INFLUENCE OF SCHOOL RELATED FACTORS ON IMPLEMENTATION OF INCLUSIVE EDUCATION IN KAMUKUNJI SUB-COUNTY, NAIROBI CITY COUNTY, KENYA

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A Research Project submitted in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Education in Curriculum Studies

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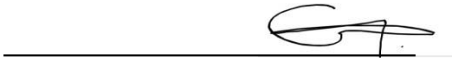
DECLARATION

This research project is my original work and has not been presented for award of degree in any other university.



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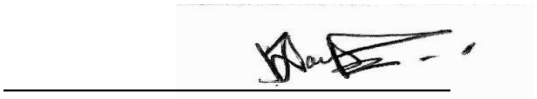

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DEDICATION

I dedicate this research project to my loving parents Mr. Faustus Ungaya Mmbaya and Mrs. Celestine Naburi Smart. My dear Siblings James, Claire, Desmond and Patricia. They have been very supportive and instrumental in providing the encouragement and support I needed to complete this project.

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ABBREVIATIONS AND ACRONYMS

EFA: Education for All

MoE: Ministry of Education

SPLTD: Sector Policy for Learners and Trainees with Disabilities

SPSS: Statistical Package for Social Sciences

SNE: Special Needs Education

UDHR: Universal Declaration of Human Rights

UN: United Nations

UNCRPD: United Nations Committee on Rights of Persons with Disabilities

UNESCO: United Nations Education Scientific and Cultural Organization

USAID: United States Agency for International Development

ABSTRACT

This study looked into how characteristics related to the school had an impact on how inclusive education was implemented in the public secondary schools in Kamukunji Sub-county. This study aimed to determine how the implementation of inclusive education was influenced by the availability of appropriate teaching and learning materials, the availability of physically modified facilities, the suitability of teachers' professional preparation, and the modification of assessment procedures for learners with disabilities. The societal Model of Disability by Oliver (1983), on which the study was based, acknowledges that societal perceptions, institutions, and regulations may be changed to offer a supportive environment in which learners with disabilities have an equal opportunity to engage in education. To perform the study, a descriptive survey research design was used. While purposive sampling was used to choose 8 principals from 10 public secondary schools delivering inclusive education, simple random sampling was employed to pick 75 instructors from a population of 248 teachers. Information from the respondents was gathered using questionnaires. To gather proof of the existence of the necessary facilities and educational resources in the schools, the researcher employed an observation schedule. Statistical Package for Social Sciences was used to evaluate the data numerically, and content analysis was used to assess the data qualitatively. This study found that the implementation of inclusive education varies by 60.7% due to characteristics associated to schools. According to the results of the coefficient of correlation, having more teaching and learning resources that are appropriate for students with disabilities available improves the implementation of inclusive education by 0.162 units (1=0.162; p=0.000). Implementing inclusive education is improved by 0.198 units when there are more physical facilities that have been adapted to accommodate students with disabilities (2=0.198; p=0.000). Implementing inclusive education is improved by 0.525 units when there are more teachers available who have professional training in both education and special needs education (3=0.525; p=0.000). Implementing inclusive education is improved by 0.416 units when assessment processes are changed for students with impairments (3=0.416; p0.001). The association is statistically significant because all of the p-values were below the 0.05 level of significance. This survey discovered that poor vision students in Kamukunji's public secondary schools have eyeglasses or contact lenses, large print textbooks, and a braille machine. However, none of the schools have computers with expanded screen images and optical character recognition systems. Additionally, 75% of schools lack portable audio recorders, 87.5% lack low vision calculators, and 62.5% lack hearing aids for students with hearing impairments. None of the schools have modified their furniture or athletic facilities to accommodate students with disabilities, despite the fact that 87.5% of the schools have large classrooms with non-slip surfaces, 75% have ramps, and 87.5% have restrooms that are inaccessible to students with disabilities. Every teacher at Kamukunji's public secondary schools has completed at least a bachelor's degree in education. Only 14.1% of teachers get pre-service training in special needs education, though. Additionally, assessment methods have been changed to allow students with disabilities more time and a more accessible format for exams. Only 1.6% of students enrolled in schools are learners with impairments, and only a small subset of these learners are enrolled in schools. This study suggests that the ministry of education fund structural modifications to public secondary schools' facilities and conduct regular compliance checks on those modifications; that principals coordinate with the MoE and work with other stakeholders to obtain enough learning materials that are appropriate for students with disabilities; and that TSC and KISE offer in-service training for teachers on these topics.

CHAPTER ONE

INTRODUCTION

Background to the Study

The purpose of education is to use it as a tool to eradicate social injustices. Education is acknowledged as a fundamental human right in Article 26 of the Universal Declaration of Human Rights (1948). Disability, however, continues to be a significant factor in exclusion from schooling. Although it has been acknowledged in numerous international declarations that individuals with disabilities have a right to education, their ability to exercise that right is constrained by their situations (UNESCO, 2020; UNHRC, 2019; World Bank, 2019). Therefore, assistance is required for kids with impairments to exercise their entitlement to a good education. The idea of inclusive education is becoming more widely known. According to this educational strategy, students with disabilities attend nearby institutions in age-appropriate regular classroom settings alongside peers without disabilities. They receive supports and instruction that ensure their inclusion among their peers while also addressing their unique needs and abilities (Chauhan, 2018). To fully benefit from educational opportunities and compete with their classmates who do not have challenges, children with disabilities need adjustments and adaptations.

By ratifying international treaties, declarations, and conventions that stress the significance of implementing inclusive education methods, nations from all over the world have demonstrated their commitment to upholding inclusive education. According to the Salamanca Statement and Framework on Inclusive Education (1994), the most effective way to fight discrimination, build an inclusive society, and ensure education for everyone is through ordinary schools with an inclusive tendency. By 2030, everyone will have access to inclusive, egalitarian, high-quality education and opportunities for lifelong learning, according to Sustainable Development Goal 4.

Countries' national policies should also reflect inclusive education in order to put an end to exclusion and marginalization in learning processes and outcomes as well as in learning opportunities, participation, and completion (UNESCO, 2017). Japan made a legally binding commitment to uphold the right to inclusive education for students with disabilities by identifying and removing barriers and obstacles to full participation in educational activities through the ratification of the United Nations Committee on Rights of Persons with Disabilities (UNCRPD) Act in 2014 (Japan National Assembly of Disabled Peoples International, 2015). Through its landmark policy document, "the education white paper no. 6," South Africa reiterated its dedication to inclusive education. The policy paper admits that certain learners experience difficulties in their learning and development as a result of the education and training systems' inability to meet their needs, and it makes a commitment to provide these learners access to educational opportunities (Republic of South Africa, 2001). Singapore's Ministry of Education has also demonstrated its commitment to the cause of inclusive education by providing the necessary infrastructure and making sure that each school has at least 10% of its teaching staff who have received special education training. This decree states that all children with special needs, regardless of their diagnosis, must be permitted to attend mainstream school. The Government of Kenya, like its counterparts, is similarly dedicated to providing all of its citizens with quality education that is relevant, inclusive, and equitable without any kind of discrimination (Sector Policy on Learners and Trainers with Disability, 2018). The 2017 Kenya Basic Education Curriculum Framework places a strong emphasis on the value of inclusion and diversity. It urges all educational institutions to be accommodating and helpful to all students, despite their variety of demands.

Despite political commitment, statements, and laws, inclusive education appears to be progressing slowly (Wermke et al., 2020). Concerns about the gap between theory and reality in the application of the equal right to education for people with disabilities are raised by the UNCRPD (2014). Planning for general education has not been synchronized with the requirements that countries enacted. The implementation of inclusive education has a gap. Although laws are focused toward inclusive educational methods, there are numerous obstacles that prevent their implementation at the school level. It is important to create an inclusive atmosphere for students with disabilities throughout their whole school experience. It is essential to provide accessible amenities such classroom furniture, restrooms, play areas, and sports facilities (UNCRPD, 2014). Children with impairments are constrained by inaccessible physical facilities, which encourages marginalization. Mutembei (2014) came to the conclusion that the low level of implementation of inclusive education in public primary schools in the Magumoni division was due to the lack of physical facilities that supported the special needs education students. Physical facility modifications are necessary to make schools accessible as a crucial step to inclusion.

The European Agency for Special Needs and Inclusive Education (2015) states that teachers' professional credentials improve their capacity to offer students with disabilities a high-quality education. The effectiveness of inclusive education, according to Marimuthu and Cheong (2014), depends on experienced, skilled, and competent teachers who are able to instill the necessary values, confidence, and support in students with special needs. There will always be new students with various special needs, thus it is crucial to provide teachers with enough pre-service and in-service training on how to handle inclusive education.

Many children with impairments do dreadfully in relation to their peers, according to World Bank (2019). Due to high dropout rates, their primary school completion rates are low.Exams present a

significant barrier to students with disabilities since they are frequently administered and evaluated without taking into consideration their disability (UNESCO, 2014). Children with impairments took the same exams as ordinary students in 2016, according to the National Gender and Equality Commission, without any reasonable modifications to account for their slower rate of learning. A curriculum that has been modified to meet the requirements of disabled children is necessary. In Kenya, the national gender equality commission's (2016) review of the state of inclusion and equality revealed gaps in curriculum adaption for the majority of children with disabilities. They observed that resources for customized teaching and learning for kids with impairments were scarce or nonexistent. The lack of active learning in school curricula and teacher-centered teaching strategies like repetition, dictation, and copying from the board prevent students with disabilities from receiving a decent education. Teachers' capacity to fully implement inclusive education is impacted by the lack of customized teaching and learning tools (Mokalang, 2019).

