both quantitative data and qualitative data. Qualitative data was analysed using descriptive statistics; frequencies, percentages and the findings presented in frequency tables. Quantitative data was then analysed using regression analysis. The study established the effect of implementation of mainstreaming practices on retention of learners with special needs in regular public primary schools. Findings from the study also showed that awareness on mainstreaming and learner-based factors also affect retention of learners with special needs in regular public primary schools. The study recommends the training of all teachers to be able to teach learners with special needs. The KICD should develop and disseminate teaching and learning resources specifically made for learners with special needs. The study suggests further research to be conducted to compare the effect of learners with special needs in mainstream education on the performance of learners without special needs.

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ABBREVIATIONS AND ACRONYMS

AHRQ:	Agency for Healthcare Research and Quality
CD:	Communication Disabilities
CRC:	Convention on the Rights of the Child
CSO:	Curriculum Support Officer
CwDs:	Children with disabilities
EARC:	Education Assessment and Resource Centre
ECDE:	Early Childhood Development Education
EFA:	Education for All
FPE:	Free Primary Education
GoK:	Government of Kenya
HI:	Handicap International
IDEA:	Individuals with Disabilities Education Act:
KISE:	Kenya Institute of Special Education
KNSPD:	Kenya National Survey for People with Disability
LSNs:	Learners with special needs
MDG:	Millennium Development Goals
MoE:	Ministry of Education
NACOSTI:	National Commission for Science, Technology, and Innovation
NCAPD:	National Coordinating Agency for Population and Development
NHPC:	National Housing and Population Census
PCMH:	Patient-Centred Medical Home
PWD:	Persons with disabilities
SAQ:	Self-administered Questionnaire
SDG:	Sustainable Development Goals

SEN:	Special Educational Needs
SETs:	Special education teachers
SN:	Special Needs
SNDs:	Special needs and disabilities
SNE:	Special needs education
SPSS:	Statistical Package for Social Sciences
UDHR:	Universal Declaration of Human Rights
UNCRPD:	United Nations Convention on the Rights of Persons with Disability
UNESCO:	United Nations Environment, Scientific and Cultural Organization
UPE:	Universal Primary Education
WDR:	World Disability Report
WHO:	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Mainstreaming is a concept that was introduced across the globe over the need to mainstream and provide education access to all learning levels and learners regardless of their abilities. Ministry of Education (2009) indicates that Kenya has a responsibility of ensuring the realization of inclusivity in education where learners with special needs are incorporated into typical class settings through mainstreaming in all levels of educational systems. Therefore, mainstreaming is defined as the process and the programs aimed at educating learners with SNDs in typical class settings. Mangope (2018) indicate that many special education professionals have increasingly accepted the axiomatic need of educating most of the learners with SNDS in typical classrooms postulating that the learners would be educated better in these classroom settings. Mainstreaming is envisioned to create an inclusive system where these learners do not feel segregated and learn in the same environment as others. Despite increased advocacy and the creation of legislation and policies supporting inclusive and mainstreaming education, the Ministry of Education (2018) noted that there was still a significant and alarming number of learners with disabilities out of school, as well as a high dropout rate. Nonetheless, this statement gives no indication of the trend or magnitude of the noted high dropout rate.

Williams (2014) notes that the world profoundly values education; unfortunately, some people flourish in acquiring knowledge and skills while others lag due to disability. Education is a universal right entitled to every person regardless of their physical, mental, economic, and social backgrounds of the people. Quality education for all is a prerequisite and indispensable tool for national development and is presumed as an

equalizer by the Democratic education theory, which acknowledges that learning is better achieved when learners are equally and freely allowed to participate in the school governance (Biesta, 2008; Ministry of Education, 2009). Quality education for all is fundamental to the national development in that it enhances the ability of the citizens to secure good health, economic well-being, and liberty as well as the participation of people in political and social activities for transformational development (Adoyo & Odeny, 2015; Eunice & Orodho, 2014; Rieser, 2013). This implies that when Learners with special needs (LSNs) and disabilities are not retained in the learning institutions, their potential to make significant contributions to the national, as well as individual development is undermined.

According to the World Disability Report in 2011 by the World Health Organization (WHO, 2011), it is estimated that persons with disabilities accounted for about 15% of the world's population. The report as well indicated that out of the 77 million children who fail to access educational programs, a third constitutes children with disability. Myers and Bagree (2011) point out that in Africa about 10% of disabled children manage to acquire primary education. Conversely, about 1-3% of disabled children do not receive any form of education in developing nations (Mwoma and Teresa, 2017). This is a major challenge following that more than two-thirds of countries across the world ratified the Universal Declaration of Human Rights and committed to adhering to the provisions of Article 26 that stems out the imperativeness of realizing universal primary education for all through mainstreaming (UNESCO, 2019).

Several pieces of research have pointed out that educational access among children with disabilities is significantly low in low-income countries compared to developed nations (Aldaihani, 2011; Eunice & Orodho, 2014; Gitonga, 2014; Janmohamed, 2012; and Mwangi, 2013). According to Itimu and Kopetz (2008), the majority of African

countries are accused of only showing a theoretical interest in providing and implementing inclusive and mainstreamed special needs education. A study by Itimu and Kopetz (2008), showed that Tanzania, Malawi, and Zambia lacked sufficient special needs educational resources as well as marginal to no collaboration among agencies concerning the education of children with disabilities (CwDs) more so training and availing of more teachers in special needs education. This provided a need to conduct a study to validate the extent to which retention of learners with special needs was affected by the advocacy of mainstreaming in regular public primary schools in Kenya.

Several countries across the globe have made significant advances toward incorporating mainstream education as a central component in their national legislation. For instance, the national legislation of Germany, Iceland, and Canada are cited to support fully inclusive education where a majority of CwDs are enrolled in local schools (McCarthy, 2002). Governments of some countries such as India, Italy, and Norway have shown a strong commitment to the policy for mainstreamed education; therefore, the number of many learners with special needs and disabilities (SNDs) learning in regular classes in schools in their neighbourhoods has increased yearly (McCarthy, 2002; Rustemier, 2008). Nonetheless, some countries have reported low to no progress in implementing mainstream education despite the general global articulation towards inclusive education (McCarthy, 2002). For instance, despite the German government fully supporting and implementing mainstream and inclusive education, a high proportion of parents still opt to place their CwDs in special schools (Hinz, 2010). Similarly, in Norway, its policy of eliminating special schools is hampered by the tendency and preference of some parents to send their children with disabilities to alternative educational centres (Rustemier, 2008). This thus, demonstrates that the severity of the

issues identified in these nations requires explanation; nevertheless, because the challenges are equally widespread in Kenya as a developing country and especially in Lurambi, Kenya, there was a need to understand and invent solutions to increase student retention with SNDs through mainstreaming.

Inclusive education was defined by the Ministry of Education (2009) as an approach where learners with SNDs can access proper education within typical or regular schools. This implies that regular public schools must practice mainstreaming for an inclusively viable and sustainable education system (Dağlı & Öznacar, 2015). The Kenya Education For All (GoK, 2014) national review 2014 emphasized the vitality of inclusive education noting that under Article 54(1) of the 2010 Constitution, PwDs should access any educational facility and institution as deemed well-matched with the interest of the individuals.

In Kenya, the national housing and population census report of 2009 that considered the disability indicators recorded that over 1,330,312 people comprising about 3.5% of the national population have disabilities out of which 647,689 are male while 682,623 females (Bii & Taylor, 2013). According to the Kenya National Survey for Persons with Disability report of 2008, over 1.3 million Kenyans are living with disabilities with only 39% (507000) and 9% (117,000) managing to attend mainstream primary and secondary schools, respectively. National Coordinating Agency for Population and Development indicates that over 3.3% (1657208) of the population of the Western province of Kenya are persons with disability (NCAPD, 2008).

The Kenya Education Policy of 2012 indicated that the nation stood at over 102,749 enrolments of learners with disabilities where 21,050 and 81,649 joined special schools and special integrated units, respectively, in both primary and secondary learning institutions (GoK, 2012). The above statistics constitute a third of all the estimated

CwDs who had attained school-going age. The statistics significantly improved compared to 1999, 2003, and 2008, when only 22,000, 26,885, and 45,000 learners and special needs respectively joined special and integrated schools (GoK, 2012). The Kenya National Survey for Persons with Disability report (2008) indicated that the former western province in which the study area (Lurambi Sub-County) is located had the highest proportion (16%) of people with disabilities.

According to the report, the PwD in this region reported that other people's attitudes toward disability had a significant impact on their daily activities. The province had the highest prevalence of disability 4251969 (96.7%), followed by the North Eastern province with a prevalence of 2425331 (97.4%) then Rift Valley with a prevalence of 4857937 (96.8%) and the Eastern province with a prevalence of 3871548 (95%) (NCAPD, 2008). In terms of the availability of assistive devices, the former Western province has the lowest at 1044543 (20.8%), followed by the North Eastern province at 393431 (15.8%), and Nairobi province has the highest at 1864358 (42.4%). The absence of assistive devices was cited as a major challenge by 95% of PwDs in Western Province (NCAPD, 2008). Approximately 2.3 percent of the province's PwDs reported having significant difficulty attending school (NCAPD, 2008). This is a clear indication that access to quality education is a major problem in the region among PwDs; hence, there was a need for the development and implementation of coherent measures to ensure the UPE and EFA objectives are promoted in the study area.

Education Assessment and Resource Centre (EARC) Lurambi Sub-County Office (2020) enrolment of learners with special needs records show that there was a total of 6607 and 819 (12.4%) children with special needs were admitted in regular public schools from 2015 - 2020. A total of 2906 mentally challenged learners, 185 (6.37%) physically challenged learners, 213 (7.33%) hearing impaired learners, 141 (4.85%)

visually impaired learners, 90 (3.1%) learners with cerebral palsy, 277 (9.53%) learners with a learning disability, and 19 (0.65%) autistic learners were enrolled in special schools and public primary schools in Lurambi Sub-county from 2015 to 2020. These data indicate that there was a need to evaluate mainstreaming in education in Lurambi Sub-County, Kakamega County.

The Ministry of Education (2009) draft of the National Special Needs Education Policy Framework emphasized the importance of promoting inclusive education hence leading to mainstreaming. It is being practiced where special units (resource rooms) are attached to regular public primary schools as opposed to the initial idea of having exclusively inclusive education systems. At the time this study was being born, no study had been carried out to find out the effect of mainstreaming practices on retention of learners with special needs in Lurambi Sub-County. This study therefore sought to bridge this gap by availing scientific data that establishes the effect of mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi sub-county.

1.2. Statement of the Problem

Access to education is a basic need and a fundamental human right in the current millennia. Regardless of gender, social, economic, political, and environmental backgrounds, all people are entitled to equal access to education. Education systems are thus bound to be inclusive of all learners regardless of their backgrounds and abilities and should be delivered in the most ambient and comfortable environment. Mainstreaming is a concept concerned with proper measures in place to ensure that individual needs are catered for appropriately and also the placement of learners with special needs in regular learning settings.

The enrolment of learners with SNDs records at the Lurambi sub-county Education Assessment and Resource Centre (EARC) indicate that 1,049 mentally challenged learners, 185 physically challenged learners, 213 hearing impaired learners, 141 visually impaired learners, 90 learners with cerebral palsy, 277 learners with learning disabilities and 19 learners with autism were enrolled in public primary schools in Lurambi Sub-county from 2015 to 2020. These statistics warrant a need to verify whether these persons receive any mainstream education and whether they are retained in the schools. Moreover, at the time this study was being born, no study had been done to find out the effect of mainstreaming practices on retention of learners with special needs in Lurambi Sub-County. This study therefore sought to bridge this gap by availing scientific data that establishes the effect of mainstreaming practices on retention of learners with special needs in Lurambi sub county.

1.3. Purpose of the Study

The purpose of the study was to assess the effect of mainstreaming practices on the retention of learners with special needs in regular public primary schools in Lurambi Sub-County, Kakamega County, Kenya.

1.4. Objectives of the Study

The following objectives guided the study:

- i. To examine the effect of implementation of mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.
- ii. To establish the effect of teachers' attitude towards mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.
- iii. To evaluate the effect of mainstreaming intervention strategies on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.

1.5. Research Hypothesis

H₀₁: There is no significant difference between the implementation of mainstreaming practices and the retention of learners with special needs in regular public primary schools in Lurambi Sub-county.

H₀₂: There is no significant difference between the teachers' attitude towards mainstreaming practices and the retention of learners with special needs in regular primary schools in Lurambi Sub-county.

H₀₃: There is no significant difference between mainstreaming intervention strategies and the retention of learners with special needs in regular public primary schools.

1.6. Significance of the Study

The study is expected to benefit the national government, county government, parents and other stakeholders with scientific data on effect of mainstreaming practices on retention of learners with special needs in regular public primary schools, Lurambi Sub

County. It seeks to achieve and promote UPE for all and attainment of the sustainable education needs for PwDs. The study may offer a basis, strategies, and insights for the national government and county government of Kakamega in promoting mainstreaming in education and meeting the educational needs of learners with special needs. The study is expected to help in the planning, budgetary allocation, and equipping of regular public primary schools by the national and county governments and other interested parties to enhance and promote the objective of mainstreaming. It is expected that the Teachers Service Commission will do the placement of the trained SNE teachers based on the number of learners with SNDs in their respective schools. It is also expected to improve the learning environment in regular schools to ensure they are disability-friendly.

1.7. Scope of the Study

The study focused on the effect of mainstreaming practices on retention of learners with special needs in regular public primary schools in the study area. The study was confined to regular public primary schools with resource rooms in Lurambi Sub-County. The targeted respondents were specifically teachers in the regular public primary schools with resource rooms and education officers of Lurambi Sub-County. Boarding primary schools, special schools and private schools in the study area were excluded from the study because majority of learners with special needs are placed in regular public primary schools after assessment at the EARC.

1.8. Limitations of the Study

The study was limited to only regular public primary schools excluding boarding primary schools, private schools, and special schools within Lurambi sub-county that could be catering for learners with special needs. However, the study used a relatively large sample size to include opinions of the majority. Failure to understand and

misinterpret some questions hence introducing aspects of bias was adequately addressed through clear explanations and guidance by the researcher.

1.9. Assumptions of the Study

The following assumptions underpinned this study:

1. All respondents provided feedback that was accurate, honest, and reliable.
2. All educators possessed skills and qualifications to cater for diverse needs of learners across various levels within mainstreamed educational settings.
3. Learners' educational records and any other relevant documents were made available.

1.10. Definition of Terms

Disability: It is used in the study to refer to specific conditions that hamper an individual's learning and development compared to the learner without disability or, any physical or mental ailment (impairment) that makes it more difficult for a person to execute specific tasks (activity limitation) and connect with the environment around them (participation restrictions).

Dropout rate: It is used to refer to the ratio of number of learners who withdraw during the school year to the number of those enrolled during the school year.

Inclusion: It is used in the study to refer to the process of adjusting the schools' environments to a level that is least restrictive to accommodate all learners or, the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded or marginalized, such as those who have physical or mental disabilities and members of other minority groups.

Inclusive Education: This term is used in this study to refer to an education system where all learners including those with special needs and disabilities can access

quality education within the regular schools within their reach or, real learning opportunities for traditionally excluded groups – not only children with disabilities but also speakers of minority languages.

Least Restrictive Environment: It is used in the study to refer to the modification of the learning environment to make it near to learners without disability to be comfortable and accommodative to all learners or, ensuring kids who get special education should be in the same classrooms as other kids as much as possible

Mainstreaming: The term is used to refer to the process of placing learners with special needs into typical class settings and school environments with their peers who have no disabilities during specific times or, inclusion of learners with special needs into general educational settings or regular schools.