The concept of inclusion goes beyond what is done in the classroom to include all of the experiences a student will have when they engage with the school environment, making an inclusive curriculum a crucial instrument in the fight against injustice.At the school level, implementing an inclusive education curriculum is difficult due to a number of factors, such as untrained staff who lack the knowledge to deal with students who have learning disabilities, inadequate classroom space, and a lack of other necessary teaching and learning resources. The Ministry of Education's statistical yearbook (2020), which shows a poor level of integration of students with special needs in secondary schools over time in the Kamukunji sub-county. Due to their impairments, students with learning difficulties find it incredibly difficult to exercise their right to an education. Many people struggle to fit into the typical classroom setting, which makes learning more challenging. As a result, a large number of individuals leave the educational system.

Therefore, the purpose of this study is to ascertain how the implementation of inclusive education in the Kamukunji sub-county of Nairobi County, Kenya, is influenced by characteristics related to the schools. The variables chosen for inquiry include teacher preparation, student evaluations, physical facilities, and instructional materials.

The comparative enrollment of students with special needs in primary and secondary schools in Kamukunji sub-county is shown in Table 1.1 below. In Kamukunji sub-county, there are fewer students with special needs enrolled in secondary schools than there are in primary schools.

Table 1.1 Enrolment of Learners with Disabilities in Kamukunji Sub-County

Year	Number of learners with special needs in primary	Learners with special needs in Secondary	Difference
2017	66	24	42(63.6%)
2018	64	16	48 (75%)
2019	71	21	50 (70.4%)
2020	73	22	51(69.9%)

Source: Kamkunji Sub County Education Office (2022)

Statement of the Problem

Even though the right to education is guaranteed by both domestic and international treaties, children with disabilities nevertheless face barriers to accessing it, being socially integrated in it, and receiving a quality education. In middle- and low-income nations, 50% of students with disabilities are not enrolled in school, according to the 2020 Global Education Monitoring Report (UNESCO, 2020). However, Kamkunji may have a larger percentage of learners with disabilities who dropped out of secondary school. According to data from the Kamkunji Sub County Education Office (2022), enrollment rates for primary schools and high schools differ greatly. The

enrollment of students with disabilities in primary and secondary schools varied by 63.6% in 2017, 75% in 2018, 70.4% in 2019, and 69.9% in 2020. In contrast to the 95% transition rates from primary to secondary among students without impairments in 2020, this suggests that a sizeable minority of learners with disabilities do not transition to secondary schools in Kamkunji (KNBS, 2020). Additionally, as boys and girls with disabilities move through different school periods, the enrollment gap worsens, demonstrating the critical need for action to "ensure learning opportunities for all" (Sustainable Development Goal 4 or SDG 4). In addition to these limitations, there is little research on the implementation of inclusive education in Nairobi County's Kamukunji Sub-County and what makes inclusive education effective in Kenya.

Purpose of the Study

This study's goal was to determine how factors associated to schools affected the adoption of inclusive education in public secondary schools in Kenya's Nairobi City County's Kamukunji Sub-county.

Research Objectives

This study sought:

i. To establish the influence of availability of suitable teaching and learning materials on implementation of inclusive education in public secondary schools in Kamukunji Sub-County.
ii. To establish the influence of availability of modified physical facilities on implementation of inclusive education in public secondary schools in Kamukunji Sub-County.
iii. To determine the influence of suitability of teachers' professional training on implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

iv. To determine the influence of modification of assessment procedures for learners with disabilities on implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

Research Hypothesis

The following null hypothesis was formulated from the objectives:

i. Availability of suitable teaching and learning materials does not influence implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

ii. Availability of modified physical facilities does not influence implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

iii. Suitability of teacher professional training does not influence implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

iv. Modification of assessment procedures for leaners with disabilities does not influence implementation of inclusive education in public secondary schools in Kamukunji Sub-County.

Significance of the Study

With the help of this study, it may be possible to determine what factors contribute to the success of an inclusive education program in the public secondary schools of Kamukunji Sub-County. The results of this study may be used by the Ministry of Education to improve the conditions for teaching and learning at the institutions that provide inclusive education. It could also be useful for educational administrators to pinpoint the issues that exist at their institutions and then locate pertinent solutions to the issues. Finally, by offering special needs students who are currently

enrolled in inclusive settings a more comfortable learning environment where their requirements are being fully met, the study's findings may also aim to benefit those students.

Limitations of the Study

The study was expected to have certain limitations because respondents' opinions might be influenced by their professional backgrounds or societal prejudices. In addition, the respondents might have feared being victimized by the Teachers Service Commission, leading them to base their answers on what would be considered socially acceptable. All respondents, however, received assurances on the privacy of their answers when completing the questionnaires.

Delimitations of the Study

Because the study was conducted in public secondary schools in the Kamukunji Sub-County, it may be difficult to extrapolate the results to private institutions. This is due to the fact that sub-county education offices are a trustworthy source of data because they have up-to-date information on enrollment records of public schools. The study focused only on how physical facilities, professional development for teachers, learner assessments, and teaching and learning resources affected the implementation of inclusive education in schools. This is due to the researcher's finding that the literature on the aforementioned elements and their effects on the implementation of inclusive education is scarce.

Assumptions of the Study

The study's underlying presumptions were that respondents were aware of the inclusive education policy for students with learning disabilities in public primary schools and that participants had positive attitudes toward all the study's stakeholders who dealt with the day-to-day teaching and learning in institutions that offer inclusive education.

Definition of Significant Terms

The following are definitions of significant terms as used in the study:

Inclusive Education-refers to the enrolment and integration of learners with disabilities in regular public secondary schools and provision of appropriate learning resources; teachers who are qualified to handle learners with special needs; and a disability friendly learning environment where learners with disabilities can learn, play and interact with their peers without disabilities.

Modification of Assessment Procedures- refers to adjustments to the process of administering exams for learners with disabilities by providing additional time to complete exams; providing exams in braille and large print format; and use of transcriptions to compensate for their disability related limitations such as slow pace of writing and inability to read standard texts.

Physical Facilities- refers to the suitability of school facilities that have been modified to create an accessible barrier free learning environment in public secondary schools in Kamukunji. These include: ramps, specialized/modified furniture, spacious pavements/pathways, spacious classrooms, modified sports facilities and accessible ablution blocks.

School-related factors: refer to factors at the school level that influence integration of leaners with disability in regular public secondary schools. They include teaching and learning resources that are suitable for leaners with disabilities; modified physical facilities; professionally trained teachers; and modification of assessment procedures for learners with disabilities.

Teachers' Professional Training- refers to refers to suitability of training of teachers in public secondary schools in Kamukunji in terms of pre-service training special needs education at degree level or training in education at the degree level and in-service training in special needs education/inclusive education.

Teaching and Learning Materials- refers to the availability of learning resources that are appropriate for particular disabilities that learners who are integrated in Kamukunji public

secondary schools need to complete learning in normal courses with their classmates without disabilities. These include braille machines, computers with optical character recognition systems used to convert text into audible speech for students with visual impairment, computers with enlarged screen images for reading maps and diagrams for students with low vision, and portable audio recorders for recording audio format. Large print materials are used by students with low vision who cannot read small prints.

Organization of the Study

The study contains five chapters. Chapter one, introduction, consists of background to the study, statement of the problem, purpose of the study, objectives and research questions, significance and limitations of the study, delimitations, assumptions, and definition of significant terms. Chapter two on literature review, comprises of review of literature related to the study, under the following subheadings; the concept of inclusive education, influence of adequacy of teaching and learning resources, requisite physical facilities, teachers' professional training, and modification of learners' assessment procedures on the implementation of inclusive education, theoretical and conceptual framework of the study and the summary of the literature review. Chapter three, research methodology, will include the research design, target population, sample size and sampling procedure, the validity of the research instruments, reliability of the instruments, data collection procedures, and data analysis techniques. Chapter four presents data analysis, interpretation, and discussion of the study findings and Chapter five contains the summary, conclusion and recommendations, and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Review of related literature on inclusive education is presented in this chapter. It covers the idea of inclusive education, the impact of teaching and learning resources, the necessity of physical facilities, professional development for instructors, and the adjustment of learners' evaluation methods with regard to the implementation of inclusive education. Additionally, it offers a synopsis of the study's theoretical and conceptual foundation.

The Concept of Inclusive Education

According to the Sector Policy for Learners and Trainees with Disabilities (2018), inclusive education is a method of instruction that involves offering learners and trainees with disabilities appropriate educational interventions within conventional institutions with reasonable accommodations and support. According to the principle of inclusive education, which holds that all students have a right to share an educational environment, schools must implement policies to meet the needs of all students so that everyone can take part in class activities together (UNESCO, 2017). According to the Kenya Institute of Special Education (2018), inclusive education refers to a strategy in which students with disabilities and special needs receive a quality education in regular classrooms. According to Adoyo (2019) and Okongo et al., (2015), inclusive education is the process of converting conventional classrooms into a barrier-free setting that accepts students with impairments. Therefore, inclusive education is a system of education in which students with and without disabilities are enrolled, present, and engaged in learning activities in regular classes on an equal basis without being divided based on disability.