Regular Public Schools: This term is used in the study to denote government-owned learning institutions primarily designed to admit and accommodate learners with or without special needs or, a school that is maintained at public expense for the education of the children of a community or district and that constitutes a part of a system of free public education commonly including primary and secondary schools.

Relationship: Refers to the way learners with special needs interact with the rest of the people in the school and build healthy friendships.

Resource rooms: It was used in the study to refer to rooms set aside specifically for part-time instruction of learners with special needs and disabilities. It is also used interchangeably with special units attached to regular schools or, a resource room is a separate setting, either a classroom or a smaller designated

room, where a special education program can be delivered to a student with a disability, individually or in a small group.

Retention: The term was used in the study to refer to the rate of successful keeping the same number of enrolled learners with special needs in schools progressively across the years.

Special Needs Education: The term is used in this study to refer to education programs tailored to meet the diverse and unique needs of learners with special needs.

Special Needs: It was used in the study to refer to specific conditions that hamper an individual's learning and development compared to the learner without special needs or, individuals that may need help with communication, movement, and other functions.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter provides literature information related to the research topic, which includes sections on the implementation of mainstreamed practices on retention of learners with special needs, the perception of teachers on retention of learners with special needs and intervention strategies used to support learners with special needs. The chapter also discusses the theoretical and conceptual framework of the study.

2.2. Implementation of Mainstreaming Practices on Retention of Learners with SN

Implementation of Mainstreamed Practices ensures that learners with special needs access education irrespective of the severity of special needs. Four categories describe the severity of an individual's disability. They include mild, moderate, severe, and profound disabilities. The survey by the Ministry of Education, Science and Technology in 2013 in the Lurambi constituency established that the prevalence of disabilities among children aged 0-21 years was 13.5%, which is comparable to the global estimate of 15%, as of 2010 (Ministry of Education, 2013). Each type of disability severity affects the life of an individual. For example, in intellectual disability, a person in the mild category is described as people who reacts slower to their daily activities and social life. They can learn practical life skills enabling them to operate in ordinary life with minimal support (Boat & Wu, 2015).

An individual with a moderate disability can take care of himself, learn some basic life skills, and move to familiar places. They require moderate support to operate as a reasonable man. Severe disability is a situation whereby there was an impact on communication skills. They might learn simple life skills and self-care, but they require

supervision in a social setting and family care in their daily routine. Finally, an individual with a profound disability usually is dependent. They always need close support and family help in self-care activities. They have limited ability in communication and movement skills and are also prone to health matters. Boat and Wus (2015), book chapter primarily discussed the intellectual disabilities which affect the learning capabilities of learners; however, it does not state the extent to which the severity of the special needs and disabilities can affect the retention of learners more so in regular public primary schools. Therefore, there was a need to fill this gap with a focus on Lurambi Sub-County, Kakamega county, Kenya.

The severity of an individual disability has a significant influence on learners with special needs retention in school. The more severe the disability, the higher the possibility of more health issues. Health is among the factors that influence learners with special needs to retain school attendance. People living with disabilities are more prone to diseases than people without disabilities (Krahn et al., 2015). Disability itself results from an underlying health condition that makes an individual more vulnerable to other health matters. Disability contributes to an individual's activity limitation and participation restriction making their body inactive hence attracting diseases like cardiovascular diseases and diabetes. Such conditions are likely to occur to learners contributing to the rate of learners with disability retention. Krahn *et al*, (2015), looked at the neglect of the persons with disabilities which can be characterized by their ability to acquire an education; however, it does not state the extent to which the severity and negligence of learners with special needs and disabilities can affect the retention of learners in regular public primary schools.

A survey carried out by the Ministry of Education, Science and Technology (MOE, 2013), in the Lurambi sub-county to establish the prevalence of the disabilities and

special needs among school and out of school children between the ages of 0 to 21 years in Kenya indicated that there was a high prevalence of disabilities among children aged 0-21 years. According to the findings, the youngest age group (0–5 years old) had the lowest impairment rates, at 15% (Musili, 2020). The other age groups had about identical rates of 28% each, with the 11–15 age group having the highest prevalence of 29%. Furthermore, this age group (11–15 years old) had the greatest rate in six of the fifteen categories of disorders, with 45% in the learning disability category and 38% in the intellectual and cognitive handicap category (Musili, 2020). Except for albinism, which had the highest prevalence at 45%, the age range 0-5 years had the lowest rates in practically to other categories. In the gifted and talented category, all age groups over 5 years had about the same percentages, ranging from 28% (6-10 years old) to 31% (11-15 years old). Disability rates for several categories among youth aged 16-21 years (hearing impairment, visual impairment, physical impairment, cerebral palsy, epilepsy, Down syndrome, autistic spectrum disorders, intellectual and cognitive handicap, emotional and behavioural disorders, learning disabilities, speech and language disorder, multiple disabilities other than deafblind, (dwarfism and albinism) indicate that the multiple disabilities other than deafblind was the most common followed by visual impairment and hearing impairment (Musili, 2020).

The underlying health conditions have several influences on a learner with a disability, affecting the rate of school retention. As discussed above, people with disabilities are more vulnerable to infections and viruses, contributing to absenteeism or school dropout because of hospitalization (Australia Disability Clearing House on Education and Training, 2020). Some learners with special needs may be affected by the environmental condition of the school, such as the inability to tolerate heat during hot seasons hence forcing them to stop schooling. Some special needs learners are usually

on medication to compact health conditions. Particular medication contributes to a lack of concentration in class which affects performance and ability to learn. Some health conditions that people with disabilities suffer are connected to mood swings and depression, determining the learner's attendance at school. The health conditions contribute to gaps in their educational experience, affecting consistency and adjustment because people with disabilities are more vulnerable to infections and viruses, contributing to absenteeism or school dropout because of hospitalization (Australia Disability Clearing House on Education and Training, 2020).

Multiple disabilities effect is also another thing that significantly impacts special needs learners' retention at school. Multiple disabilities denote a situation where a child has more than one disability. The two examples of such a combination include intellectual disability and blindness and intellectual impairment and orthopaedic (Lombardi, 2019). Such blending has an impact on child educational needs. An individual need to understand the child's disabilities involved, the severity of each disability, and how each of the disabilities present affects the learning and daily life for him/her to understand the appropriate support for the child. Offering an education curriculum that covers all requirements of the individual with multiple disabilities may be difficult. The education programs that should be provided to a child with multiple disabilities must address all the conditions, not one or some. Therefore, failure to provide adequate education programs can affect learners' school retention rates.

Deafness is another disability that has an impact on the retention of learners with special needs. Deafness hinders communication which in turn affects the learning activities. Children who lose hearing at a given stage of life after speaking are helped through hearing aids. Children born with deafness disability are a bit different when it comes to assisting them in learning. They majorly depend on sign language for communication.

According to Mwoma (2017), deaf children learn better and understand more when taught by a deaf teacher. Deaf teachers have a deep understanding of sign language vocabularies better than hearing special needs trained teachers. Communication barriers also have an impact on how deaf children interact with others and adjust to the school environment.

Speech and Language disabilities are other examples of communication disabilities (CD) that influence special needs learner retention. Communication is an essential tool both in education and in the daily life activity of an individual. The severity of communication disability is primarily experienced in teachers practicing in a mainstream setting where there was a wide range of learners. A challenge emerges when a teacher must address that learner with CD (Mutai, 2018). Such conditions and other disabilities among the learners seem to be more demanding and disruptive on teachers and other learners without disabilities. Teachers' attitudes towards learners with disabilities may be affected considering the rate of demand for support required. The teacher's presentation to the learner determines the willingness to continue studying and complying with the classroom requirements. Therefore, the severity of the disability of the learner impacts the teacher's attitude, which in turn affects the learner's academic success and the focus on education.

Parents also play an essential role in influencing the retention of special needs learners in schools. Parent perception concerning disability influences the education progress of the CwD in India. Social stigma, shock, and acceptance of the child's condition make some parents deny CwD from acquiring education. Parental approval of disability depends on how physical the disability is, and the type, and severity of the disability (Limaye, 2016). Lack of adequate counselling for parents affects acceptance of the condition, making them fail to understand the slowness experienced in education

progress. Regarding that, some parents remove their children from school or change their children to other schools. Some fail to appreciate the mainstream education system, while others develop an overprotective attitude that impacts the child's learning process.

In Nepal, there was also a problem in retaining special needs learners in school. According to Human Rights Watch report, there was a low enrolment rate and high dropout of learners with disabilities (Barriga, 2011). The factors highlighted that contribute to low enrolment and retention rate include lack of awareness concerning the right to education for all, enough trained teachers, required teaching materials, distance to school, and means of transport. The other factor is the negative attitude towards the capability of learners with impairment.

PwD and their parents/families in Nepal reported to Human Right Watch that the reason for high school dropout is because of communication barriers such as lack of sign language instruction, difficulty in accessing schools, teachers' attitude, and education programs that fail to address adequate requirements of learners with disability. The poor environmental condition that is not friendly based on the needs of the impaired children and inadequate staff also cause a lack of trust in the quality of education for children with disabilities. To add to that, all children in the mainstream system of learning must follow the same lesson plan regardless of the variation in the ability and needs of the learners. Therefore, learners with disability repeatedly fail and rewind the same grade severally which may be demoralizing to the learner. Girls with disabilities in Nepal drop out of school when they reach puberty because of a lack of school support (Barriga, 2011). As much as puberty is a problem for all girls to those with disabilities, they are already experiencing problems with movement and coping with other conditions.

Social factors are also an issue that influences the special needs learner's retention. Stigma from society is a problem that many people in society face. Stigmatization and isolation from the immediate society, for example, school and community, contribute to the child with special needs dropping out of school (Flora, 2015). The social theory explains that disability is a limitation to participating in society because of an inaccessible environment. The approach urges that social attitude is among the barriers people with disabilities face (Moyi, 2018). Applying social theory, one can understand that learners with special needs fail to access education opportunities because of obstacles from school and the community (Flora, 2015). Such barriers affect their participation and performance in mainstream settings hence contributing to school dropout. It is noted that the studies did not specifically evaluate the extent to which the severity of SN and disability affect the retention of learners with special needs. Therefore, the researcher tried to fill this gap by evaluating the extent to which the severity of SN and disability affect the retention of learners more so in regular public primary schools in Lurambi Subcounty.

2.3. Attitudes of Teachers and Education Officers on Retention of Learners with SN

According to Oluremi (2015), many teachers express negative attitudes and hesitancy in accepting learners with disabilities. For some teachers, the mainstream system of education is like a whole truck of loads on them. Among the attitude of teachers include unwillingness to accept the learners with special needs fearing the demands connected to them, the tendency of having lower expectation from the disabled learner, and a feeling that dealing with special learners require a specialist. Such situations affect the learning of the SN learner, which affects the learner's performance potential. The learner later develops a low interest in school and hence drops out.

Mainstreaming is defined as the process and the programs aimed at educating learners with SNDs in typical class settings (Dağlı & Öznacar, 2015; Hammel, 2012; Sah, 2009; Shaddock et al., 2007). Inclusive is an alternative to inclusive education, which is defined by (UNESCO Institute for Lifelong Learning, 2009) defined inclusive education as a process aimed at responding to and addressing the diverse needs of all learners. Mainstreaming is envisaged as a panacea to strengthen and reinforce the capacity of educational institutions and systems to reach out to all learners amicably and indiscriminately to achieve the objectives of EFA. The underpinning value of mainstreaming is embedded in the fact that access to education is a necessary human right and a requisite for the development of a just and equal society. Even though education is a human right, there have been cases of learners with special needs and disabilities failing to access education in schools within their vicinities because they lack teachers trained in SNE.

Mainstreaming advocates adjusting and modifying the content, approaches, strategies, structures, and the general environment of regular schools with a common vision of covering and accommodating all children. It eliminates the need for sending CwDs to special schools that are discriminative and restrictive but envisions an education system where both learners without special needs and learners with SNDs can interact in an equal school environment. According to Gitonga (2014), mainstreaming in education envisions a system that enables a regular teacher to focus on the social, cultural, and educational aspects of a CwDs in a regular classroom sustainably. The teachers must realign their instructional practices and methodologies to conform to the needs of the CwDs and special needs (Gitonga, 2014). This is a key component of this study as it assesses the availability of trained SNE teachers and their ability to teach successfully in regular learning environments. Mainstreaming and inclusivity focus on the capability

of teachers to modify the learning environment to accommodate learners with SNDs (Gitonga, 2014; Mwangi, 2013).

Kauffman et al, (2017) point out that if special education teachers (SETs) are accorded sufficient administrative support, it influences their performance and commitment to the implementation of the education. Administrative support is strongly associated with greater job satisfaction hence enhanced policy implementation and quality education for all. Similarly, the ability to access instructional materials and the infrastructure of the learning environment contribute to the instructional quality of the SETs. It is imperative to match the challenges with the support of evidence-based data on the extent of the challenge to the policy objective.

The 2010 Kenyan constitution emphasizes that CwDs like any other children have a right to benefit from decent and full education where their dignity and self-reliance are reinforced to facilitate their active participation in society. However, PwDs remain a crucial part and large group of the marginalized population in Kenya (Mutua & Dimitrov, 2001). It is estimated that about one out of six CwDs in Kenya manage to attend school. However, the few that attend schools face considerable challenges of social exclusion, stigmatization, inappropriate curricula, poorly equipped schools, and insufficiently trained teachers, which impact their retention (Oriado, 2003).

It is unequivocally clear that under the universal primary education (UPE), MDGs, SDGs, and Kenya Vision 2030, among other international and national policies, education for all is a prime agenda and prerequisite not only for national but also international development. The adoption and advocacy of mainstreaming were aimed at enhancing access to better and quality education for all. Nonetheless, the Ministry of Education (2009), Bii and Taylor (2013), Wangari (2015), and Janmohamed (2012), among other studies, denote that mainstreaming of special needs education under the

inclusive education policy is coupled with a myriad of challenges stemming from inadequate facilities to teachers' perceptions on the policy.

According to Article 44 (4) of the Education Act of 2013, mainstreaming can only be a success if the learning institutions have teachers with coherent training and skills in handling both children with or without special needs and disabilities. Gitonga (2014) noted that in the past years, CwDs and special needs were primarily taught in restrictive environments in the special need schools; however, with the inception of inclusive education, the regular and other specially trained teachers are expected to teach all the learners in a regular class setting adapted to accommodate the needs of CwDs. Therefore, trained SNE teachers need to understand the extent of implementation of the named factors to be able to effectively promote mainstreaming in the study area and the country at large.

Teachers' training institutes must be more thorough to properly prepare an individual to face the difficulties and possibilities given by the inclusive education system. The program offered to teachers during their education should be designed in a way that an individual can understand the complex differences among the learners in the classroom. Neilson and Brink (2008) discovered that the teacher's institution in New Zealand offers inadequate coverage information concerning inclusive education while others offer content about inclusive education indirectly. According to these two authors, a compulsory special education unit should be provided to all trainee teachers. With coverage on that unit, there will be more coverage on diversity in the classroom, reducing the cases where teachers are confused about what to do, which gives learners challenges. Introducing the special education unit in the learner teachers' program will help teachers appreciate and celebrate diversity. Just the same way a teacher who knows mathematics teaches it better, a teacher who understands reality about inclusivity will

advocate for including it. Special education helps the teacher acquire techniques on how to deal with SN learners.

According to Neilson and Brink (2008), teachers are the role model for the children they are teaching. The future life of the learners lies in the hand of teachers. Teachers can influence their learners on how they see and react to the world. They have to prepare children in the classroom to value and appreciate any diversity in school. SN trained teachers to understand the issues of equity and recognition of diversity. In every aspect of life, role models are considered a path to conveying a compelling message to all learners. Positive role models contribute to helping an individual to deal with and overcome challenges and achieve great things in life. A positive role model can suppress the negative assumptions and enables an individual to have alternative ways of looking at the world. When it comes to a classroom of children with SN, the teacher's attitude impacts the learner's learning experience. Developing a positive attitude removes barriers in the way of the learner's progress, enabling them to reach their maximum potential. Neilson and Brink (2008) recommend that the government should encourage PwD to train as teachers. They said it would improve understanding of inclusive education because the learners will perceive that they are talking from the experience of facing damaging and incorrect stereotypes, thus encouraging those learners with disabilities/SN.

In mainstream and inclusive education, teachers need to have both knowledge and the ability to teach SN learners. CwDs are now pushed out of the isolated learning environment to a general education classroom. This means regular teachers are currently handling more learners with disability hence need to understand how to handle the challenges connected with them. Neilson and Brink (2008) as well as Mader (2017), admit that many teachers' training institutions offer inadequate content about

special education, which is not enough to equip teachers with knowledge and ability on dealing with diversity in learners. According to Madder's (2017) research, about 85% of learners with SN can adjust to the general education system when given necessary educational support. Examples of support include the availability of trained teachers and learning materials that make the learner more comfortable. Teachers should learn to work with all children in the classroom and take the learners as their responsibility. The above scholars have not been able to establish the extent to which trained SN education teachers influence the retention of learners with SN and disabilities. Therefore, this gap was filled by the researcher by determining the extent to which teachers and education officers influence the retention of learners with SN and disabilities, more so, in regular public primary schools in Lurambi Sub-County.

Several kinds of research have pointed out that educational access among children with disabilities is significantly low in low-income countries compared to developed nations (Aldaihani, 2011; Eunice & Orodho, 2014; Gitonga, 2014; Janmohamed, 2012; Mwangi, 2013). According to Itimu and Kopetz (2008), the majority of African countries are accused of only showing a theoretical interest in providing and implementing inclusive and mainstreamed SN education. A study by Itimu and Kopetz showed that Tanzania, Malawi, and Zambia lacked sufficient SN educational resources as well as marginal to no collaboration among agencies concerning the education of children with disabilities more so training and availing of more teachers in SN education. This depicts the need to conduct a study to validate the extent to which retention of learners with SN and disabilities is impacted by the advocacy of mainstreaming in regular public primary schools in Kenya. Therefore, perception being a key factor in the implementation of mainstreaming, this study seeks to find out how

the perceptions of teachers and education officers influence the retention of learners with SN in regular public primary schools.

The government of Kenya envisions creating an inclusive and mainstream education; however, Gitonga (2014) indicates that many primary regular educators are less confident in their ability to educate the learners with SNDs in regular classrooms effectively. Equally, some teachers are reported to question why they are required to adjust the content-driven lessons just to meet the needs of the learners with disability. Whether under regular inclusion programs where the learners with SN are taught in a regular classroom setting but have some special additional programs outside the regular classes or full inclusion where all learners attend full time learning in the regular classroom; the teachers are the pillars of ensuring the learners are imparted with the necessary knowledge and skills.

Janmohamed (2012) points out that many teachers habituated to teaching in typical classrooms may find it a challenge to teach in an inclusive classroom. To be a successful and efficient teacher in a mainstream context, instructors must have fundamental SNE abilities that will allow them to teach well. One requirement for effective teaching in an inclusive classroom is the ability of the teacher to manage the class and handle the behavioural problems sustainably. The teacher is required to create appropriate conditions for instruction that meet the learning needs of the various learners; hence all the learners benefit equally. Satisfying the needs of the learners with SNDs is cumbersome for teachers without SNE. Hence, this study aims at evaluating the perception of teachers and educators on mainstreaming and how it influences the retention of learners with SNDs in a regular primary school in the light of implementing mainstreaming.

The Kenya Institute of Special Education (KISE), as well as SN education departments at Kenyatta, Moi, Maseno, and Methodist Universities, were formed to produce more instructors in SNE (Ministry of Education, 2009). To be an effective and efficient teacher in a mainstream context, instructors must possess important SNE abilities that will enable them to teach effectively. Teachers besides the learning environment and infrastructure are the pillars of inclusive education; trained teachers experienced in inclusive education significantly dictate the magnitude of implementation of inclusivity in the learning system. Therefore, the study specifically assesses how the perception of teachers and educators on mainstreaming influences the retention of learners with SNDs in regular primary schools, an indicator of mainstreaming.

Teachers and officers need to understand appropriate terminology while addressing their learners, given the diversity created by implementing an inclusive education system. It is essential to use language that considers the learner over the disability available. The terms used when addressing the SN learners might be stigmatizing, affecting the learner's potential in learning. Among the guideline offered by The National on Disability and Journalism requires that professionals should ask the source or any close family member about the appropriate way he/ she would like to be addressed. The organization discourages professionals from using their own-made words while referring to a SN person. Research by Oluremi (2015) identified the labelling of special learners in school to be a problem that teachers expressed. In some circumstances, teachers negatively label their learners, for example, the term mentally retarded. Such words make the learners with disabilities feel rejected and different from others creating low self-esteem.

School officers also face challenges because of educational changes resulting from inclusive education. The system requires the school to provide a learning environment

that ensures the comfort of the diversity of learners, rather than the learner getting adapted to the school structures. Therefore, the school's officers must develop mechanisms suitable for all learners present regardless of the diversity and level of disability. This change becomes difficult for schools organized in a conservative structure resistant to change (Sakız, 2016). Also, the competitive attitude of schools where schools compete for ranking makes it difficult for schools to consider SN learners because they are likely to interfere with the school's mean score. The issue of competition is the nature of the schools around the world. The changes required for the school to accommodate learners of all diversity are more demanding. However, some schools go for cheap implementation that does not meet the standard required, especially schools with a competition-focused attitude. Teachers in such schools may develop a negative attitude towards learners with SN with lower performance because the school's norm is to achieve a certain rank in society.

The lack of officers and government is another issue in inclusive education. In Kenya, about 90% of children with disabilities do not go to school despite the implementation of the policy of education for all. Schools in Kenya are still under poor management, which is not favourable to accommodate learners of all diversity. Issues contributing to poor management are a lack of trained teachers and appropriate facilities. For the implementation of the mainstream education system to be successful, there must be support from school inspectors, educational officers, and other school-connected authorities (Musikhe, 2014). They should collaborate in all stages of implementing the curriculum. They should support the teachers to ensure that learners of SN get the support they require for inclusion to be effective. A less supported learning environment is likely to cause negative self-concept, inability to interact, and anxiety in their learning process. However, a bottom-up approach to management should be encouraged in

schools where every school stakeholder is included in implementation matters. The scholars above have not specifically assessed the extent to which perceptions of teachers affect the retention of learners with SN and disabilities. Therefore, the researcher closed this gap by assessing the extent to which perceptions of teachers and education officers influence the retention of learners with SN, more so, in regular public primary schools in Lurambi Sub-County.

2.4. Intervention Strategies to Support Learners with SN

For mainstreaming to be successful, regular schools must be supplied with the required resources, equipment and infrastructure as well as altering existing surroundings of regular schools to accommodate learners with SN.

UNESCO Institute for Lifelong Learning (2009) and Janmohamed (2012) records that mainstreaming and inclusive education can only be achieved if all ordinary schools are more inclusive in the essence that they provide education to all the children within the community without special arrangements outside the regular school programs. The Salamanca Conference of 1994 held in Spain acclaimed that regular schools with a coherent inclusion orientation are the most feasible means of eliminating and alienating discriminatory attitudes hence creating communities with strong cohesion and co-existence and attaining the EFA. The inclusive orientation in regular schools is as well postulated as an efficient way of providing education to most schools hence improving the efficacy and the cost-effectiveness of the education system holistically. One of the primary objectives of this research is to assess how school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools. Since the launch of the Free Primary education in 2003 by the Government of Kenya, the education systems registered an influx enrolment of pupils in primary schools. Ministry of Education (2009) indicates that by 2008, the number of public and private

primary schools increased to 18,600 and 1,839 respectively recording an enrolment of 8,563,821 pupils compared to an enrolment capacity of 891553 learners from 6,058 primary schools at independence (Ministry of Education, 2009). With the expansion of the enrolment in primary schools across the country, a major challenge ensued regarding enrolment and meeting the needs of learners with SN and disabilities and there was the need to determine the state of the implementation in Kenya and especially, Lurambi Sub-County in Kakamega County. Thus, this study saw the need to determine how school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools.

Children with disabilities and SN are noted to have marginally access to education in Kenya even after the ratification of the UDHR, among other national and international policies. By 1990, it was estimated that only 22,000 learners with disability and SN had access to education and enrolled in special and integrated school programs. Nonetheless, the adoption of the FPE saw the numbers rise from 26,885 in 2003 to 45,000 in 2008, which is poor, compared to the national statistics of PwDs and enrolment of children without disability (Ministry of Education, 2018). The low enrolment of learners with SNDs can be attributed to the lack of nearby schools practicing mainstreaming. Mainstreaming requires modification of classes and school environment to meet the needs of the learners.

Article 44(4) of the Education Act of 2013, in light of promoting inclusive education, states that the cabinet secretary in charge of the Ministry of Education will ensure that learning institutions with learners with SN are well equipped with sufficient and friendly infrastructure, learning materials and equipment as well as staffed with sufficient and qualified trained teacher and support (GoK, 2014). Hence, this study saw

the need to determine how school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools.

For instance, a teacher cannot teach a learner with mild hearing impairment like other learners; thus, for this learner to be incorporated into the learning environment, necessary infrastructure and materials must be availed to both the learner and the instructor. Ministry of Education (2009) states that the adequacy of teaching/learning materials, physical infrastructure, and facilities appropriate for SNE was a prerequisite for effective implementation of mainstreaming and inclusive education. The lack of adequate facilities, infrastructure, and equipment for learners with SNDs in most regular schools was recorded to be a key inhibitor to the effective implementation of mainstreaming and inclusive education. Therefore, this study saw the need to determine how school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools.

Assistive devices and equipment significantly influence the ability of the teacher to deliver and of the learner to acquire the necessary skills. Specialized services, facilities, equipment and teaching/learning materials, assistive devices, and technology is inevitable for successful inclusive education. Janmohamed (2012) noted that modification of the class environments was important in ensuring all the learners are well included in the learning process. According to Janmohamed (2012), the following modification, among others can be made to the class environment to guarantee learners with SN are well educated (see Table 2.1).

The degree to which learners are educated considerably directly correlates with personnel preparation and the suitability of the physical infrastructure. The infrastructure such as the lighting systems, the size of doors, air conditioning and ventilation, availability of ramps, and other disability-friendly infrastructure are key

modifications essential for effective implementation of mainstreaming. Mwangi (2013) notes that school infrastructure gravely contributes to the well-being of learners and its aptness and quality strongly influence the perception of their well-being, thus a need for schools to make modifications and adaptations to enhance access and learning of the CwDs. As alluded to earlier, infrastructure and school environment ought to be modified to create an ambient and inclusive environment for all learners. Objective two of this study specifically assesses this indicator of inclusive education in the study area. It was hypothesized that the more the school environment and infrastructure are suitable the higher the ability to promote mainstreaming and attaining education for all as well as the universal primary education objectives. Thus, this study saw the need to determine how school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools.

Table 2.1: Probable classroom modifications by a teacher to promote inclusivity

Types of Modification	Description
Size	Change the amount or the number of items that the learner was expected to learn
Time	Change the amount of time allocated for learning and completing assignments.
Input	Change the way that instruction was presented.
Output	Change the way that the learner responds.
Difficulty	Change the skill level required for task completion
Participation	Allow for various levels of learner involvement.
Level of support	Change the amount of individual assistance.
Alternative goals	Use similar materials, but change expected learning outcomes
Substitute curriculum	Change the materials and instruction

Source: Janmohamed (2012)

Preparation of necessary infrastructure and providing a conducive learning environment was crucial because it ensures comfort while learning. According to Yasin et al. (2010), developing a better environment for children with SN help the individual to feel comfortable, safe, and controlled in their learning surrounding. Therefore, in preparation for the required environment for inclusive education, the school needs to identify several factors. Among them include the evaluation of learners with SN to determine how best to accommodate them to be beneficial in the future. Also, it is essential to identify factors that might impact the attitude, achievement, and social development of the learner. Hence, the school should consider all basic needs that may be a barrier to the SN learner's progress (Yasin et al., 2010). Examples of basic needs include a conducive classroom, safety equipment, sanitation facilities, and many others. Availability of appropriate infrastructure and equipment, the help of the teachers, a good environment, and better interaction with other regular learners contribute to the ability of the learners with disabilities to achieve success in education. A school with adequate and accessible facilities motivates a learner to continue learning. Thus, this study saw the need to determine the extent to which school infrastructure, resources, and environment affects the retention of learners with SN in regular public primary schools.

In many schools managing mainstream education is not something easy. Inclusive is not only about teaching learners with disabilities in a regular school, but it also includes giving the learners with SN an equal opportunity to participate as required in the curriculum. A school needs to consider several aspects categorized into two characteristics: physical and physiological characteristics (Azizah, 2011). In physical features, there are several aspects a school should consider. A school should provide facilities and infrastructures that align with the needs of the learners. A school should

also set and arrange the classroom in a manner that favours learners with disabilities. Seating arrangements can affect the learning and the behaviours of the learner. Several seating arrangements have both advantages and disadvantages to the learner's academics. Teachers and staff are also essential aspects a school should consider. Teachers and staff must be equipped with relevant and professional competence. The other physical characteristics aspect is educational documents which include assessment results and curriculum program. The document helps plan and monitor the progress of a learner with SN.

Physiological characteristics are aspects related to the social and emotional atmosphere created in the school environment. These features include teachers, other staff, and learner attitudes toward the learners with disabilities (Azizah, 2011). Other aspects under physiological characteristics are interaction level and school policy. The interaction level covers elements like values for all learners and the availability of evidence-based practices that contribute to the improvement of the organization. Under school policy, it is a requirement for the school to develop rules and regulations considering the comfortability of learners with SN. Proper consideration of physiological features influences the implementation of appropriate physical characteristics that favour learners with SN. Thus, there was the need to determine the extent to which modifications of the school infrastructure, resources, and environment affect the retention of learners with SN in regular public primary schools.

In inclusive education, providing a barrier-free environment is a critical requirement that a school organization should consider. Sven and Joachim (2016) suggested that schools need to consider a universal design approach while developing an appropriate school environment. The universal design approach requires that any design made in any field be able to serve all people without adaptation. According to this approach, the

common barriers that influence learners' school attendance with disabilities arising from the physical environment can be grouped into three; the way to school, school building infrastructure, and extracurricular school activities. Thus, there was the need to determine the extent to which school infrastructure, resources, and environment affect the retention of learners with SN in regular public primary schools.

The way to school category covers issues dealing with distance from home to school and the quality of the road considering the weather condition compared to the users' type and severity of the disability. This category also covers the importance of safety on the way to school, especially for girls, and accessibility to public means of transport. In the building infrastructure category, all school buildings should be designed to ensure full access to all learners (Sven & Joachim, 2016). The school should include a room that may offer therapy for the learners with disabilities to avoid the absenteeism of such learners because of the search for the service. Concerns about extracurricular activity space are raised in category three. It demands that all students participate in activities such as school trips.