Over the years, Kenya's education system has undergone a number of adjustments to make sure that students with disabilities can participate in and access education. The ratification of international policy frameworks and subsequent adoption of such frameworks, such as the Special Needs Education Policy (2009) after the Kochung Task Force's 2003 report, are important improvements. This is the special education policy manual that outlined how students with disabilities might access instruction in special schools, integrated schools, and special sections of conventional schools. The 2018 Sector Policy for Learners and Trainees with Disabilities, which aims to provide education to learners with disabilities in regular schools, was adopted as a result of the current global shift toward inclusive education. According to the Policy, inclusive education includes having students with disabilities enrolled in regular classes alongside their peers without

disabilities, requiring the establishment of a safe, accessible, and barrier-free environment for students with disabilities, and requiring teachers to have training, competencies, and attitudes that are well-aligned to support learning.

The enrollment of students with disabilities in public secondary schools nationwide increased by 19% in 2019, from 4,019 to 4,794, according to the 2019 Basic Education Statistical Booklet. According to studies, there is still a poor level of integration for disabled kids in conventional classrooms. The majority of students enrolled were students with hearing impairment (47.9%), followed by students with physical impairment (32.6%), and students with vision impairment (19.5%). The schools did not accept students with mental disorders or those who had multiple disabilities (Republic of Kenya & Ministry of Education, 2019).

According to studies, the integration of students with impairments in regular classrooms is still quite low. UNICEF (2018) estimates that less than 10% of students with disabilities are enrolled in schools in developing nations. The low enrollment rates are attributed to a number of factors, including a lack of reasonable accommodations that make the school inaccessible to students with disabilities, teachers who lack the necessary training to meet the needs of students with disabilities, and teachers who have a negative attitude toward integrating students with disabilities into regular classrooms.

According to Edwina (2022), who evaluated the state of inclusive education implementation in Liberian public high schools, only 60% of principals were aware of the policy, only 40% had implemented it, 90% of the schools lacked a procedure for admitting students with disabilities, and 70% of the teachers had not received training on inclusive education. Additionally, 74.5% of the students said that there were no ramps, 85.1% said that the classrooms were too small for students to sit and move around in wheelchairs, and 95.74% said that there were no sign language

interpreters or braille or audio versions of the course materials. All of the kids (100%) said the schools didn't have wheelchairs, hearing aids, or walking canes, and that students with impairments couldn't take part in wheelchair basketball, seated volleyball, or blind soccer. As a result, 80% of the principals reported high truancy rates and poor enrollment rates for kids with disabilities.

Due to difficulties in modifying school infrastructure and amenities, Ireri et al.'s (2020) investigation of the impact of structural adjustments on inclusive education discovered that relatively few learners with disabilities are enrolled in public secondary schools in Tharaka Nithi County. Only 10 (26.3%) of the 38 county schools have students with disabilities enrolled. Only 6 (or 30%) of the 18 additional county schools had students with disabilities enrolled. In 16 schools in the county, just 11 students with physical disabilities were accepted, compared to 30 who had previously been enrolled between 2015 and 2018. According to 88% of the teachers, the low enrollment rates are a result of the physical facilities not being updated. The schools include multi-story structures with stairways, but there were no ramped alternate routes for students with impairments. Additionally, 76% of the teachers reported that parents had an unfavorable view of include students with impairments in the classroom.

Only 259 students with disabilities had been enrolled in 65 ordinary schools, according to Adoyo's (2019) research on the state of inclusive education implementation in Siaya County. This suggests that each institution only admitted, on average, 4 students. The majority of students (53.3%) had a learning disability, which was followed by students with physical disabilities (21.6%), emotional and behavioral issues (9.7%), visual impairment (8.5%), chronic health issues (4.6%), hearing impairment (1.5%), and mild mental health issues (0.8%). Only 24.7% of head teachers stated that they admit students with impairments or not. Only 12.3% of the schools had ramps at the entrance of school buildings, 13.8% had entrances that were wide enough to allow entrance, 18.5% had

accessible toilets, and only 3.1% had reserved parking for teachers or people with disabilities. This is despite the fact that 73.8 of the schools had spacious classrooms, 86.2% had non-slippery floors, and 58.2% had accessible pathways. Additionally, just 25.5% of the teachers and head teachers received training in inclusive education.

The lack of adequate teaching and learning resources has also made it difficult to implement inclusive education. Pre-school in Nyamira North has a shortage of teaching and learning materials, which has negatively impacted the enrollment and retention of students with special needs in pre-school, according to 78% of teachers and education officers who participated in Okongo et al.'s (2015) examination of the impact of availability of teaching and learning materials on the implementation of inclusive education. Because most ordinary schools fall short of the requirements for full inclusion of students with disabilities as outlined in the 2018 Sector Policy for Learners with Disabilities, inclusive education is not effectively implemented.

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Availability of Suitable Teaching and learning Resources and Implementation of Inclusive Education

The term "adequacy of teaching and learning resources" refers to material resources that are of a suitable or acceptable quality and quantity. Textbooks, graphs, maps, and audio-visual and electronic teaching aids like radio, tape recorder, television, and video tape recorder are examples of material resources. Paper goods and writing instruments such pens, erasers, exercise books, crayons, chalk, drawing books, notebooks, pencils, rulers, slates, workbooks, and others make up the other group of material resources (Atkinson, 2018). The most cost-effective factor influencing student achievement, according to DFID (2017), is the suitability of instructional materials, such as textbooks, which serve as the primary teaching resource. In this context, an acceptable quantity

is typically considered to be at least one textbook for every three pupils, as well as enough reading materials for the elementary grades so that every child can read at least one new book each week. The effectiveness of an educational system is determined by the quality of the teaching and learning materials (Mokalang, 2019). Textbooks and other reference resources are essential for efficient teaching and learning; their lack or insufficiency causes teachers to treat subjects abstractly, giving the impression that they are uninteresting and dry. In order to support educational efforts, it is crucial to have the right staff and physical infrastructure in place. According to Mutungi (2018), a lack of textbooks, libraries, and physical infrastructure would prevent the educational system from adequately meeting new expectations. Academic achievement and instructional resources have a very strong, positive, significant association, according to Adeogun (2018). Schools having more resources outperformed schools with fewer resources, according to Adeogun. Because they are the fundamental resources that result in students performing well academically, the availability of teaching and learning resources therefore improves the efficacy of schools. Insufficient teaching and learning resources have an impact on how inclusive education is implemented. Okongo (2015) asserts that the availability of teaching and learning materials in an inclusive environment results in improved curriculum delivery and increases rates of enrollment and retention for kids with special needs. The absence of necessary teaching and learning resources may affect teachers' capacity to conduct inclusive education, and Mokaleng (2019) concurs. He advises that schools be given sufficient resources to meet the various requirements of all students. By concluding that insufficient and unavailability of teaching and learning materials were obstacles to the implementation of inclusive education, Mutungi (2018) verifies these findings.

Availability of Modified Physical Facilities and Implementation of Inclusive Education

Physical barriers prevent disabled students from interacting with the learning environment, resulting in unmet educational needs (Onyuka, 2015). Communities, parents, and sponsors should continue to be encouraged to build and maintain physical infrastructure at educational institutions. This is due to the fact that a lack of such facilities impedes learning (Republic of Kenya, 2018). The implementation of inclusive education and the significance of school facilities in relation to high-quality education are both significantly positively correlated with the physical infrastructure of schools, according to Malik et al.'s (2018) research. Achievement differences could be attributed to different educational facilities. Classrooms, lecture halls, auditoriums, administrative buildings, libraries, workshops, play areas, assembly halls, and specific spaces like clinics, staff quarters, student hostels, kitchen, cafeteria, and restrooms are only a few examples of physical amenities. According to him, learning experiences are successful when there are sufficient quantities and quality of physical resources available. He also claims that unattractive school buildings, crammed classrooms, a lack of play areas, and environments devoid of aesthetic beauty can all lead to subpar academic performance. According to Fonseca and Conboy (2016), creating a culture of success can be aided or hindered by the physical setup and organizational structure of schools. According to MOEST (2020), the Ministry of Education Science and Technology, it is crucial to guarantee that there are sufficient and acceptable facilities for teaching and learning in order for educational programs to be successfully executed.

Suitability of Teachers Professional Training and Implementation of Inclusive Education

According to Florian (2019), in order to implement inclusive education, teachers must have the appropriate professional training, including pre-service special needs education training at the degree level or training in education at the in-service level. Professional development for teachers is the process of enhancing their abilities to teach inclusively and preparing them to do so

regardless of the various learning obstacles and challenges that their pupils may encounter. Ensuring that all teachers are equipped to instruct all pupils is a crucial component of inclusive education. Without instructors who are empowered change agents and who possess the principles, skills, and attitudes necessary for every kid to flourish, inclusion cannot be achieved (Florian, 2019).