California Department of Education and WestEd (2020) suggested six basic components an infrastructure needs to have for an inclusive education program to function well. The first one is collaboration and communication, which stresses implementing norms and processes that promote effective interaction between special education programs and others not leaving behind schools and families. The second is about the ability to allocate staff with defined roles and responsibilities. Policy and procedure are the third policy addressing documentation issues and accessible procedures considering the Individual with Disability Education Act (IDEA). The fourth component is the data system that ensures accurate and consistent data and monitors the learner's progress. The fifth is resource management which deals with

budgeting needs for special education, and the last component is instructional practices which include professional learning for high-quality education. It is noted that the above studies did not categorically establish the extent to which infrastructure and resources affect the retention of learners with SN and disabilities. Therefore, the researcher filled this breach by establishing the extent to which the available infrastructure and resources affect the retention of learners with SN, more so, in regular public primary schools in Lurambi Sub-County.

2.5. Theoretical Framework

The study was guided by the Social Model of Disability theory, which argues that it is the society that segregates and disables people with SN; however, this can be averted by the society changing their perceptions as opposed to focusing on the rehabilitation and adjusting the individuals (Owens, 2015; Retief & Letšosa, 2018; Terzi, 2004). The social model of disability was coined by Michael Oliver due to a series of disability movements in the 1960s and 1970s in Britain where the society expected the people with disabilities to adjust themselves to the prevailing needs of their environment (Retief & Letšosa, 2018; Terzi, 2004). Disability is a product of the specific socio-cultural, economic, and environmental structures; hence the social model of disability aims at addressing issues of discrimination and oppression of the disabled people based on institutional forms and cultural attitudes drawn from social practices of exclusions. It advocates for society with its institutions to adjust their approach to people with disability by creating ambient environments as opposed to requiring them to adjust and fit unapologetically in the defined structures by society. This implies that learners with SNDs should access education with other learners without disability; however, the environment, resources, and perceptions of society should change towards embracing of least restrictive environments.

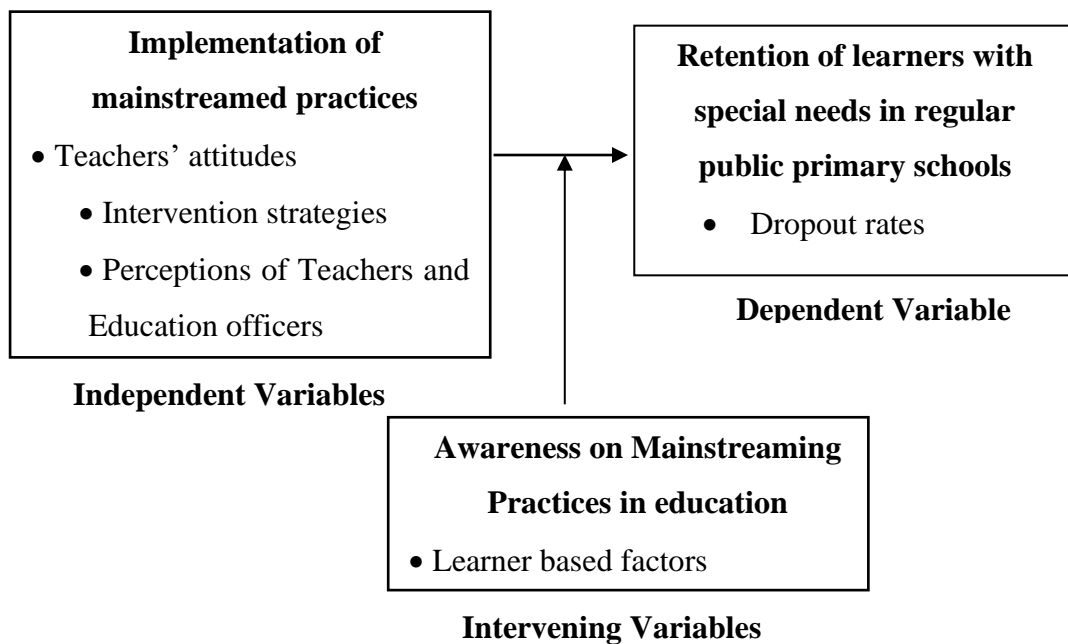
Learners with SNDs are often made to feel segregated and always at fault for being born with unique and diverse abilities as compared to the learners without disability. The theory sensitizes the entire education system to acknowledge that learners with SNDS are not lesser humans just for being born different, but people are abled differently. It is factual that the difficulties experienced by these learners cannot be reversed nor forced to comply with what is presumed to be conventional. However, society can make the learners feel welcomed by modifying their environment stemming from cultural and individual attitudes to create an accommodating environment.

Mainstreaming is anchored on the theory of the social model of disability as it advocates educating learners with SN in the regular class and school settings as opposed to special schools. This implies that the schools should be accommodative and inclusive enough for all learners. Noteworthy, this is expected, but it is paramount to ascertain whether the policy is implemented on the ground. Therefore, the social model of disability theory is relevant to this study as it encourages education systems to create a mainstream learning environment for all hence translating to higher retention of learners with SNDs. As per the theory, if there are sufficiently trained SNE teachers, a disability-friendly environment, teachers, and education officers who make the learners experience a sense of belonging, the school was to be an enjoyable place to stay hence high retention. Thus, this ensures that the strength of the learners is prioritized as opposed to focusing on their disability.

2.6. Conceptual Framework

From the literature review, the conceptual framework is developed; it illustrates the implication of independent variables (indicators of mainstreaming) on the dependent variables (indicators of retention), and the two are affected by the intervening variables.

Figure 2.1: Effect of mainstreaming on the retention of learners with SN



Source: Researcher (2019)

The dependent variables according to Kaur (2013) and Kothari (2004), are the outcome variables influenced by other independent variable(s). As per the study title, the outcome variable in this study is the retention of learners with SN in regular public primary schools. The dropout rate was used as an indicator of retention. For instance, when the schools lack teachers trained in special education such as in sign language, it is very hard for a learner with partial or severe hearing impairment to be accommodated in regular primary school hence forced to either drop out or enrol in the special schools. Availability of SN and disability-friendly resources and infrastructure also determine the retention of learners with SN in schools. For instance, when schools lack infrastructure such as ramps, a learner in a wheelchair might find it frustrating to be carried by other learners into a class, hence dropping out of school. Equally, when teachers make derogatory statements to learners with SN due to their negative perceptions of them, the learners are likely to drop out of school. The independent variables are those variables that are subject to manipulation, and can be changed or

controlled (Kaur, 2013; Kothari, 2004). In this study, the independent variables comprised the availability of trained teachers, available infrastructure and resources, and the perceptions of teachers and education officers on mainstreaming. Conversely, the intervening variables are not studied, but they can influence mainstreaming (independent variable) and its effects on the retention of learners with SNDs in the regular public primary schools (Kothari, 2004; Kaur, 2013). In this study, the intervening variables constituted awareness about mainstreaming practices and learner-based factors.

2.7. Summary of Literature Review

From the above literature review, it is evident that mainstream as an alternative to inclusive education is significantly advocated for stemming from the international to national policymakers. Mainstreaming is requisite for the promotion of education for all; however, this is coupled with a myriad of challenges that hamper the ability of PwDs to access quality education. Originally, the Kenyan government envisioned having an exclusively inclusive education system, but this has not been practically viable, thus mainstreaming. In addition, it is revealed from the literature that the availability of trained SNE teachers has a significant effect on the retention of learners with SNDs. It is further noted that the suitability and disability friendliness of school infrastructure and resources substantially influence the enrolment and retention of the learners in the schools. Consequently, as per the social model of disability theory, the perceptions of teachers and education officers can either promote or inhibit the learners' sense of belonging to the schools hence their dropout. Factors influencing mainstreaming of learners with SN have come out well. However, the extent to which they affect retention needs to be established. Therefore, this study filled this gap by assessing the extent to which mainstreaming factors namely; implementation of

mainstreamed practices, teachers' attitudes and intervention strategies affect the retention of learners with SN and more so in regular public primary schools in Lurambi Sub-County, Kakamega county.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter presents information on the research design, a description of the study area, target population and sample size, sampling procedures, data collection instruments, data collection procedures, pilot study, reliability and validity, data analysis, and ethical considerations.

3.2. Research Design

Descriptive survey research design was used in this study. According to Kothari (2004), a descriptive survey research design aims at describing the state of affairs of the phenomena as it exists in the present time. Neuman (2014) also notes descriptive researches give a vivid picture of the specific details, relationship, or social setting of phenomena. This design fitted this study because it aimed at assessing the state of mainstreaming and its influence on the retention of learners with SN in regular primary schools. This design was appropriate for the study because it sought to assess the state of mainstreaming and its impact on the retention of students with SN in regular primary schools. Descriptive survey research design is advantageous because it allows for a consistent understanding of both qualitative and quantitative data and findings (Creswell & Wisdom, 2013).

3.3. Study Area

The research was carried out in Lurambi Sub-County, one of Kakamega County's twelve sub-counties in Kenya's former Western Province. Appendix 8 depicts a map of the study's location. Lurambi Sub-county was selected for the study because it had the highest number of learners with special needs at the EARC compared to other sub counties in Kakamega county. The population of the Lurambi sub-county is estimated

to be 160,229 people, with an area of 161.8 km². There are 61 primary schools in the Lurambi Subcounty (Kiiti et al., 2020). Butso East, Butso South, Butso Central, Shieywe, Mahiakalo, and Shirere are among the wards.

3.4. Target Population

The study targeted 29 head teachers, 406 teachers, and 5 education officers distributed in 29 primary schools. Mugenda and Mugenda (2008) points out that a population is the total number of the entire group of individuals, events, or objects sharing common observable attributes and characteristics. The total population comprised four hundred and forty respondents that made up the target population of the study.

Table 3.1: Target population

Representatives	Target Population
Head teachers	29
Teachers	406
Education Officers	5
Total	440

3.5. Sampling Procedures and Sample Size

3.5.1. Sampling Procedures

The study used cluster sampling to cluster the 61 primary schools in different location within Lurambi Sub-county. The study used stratified sampling to identify sub-groups in the target population; the sub-groups were head teachers, teachers, and education officers. Purposive sampling is a method used to select the subjects who had the required information (Oso & Onen 2009). Therefore, purposive sampling was used to select schools with special units for CwDs because they had the required information the researcher needed. Simple random sampling was used to select samples without bias from the accessible population; it was justified because it accorded each member

of the population equal and independent chance of being selected and independent choice.

3.5.2. Sample Size Determination

A sample is a smaller group obtained from the accessible population. This research drew a sample size using Yamane's formula. The sample size was determined from target population using the Yamane's while that of management was determined using Yamane's formula (Yamane, 1967).

$$n = \frac{N}{1+N(e^2)}$$

Where n = the desired sample size, N = the total population, e = the level of statistical significance

Therefore, the sample size for teaching staff and non-teaching staff is:

$$n = \frac{4400}{1+440(0.05^2)} = 210$$

$$\text{Non-response} = \frac{5}{100} \times 440 = 22$$

Therefore, total sample size is $210+22 = 232$

The sample size for each stratum was determined using sample proportionate stratification approach. With proportionate stratification, the sample size of each stratum is proportionate to the population size of the stratum. Strata sample sizes are determined by the following equation

$$n_h = \frac{N_h}{N} \times n$$

Where

$$n_h = \frac{N_h}{N} \times n$$

n_h = sample size for strata

N = the total population size

n = the total sample size

N_h = population size for strata

$$n_h = \frac{29}{440} \times 232 = 15.3 \approx 15$$

$$n_h = \frac{406}{440} \times 232 = 214.1 \approx 214$$

$$n_h = \frac{5}{440} \times 232 = 2.6 \approx 3$$

Table 3.2: Sample size

Representatives	Sample size
Head teachers	15
Teachers	214
Education Officers	3
Total	232

3.6. Data Collection Instruments

The research instruments that were used included questionnaires (questionnaire for teachers) and interviews for head teachers and Sub-County Education Officers) and checklists (Teaching, learning Equipment and Materials Checklist, availability of disability-friendly and environment checklist). The questionnaires were primarily focusing on collecting data on the perceptions of teachers and education officers on mainstreaming and how they affect the retention of learners with SN. In this study, the researcher physically issued the questionnaires to the respondents, as they were convenient for the study and easy to administer to the sample population. Physically delivered questionnaires were of advantage as the researcher can directly answer some of the respondents' concerns regarding the study. Furthermore, questionnaires are cost-

effective, free of researcher biases, respondents can be reached easily, and huge samples may be used, making them reliable. However, there was a possibility of a low return rate and incompletely filled surveys. They were only useful for literate respondents and time-intensive. There were five-point Likert Scale questionnaires used (Agree, Strongly Agree, Not Sure, Disagree, and Strongly Disagree).

A checklist is a pre-set form used for rapid and easy data recording. It was simple to extract data because it frequently relies on records and observable features, and it was especially useful when tracking the occurrence of incidents, events, activities, or difficulties (Andersen, 2007; Bauer et al., 2006). A checklist was used to call attention to various aspects of an object or situation.

3.7. Piloting of the Research Instruments

Piloting was conducted in Shanyinya primary school in Kakamega East Sub-County to determine the validity and reliability of the data collection instruments as well as help in further preparation of the study. The primary school was selected based on the criteria of admission since they had children with SN admitted over the years. Through the process of piloting, the questionnaires and checklists were tested for ambiguity and any nonconformity to enable the researcher to make the necessary adjustments. In addition, the researcher gave the questionnaires and interview guide to the two supervisors and other research experts from the Department of Education Foundation and Psychology for them to go through and advise accordingly.

The researcher reduced the cases of bias based on the findings of the pilot study and advice from the consulted supervisors by removing questions that seemed ambiguous. The researcher also included the definition of the term mainstreaming in the introductory paragraph of the questionnaires to ensure the respondents understood the context in which the term is used.

3.8. Validity of the Research Instruments

The validity of a research instrument is a measure of the magnitude at which the instrument in question measures what it is intended to measure (Kothari, 2004). Determining the validity of the research instrument is paramount as it enables the researcher to ascertain the efficacy of the choice of data collection instrument hence eliminating cases of ambiguous, confusing, and redundant questions. The researcher used content validity of the research instruments to ascertain and improve the advice and insights from the two supervisors from the Department of Education Foundation and Psychology at the Maasai Mara University.

3.9. Reliability of the Research Instruments

Reliability is the measure of the level to which a research instrument gives a consistent data upon repeated trials, all other things remaining constant. Researchers agree on four methods of testing the reliability of a questionnaire; test-retest, equivalent form, split half, and Cronbach alpha coefficient of internal consistency (Ritter, 2010). The study adopted the Cronbach alpha coefficient of internal consistency because it is more practical, it uses all items in the research instrument and is more convenient as compared to other methods since it requires one test administration approach (Tavakol & Dennick, 2011). A pilot study was carried out in Shanyinya primary school in Kakamega East Sub-County to determine the validity and reliability of the data collection instruments but outside the study sample. The four independent variables (the implementation of mainstreamed practices, teachers' attitude, and intervention strategies) and the dependent variable (retention of learners with SN) were subjected to reliability test. The alpha was computed using data obtained from the questionnaires pilot testing as

$$\alpha = \frac{\left[\frac{k}{k-1} \right]}{\left[1 - \frac{\sum_{i=1}^n S_i^2}{S_x^2} \right]}$$

where

k = the number of items on the test

S_i^2 = the obtained variance for item i

S_x^2 = the variance of the total test scores

Different researchers use different cut-off values for alpha which according to Tavakol and Dennick (2011) range from 0.7 – 0.95. George and Mallery (2003) made the following interpretation of the values of alpha coefficient as a rule of thumb i.e., > 0.9 – Excellent, > 0.8 – Good, > 0.7 – acceptable, > 0.6 – questionable, > 0.5 – poor and < 0.5 – Unacceptable. This interpretation was applied to this study.

Using SPSS, the results for reliability are presented in Table 3.3.

Table 3.3: Reliability test for teachers’ questionnaire

Variable	Cronbach alpha if item deleted	Cronbach alpha
Implementation of mainstreamed practices	.778	0.735
Teachers’ attitudes	.712	
Intervention strategies	.715	

Source: (Researcher’s Pilot survey, 2022)

From Table 3.3, the results show that Cronbach's alpha is 0.735, which indicates acceptable level of internal consistency for our scale with this specific sample.

Data collected through interviews was compared with the data collected from questionnaires. These comparisons showed that the data was largely congruent except for minor exceptions. Since there were no significant departures noted in the data from questionnaires, the interview collected data was considered reliable.

3.10. Data Collection Procedure

The researcher obtained an introductory letter and clearance from the Maasai Mara University School of graduate studies, which enabled the researcher to obtain a research permit from the National Commission for Science, Technology, and Innovations (NACOSTI). The researcher was at liberty to carry out the research in the study area. In addition, the researcher sought approval for data collection in the study area from the Lurambi Sub-County Director of Education before actual data collection. While at the respective schools, the researcher was able to first seek permission from the headteacher or any other relevant authority before conducting the study.

3.11. Data Analysis

The researcher ensured that the questionnaires were accurate and complete as received from the respondents during the process of data collection. The questionnaires were coded and keyed into the statistical Package for Social Sciences (SPSS) version 26 for processing. Data analysis is a process of translating data into meaningful information by comparing and contrasting, analysing the patterns and identifying suitable statistical techniques to interpret its causality (Cooper & Schindler, 2014). It refers to the examination of the collected data and making deductions and inferences (Kombo & Tromp, 2006). Babbie (2015) contends that data analysis ensures order, structure and meaning to large amount of data collected by researchers.

In this study, the researcher used both descriptive and inferential statistics. The data collected was presented in form of tables and frequency distribution. Descriptive analysis entailed use of frequencies, mean, percentages and standard deviation while inferential statistics involved Pearson correlation and linear regression. According to Kothari and Garg (2014) correlation tests the strength and direction of relationship between variables. It is used to explore the relationship among groups of variables

(Pallant, 2015). It will thus be used to determine the relationship between variables. Linear regression analysis was used to examine direct influence of independent variables to independent variables. The regression model used was as follows:

Regression equation without moderator

$$Y = B_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y is the outcome variable (retention of learners with SN), β_0 is the y-intercept or constant. X_1 , X_2 , X_3 and X_4 denotes the implementation of mainstreamed practices, teachers' attitude, intervention strategies perception of teachers and education officers respectively. ε denotes the error margin. β_1 , β_2 , β_3 , β_4 - Model coefficients which are significantly large to have significant influence on the model.

3.11.1. Diagnostic Tests

Before conducting linear regression analysis, diagnostic tests such as normality, multicollinearity, independence, and heteroscedasticity will be carried out. Heteroscedasticity means a situation which the variance of the dependent variable is not the same for all the data (Xu et al., 2014). This will be tested using white test where significance (p) should be greater than 0.05 to indicate absence of heteroscedasticity. Normality means that the distribution of the test is normally distributed with 0 mean, with 1 standard deviation and a symmetric bell-shaped curve (Garson, 2012). This will be achieved using statistical methods such as Shapiro–Wilk test where non-significant implies presence of normality in the distribution. Multi-collinearity refers to high relationship among the independent variables (Bryman & Cramer, 2014). To check for multicollinearity, variance inflation Factor (VIF) and Tolerance level will be used. A VIF of less than 10 or a tolerance level of greater than 0.1 is acceptable

Before processing the responses, data preparations were done on the completed questionnaires by editing, coding, entering, and cleaning the data. Once the completeness of the questionnaires was ascertained, the questionnaires were organized, numbered, and coded. The data analysis was done with the help of a Statistical Package for Social Sciences (SPSS) version 26. The data were analysed using descriptive statistics and presented in frequencies and percentages using tables to validate the level of the effects of different variables. The results were analysed and interpreted using frequency and percentage distribution tables. The mean of available teachers against the learners as per their specific SN and disability was used to determine the teacher-learner ratio. Similarly, the total number of equipment and material was compared to the number of learners requiring them; hence the equipment/material-learner ratio was determined.

To analyse the collected data, there is need to examine if there exist any statistics relationship between the set of independent variables or between independent variables and the dependent variables. This leads to the introduction of correlation and regression analysis.

3.12. Operational Definition of Variables

This section shows the variables and how they were measured. It also shows questionnaire items that measured each variable. The results are presented in Table 3.4.

Table 3.4: Operational definition of variables

Research Objectives	Method of Analysis
To determine the implementation of mainstreamed practices on retention of learners with SN in regular public primary school.	Frequencies, Percentages, Mean, Standard deviation, Regression analysis
To establish the teachers' attitude towards retention of mainstreamed learners with SN in regular primary school.	Frequencies, Percentages, Mean, Regression analysis
To evaluate intervention strategies used to support learners with SN in regular public primary school.	Frequencies, Percentages, Mean, Regression analysis
To evaluate how the perceptions of teachers and education officers on mainstreaming affect the retention of learners with SN in regular	Frequencies, Percentages, Mean, Regression analysis

3.13. Ethical Issues and Considerations

The questionnaires were only administered in the respective schools in the study area on approval by the relevant authorities. Permission to conduct the study was sort from the County Director of Education, the Education Assessment and Resource Centre (EARC) Lurambi Sub-County Office, and the head teachers. The participation of respondents in the study was on voluntary basis. The researcher explained to the respondents the purpose and procedures of the study before commencing the data collection process. The responses of the respondents were treated with the utmost confidentiality.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

In this study, the findings of the study, interpretation, and discussion of results are presented according to the stated objectives and hypotheses. Descriptive statistics are provided for each stated objective followed by inferential statistics used to test the null hypothesis. Finally, there is a discussion of the findings. The objectives of the study were;

- i. To examine the effect of implementation of mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.
- ii. To establish the effect of teachers' attitude towards mainstreaming practices on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.
- iii. To evaluate the effect of mainstreaming intervention strategies on retention of learners with special needs in regular public primary schools in Lurambi Sub-county.

4.2. Rate of Questionnaire Return

A total of 214 questionnaires were issued to respondents. A total of 198 (93%) questionnaires were received back. Of these 15 (7.5%) were dropped out of the tally for having significant gaps in response for variable items.

Table 4.1: Survey response rate

Unit of observation	Data collection method	Target population	Sample size	Usable response	% effective response rate
Teachers	Questionnaires	406	214	183	86

From Table 4.1, a total of 183 questionnaires were used for data analysis. This represented 86% of questionnaire return rate. According to Kothari, C (1993) over 60% return rate was acceptable return for survey study such as this one.

4.3. Demographic Information

Before embarking on the main objectives of the study, it was important to find out the background information of the respondents. This was ascertained by looking at gender, age, education, years of teaching experience, type of special need and area of specialization. Background information was important as it lays a basic foundation on which interpretations of the study are based. Furthermore, the background information of the respondents enables both the researcher and the readers to have confidence in the study. The results of demographic information are shown in Table 4.2.

The results presented in Table 4.2. show that 68(37.2%) of the respondents were male while 115(62.8%) were female. The findings reveal the gender disparity in favour of female teachers as compared to the male teachers. In terms of age distribution, teachers between 21 - 30 years were 40(21.9%), between 31 - 40 years were 82(44.8%), and between 41 and 50 years were 61(33.3%). On the level of education of the SN teachers, the majority 87 (47.5%) of the teachers had attained Certificate level of education, 69 (37.7%) had Diploma, the teachers who had attained Degree level were 15 (8.2%) while 6 (3.3%) of the teachers had Master's degree. The results further show that the majority of the teachers 78(42.6%) had work experience of 0-5 years. Those who had 6-10 years

of experience were 45(24.6%) teachers, 36(19.7%) had worked as teachers for 11-15 years and above 15 years was 24(13.2%). The results indicated that the majority of the respondents had served long enough to give information on the effects of mainstreaming on the retention of learners with SN in regular public primary schools in Lurambi Sub-County, Kakamega County, Kenya.

The researcher also sought to find out from the respondents on the type of special need that is dominant in the school they teach, from the results, 79(43.2%) of the respondents' schools had mentally challenged students, 64(35%) had physically challenged students, 10(5.5%) had visual impaired students, 9(4.9%) had hearing impaired students, 7(3.8%) had learning disability students, 8(4.4%) had cerebral palsy students while 6(3.3%) had Autism students. On the area of specialization of teachers, 8(4.4%) had specialized in mentally challenged students, 12(6.6%) in physical challenged students, 58(31.7%) in visual impaired students, 84(45.9%) in hearing impaired students, 12(6.6%) in learning disability students, 5(2.7%) in cerebral palsy students while 4(2.2%) had specialized in Autism students.

Table 4.2: Demographic information

Variable		Frequency	Percent
Gender	Male	68	37.2
	Female	115	62.8
	Total	183	100.0
Age	21-30	40	21.9
	31-40	82	44.8
	41-50	61	33.3
	Total	183	100.0
Education	Certificate	87	47.5
	Diploma	69	37.7
	Degree	15	8.2
	Masters	6	3.3
	Total	183	100.0
Experience	0-5	78	42.6
	6-10	45	24.6
	11-15	36	19.7
	Above 15	24	13.2
	Total	183	100.0
Type of special need	Mentally challenged	79	43.2
	Physically challenged	64	35.0
	Visual impaired	10	5.5
	Hearing impaired	9	4.9
	Learning Disability	7	3.8
	Cerebral palsy	8	4.4
	Autism	6	3.3
	Total	183	100.0
Area of specialization	Mentally challenged	8	4.4
	Physical challenged	12	6.6
	Visual impaired	58	31.7
	Hearing impaired	84	45.9
	Learning disability	12	6.6
	Cerebral palsy	5	2.7
	Autism	4	2.2
	Total	183	100.0

4.4. Basic Tests of Statistical Assumption for Teachers Questionnaire

Diagnostic tests were performed to check the fitness of data in meeting the basic tests of statistical assumptions.

4.4.1. Test for Normality

Normality test was done at 95% confidence interval. If the p-value is less than 0.05, then the null hypothesis is rejected and there is evidence that the data tested is not from a normally distributed population. If the p-value is greater than 0.05, then the null hypothesis stating that the data came from a normally distributed population is accepted. Kolmogorov-Smirnov (KS) goodness-of-fit test and Shapiro-Wilk (SW) test for normality was done to test the hypothesis;

H_0 : the data is not drawn from a normal distribution

H_1 : the data is drawn from a normal distribution

The findings are as shown in Table 4.3.

Table 4.3: Tests of normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Implementation of mainstreamed practices	.062	183	.468	.983	183	.245
Teachers' attitudes	.102	183	.215	.984	183	.105
Intervention strategies	.135	183	.167	.973	183	.086
a. Lilliefors Significance Correction						

The Kolmogorov-Smirnov (KS) results in Table 4.3 indicate that data collected on implementation of mainstreamed practices ($df = 183$, $p = 0.468$), teachers' attitude ($df = 183$, $p = 0.215$), and intervention strategies ($df = 183$, $p = 0.167$), were normally distributed as p -values ≥ 0.05 and therefore statistically significant at 5% level of significance. The results imply that we reject the null hypothesis that the data does not come from the normal distribution and conclude that it is normally distributed. On the other hand, the Shapiro-Wilk (SW) results in Table 4.3 shows that the data collected on implementation of mainstreamed practices ($df = 183$, $p = 0.468$), Teachers' attitudes

($df = 183, p = 0.215$), and intervention strategies ($df = 183, p = 0.167$), were normally distributed as $p\text{-values} \geq 0.05$ and therefore statistically significant at 5% level of significance. The results imply that we reject the null hypothesis that the data does not form the normal distribution and conclude that it is normally distributed.

The SW results confirmed the KS results that the data came from normally distributed population and was normally distributed. This means that the tests of normality were significant and therefore parametric test should be used for analysis.

4.4.2. Multicollinearity Tests

Multicollinearity exists when there is the presence of strong correlation between or among predictor variables and can result to increase in the standard errors with the beta coefficients, limit the value of R and make it difficult to determine the importance of each predictor in the model. Assessment of Multicollinearity was done using the tolerance value and Variance inflation factor (VIF). Tolerance value ranges between 0 and 1 with a value below 0.1 indicates serious Multicollinearity problem. The VIF statistic is the inverse of tolerance value and has no definite cut-off points but if the VIF value lies between 1– 10, then there is no Multicollinearity. If the VIF value is less than 1 or more than 10, then there is Multicollinearity. The results of Multicollinearity test are presented in Table 4.4.

Table 4.4: Multicollinearity tests

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Implementation of mainstreamed practices	.539	1.854
	Teachers' attitudes	.605	1.654
	Intervention strategies	.861	1.162

The results in Table 4.4 shows that the tolerance values are all above 0.5 and are closer to the maximum value of 1 than to minimum value of 0 which indicates the absence of Multicollinearity. On the other hand, the VIF values are all close to 1 than 10 indicating the absence of collinearity and absence of bias in the regression model.

4.4.3. Correlation Analysis

Bivariate correlation which measures the association between two variables was computed for the observed variables using the Pearson product-moment correlation coefficient (r). The values of r ranges between 0 and ± 1 indicating the extremes of no correlation and perfect correlation respectively and shows the extent to which a linear relationship exists between two variables. The results of correlation analysis are presented in Table 4.5.

Table 4.5: Correlation analysis

		1	2	3	Perception of teachers and education offices
1. Implementation of mainstreamed practices	Pearson Correlation	1	.612**	.338**	.691**
	Sig. (2-tailed)		.000	.000	.000
	N	444	262	255	444
2. Teachers' attitude	Pearson Correlation	.612**	1	.082	.509**
	Sig. (2-tailed)	.000		.190	.000
	N	262	262	255	262
3. Intervention strategies	Pearson Correlation	.338**	.082	1	-.004
	Sig. (2-tailed)	.000	.190		.951
	N	255	255	256	255
**. Correlation is significant at the 0.01 level (2-tailed).					

In Table 4.5, the results show a strong positive correlation between the study variables and the predictor variables are significant at 0.01 level of significance.

4.4.4. Heteroscedasticity/ Homoscedasticity

Homoscedasticity is a situation where the variance errors across all levels of the predictor variable are the same while heteroscedasticity is the absence of homoscedasticity that is the variance errors vary across all the observations. Failure to correct heteroscedasticity invalidates statistical tests of significance such as regression analysis and increase the chance of wrong inference. This study used Levene statistic to test the null hypothesis that the variance of the explained variable is equal across all levels of explanatory variables. The results are presented in Table 4.6.

Table 4.6: Test homoscedasticity

	Levene Statistic	df1	df2	Sig.
Teachers' attitudes	.808	1	181	.370
Intervention strategies	56.747	1	181	.119
Implementation of mainstreamed practices	12.948	1	181	.209

The Levene statistics is significant when $p < 0.05$ which would lead to rejection of the null hypothesis but when $p > 0.05$ we accept the null hypothesis. It is worthy to note from the results in Table 4.6 that the $p > 0.05$ which implies that we accept the null hypothesis and conclude that the variances of the dependent variable are not steady across different levels of the explanatory variables which fulfils the assumption of homogeneity of variance.