Education systems are rapidly shifting away from identifying problems with learners and toward identifying impediments to learning (UNESCO, 2018), despite variances in teacher standards and credentials. Education systems must create chances for teacher education and professional growth that challenge ingrained notions that some pupils are inadequate, unable, or unable in order to bring about this transition. Teachers must accept the idea that each student has an unlimited capacity for learning and be open to diversity in order to practice inclusive teaching (Florian, 2019). To teach inclusively, instructors must receive high-quality training (Florian, 2019; Florian & Spratt, 2013; UNESCO, 2009). Pedagogical and other knowledge gaps among instructors may contribute to a lack of readiness for inclusive teaching. The topics that can be covered in teacher education include learning evaluation methodologies, classroom management, and multi-professional teams. According to the European Agency for Special Needs and Inclusive Education (2010, 2015), it must be pertinent to teachers' needs, cover a variety of facets of inclusive teaching for all learners, and offer follow-up support to assist instructors in incorporating new skills into classroom routines. In fact, according to Cochran-Smith and Dudley-Marling (2012), the notion that specialized expertise is necessary can downplay concerns about diversity in teacher education. Teachers who are qualified, knowledgeable, and competent enough to nurture the desired values and competences in learners with special needs while providing them with the necessary assistance are necessary for successful inclusive education, according to Marimuthu and Cheong (2014). The

training and credentials of teachers determine their capacity to deliver high-quality instruction (European Agency for Special Needs and Inclusive Education, 2015). The National Gender Equality Commission (2016) study suggests that all teachers take periodic refresher courses on how to interact with students with impairments. Ondieki (2015) contends that despite having subject knowledge in special needs education, teachers still face difficulties in the classroom. A theoretical curriculum with little practical work needed of trainees to develop the essential skills during pre-service training, according to the Kenya Institute of Special Education, is to blame for the challenges teachers experience in dealing with emergent kinds of disabilities (NGEC, 2016). Oketch (2003) notes that the one semester special needs education course taught to general teachers is too brief to produce highly skilled instructors, but it unquestionably raises awareness and provides aspiring teachers a sneak peek into what to expect. To avoid the misconception that teaching students with disabilities is a separate training initiative and not a core competency needed by all teachers, the International Disability and Development Consortium (2013) recommends that training in teaching students with disabilities be made an integral part of core teaching competencies rather than being handled as a stand-alone subject. All instructors should be encouraged to participate in in-service training, according to Omamo (2017), in order to continuously improve their professional growth and their ability to work with kids who have disabilities. This is crucial because teachers need to stay current as new students with various special needs enter the classroom on a regular basis. Teachers should receive additional training and seminars in the area of educational inclusion, according to Gorika and Popovoski (2019). Provision of pre-service and in-service training to teachers to enhance their knowledge, skills, and competence should be part of fostering inclusive education. This will enable them to recognize each student's needs, adapt their instruction to meet those needs, and accommodate each student's

interests. A general education teacher can provide a variety of teaching methods so that all students can actively participate in their learning with the right preparation (Logsdon, 2020).

Modification of Learners' Assessments Procedures and Implementation of Inclusive Education

A crucial part of teaching is assessment, which is a systematic process for acquiring information about student success. The 2018 Sector Policy for Learners and Trainees with impairments emphasizes that students with impairments face significant obstacles as a result of Kenya's assessment system. Disability is not taken into account in the administration or grading scheme. Because of this, students with impairments frequently perform poorly, which hinders their ability to move up the educational ladder and into the workforce, causing them to stay in school for longer periods of time, drop out at higher rates, and experiencing high unemployment. According to the policy statement, the MoE must regularly examine differentiated curricula and implement evaluation reforms to make sure that the needs of students with disabilities are taken into account. In order to achieve this, the policy calls for a review of assessment criteria and a strengthening of assessment practices that are tailored to the needs of students with disabilities. It also encourages the use of alternative forms of communication like braille, sign language, and augmentative alternative communication that are appropriate for students with disabilities.

Any type of evaluation in an educational setting entails judgments about how to get information, how to analyze it, and how to interact with the users who will be impacted. Appropriate, trustworthy, and valid assessment in the classroom is the best strategy to enhance learning for a

varied variety of students. In order to better understand the gaps and barriers that prevent everyone from receiving high-quality education, learning outcomes should be critically monitored and analysed, according to the 2018 World Development Report (World Bank, 2018). The growing enrollment of children with disabilities in schools is proof that the idea of inclusive education has gained support, but there are still concerns about the caliber of instruction they get. Children with disabilities perform poorly in contrast to their peers and have significant dropout rates, according to the World Bank (2019). Many countries' current evaluation procedures do not conform to the contemporary idea of inclusive education (Malik, 2018). Rarely are reasonable modifications and accommodations made that would advance equity. According to Longdon (2020), educators must prepare students to perform well on particular standardized examinations, which makes it challenging to deliver differentiated learning. Exams that don't take disability into consideration further encourage discrimination and the idea that students with impairments are underachievers (UNESCO, 2014). The protracted attendance of students with disabilities in school, their high dropout rates, and their poor performance are all influenced by rigid evaluation (SPLTD, 2017). To ensure inclusion, learning assessment procedures should be revised. According to a 2016 report by the national gender equality commission, time modifications were not made to account for the slower writing speed of children with physical disabilities so that they may take the same exam as other students. Exams should allow for the modifications needed by students with special needs, such as extra time allotted for completion, transcribing services, and alternate exam forms. The breadth, depth, and complexity of a concept should be taken into consideration when adjusting the framework and technique for inclusive evaluations (World Bank 2019). Additionally, Bulat (2017) emphasizes the significance of modifying assessments to protect students who may struggle to

demonstrate the knowledge they have learned in the classroom and may require more time to complete assignments or examinations.

Summary of Literature Review

Research examining the impact of professional training for teachers has revealed that a significant proportion of educators in public schools have not received formal instruction in inclusive education. According to Edwina's (2022) findings, a significant majority of teachers, specifically 70%, had not received any form of training pertaining to inclusive education. In a similar vein, Adoyo (2019) discovered that a mere 25.5% of teachers have training in inclusive education, as reported by the head teachers. Nevertheless, the aforementioned research did not ascertain the precise degree to which the training of teachers impacted the implementation of inclusive education. The present study yielded comparable results, indicating that a minority of teachers (14.1%) has prior training in Special Needs Education. The present study employed a correlation analysis to examine the relationship between teachers' training in inclusive education and the implementation of inclusive education. The results indicated a positive and statistically significant effect of teachers' training on inclusive education. Furthermore, the study found that the increased availability of teachers with professional training in education and special needs education contributes to the successful implementation of inclusive education. The present investigation also evaluated if teachers possessed pre-service professional training in the field of education.

According to Florian (2019), the successful implementation of inclusive education by instructors is contingent upon their sufficient preparation through training programs that equip them with the

necessary skills and competencies to effectively instruct learners with disabilities. Educators who have received formal instruction in inclusive education has the necessary skills and sufficient readiness to effectively cater to students with impairments. Nevertheless, this particular study did not ascertain the specific percentage of teachers who received pre-service or in-service training in inclusive education. Additionally, it did not explore the precise impact of such training on the implementation of inclusive education. However, the study did find that an increase in the presence of teachers with professional training in education and special needs education by 0.525 units positively enhances the implementation of inclusive education. Furthermore, the study also revealed that teachers who received training in special needs education exhibited a significant and positive influence on the implementation of inclusive education.

Regarding the domain of physical education, research has indicated that there has been a notable deficiency in the enrollment of students with disabilities. This can be attributed to the insufficient provision of adapted physical facilities that are necessary to accommodate learners with special needs. According to Edwina's (2022) study, a significant proportion of principals, approximately 80%, reported low enrolment rates of students with disabilities. This was primarily attributed to several factors, including the absence of ramps in the majority of schools, inadequate classroom space to accommodate wheelchair users, and a lack of modified sports facilities that restricted the participation of disabled learners in sports activities. Nevertheless, this study did not ascertain the precise count of learners with disabilities who were enrolled in these schools, nor did it assess the extent of integration. The current study, however, revealed that learners with disabilities accounted for a mere 1.6% of the total student population in these schools. Furthermore, the level of integration was found to be quite low, with only a limited group of learners with physical, hearing, and visual impairments being integrated into public secondary schools. The present investigation

additionally assessed the presence of adapted physical infrastructure, including desks, tables, and seating arrangements, as well as pathways, accessible restrooms, and facilities beyond classrooms, such as ramps and sports amenities. In contrast to the findings of Edwina (2022), the present study has determined that schools have made modifications to their classrooms by constructing ramps and pathways. However, it was observed that the furniture, sports facilities, and bathrooms have not been adapted to adequately accommodate learners with disabilities.

In a similar vein, the study conducted by Ireri et al. (2020) revealed that a mere 11 students with physical disabilities were included in a total of 10 county schools and 6 additional county schools in Tharaka Nithi County. The primary hindrance to their integration was the presence of multi-story buildings with staircases, which lacked alternate ramped pathways to accommodate learners with disabilities. The previous study exclusively focused on learners with physical disabilities, whereas the present study expands its scope to include learners with physical disabilities, hearing impairments, visual impairments, and low vision. The scope of the study was limited to the examination of modifications made to classroom entrances and buildings. In contrast, the present study found that while classrooms had been remodeled and ramps and paths had been erected to accommodate learners with disabilities, there was a lack of modifications to school furnishings, restrooms, and sports facilities. Furthermore, the present study has demonstrated that physical facilities exert a beneficial and statistically significant impact on the implementation of inclusive education.