4.5. Analysis of Likert scale

The study used a five-point Likert scale to collect Likert type data on the study variables. The scale was Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD). Though the study researcher considered individual Likert

scale items as yielding ordinal data, when more Likert scale items are used to measure a concept on a summative scale, the resulting Likert type data can be considered to be an interval scale (Carifo & Perla, 2007). According to Benard (2006), when a researcher uses an ordinal scale of five or more ranks, it can be treated as if it were an interval-level scale. Likert type questions were applied in this concept to collect data for this study with items used to collect Likert type data on one variable in a summative scale thus allowing the use of parametric test. To satisfy the Likert scale assumption of equidistance, the study adopted Carifo and Perla (2007) equidistance of 8. Since each variable was measured using different Likert scale items (e.g., 3 - 13 items) on an attitudinal scale of 1-5, the resulting summative score ranged from 10 to 30. Applying an equidistance of 5 results to the following scale which was used in the study for objectives i.e. 5 < strongly disagree < 10, 10 < Disagree < 15, 15 < Neutral < 20, 20 < Agree < 25 and 25 < strongly agree < 30. For individual items with a low of 1 and a high of 5, the same scale was adopted as 1 < strongly disagree < 2, 2 < disagree < 3, 3 < Neutral < 4, 4 < agree < 5 and >5 strongly agree.

4.6. Objective One: Effect of Implementation of Mainstreaming Practices on Retention of Learners with SN in Regular Public Primary Schools

4.6.1. Type of SN and Disability

The researcher first sought to find out the extent of severity of SN on the retention of learners with SN in regular public primary schools. The data used on the type of disability was from 2015 to 2020 as displayed in Table 4.7 below.

From the data it is indicated that in the year 2015, majority 402 of the learners with SN and disabilities were mentally challenged, followed by those with learning disabilities 186, 24 of the learners had autism as well as those who had cerebral palsy, only 6 were physically challenged as well as those who were visually impaired, there were no

learners with hearing impaired. Only 5 learners dropped out of school. In 2016, most of the learners 447 were mentally challenged and 423 had a learning disability. 55, 40, 24, 9 learners physically challenged, cerebral palsy, autism, and visual impaired respectively. In the years 2017, 2018, 2019, and 2020 the majority of learners were mentally challenged 457, 528, 530, and 542 respectively. From the data collected, it shows that from 2017 to 2020 the learners with learning disability were 468, 450, 483, and 472 consecutively. The hearing impairment cases were minimal, as observed in Table 4.7. The dropout rate was reported with a small proportion (4, 3, 6, 7, 10 and 11) dropouts from 2015 to 2020 respectively. The drop-out rate measured retention of the primary schools, based on whether the children moved out of the schools or not. The changes in the dropout rates were evidence of variation in the retention rates across the different schools involved in the study.

Table 4.7: Type of SN and disability

Type of SN and Disabilities	Total Number of Learners						
	2015	2016	2017	2018	2019	2020	Total
Mentally challenged	402	447	457	528	530	542	2906
Physically Challenged	6	55	57	102	107	110	437
Visually impaired	6	9	6	9	15	21	66
Hearing-impaired	0	0	0	3	7	8	18
Learning Disability	186	423	468	450	483	472	2482
Cerebral palsy	24	40	41	48	45	48	246
Autism	24	24	42	32	24	42	188
Any other	42	42	42	42	45	51	264
Total	690	1040	1113	1214	1256	1294	6607
Dropouts	5	4	3	6	7	11	36

4.6.2. Categories of disabilities

The study found it ideal to investigate the category of disability among the learners in regular public primary schools in the Lurambi sub-county by categorizing them into either mild, moderate, or severe. The findings of the research and the results were presented in Table 4.8 below.

Table 4.8: Categorization of disabilities

Disabilities	Frequency	Percent
Mild	42	23
Moderate	115	62.8
Severe	26	14.2
Total	183	100

From the results, 115(62.8%) of learners in the Lurambi sub-county in regular public primary schools were found to have moderate cases of disability followed by 42(23%) with mild cases and the least was severe with 26(14.2%). Therefore, it can be concluded from the analysis that most of the learners in special schools have moderate cases of special need and disability.

4.6.3. Equipment and Materials that Affect the Retention of Learners

The study also sought to investigate the availability of assistive equipment and materials that influence the retention of learners in regular public primary schools in the Lurambi sub-county. The findings of the study are illustrated in Table 4.9 below.

From the findings of the study, regular public primary schools in the Lurambi sub-county recorded a low number of equipment and materials. Among the regular public primary schools in the Lurambi sub-county, the schools reported having 43 hearing aids, even though in the year 2020 the number of learners who were recorded with hearing impairment was more compared to the previous years. The equipment was less

due to the mild cases from the majority of the learners that were reported by regular public primary schools. The cases were not severe hence the teachers might have used other available means to assist these learners including speaking audibly and loud enough in clear voices, large print, and well-ventilated rooms for those with low vision. The severity of these cases being moderate and mild made it possible for learners with SN to be managed in regular public primary schools.

Table 4.9: List of equipment and materials that affect the retention of learners

Equipment/Materials	Quantity
Hearing Aids	43
Crutches	27
Lenses	1
Wheelchair	45
Commode	2
Standing aids	3
Abacus	5
Number/Letter Puzzles	15
Scored Board	2
Theme Board	3
Total	146

In addition, out of 183 learners who were physically challenged, the schools recorded to have 27 crutches and 45 wheelchairs which aided in mobility. Most of the learners had moderate and mild cases which probably required modification of the environment to enable them to learn effectively. The schools are also reported to have only two commodes which might not be enough given the high numbers of learners who are likely to make use of them.

4.6.4. Challenges of Mainstreaming Practices

The researcher sought to find out some of the problems faced during the application of mainstreaming practices on retention of learners with SN in regular public primary school. The results are displayed in Table 4.10.

Table 4.10: Challenges of mainstreaming practices

	Frequency	Percent
Regular teachers do not want students with SN in their class	86	47.0
Regular class teachers lack adequate information on the special need learners	83	45.4
Less participation in class and rules are not followed	9	4.9
Regular approaches of teaching learners without SN	5	2.7
Total	183	100.0

From Table 4.10, 86(47%) of the respondents do not want students with SN in their class, 83(45.4%) of the respondents lack adequate information on the special need learners while 9(4.9%) of the respondents cited less participation in class and school rules not being followed. On the other hand, 5(2.7%) of the respondents use regular approaches in teaching children without SN which affects learners with SN.

4.6.5. Expectation from the Ministry of Education for the Best Way to Apply Mainstreaming

The researcher also sought to find out the expectation of the ministry of education on the best way to apply mainstreaming practices in regular public primary school. The results are displayed in Table 4.11.

From Table 4.11, the results shows that 85(46.4%) of the respondents are of the opinion that regulation should be made on mainstreaming practices, 46(25.1%) of the respondents are of the opinion that necessary infrastructure should be provided, 36(19.7%) of the respondents are of the opinion that enough funds should be provided

while 16(8.7%) of the respondents are of the opinion that the ministry should increase sensitization towards mainstreaming practices in regular public primary schools.

Table 4.11: Expectation from the Ministry of Education for the best way to apply mainstreaming

	Frequency	Percent
Regulation should be made	85	46.4
Provision of necessary infrastructure	46	25.1
Provision of enough funds	36	19.7
Increase Sensitivity towards mainstreaming	16	8.7
Total	183	100.0

4.6.6. Expectation of Teachers on Application of Mainstreaming Practices

The researcher also sought to find out the expectation of teachers on application of mainstreaming practices in regular public primary school. The results are displayed in Table 4.12. From the results in Table 4.12, 49(26.8%) of the respondents are of the opinion that regular teachers should be patient, accept and be warm towards students with SN and also develop themselves through research collaboration among parents, special education teachers and counsellors. The results further reveal that 85(46.4%) of the respondents should be able to fulfil their duties as teachers.

Table 4.12: Expectation of teachers on application of mainstreaming practices

	Frequency	Percent
Be more patient, accepting and warm towards students with SN	49	26.8
Develop themselves through research collaboration among parents, special education teachers and counsellors	49	26.8
To fulfil their duties as a teacher	85	46.4
Total	183	100.0

4.6.7. Benefits of Mainstreaming

The researcher also sought to find out the benefits of mainstreaming practices in regular public primary school. The results are displayed in Table 4.13.

Table 4.13: Benefits of mainstreaming practices

	Frequency	Percent
Increase Confidence	27	14.8
Increase Socializing	38	20.8
Develop academically	20	10.9
Develop understanding and acceptance of different individuals	62	33.9
Develop communication skills	36	19.7
Total	183	100.0

From Table 4.13, the results show that 27(14.8%) of the respondents are of the opinion that mainstreaming practices increases confidence, 38(20.8%) of the respondents are of the opinion that it increases socializing, 20(10.9%) of the respondents are of the opinion that it develops academically while 62(33.9%) of the respondents are of the opinion that it develops understanding and acceptance of different individuals.

4.6.8. Ways for the Application of Mainstreaming

The researcher also sought to find out the ways of applying mainstreaming practices in regular public primary school. The results are displayed in Table 4.14. From Table 4.14, the results show that 21(11.5%) of the respondents are of the opinion that time spent in the resource room should be increased, 25(13.7%) of the respondents are of the opinion that infrastructure problems should be resolved while 73(39.9%) of the respondents are of the opinion that resource rooms should be opened in all schools. On the other hand, the results show that 12(6.6%) of the respondents are of the opinion that teacher development should be enabled. 32(17.5%) are of the opinion that the mainstreaming

practices should serve the intended purpose while 20(10.9%) of the respondents are of the opinion that the relationship among parents, teachers and administrators should be good.

Table 4.14: Ways for the application of mainstreaming

	Frequency	Percent
Time spent in the resource room should be increased	21	11.5
Infrastructure problems should be resolved	25	13.7
resource rooms should be opened in all schools	73	39.9
Teacher development should be enabled	12	6.6
Mainstreaming applications should serve their purpose	32	17.5
The relationship among parents, teachers and administrators should be good	20	10.9
Total	183	100.0

4.6.9. Implementation of Mainstreamed Practices and Retention of Learners with SN

The study sought to determine the implementation of mainstreamed practices on retention of learners with SN in regular public primary school. To establish this, simple linear regression test was used. The study utilized the following null hypothesis which was tested at 0.05 level of significance.

H₀₁: There is no significant difference between the implementation of mainstreaming practices and the retention of learners with special needs in regular public primary schools in Lurambi Sub-county.

The results are shown in Tables 4.15 to 4.17.

Table 4.15: Model summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.134 ^a	.518	.013	2.604	.018	3.304	1	181	.071
2	.352 ^b	.524	.109	2.473	.106	10.795	2	179	.000

a. Predictors: (Constant), Implementation of mainstreamed practices
b. Predictors: (Constant), Implementation of mainstreamed practices, Awareness on inclusive education, learner-based factors
c. Dependent Variable: Retention of learners with SN in regular public primary schools

Table 4.16: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.404	1	22.404	3.304	.071 ^b
	Residual	1227.246	181	6.780		
	Total	1249.650	182			
2	Regression	154.493	3	51.498	8.417	.000 ^c
	Residual	1095.158	179	6.118		
	Total	1249.650	182			

a. Dependent Variable: Retention of learners with SN in regular public primary schools
b. Predictors: (Constant), Implementation of Mainstreaming practices
c. Predictors: (Constant), Implementation of Mainstreaming practices, Awareness on inclusive education, learner-based factors

Table 4.17: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.162	.522		25.221	.000
	Implementation of mainstreamed practices	.066	.036	.134	1.818	.071
2	(Constant)	11.785	.768		15.348	.000
	Implementation of mainstreamed practices	.122	.091	.246	1.337	.183
	Awareness on inclusive education	.464	.108	.377	4.283	.000
	learner-based factors	-.242	.117	-.370	-2.065	.040

a. Dependent Variable: Retention of learners with SN in regular public primary schools

Tables 4.15 – 4.17 shows that with the inclusion of the interaction effect of awareness on inclusive education and learner-based factors in the relationship implementation of mainstreaming practices on retention of learners with SN in regular public primary schools. A multiple linear regression was fitted to explain implementation of mainstreaming practices on retention of learners with SN in regular public primary schools using awareness on inclusive education and learner-based factors as the intervening/moderating variable. All the assumptions of regression analysis were met except the autocorrelation assumption between residuals. The results in model summary shows that the "R Square Change", in model 1 increased in variation as a result of the addition of the interaction term i.e., 10.6% (i.e., 0.106) which is the percentage increase in the variation explained by the addition of the interaction term. The results further show that this increase is statistically significant ($p < .05$), a result we obtain from the "Sig. F Change" column. Therefore, we can conclude that awareness on inclusive education and learner-based factors do moderate retention of learners with SN in regular public primary schools. Further, though still more accurate prediction about retention of learners with SN in regular public primary schools could be done (F-ratio > 1) with the inclusion of interaction effect (awareness on inclusive education and learner-based factors), this accuracy has decreased i.e., F-ratio increased from 3.304 to 8.417. Finally model 2 has the p-value of 0.000 and 0.040 for the interaction effect (awareness on inclusive education and learner-based factors) which shows that the null hypothesis of having no moderating effect of awareness on inclusive education and learner-based factors on the linkage between implementation of mainstreamed practices and retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study

i.e. 0.05. The null hypothesis of having no moderating effect of implementation of mainstreamed practices on retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study i.e., 0.05.

4.7. Objective Two: Effect of Teachers' Attitude towards Mainstreaming Practices on Retention of Learners with SN in Regular Primary Schools.

The researcher sought to find out the Teachers' attitudes towards retention of mainstreamed learners with SN in regular public primary schools. Quantitative data was analysed into frequency distribution. The mean, the Standard Deviation (SD) and the composite mean were computed. The result is presented in Table 4.18. The study sought to find out whether learners with SN should be taught in special schools, 148(80.8%) of the respondents agreed, 12(6.6%) were neutral while 23(12.6%) disagreed. The mean score was 1.96 with a standard deviation of 1.076 which shows that most respondents agreed that learners with SN should be taught in special schools. The item mean was below the composite mean of 2.19 indicating a negative influence on the composite mean. The standard deviation for the item was below the composite standard deviation of 1.077 indicating a small spread in response for the item than the variable.

Table 4.18: Likert on attitudes of teachers

Attitude of teachers	SA	A	N	D	SD	Mean	StD
Learners with SN should be taught in special school	72 (39.3%)	76 (41.5%)	12 (6.6%)	16 (8.7%)	7 (3.8%)	1.96	1.076
Learners with special need should be taught in mainstreaming learning	61 (33.3%)	87 (47.5%)	12 (6.6%)	23 (12.6%)	-	1.98	0.952
Communicating with learners with special need is frustrating	63 (34.4%)	87 (47.5%)	10 (5.5%)	16 (8.7%)	7 (3.8%)	2.00	1.048
I prefer to handle learners without SN	33 (18%)	80 (43.7%)	21 (11.5%)	28 (15.3%)	21 (11.5%)	2.58	1.268
I prefer to handle learners with special need	7 (3.8%)	18 (9.8%)	10 (5.5%)	65 (35.5%)	83 (45.4%)	1.91	1.116
Learners with SN lack skills needed to master the mainstream classroom curriculum	31 (16.9%)	125 (68.3%)	-	27 (14.8%)	-	2.13	0.865
Teachers who received training tend to be more willing to work with learners with SN	28 (15.3%)	79 (43.2%)	24 (13.1%)	41 (22.4%)	11 (6.0%)	2.61	1.167
There should be provision of special classes for special need learners	38 (20.8%)	88 (48.1%)	11 (6.0%)	41 (22.4%)	5 (2.7%)	2.38	1.127
Composite mean and StD						2.19	1.077
Key: SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree; StD = Standard deviation							

On whether learners with SN should be taught in mainstreaming learning, 148(80.8%) of the respondents agreed, 12(6.6%) were neutral while 23(12.6%) disagreed. The mean score was 1.98 with a standard deviation of 0.952 which shows that most respondents agreed that learners with special need should be taught in mainstreaming learning. The item mean was below the composite mean of 2.19 indicating a negative influence on the composite mean. The standard deviation for the item was below the composite standard deviation of 1.077 indicating a small spread in response for the item than the variable.

The study also sought to find out whether communicating with learners with special need is frustrating, 150(81.9%) of the respondents agreed, 10(5.5%) were neutral while 23(12.6%) disagreed. The mean score was 2.00 with a standard deviation of 1.048 which shows that most respondents agreed that communicating with learners with special need is frustrating. The item mean was below the composite mean of 2.19 indicating a negative influence on the composite mean. The standard deviation for the item was below the composite standard deviation of 1.077 indicating a small spread in response for the item than the variable.

On whether the respondents prefer to handle learners without SN, the results also show that 113(61.7%) of the respondents agreed, 21(11.5%) were neutral while 49(26.8%) disagreed. The mean score was 2.58 with a standard deviation of 1.268 which shows that most respondents prefer to handle learners with SN. The item mean was above the composite mean of 2.19 indicating a positive influence on the composite mean. The standard deviation for the item was above the composite standard deviation of 1.077 indicating a wider spread in response for the item than the variable.

The study also sought to find out whether the respondents prefer to handle learners with special need, 148(80.8%) of the respondents disagreed, 10(5.5%) were neutral while

25(13.6%) agreed. The mean score was 1.91 with a standard deviation of 1.116 which shows that most respondents do not prefer to handle learners with SN. The item mean was below the composite mean of 2.19 indicating a negative influence on the composite mean. The standard deviation for the item was above the composite standard deviation of 1.077 indicating a wider spread in response for the item than the variable.

On whether learners with SN lack skills needed to master the mainstream classroom curriculum, 156(85.2%) of the respondents agreed while 27(14.8%) of the respondents disagreed. The mean score was 2.13 with a standard deviation of 0.865 which shows that most respondents agreed that learners with SN lack skills needed to master the mainstream classroom curriculum. The item mean was below the composite mean of 2.19 indicating a negative influence on the composite mean. The standard deviation for the item was above the composite standard deviation of 1.077 indicating a wider spread in response for the item than the variable.

The study also sought to find out whether teachers who received training tend to be more willing to work with learners with SN, 107(58.2%) of the respondents agreed, 24(13.1%) were neutral while 52(28.4%) disagreed. The mean score was 2.61 with a standard deviation of 1.167 which shows that most respondents agreed that teachers who received training tend to be more willing to work with learners with SN. The item mean was above the composite mean of 2.19 indicating a positive influence on the composite mean. The standard deviation for the item was above the composite standard deviation of 1.077 indicating a wider spread in response for the item than the variable.

On whether there should be provision of special classes for special need learners, 126(68.9%) of the respondents agreed, 11(6%) were neutral while 46(25.1%) disagreed. The mean score was 2.38 with a standard deviation of 1.127 which shows that most respondents agreed that there should be provision of special classes for special

need learners. The item mean was above the composite mean of 2.19 indicating a positive influence on the composite mean. The standard deviation for the item was above the composite standard deviation of 1.077 indicating a wider spread in response for the item than the variable.

The study sought to establish the teachers' attitude towards retention of mainstreamed learners with SN in regular primary school. To establish this, simple linear regression test was used. The study utilized the following null hypothesis which was tested at 0.05 level of significance.

H₀₂: There is no significant difference between the teachers' attitude towards mainstreaming practices and the retention of learners with special needs in regular primary schools in Lurambi Sub-county.

The results are shown in Tables 4.19 - 4.21.

Table 4.19: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.079 ^a	.006	.001	2.619	.006	1.141	1	181	.287
2	.390 ^b	.152	.138	2.433	.146	15.400	2	179	.000

a. Predictors: (Constant), Teachers' attitudes
b. Predictors: (Constant), Teachers' attitudes, Awareness on inclusive education, learner-based factors
c. Dependent Variable: Retention of learners with SN in regular public primary schools

Table 4.20: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.828	1	7.828	1.141	.287 ^b
	Residual	1241.822	181	6.861		
	Total	1249.650	182			
2	Regression	190.138	3	63.379	10.708	.000 ^c
	Residual	1059.512	179	5.919		
	Total	1249.650	182			

a. Dependent Variable: Retention of learners with SN in regular public primary schools
b. Predictors: (Constant), Teachers' attitudes
c. Predictors: (Constant), Teachers' attitudes, Awareness on inclusive education, learner-based factors

Table 4.21: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.472	.569		23.682	.000
	Teachers' attitudes	.033	.030	.079	1.068	.287
2	(Constant)	10.577	.779		13.571	.000
	Teachers' attitudes	-.239	.085	-.581	-2.805	.006
	Awareness on inclusive education	.698	.126	.568	5.550	.000
	learner-based factors	.181	.116	.278	1.567	.009
a. Dependent Variable: Retention of learners with SN in regular public primary schools						

Tables 4.19 - 4.21 shows that with the inclusion of the interaction effect of awareness on inclusive education and learner-based factors in the relationship Teachers' attitudes on retention of learners with SN in regular public primary schools. A multiple linear regression was fitted to explain teachers' attitude on retention of learners with SN in regular public primary schools using awareness on inclusive education and learner-based factors as the intervening/moderating variable. All of the assumptions of regression analysis were met except the autocorrelation assumption between residuals. The results in model summary shows that the "R Square Change", in model 1 increased in variation as a result of the addition of the interaction term i.e., 14.6% (i.e., 0.146) which is the percentage increase in the variation explained by the addition of the interaction term. The results further show that this increase is statistically significant ($p < .05$), a result we obtain from the "Sig. F Change" column. Therefore, we can conclude that awareness on inclusive education and learner-based factors do moderate retention of learners with SN in regular public primary schools. Further, though still more accurate prediction about retention of learners with SN in regular public primary schools could be done ($F\text{-ratio} > 1$) with the inclusion of interaction effect (awareness on inclusive education and learner-based factors), this accuracy has increased i.e., F-ratio increased from 1.141 to 10.708. Finally model 2 has the p-value of 0.000 and 0.009 for the interaction effect (awareness on inclusive education and learner-based factors) which shows that the null hypothesis of having no moderating effect of awareness on inclusive education and learner-based factors on the linkage between Teachers' attitudes and retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study i.e. 0.05. The null hypothesis of having no moderating effect of Teachers'

attitudes on retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study i.e., 0.05.

4.8. Objective Three: Effect of Mainstreaming Intervention Strategies on Retention of Learners with SN in Regular Public Primary Schools

The study sought to evaluate the intervention strategies used to support learners with SN in regular public primary school. The study first sought to find out about the available infrastructure and resources that affect the retention of learners with SN in regular public primary schools in Lurambi Sub-County. The teacher's statements were; School environment/infrastructure like ramps, toilets are friendly, School has sufficient assistive devices, Sufficient learning materials, Classroom environ/infrastructure like ventilation are friendly. The statements were presented on a 5 Likert scale as illustrated in Table 4.22 below.

On establishing how the available infrastructure and resources affect the retention of learners with SN in regular public primary schools in the Lurambi sub-county, the majority of the respondent with a 147(83.6%) disagreed that the school environment and infrastructure such as ramps, toilets, stairs, doors, and windows' sizes and playing grounds are friendly and comfortable for all learners. Additionally, 30(16.4%) agreed with the statement ($M = 1.97$, $SD = 1.30$). Furthermore, a total of 153(83.6%) of the respondents supported that the schools had no sufficient assistive devices such as Braille, hearing aids, tactile screens, etc. for learners with disability and SN, while only 9(4.9%) of the teachers disagreed to have sufficient assistive devices ($M = 1.75$, $SD = 1.01$).

Table 4.22: Infrastructure and resources

Teachers	SD	D	NS	A	SA	Mean	StD
School environment/infrastructure like ramps, toilets are friendly	90 (49.2)	57 (31.1)	6 (3.3)	18 (9.8)	12 (6.6)	1.97	1.30
School has sufficient assistive devices	93 (50.8)	60 (32.8)	21 (11.5)	9 (4.9)	0 (0.0)	1.75	1.01
Sufficient learning materials	54 (29.5)	36 (19.7)	30 (16.4)	63 (34.4)	0 (0.0)	2.46	1.42
Classroom environ/infrastructure like ventilation are friendly	63 (34.4)	57 (31.1)	9 (4.9)	39 (21.3)	15 (8.2)	2.51	1.55
Key: SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree; StD = Standard deviation							

On the statement relating to sufficient learning materials, the majority of the respondents with a total of 90(49.2%) disagreed that the availability of learning materials is capable of supporting and promoting the learning experiences of learners with disability and SN, however, 63(34.4%) of the teachers agreed with the statement ($M = 2.46$, $SD = 1.42$). The majority of the respondents further disagreed that the classroom environment and infrastructures were friendly and comfortable for all learners, this was objected to by a total of 120(65.5%) respondents, however, 54(29.5%) with ($M = 2.51$, $SD = 1.55$) of the respondents agreed. This could imply that the availability of infrastructure and learning materials does not influence the retention of learners with SN in regular public primary schools in Lurambi Sub-County.

The researcher also sought to find out how trained SN teachers are used as an intervention strategy to influence retention of learners with special need. The statements were measured using a five scale Likert, where 5- strongly agreed, 4- agreed, 3- not

sure, 2- disagreed and 1- Strongly disagree. The response from each measure was computed and summarized to determine the responses. The results from the statements were summarized and the response is presented in Table 4.23.

Table 4.23: Trained SN teachers towards the retention of learners with SN

Training (Teachers)	SD	D	NS	A	SA	Mean	Std
Sufficient trained teachers to meet the needs of all learners	24(13.1)	36(19.7)	15(8.20)	42(23.0)	66(36.1)	2.57	1.56
Trained teachers with sufficient skills/knowledge	60(32.8)	63(34.4)	18(9.8)	12(6.6)	30(16.4)	3.62	1.43
Trained teachers match the number of learners in the CwDs category	21(11.5)	9(4.9)	33(18.0)	39(21.3)	81(44.3)	2.11	1.23

On establishing the influence of trained SN education teachers on the retention of learners with SN in regular public primary schools in the Lurambi sub-county, the majority of the respondents with an average of 108(59.1%) indicated that there were sufficient trained special education teachers to provide education that meets the needs of all learners in their respective schools. On contrary 60(32.8%) of the respondents disagreed with the statement (Mean =2.57, $SD = 1.56$). Furthermore, 123(67.2%) of the respondents argued that the available teachers had not been trained in SN education nor had sufficient skill and knowledge to provide education that meets the needs of the learners in their school. However, based on the extent to which the availability of trained SN education teachers influences the retention of learners with SN in regular public primary schools in Lurambi Sub-County, only 42(23.0%) of respondents agreed that the available teachers were trained in SN education and had sufficient skills and knowledge to provide education that meets the needs of all learners in their school ($M = 3.62$, $SD = 1.43$). In addition, 120(65.6%) of the respondents agreed that the available teacher trained in SN education match the number of learners with SN in their school, and 30(16.4%) with ($M = 2.11$, $SD = 1.23$) disagreed with the statement. This could imply that trained teachers had a better understanding of the needs of the SN learners and thus encouraging retention of the learners in regular primary schools.

The study sought to evaluate intervention strategies used to support learners with SN in regular public primary school. To establish this, simple linear regression test was used. The study utilized the following null hypothesis which was tested at 0.05 level of significance.

H₀₃: There is no significant difference between mainstreaming intervention strategies and the retention of learners with special needs in regular public primary schools.

The results are shown in Tables 4.23 to 4.260.

Tables 4.24 to 4.26 shows that with the inclusion of the interaction effect of awareness on inclusive education and learner-based factors in the relationship intervention strategies on retention of learners with SN in regular public primary schools. A multiple linear regression was fitted to explain intervention strategies on retention of learners with SN in regular public primary schools using awareness on inclusive education and learner-based factors as the intervening/moderating variable. All of the assumptions of regression analysis were met except the autocorrelation assumption between residuals. The results in model summary shows that the "R Square Change", in model 1 increased in variation as a result of the addition of the interaction term i.e., 10.4% (i.e., 0.104) which is the percentage increase in the variation explained by the addition of the interaction term. The results further show that this increase is statistically significant ($p < .05$), a result we obtain from the "Sig. F Change" column. Therefore, we can conclude that awareness on inclusive education and learner-based factors do moderate retention of learners with SN in regular public primary schools. Further, though still more accurate prediction about retention of learners with SN in regular public primary schools could be done (F-ratio > 1) with the inclusion of interaction effect (awareness on inclusive education and learner-based factors), this accuracy has increased i.e., F-

ratio increased from 4.651 to 8.855. Finally model 2 has the p-value of 0.000 and 0.012 for the interaction effect (awareness on inclusive education and learner-based factors) which shows that the null hypothesis of having no moderating effect of awareness on inclusive education and learner-based factors on the linkage between intervention strategies and retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study i.e. 0.05. The null hypothesis of having no moderating effect of intervention strategies on retention of learners with SN in regular public primary schools is rejected for awareness on inclusive education and learner-based factors because the p-value (sig value in regression coefficient table) is less than the level of significance of the study i.e., 0.05.

Table 4.24: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.158 ^a	.025	.020	2.594	.025	4.651	1	181	.032
2	.359 ^b	.129	.115	2.466	.104	10.708	2	179	.000

a. Predictors: (Constant), Intervention strategies
b. Predictors: (Constant), Intervention strategies, Awareness on inclusive education, learner-based factors
c. Dependent Variable: Retention of learners with SN in regular public primary schools

Table 4.25: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.306	1	31.306	4.651	.032 ^b
	Residual	1218.345	181	6.731		
	Total	1249.650	182			
2	Regression	161.493	3	53.831	8.855	.000 ^c
	Residual	1088.157	179	6.079		
	Total	1249.650	182			

a. Dependent Variable: Retention of learners with SN in regular public primary schools
b. Predictors: (Constant), Intervention strategies
c. Predictors: (Constant), Intervention strategies, Awareness on inclusive education, learner-based factors

Table 4.26: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.879	.573		22.467	.000
	Intervention strategies	.076	.035	.158	2.157	.032
2	(Constant)	11.303	.729		15.502	.000
	Intervention strategies	.089	.052	.186	1.718	.008
	Awareness on inclusive education	.477	.106	.388	4.512	.000
	learner-based factors	-.190	.075	-.291	-2.539	.012
a. Dependent Variable: Retention of learners with SN in regular public primary schools						

4.9. The Retention of Learners with SN in Regular Public Primary Schools

The researcher sought to find out factors that measure the retention of learners with SN in regular public primary schools in Lurambi Sub-County. Retention of learners was measured by the drop-out rates. The study considered four strategies that include; equipment to accommodate learners regardless of their severity, teachers rarely experience challenge teaching learners regardless of severity, Teachers' perception of the severity of learners influences their willingness to teach, and Distance between school and learners' homes limits retention of learners based on the severity for the teachers and four strategies that include; infrastructure well suited regardless of Severity, Materials well suited regardless of severity, Retention of learners, Open to admit learners regardless of their disability for the heads. Responses were analysed descriptively by determining the percentage response, mean response, and standard deviation on each of the strategies which were measured on a 5 scale Likert. The summary of the responses on a 5 scale Likert is presented in Table 4.27.