According to Adoyo (2019), a significant proportion of the surveyed schools (73.8%) were observed to possess spacious classrooms. Additionally, the study found that 86.2% of the schools had non-slippery floors, while 58.2% had pathways that were easily accessible. However, a mere 12.3% of the schools had ramps installed at the entrances of their buildings. Furthermore, only

13.8% of the schools had entranceways that were sufficiently wide to accommodate easy entry, and a mere 18.5% had accessible toilet facilities. The present study has found that a significant proportion (85.5%) of public secondary schools in Kamkunji had ample and non-slippery flooring. Additionally, 75% of these schools have pathways that are easily accessible, whereas a mere 12.5% have bathrooms that meet accessibility standards. In contrast to Adoyo's (2019) findings, it was observed that a far higher proportion of schools, specifically 75%, has ramps. Furthermore, the present investigation has ascertained that there is a lack of modifications to school equipment and sports facilities in all public secondary schools in Kamkunji.

Research investigating the impact of teaching and learning materials on inclusive education has revealed that a scarcity of such resources within educational institutions has resulted in a restricted enrollment of students with disabilities in mainstream schools. According to a study conducted by Edwina (2022), a significant proportion of principals (80%) reported that the low enrolment rates of students with disabilities in their schools were attributed to the unavailability of educational materials in alternative formats, such as braille or audio. Additionally, the absence of assistive devices, such as hearing aids and sign language interpreters, was identified as another contributing factor. In addition to the provision of learning materials in braille and audio formats, the present study also investigated whether learners with low vision were afforded access to large print materials typically utilized by individuals who experience difficulty reading small print. Furthermore, the study examined the availability of computers equipped with optical character recognition systems, which enable the conversion of text into audible speech for students with visual impairment. Additionally, the study explored the presence of computers featuring enlarged screen images to facilitate the reading of maps and diagrams for students with low vision. In addition to the utilization of assistive devices such as hearing aids, the present study also

investigates the provision of calculators with larger keys or talking calculators for learners with low vision. Furthermore, the study examines whether students with low vision are equipped with eyeglasses or contact lenses to enhance their visual capabilities. The present study additionally performed a correlation analysis, revealing that each of the teaching and learning resources exhibited a favorable and statistically significant impact on inclusive education.

In a study conducted by Okongo et al. (2015), it was shown that a lack of teaching and learning resources had a negative impact on the enrollment and retention of learners with special needs in pre-school. This was indicated by 78% of teachers and education officials included in the study. This study aimed to investigate the impact of a scarcity of teaching and learning materials on the enrollment of preschool-aged children with impairments. Nevertheless, the study failed to establish the presence of specific teaching and learning resources necessary for the integration of learners with disabilities into regular schools. This was determined by examining the availability of materials required by learners with visual impairment, low vision, hearing difficulties, and physical disabilities. The study conducted by Okongo et al. (2015) did not address the enrollment of learners with disabilities. In contrast, the present study aims to investigate the specific number of learners with disabilities who are currently enrolled in public secondary schools, categorized according to their respective disabilities. The present study also investigated the extent of inclusion of students with disabilities in public secondary schools in the Kamkunji region.

According to Bulat et al. (2017) and Malik (2018), it has been observed that learners with disabilities may require certain modifications to assessment procedures. These modifications include providing reasonable accommodations, such as granting additional time for exam completion and ensuring that exams are provided in formats that are suitable for learners with disabilities. While these studies examined the impact of modifying assessment methods by

providing additional time and exams in the proper format, they did not investigate the specific effects of these modifications on the implementation of inclusive education. The present study ascertained that the modification of assessment procedures for learners with disabilities leads to an improvement of 0.416 units in the implementation of inclusive education. Furthermore, it was shown that there exists a positive and statistically significant association between the modification of assessment procedures and the implementation of inclusive education.

In contrast to the findings reported by NGEC (2016), which indicated that learners with disabilities were not provided with sufficient additional time, the present study has determined that learners with impairments do receive extra time. Furthermore, the present study also successfully shown that learners with disabilities receive examinations in appropriate formats tailored to their specific disabilities, such as braille for visually impaired learners and large print for learners with limited vision. Furthermore, the present study has also established that the inclusion of additional time and the availability of exams in suitable formats for learners with disabilities have a statistically significant and favorable impact on inclusive education.

Theoretical framework

The present study is grounded in the Social model of disability, as espoused by Oliver (1983). According to Oliver (1983), the paradigm acknowledges that the origin of disability lies not in the variations or impairments exhibited by individuals in society, but rather in the societal structure itself. The current structure of society mostly caters to individuals without impairments, necessitating a reorganization to better accommodate individuals living with disabilities. Brunton and Gibson (2009) argue that the social model of disability emphasizes the importance of providing necessary support to those with impairments in order to facilitate their ability to engage

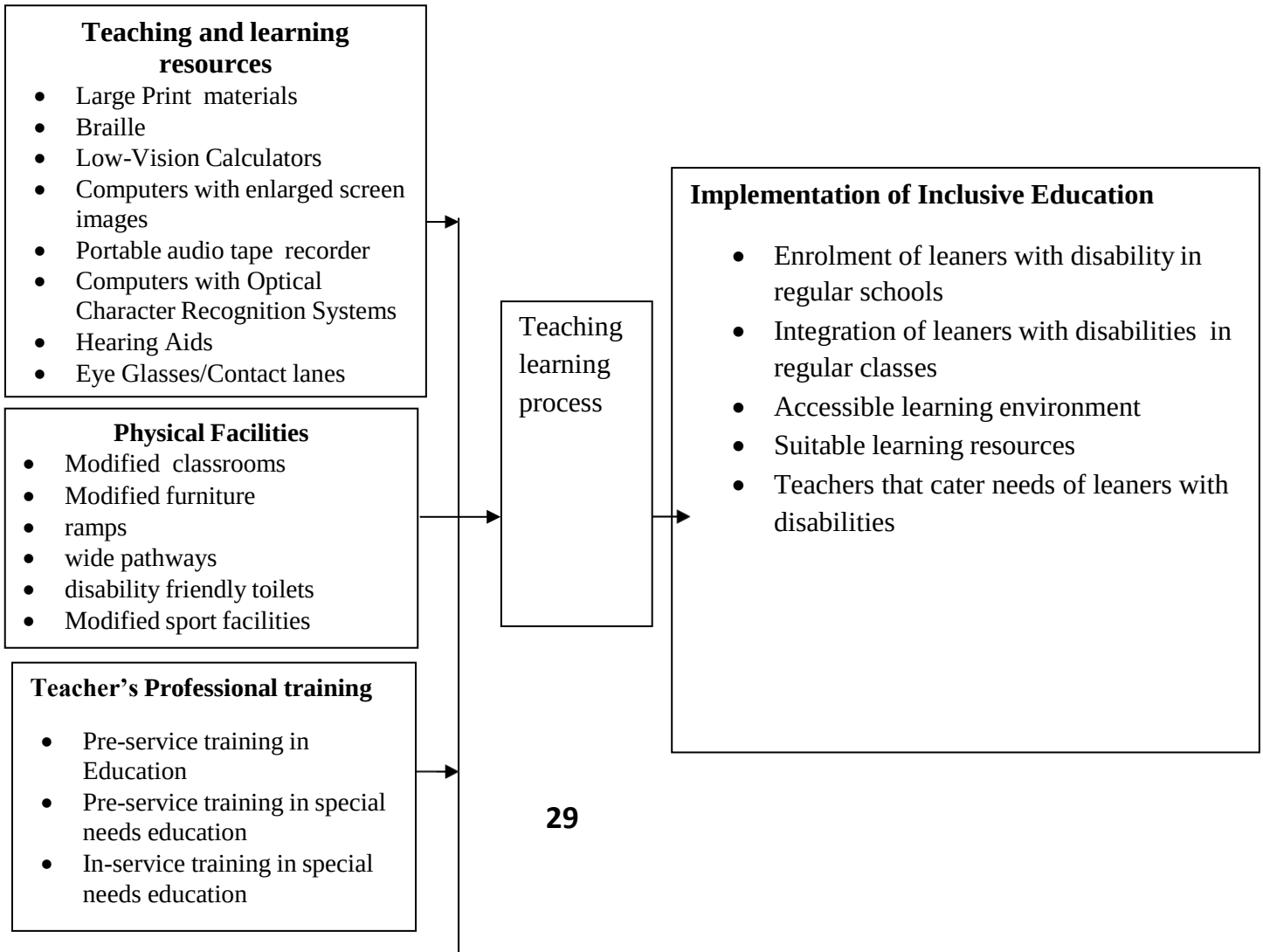
in fully active lifestyles. Education is an inherent entitlement of every individual, constituting a fundamental human right. Nevertheless, there exist impediments that restrict those with disabilities from attaining equitable access to education of high quality. The social model of disability posits that it is incumbent upon society to mitigate and ultimately eliminate the barriers that contribute to impairment. According to Leshota (2013), there is a promotion of considering the ways in which students with special needs might be supported to engage in activities on an equitable basis alongside their peers.

The utilization of the model in this research is justified due to the role of educational institutions as catalysts for inclusivity, wherein they are expected to create an environment that enables students with disabilities to engage fully in the educational experience by removing any obstacles that may hinder their participation. It is imperative to ensure that educational institutions provide inclusive physical facilities that are accessible to students with impairments. It is imperative to ensure the provision of accommodations such as ramps, modified furniture, and roomy classrooms. The adaptation of curriculum elements, including teaching and learning resources as well as assessment methods, should be undertaken to cater to the specific needs of individual learners. Educators also want access to relevant information pertaining to adapting instructional strategies and effectively addressing the diverse requirements of their pupils. The lack of modifications to the school environment may present obstacles to the successful implementation of inclusive education.

Conceptual framework

The objective of this study was to examine the impact of school-related factors on the implementation of inclusive education in public secondary schools. The dependent variable in this

study is the implementation of inclusive education. The independent variables in this study encompass school-related elements, including teaching and learning materials, physical resources, teachers' professional qualifications, and modification of assessment procedures. The relationship is depicted in Figure 2.1 presented below:



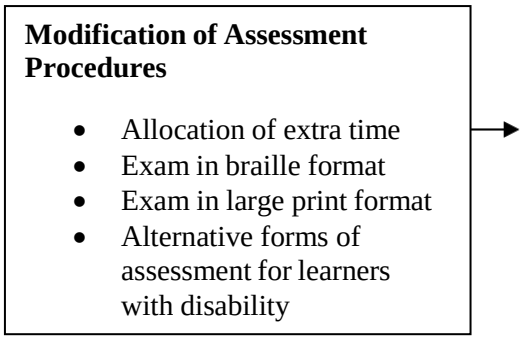


Figure 2.1 Conceptual framework on the influence of school related factors on implementation of inclusive education

The primary aim of this research was to investigate the influence of several school-related factors on the successful implementation of inclusive education within public secondary schools. The variable under investigation in this study pertains to the implementation of inclusive education. The study incorporates independent variables that pertain to several aspects of schooling, such as teaching and learning materials, physical resources, teachers' professional qualifications, and modifications to evaluation techniques. The relationship is illustrated in Figure 2.1, as seen below:

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

The primary aim of this research was to investigate the influence of school-related variables on the execution of inclusive education within public secondary educational institutions. The variable under investigation in this study pertains to the implementation of inclusive education. The study incorporates independent variables that pertain to several aspects of schooling, such as teaching and learning materials, physical resources, teachers' professional credentials, and modifications made to assessment techniques. The depicted link can be observed in Figure 2.1, which is shown below.

Research Design

Research design refers to the systematic organization and structure of the various components involved in the collecting and analysis of data (Dawadi et al., 2021). The conceptual framework serves as the underlying structure that guides the execution of research (Creswell & Clark, 2018). In this study, the researcher employed a descriptive survey research approach. The descriptive survey study design is a commonly employed approach for gathering data on individuals' opinions, habits, and attitudes pertaining to economic or social matters. This method involves the distribution of questionnaires to a representative subset of the population (Dawadi et al., 2021; Lune & Berg, 2016). The researcher employed a descriptive survey design as it was deemed appropriate for gathering primary data to offer a precise depiction of the accessibility of teaching and learning materials, adapted physical infrastructure, professionally trained educators, and modified

assessment methods. The aim was to examine how these factors impact the implementation of inclusive education within public secondary schools in Kamkunji.

Target Population

The population refers to a group of humans, objects, or artifacts that share similar features and are used as the basis for selecting samples in statistical testing (Kombo & Tromp, 2009). Based on the educational department's statistics pertaining to Nairobi's public secondary schools in 2021, it has been determined that there exist a total of ten public secondary schools inside the Kamukunji sub-County. Consequently, the study focused on the target population comprising of the ten public secondary schools located in Kamukunji sub-County, together with ten school head teachers and 248 instructors. The population under study provided sufficient data to elucidate the impact of school-related factors on the implementation of inclusive education in Kamukunji sub-county, located in Nairobi city county, Kenya.

Sample Size and Sampling Procedures

Sampling is a fundamental procedure in research, as elucidated by Orodho (2004). It is the deliberate selection of a sample of cases from a larger population, with the aim of making inferences and generalizations about the full collection. The study employed purposive and simple random sample procedures, as well as the census approach. The researchers employed purposive sampling methodology to select a sample of 10 principals from 10 public secondary schools that cater to kids with special needs in the Kamukunji sub-County. The researchers employed a simple random sampling technique to pick the sample of teachers who took part in the study. The researcher acquired a comprehensive roster of educators within each educational institution and proceeded to allocate a unique identification number to each individual's name. The numerical values were transcribed onto sheets of paper, afterwards folded, and then subjected to a

randomization process. The researcher employed a random selection method to determine the quantity of paper sheets that corresponded to the calculated sample size. The aforementioned designations were assigned to the respective numerical values that were selected for the purpose of investigation.

Mugenda & Mugenda (2003) assert that a sample size of 30% is deemed sufficient for conducting a descriptive survey. Hence, a sample comprising 30% of the teaching staff from the 10 public secondary schools was selected for the purpose of this study. The researcher employed a limited population adjustment method in order to enhance the statistical power of tests by including sample scores, as denoted by the formula f = n / N. In this context, let n represent the sample size, N denote the population size, and f be equal to 1. The researcher employed a random sampling method to choose a sample of 75 teachers for participation in the study. Among the total of 75 teachers, a subgroup of 8 teachers was selected for the pilot project, and hence, these participants were eliminated from the final study. A total of 67 teachers participated in the concluding phase of the study. For the pilot project, two (2) principals from two secondary schools were selected out of the total of ten principals. The final study eliminated two principals who had participated in the pilot study, along with their individual schools. A total of eight principals from eight publicly-funded secondary schools were involved in the study. Data on the availability of physical facilities and instructional materials in the eight (8) secondary schools was collected using an observation schedule/checklist.

Research Instruments

The primary research instruments employed in this study were questionnaires and an observation checklist. The questionnaire was intended for both head teachers and teachers. The observation checklist was employed to assess the sufficiency of learning materials and facilities. The

questionnaires administered to the head teachers differed from those administered to the teachers. The reason for this discrepancy can be attributed to the fact that the head teachers approached the concept of inclusive education from an administrative standpoint, whilst the instructors approached it from a pedagogical perspective. The survey included a combination of structured and unstructured questions and was divided into five sections. Demographic information was collected from respondents in Section A, while Sections B to E consisted of questions and statements designed to assess the impact of school-related factors on the implementation of inclusive education in public secondary schools in Kamukunji sub-county. The items were assessed using a 4-point Likert scale, ranging from "Strongly Agree" (4) to "Strongly Disagree" (1), as well as a dichotomous scale with options "Yes" (2) and "No" (1). The researcher utilized an observation schedule to gather empirical data regarding the presence of facilities and learning materials implemented inside the classes, with the aim of establishing an inclusive educational environment.

Validity of Instruments

Bolarinwa (2015) defines validity as the degree to which inferences drawn from research findings are accurate and meaningful. The concept of validity pertains to the extent to which a research study accurately captures and assesses the specific construct or phenomenon it aims to investigate. In order to establish the validity of the instruments, a piloting process was conducted. The term "piloting" is used to describe the process of doing an initial research study prior to the major research in order to facilitate reflection (Nashwa & Kinchin, 2018). Nashwa and Kinchin (2018) assert that a sample size ranging from 1% to 10% of the overall population is deemed adequate for conducting pilot research. Consequently, prior to doing data collection in the field, the researcher conducted a pre-test of the items utilizing two secondary schools located in Kamukunji sub-

County. A sample of two principals and eight teachers was selected at random for the pilot study. This presented the researcher with an opportunity to engage in more nuanced interactions with the participants of the pilot study, in order to ascertain the validity of the research instruments' questions. The researcher employed the technique of content validity to identify any questions that exhibited ambiguity and those that did not contribute to the collection of pertinent data for the study. Consequently, this facilitated the researcher in identifying any hurdles or issues that emerged in the data collection devices, thereby allowing for their resolution before to the commencement of the real study. Furthermore, to enhance the reliability of the utilized instruments, two distinct groups of participants were included, specifically head teachers and teachers.

Reliability of the Instruments

The concept of reliability pertains to the degree of consistency, repeatability, or stability observed in the outcomes of a study (Bolarinwa, 2015). In order to enhance the dependability of the data collection instruments, the test and retest technique was employed. The surveys were delivered on two occasions to the identical groups of respondents, with a time interval between the first and second administration. The replies provided by the participants were carefully examined in order to determine the reliability of the instruments used. The Pearson product-moment correlation coefficient (r) was employed to establish a comparison between the two tests.

$$\mathbf{r} = \frac{\mathbf{n}(\sum \mathbf{xy}) - (\sum \mathbf{x})(\sum \mathbf{y})}{\sqrt{[\mathbf{n}\sum \mathbf{x^2} - (\sum \mathbf{x})^2][\mathbf{n}\sum \mathbf{y^2} - (\sum \mathbf{y})^2]}}$$

Where,

r = Pearson Coefficient

n= number of the pairs of the stock

$\sum xy$ = sum of products of the paired stocks

$\sum x$ = sum of the x scores

$\sum y$= sum of the y scores

$\sum x^2$ = sum of the squared x scores

$\sum y^2$ = sum of the squared y scores

numbers in the range of 0 to 0.8 are indicative of dependability, whilst numbers beyond 0.80 suggest a test that is homogeneous. The utilization of the item reliability index was employed to indicate the extent to which the item contributed to the overall variance in scores. Bolarinwa (2015) asserts that a correlation coefficient equal to or over 0.7 is deemed suitable and thus dependable for data collection purposes. The Pearson correlation coefficient indicated a correlation of 0.75 for head teachers and 0.76 for teachers' questionnaire. Therefore, the surveys were deemed to possess reliability due to the fact that the correlation coefficient exceeded 0.7.