Table 4.27: Respondents' views on the retention of learners based on the extent of severity

Teachers	SD	D	NS	A	SA	Mean	Std
Equipment to accommodate learners regardless of their SN	39 (21.3)	45 (24.6)	30 (16.4)	12 (6.6)	57 (31.1)	2.02	1.2 9
Teachers rarely experience challenge teaching learners regardless of SN	6 (3.3)	21 (11.5)	9 (4.9)	66 (36.1)	81 (44.3)	3.20	1.0 0
Teachers' perception towards learners with SN influences their willingness to teach	30 (16.4)	57 (31.1)	33 (18.0)	18 (9.8)	45 (24.6)	3.20	1.5 7
Distance between school and learners' homes limits retention of learners based on the severity	63 (34.4)	60 (32.8)	21 (11.5)	15 (8.2)	24 (13.1)	3.66	1.3 6
Key: SA = Strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree; StD = Standard deviation							

The results regarding retention of learners with SN in regular public primary schools in Lurambi sub-county on a scale of 1-5, where one is, strongly disagree, and five is strongly agreed and strongly Disagree (SD), Disagree (D), Not sure (NS), agree (A) and strongly agree (SA). The results indicated that the majority of the participants 84(45.9%) disagreed that there were enough equipment and preparedness to admit and accommodate SN regardless of their needs 69(37.7%) of the respondents agreed with the same statement. 147(80.4%) of the respondents agreed that teachers rarely experience challenges in teaching learners regardless of their severity ($M = 2.02$, $SD = 1.29$), and those respondents who were with a contrary opinion were 27(14.8%). Relating teachers' perception on the severity of learners and how it influences their willingness to teach was opposed by the majority of the teachers 87(47.5%), ($M = 3.20$, $SD = 1$). On the other hand, 63(34.4%) of the respondents supported that the teachers' perception of the severity of learners influenced their willingness to teach ($M = 3.20$, $SD = 1.57$). Most of the teachers 39(21.3%) of the respondents ($M = 3.66$, $SD = 1.36$) indicated that retention of learners with SN was based on their needs, this was supported by the distance between school and learners' homes which limit retention of learners based on their level of disability. The findings were similar to Owens (2015); Retief & Letšosa (2018) since the distance travelled by learners was one of the factors linked to increased rate of drop-outs among CwD. Nonetheless, Terzi (2004) explained that changes in the drop-out rates (retention) was influenced by other factors such as the available SN schools, adequate resources to facilitate the children's education and the parental push to enable the learners gain primary education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.

5.1. Introduction

This chapter entirely focuses on the summary of the discussion between the study's findings, recommendations, and conclusions.

5.2. Summary of the Findings

Majority of the teachers disagreed with the statement that learners with SN should be taught in mainstream schools. This implied that they have a negative attitude towards mainstreaming learners with SN, a point which was confirmed by the teachers when they reported that communicating with learners with special needs was frustrating them. Majority of the teachers preferred handling learners without SN and most of them also disagreed handling both learners.

For effective intervention strategies, teaching learning resources are very important for teaching learners with SN. It was found that textbooks, hearing aids, speech aids, charts, models, and computers were available in varying quantities. From the statistical test to compare the effect of intervention strategies on retention of learners with SN, it was found that learners with SN scored significantly lower than their counterparts without SN. Intervening variables of awareness on inclusive education and learner-based factors also played a vital role in retention of these learners.

Majority of the teachers did not support the idea of full inclusion of learners with SN in their mainstream classrooms but they accepted them. The teachers were less willing to educate learners with SN in the mainstream classroom. These teachers also felt that such learners lack skills needed to master the mainstream classroom curriculum. These findings suggest primary mainstream teachers are willing to include learners with SN. These findings agree with Liu *et al.* (1999). Teachers tend to be more willing to educate

students in their classrooms as long as the students do not have severe SN. These findings are also in line with the conclusion of the research done by Al Ghazo and Gaad (2004).

5.3. Conclusions

In conclusion the study showed that teachers' attitude on mainstream education for learners with SN was just physically having and accepting learners in their school and in their classrooms. However, offering learning experiences and providing opportunities which require learners with special needs to actively participate in their learning seemed minimal in practice. Some teachers were aware of the fact that there was need to help learners with special needs by creating the extra time for them. Failure to do so would just be a confirmation to them that they are unable to cater for their diverse needs and therefore their self-efficacy, attitude and morale would be affected. Teachers should be advised to collaborate with special education teachers, school counsellors, and school administrators in order to find more positive solutions to challenges facing learners with SN. In this context, it can be said that school administrators should have regular assessment meetings with teachers who have mainstream learners and other relevant teachers. Retention was influenced by factors such as distance from school, availability of special needs schools, and adequate resources to facilitate the children's education.

5.4. Recommendations of the study

The study recommends:

- i. Development of policies and legislations that support learners with SN.
- ii. Coming up with administrative policies within the school environment, including friendly rules and regulations.
- iii. Motivation of teachers through better remuneration and certification to positively change their attitude towards learners with SN.
- iv. Introduction of a diversified curriculum and examination system that accommodate learners with SN.

5.5. Recommendations for Further Research

- i. A comparative study should be conducted to establish the effects of learners with SN on educational performance of learners without SN.
- ii. The sense of self-efficacy of the teachers in the mainstream classroom.
- iii. The discrepancy between policy and practice of mainstream education in public primary schools.

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APPENDICES

Appendix 1: Questionnaire for Head Teachers

This questionnaire is to collect data for purely academic purposes. The study seeks to investigate the effect of mainstreaming on retention of learners with SN in regular public primary schools in Lurambi Sub-County. Mainstreaming is defined as the process of placing learners with SN into typical class settings and school environment with their peers who have no disabilities during specific times. Your responses will be treated with utmost confidentiality.

Please indicate by putting a tick (✓) next to the response that applies to you.

1. How long have you been teaching in this school? (Please Tick in the appropriate box)

0-5 Years	6-10 years	11-15 Years	16-20 Years	21-25 Years	Above 25 Years

2. What is your education level?

P1	Diploma	Post Graduate Dip.	Degree	Masters	Other (specify)

Please specify the area of specialization (e.g., B. A. in SN education)

.....
.....

3. What is the total enrolment of learners in your school both with and without SN and disability?

.....
.....

4. What is the enrolment of learners with SN and disability in your school? Specify the disability?

Type of Special Need and Disability	Total Number of Learners					
	2015	2016	2017	2018	2019	2020
1. Mentally challenged						
2. Physically challenged						
3. Visually impaired						
4. Hearing-impaired						
5. Learning Disability						
6. Cerebral palsy						
7. Autism						
8. Any other						

5. Kindly tick the categories of learners admitted to your school in terms of the severity of the special need. (*can select more than 1*)

Category	Tick here
Mild	

Moderate	
Severe	
Profound	

6. Which category has most of them?

Category	Tick here
Mild	
Moderate	
Severe	
Profound	

7. How many teachers are in the school?

.....

8. Specify the number of teachers trained in SN education with their areas of specialization.

No.	Specialization (e.g., hearing impaired)	No.	Specialization (e.g., hearing impaired)
1		6	
2		7	
3		8	
4		9	
5		10	

9. Which classes do you teach? Please specify the subjects you teach.

Class	Subjects

10. If your class (s) has any children with disability and/or SN, please specify.

In which class	Type of Disability or SN (e.g., physical challenged)

Statements	Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree
11. The infrastructure in my school is well suited to accommodate and					

retain learners with SN regardless of their severity.					
12. The available materials and resources in my school are well suited to accommodate and retain learners with SN regardless of their severity.					
13. Discrimination against learners with mild to severe SN by other learners and teachers in my school lead them to drop out of school or transfer to special schools					
14. The retention of learners with SN in my school is or has been strongly influenced by the severity of SN.					
15. I am always open to admit learners with SN in in my schools regardless of the severity of their SN.					
16. There are sufficient trained SN education teachers to provide education that meets the needs of all the learners in my school.					
17. The available trained teachers in SN education in my school have sufficient skills and knowledge to provide education that meets the needs of all learners in my school.					
18. The available trained teachers in SN education match with the number of learners with disability and SN in my school.					
19. The school environment and infrastructure such as ramps, toilets, stairs, doors and window sizes and playing grounds are friendly and comfortable for all learners					
20. The classroom environment and infrastructure such as lighting system, ventilation, chairs, desks, spacing, and audibility are friendly and comfortable for all learners.					
21. The school has sufficient assistive devices such as Braille, hearing aids, tactile screens, etc. for learners with disability and SN.					
22. The school has sufficient learning materials such as textbooks, visual aids, etc. capable of supporting and promoting the					

learning experiences of learners with disability and SN.					
23. My school has been encouraged to implement and adhere to the provisions of mainstreaming in education.					

Appendix 2: Questionnaire for Teachers

This questionnaire is to collect data for purely academic purposes. The study seeks to investigate the effects of mainstreaming on the retention of learners with SN in regular public primary schools in the Lurambi Sub-County. Mainstreaming is defined as the process of placing learners with SN into typical class settings and school environments with their peers who have no disabilities during specific times. Your responses will be treated with the utmost confidentiality.

Please indicate by putting a tick (✓) next to the response that applies to you.

1. What is your position?

Position , e.g., Deputy Headteacher	Trained SN Education Teacher (✓)

For trained SN education teachers, please indicate the area of specialization (e.g., hearing impaired).

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2. How long have you been teaching in this school? (Please Tick in the appropriate box)

0-5 Years	6-10 years	11-15 Years	16-20 Years	21-25 Years	Above 25 Years

3. What is your education level?

P1	Diploma	Post Graduate Dip.	Degree	Masters	Other (specify)

Please specify the highest qualification (e.g., B. A. in SN education)

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4. What classes do you teach? Please specify the subjects you teach.

Classes	Subjects

5. If your class (s) has any children with disability and/or SN, please specify.

In which class	Type of Disability or SN (e.g., physical impairment)

Statements	Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree
6. Our school is well equipped and prepared to admit and accommodate any learner with SN regardless of their severity					
7. Teachers rarely experience any challenge teaching learners with SN regardless of their severity					
8. The perceptions of teachers towards the severity of the SN of a learner influence their willingness to teach them.					
9. The distance between school and learners' homes limits the retention of learners with SN more so based on their severity.					
10. There are sufficient trained SN education teachers to provide education that meets the needs of all the learners in my school.					
11. The available teachers trained in SN education have sufficient skills and knowledge to provide education that meets the needs of all learners in my school.					
12. The available teachers trained in SN education match with the number of learners with disability and SN in my school.					
13. The school environment and infrastructures such as ramps, toilets, stairs, door and window sizes, and playing grounds are friendly and comfortable for all learners					
14. The classroom environment and infrastructure such as lighting system, ventilation, chairs, desks, spacing, and audibility are friendly and comfortable for all learners.					
15. The school has sufficient assistive devices such as Braille, hearing aids, tactile screens, etc. for learners with disability and SN.					
16. The school has sufficient learning materials such as textbooks, visual aids, etc., capable of supporting and promoting the learning experiences of learners with disability.					
17. My school has been encouraged to implement and adhere to the provisions of mainstreaming in education					

18. Please provide any comment you feel important in regard to promoting the availability of teachers trained in SN education in your school.

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19. Please provide any comment you feel important in regard to improving the suitability of the school and classroom environment and infrastructure in order to ensure the environment is friendly and comfortable for all learners.

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Appendix 3: Questionnaire for Sub-County Education Officers

This questionnaire is to collect data for purely academic purposes. It seeks to investigate the effects of mainstreaming on the retention of learners with SN in regular public primary schools in the Lurambi Sub-County. Mainstreaming is defined as the process of placing learners with SN into typical class settings and school environments with their peers who have no disabilities during specific times. Your responses will be treated with the utmost confidentiality.

Please indicate by putting a tick (✓) next to the response that applies to you.

1. How do you rate the state of mainstreaming in your area of jurisdiction?						
Excellent	Good	Average	Poor	Extremely Poor		
Statements		Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree
2. There have been cases of headteachers declining to admit learners with SN placed in their schools due to the severity of SN.						
3. There have been cases of parents complaining about a teacher or a school secluding a learner with SN based on the severity of their condition.						
4. The regular public schools in my area of jurisdiction are well equipped to admit and accommodate learners with SN regardless of the severity of their conditions.						
5. There are sufficient specially trained teachers to provide education that meets the needs of all the learners in my area of jurisdiction.						
6. The available teachers trained in SN have sufficient skills and knowledge to provide education that meets the needs of all learners in my area of jurisdiction.						
7. The available teachers trained in SN education match with the number of learners with disability and SN in my area of jurisdiction.						
8. The school environment and infrastructure of all schools in my area of jurisdiction have been effectively modified to accommodate all learners with disability and SN.						
9. The school environment and infrastructure such as ramps, toilets, stairs, door and window sizes, and playing grounds of all schools in my						

area of jurisdiction are friendly and comfortable for all learners.					
10. The classroom environment and infrastructure such as lighting system, ventilation, chairs, desks, spacing, and audibility of all schools in my area of jurisdiction have been effectively modified and are friendly and comfortable to all learners.					
11. All schools in my area of jurisdiction have sufficient assistive devices such as Braille, hearing aids, tactile screens, etc. for learners with disability and SN.					
12. All schools in my area of jurisdiction have sufficient learning materials such as textbooks etc. capable of supporting and promoting the learning experiences of learners with disability and SN.					

13. Please provide any comment you feel important in regard to promoting the availability of teachers trained in SN education in your area of jurisdiction.

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14. Please provide any comment you feel important in regard to improving the suitability of the school and classroom environment and infrastructure in order to ensure the environment is friendly and comfortable to all learners in your area of jurisdiction.

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Appendix 6: Letter from Postgraduate Maasai Mara University



MAASAI MARA UNIVERSITY

(OFFICE OF THE DIRECTOR, POSTGRADUATE STUDIES)

TEL. No.0722346 419
Email: graduatestudies@mmarau.ac.ke

P. O. Box 861-20500
NAROK, KENYA

Ref/MMU/AA0328/45/ VOL 1 (66)

Date: 1st July,2021

Council Secretary,
National Council for Science and Technology,
P.O. Box 30623-00100
NAIROBI-KENYA

Dear Sir/Madam,

RE:APPLICATION FOR A RESEARCH PERMIT FOR: MACKENZIE KHALAI MONICA, REG. NO. EM09/S/6003/2012.






I wish to recommend the above candidate for a permit to enable her collect data for her research. She defended her proposal at the School of Education successfully and has made the necessary corrections. The title is "*Mainstreaming and Retention of Learners with Special Needs in Regular Public Primary Schools in Lurambi Sub-County, Kakamega County, Kenya.*" She therefore qualifies for a permit to conduct research.

Any assistance accorded to her will be highly appreciated.

Thank you



Appendix 7: Research Permit from NACOSTI

 <p>REPUBLIC OF KENYA</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
Ref No: 493322	Date of Issue: 12/July/2021
RESEARCH LICENSE	
	
<p>This is to Certify that Ms. Monica Mackenzie Khalai of Maasai Mara University, has been licensed to conduct research in Kakamega on the topic: MAINSTREAMING AND RETENTION OF LEARNERS WITH SPECIAL NEEDS IN REGULAR PUBLIC PRIMARY SCHOOLS IN LURAMBI SUB-COUNTY, KAKAMEGA COUNTY, KENYA for the period ending : 12/July/2022.</p>	
License No: NACOSTI/P/21/11722	
493322	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code	
	
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	

Appendix 8: A Map of the Study Area - Lurambi Sub-county