Data Collection Procedures

The data included in this investigation was obtained via a methodical methodology. Prior to commencing data collecting in the field, the necessary research clearance was obtained from the University of Nairobi. The researcher obtained approval from the National Commission for Science, Technology and Innovation (NACOSTI) by submitting a formal letter of introduction from the University of Nairobi. The research permit for conducting the study was granted by the Nairobi County office of Education. The researchers gained subsequent authorization from the Ministry of Education, namely the Department of Early Learning and Basic Education, as well as

from the head teachers of the selected schools. The researcher scheduled meetings with the principals of selected primary schools. During the scheduled session, the researcher provided a comprehensive overview to the school staff regarding the study's goal and objectives. Subsequently, the distribution of questionnaires occurred, followed by the request for respondents to complete them under the supervision of the researcher. The questionnaires that were filled out by the respondents were gathered on the day of their administration.

Data Analysis Techniques

Once all relevant data had been collected, a process of data cleaning was undertaken in order to identify and extract significant information. This process served to inform the subsequent analysis and enhance the overall quality of the dataset. Following the process of data cleaning, the collected information was encoded and subsequently entered into the SPSS software in order to facilitate the analysis of the data. Descriptive statistics were employed to effectively display and summarize quantitative data in a concise manner, utilizing a combination of frequency tables, percentages, and statistical analysis. The utilization of a computer spreadsheet was necessary for the analysis of quantitative data, thereby leading to the adoption of the Statistical Package for Social Science. The frequencies of variables were computed and expressed as percentages, together with the use of frequency tables, in order to derive a relevant conclusion. The qualitative data underwent analysis through the method of content analysis, which involved the systematic organization of data into various subjects, patterns, and subtopics.

A correlation study was performed to determine the extent to which school-related characteristics are associated with the implementation of inclusive education. Regression analysis was employed to assess the extent to which the implementation of inclusive education is influenced by a mix of school-related characteristics, and to establish the statistical significance of this relationship. The

coefficients of correlation ascertain the degree to which variations in the availability and sufficiency of teaching and learning materials, the availability and appropriateness of physical facilities, the adequacy of teachers' professional training, and the adaptation of assessment procedures impact the execution of inclusive education. The significance of the association between teaching and learning materials, physical facilities, teacher's professional training, and adjustment of assessment processes and implementation of inclusive education was established using Pearson's correlation coefficients.

The regression equation was formulated in the following manner:

$$Y = \alpha + \beta_1 X_{1+} \beta_2 X_2 + \beta_3 X_{3+} \beta_4 X_4$$

Where:

Y = Implementation of Inclusive Education

α = constant (coefficient of intercept)

X_1 = Teaching and Learning Materials

X_2 = Physical Facilities

X_3 = Teachers Professional Training

X_4 = Modification of Assessment Procedures

$\beta_1 \ldots \beta_4$ = regression coefficient of the four variables

Ethical Considerations

In order to uphold research ethics, the researchers got a research authorisation letter from the Department of Educational and a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). The participants were given detailed information regarding the objectives of the research in order to facilitate their ability to make an educated

choice regarding their involvement in the study. The participants were also duly informed of their voluntary right to withdraw from the study in the event of any perceived grievances. Prior to the delivery of the questionnaire, the participants were obligated to provide their assent by signing consent papers, indicating their agreement to participate as respondents. In order to safeguard the privacy and anonymity of the respondents, it was not mandatory for them to provide their identities on the questionnaires.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION

Introduction

This chapter summarizes the research findings of an examination into the impact of school-related factors on the implementation of inclusive education in public secondary schools in Kamukunji Sub-county, located in Nairobi City County. The results are presented according to the demographic features of the participants, the findings based on the study objectives, and the correlation analysis.

Response rate

The researcher distributed a total of 8 surveys to school principals and 67 questionnaires to teachers. Table 4.1 presents the surveys that were effectively completed and thereafter returned for the purpose of analysis. All schools were subject to observations of their physical facilities and learning materials in accordance with the prescribed observation schedule.

Table 4.1: Response rate

Category	Sample	Returned	Percentage (%)
Principals	8	7	87.5
Teachers	67	64	95.5

Total	**75**	**71**	**94.5%**

The return rate of 71 (94.5%) as presented in Table 4.1 was deemed enough for conducting analysis and making inferences in the study. Stephen et al. (2016) argue that while it is ideal for researchers to aim for a response rate of 100%, it is not feasible to get such a high percentage in practice. Therefore, they suggest that a more realistic target for response rates should fall within the range of 70% to 80%. In a similar vein, Kothari (2011) notes that achieving a response rate of 70% or more is considered highly favorable. The school principals and teachers exhibited a notable level of engagement, which can be attributed to the structured nature of the questionnaires. By providing predetermined response options that accurately captured their circumstances, respondents were able to efficiently complete the questionnaires, thus contributing to the high response rate. Consequently, there was an increase in the rate of return.

Demographic Information of the Respondents

This section provides an overview of the demographic characteristics of the participants, including their gender, educational background, and work experience. The information is organized into the following subsections:

Distribution of Respondents by Gender

The implementation of inclusive education might be influenced by gender variations observed among male and female teachers. Priyadarshini and Thangarajathi (2017) conducted a study examining the impact of various factors on the attitudes of regular teachers towards education. Their findings indicate that female teachers exhibit a more favorable attitude towards inclusive education when compared to their male counterparts. This can be attributed to the greater patience demonstrated by female teachers in handling challenging circumstances. Contrary to expectations, the study conducted by Kent et al. (2022) explored the phenomenon of gender polarization in

teachers' attitudes towards inclusive education. The findings revealed that female teachers exhibited greater apprehension in regard to the integration of learners with special needs, as they perceived themselves to be less prepared than their male counterparts in effectively addressing the needs of these learners. Based on the findings of the United Nations Girls Education Initiative (2016), Al-Ghaib et al. (2017), and Cheshire (2017), the inclusion of female teachers plays a crucial role in mitigating the underrepresentation of girls with disabilities in the education system. This is achieved through the transformation of societal attitudes, the provision of mentorship, and the promotion of educational pursuits among girls with disabilities. Hence, it was crucial to ensure the involvement of both female and male educators in the implementation of inclusive education. Table 4.2 presents the gender breakdown of the teachers:

Table 4.2: Distribution of Teachers and Principals by Gender

Gender	**Teachers**		**Principals**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Male	44	68.8%	4	57.1%
Female	20	33.2%	3	42.9%
Total	**64**	**100%**	**7**	**100%**

According to the data presented in Table 4.2, it is evident that there is a notable disparity in the gender distribution of teachers and principals in public secondary schools within Kamkunji Sub County. The table reveals that male teachers account for a substantial majority, including 68.8% (44 individuals), while male principals comprise 57.1% (4 individuals) of the total. In contrast,

female teachers represent a substantially lower proportion, comprising just 33.2% (20 individuals), and female principals account for 42.9% (3 individuals). This suggests that male teachers exhibit a greater level of involvement in the implementation of inclusive education as compared to their female counterparts. Although there is no discernible disparity in the teaching capabilities of male and female educators when it comes to instructing students with disabilities, variances in their attitudes towards inclusivity, as evidenced by the studies conducted by Priyadarshini and Thangarajathi (2017) and Kent et al. (2022), underscore the need for equitable involvement of both genders. This is because attitudes play a significant role in shaping teachers' willingness to integrate students with disabilities into mainstream educational settings and create an inclusive learning environment where these students feel fully integrated within the regular school system. Moreover, the inclusion of female educators plays a crucial role in serving as mentors and fostering the educational aspirations of girls with disabilities. This is supported by the findings of United Nations Girls Education Initiative (2016), Al-Ghaib et al. (2017), and Cheshire (2017), who have all highlighted the prevalent underrepresentation of girls with disabilities in the field of education. Therefore, it is crucial to augment the representation of female educators in order to attain gender equality and foster greater inclusion of girls with disabilities in educational settings.

Distribution of Participants based on their Highest Level of Educational Attainment

The degree of education attained by teachers has a significant impact on their competence and attitude when it comes to the implementation of inclusive education. Several academic studies conducted by Alieto and Caspillo (2022), Hamid and Mohamed (2021), and Hassanein et al. (2021) have demonstrated that teachers who receive pre-service training in inclusive education possess

the necessary competence to provide high-quality education to students with disabilities. As a result, these teachers hold positive perceptions towards inclusive education, as they feel confident in their ability to effectively deliver instruction. In contrast, educators who possess inadequate training express concerns regarding their ability to effectively cater to students with impairments. In a similar vein, the study conducted by Costello and Boyle (2018) established that secondary school teachers with pre-service training that had enrolled in postgraduate Research findings suggest that the effectiveness of implementing inclusive education is higher among educators who have participated in specialized programmes, as opposed to those who have solely completed undergraduate courses. Hence, it was imperative to ascertain whether the teachers possess the necessary professional credentials to deliver high-quality inclusive education to secondary school children with special needs. Table 4.3 presents the distribution of teachers according to their highest level of educational attainment:

Table 4.3: Respondents Highest Level of Education

Level	**Teachers**		**Principals**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Degree	61	95.3	4	57.1
Masters	3	4.7	3	42.9
Total	**64**	**100%**	**7**	**100%**

According to the findings shown in Table 4.3, it can be observed that educators and administrators in the public secondary schools in Kamkunji have the requisite professional credentials that are mandated for teaching at the secondary school level. Out of the total number of instructors, 61 individuals, accounting for 95.3%, possess a degree in education. Similarly, among the school principals, 4 individuals, representing 57.1%, hold a degree. As to the regulations outlined by the

Teachers Service Commission (2021), it is required that a secondary school has a Bachelor's Degree in Education, along with a minimum of two compulsory teaching subjects. Therefore, the majority of teachers possess the necessary qualifications. Additionally, it is observed that 3 out of 7 principals, accounting for 42.9%, own a master's degree. Similarly, 3 out of 64 teachers, representing 4.7%, hold a master's degree. This level of education guarantees that educators possess a high degree of expertise in the subjects they teach and the essential skills required to provide effective instruction to students with special needs. Therefore, it is imperative for teachers in public secondary schools to possess the necessary professional qualifications in order to effectively instruct students at the secondary school level.

Distribution of Teachers by their Teaching Experience

The expertise of teachers in instructing students with impairments has a significant impact on their self-assurance and proficiency in providing high-quality education. Priyadarshini and Thangarajathi (2017) conducted a study examining the impact of various factors on the attitudes of regular teachers towards education. The findings of their research indicated that teachers with extensive experience in instructing students with disabilities possess a more comprehensive comprehension of the unique requirements and characteristics of these students. Consequently, these educators exhibit inherent self-assurance and maintain a favorable disposition towards inclusive education due to their enhanced understanding of instructional strategies and accommodations for students with disabilities. Therefore, it was crucial to ascertain the level of experience among instructors in the field of education, as depicted in Table 4.4, which presents the duration of teachers' tenure in secondary schools. :

Table 4.4: Year of Service in the Teaching Profession

Years	Teachers		Principals	
	Frequency	Percentage (%)	Frequency	Percentage (%)

Less than one year	2	3.1	-	-
1-9 years	13	20.3	-	-
10-19 years	36	56.3	2	28.6
Over 20 years	13	20.3	5	71.4
Total	**64**	**100%**	**7**	**100%**

According to the data presented in Table 4.4, a substantial number of both teachers and principals in secondary schools in the Kamkunji region possess a notably extensive tenure in the field of secondary education. More than half (56.3%) of the teachers possess teaching experience ranging from 10 to 19 years, whilst a majority (71.4%) of school principals have accumulated over 20 years of expertise. Hence, a significant number of educators possessed a decade of teaching experience both preceding and following the implementation of the 2018 Sector Policy for Learners and Trainees with Disabilities. This policy consequently facilitated the inclusion of students with special needs within mainstream educational institutions. Therefore, these educators possess expertise and practical understanding of the amount to which inclusive education has been implemented within their individual schools, as well as the various school-related issues that have either facilitated or hindered the integration of students with special needs into mainstream educational settings.

Status of Implementation of Inclusive Education in Public Secondary Schools

The variable under consideration pertained to the implementation of inclusive education. Hence, the objective of this research was to assess the extent to which inclusive education is being implemented in public secondary schools in Kamkunji Sub County. This assessment was based on factors such as the enrollment of students with disabilities in these schools, the distribution of these

students according to their specific disabilities, and the level of integration observed within the schools. These aspects will be discussed in the following sections:

Enrolment of Learners with Disabilities in Public Secondary Schools

Table 4.5 indicates distribution of the leaners based on their disability in public secondary schools in Kamkunji

Table 4.5: Distribution of Learners with Disabilities based on their Disabilities

Type of Disability	Frequency	Percentage (%)
Physically Impaired	28	63.6
Visually Impaired	8	18.2
Albinism	4	9.1
Hearing Impaired	4	9.1
Total	**44**	**100%**

According to the data presented in Table 4.5, it can be observed that students with physical impairments make up a substantial majority (63.3%) of the enrolled population in public secondary schools in Kamukunji. Conversely, students with vision impairments (18.2%), hearing impairments (9.1%), and those with Albinism (9.1%) represent the smallest proportions. This suggests that there is a limited degree of inclusion of students who have visual and hearing impairments. Learners with intellectual and developmental disabilities, learners with specific learning disorders such as dyslexia, and learners with autism have yet to be included in the mainstream educational system of public secondary schools in the Kamukunji area. A significant percentage (63.6%) of students integrated into secondary schools are individuals with physical impairments. This is due to the relative ease with which students with physical disabilities can participate in regular classroom settings alongside their non-disabled peers, as compared to students with other types of disabilities. These learners utilize standard learning materials similar to their non-disabled peers, necessitating only structural accommodations such as ramps,

modified school furniture, and accessible sanitation facilities. Moreover, these pupils possess the ability to independently navigate their surroundings or require minimum aid, mostly relying on mobility assistive devices such as crutches and wheelchairs. However, the proportion of visually impaired children integrated into secondary schools is limited to 18.2% due to their inability to independently navigate the classroom, perceive visual aids or writings on the blackboard, and read standard written texts. Consequently, students with visual impairments necessitate adapted learning resources, such braille machines, optical character recognition systems, low-vision calculators, braille or audio format notes, and large print materials. However, these resources are costly and infrequently accessible in public educational institutions. The proportion of students with hearing impairment is the lowest, accounting for 9.1% of the total student population. These students face challenges in comprehending auditory information, such as understanding the instructor's instructions and taking notes. Consequently, they may benefit from having a teacher who is proficient in sign language, the support of an interpreter, and the usage of hearing aids. These considerations present challenges for public schools in the integration of such learners into normal classrooms.

The aforementioned results contradict the findings presented by the Ministry of Education (2019), which indicated that students with hearing impairment comprised the highest percentage of enrolled students, followed by students with physical impairment and students with visual impairment (Republic of Kenya & Ministry of Education, 2019). The present study's results are in opposition to the findings of Ireri et al. (2020), which indicated a low enrollment rate of learners with physical disabilities (11 individuals) in public secondary schools within Tharaka Nithi County. Additionally, Adoyo (2019) discovered that only 259 learners with disabilities were enrolled in 65 regular schools. This suggests that, on average, there were only four learners

admitted per school. The greatest demographic of students enrolled in public schools in Siaya consisted of individuals with learning disabilities, followed by those with physical disabilities.

Enrolment Rates of Students with Special Needs

The survey was done in 8 public secondary schools, with a total student population of 2,808. The aggregate enrollment of students with disabilities at these educational institutions amounted to 44. Therefore, it can be observed that the proportion of students with disabilities in public secondary schools in Kamukunji is 1.6% of the total enrollment. This finding suggests a notable deficiency in the enrollment of students with disabilities within public secondary schools in the Kamukunji region.

The findings align with those presented by Edwina (2022), indicating that a significant number of principals reported low enrollment rates of students with disabilities in public secondary schools in Liberia. This is primarily attributed to the lack of educational materials in alternative formats, such as braille or audio, as well as the absence of sign language interpreters and inadequate provision of assistive devices within these schools. The findings of Ireri et al. (2020) align with the present study, as they also observed a low enrollment rate of students with physical disabilities in public secondary schools in Tharaka Nithi County. This was attributed to the absence of appropriate physical facilities. Similarly, Adoyo (2019) discovered that the number of students with disabilities admitted to schools in Siaya County was significantly low, with an average of only four students per school. This was primarily due to the limited availability of ramps (12.3%), wide entrances (13.8%), and accessible toilets (18.5%) in the schools. Hence, the limited number of students enrolling in schools within the Kamkunji area may potentially suggest a lack of adaptations made to the physical infrastructure to cater to the needs of students with disabilities.

However, these claims are in opposition to the data presented by the Ministry of Education, which indicates a 19% rise in the enrollment of students with disabilities from 2017 to 2019.

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Integration of Students with disabilities in Public Secondary Schools

Inclusive education was assessed based on the level of integration of leaners with disabilities in public secondary schools. Table 4.6 indicates teachers and principals perspective on the extent to which learners with disabilities have been integrated in their respective schools measured on a

Likert Scale of 1-5 **(1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Disagree):**

Table 4.6: Integration of Leaners with Disabilities in Public Secondary Schools

Statement	Mean	Std. Deviation
Learners with disabilities undertake learning in regular classroom settings with non-disabled peers	4.042	.719
Teachers use a variety of teaching approaches that accommodate the diverse strengths and different learning styles of learners with disabilities	4.059	.687
Learners with disabilities have access to sufficient modified learning materials that are suitable to their disabilities	1.239	.664
Structural adjustments have been made to school facilities to create a barrier free and disability friendly school environment that is accessible to learners with disabilities	1.225	.928
Assessment of learners with disabilities provides for reasonable accommodations/modifications to compensate for their disability related limitations	4.028	.715
Aggregate Mean and Standard Deviations	**2.918**	**0.742**

With an aggregate mean of 2.918 in Table 4.6, implies that respondents (teachers and principals) The study was conducted within a sample of eight publicly funded secondary schools, encompassing a collective student population of 2,808 individuals. The combined enrollment of students with impairments at these educational institutions totaled 44. Hence, it is evident that the percentage of students with disabilities in public secondary schools within the Kamukunji region amounts to 1.6% of the overall student population. The aforementioned discovery indicates a significant inadequacy in the inclusion of students with disabilities in public secondary schools in the Kamukunji district.

The results are consistent with the research conducted by Edwina (2022), which suggests that a considerable proportion of principals in public secondary schools in Liberia have reported a decline in the enrollment rates of students with disabilities. The primary cause of this issue can be linked to the insufficient availability of educational resources in alternative formats, such as braille or audio, as well as the absence of sign language interpreters and poor provision of assistive devices within these educational institutions. The observations made by Ireri et al. (2020) are consistent with the current study, as they similarly identified a low incidence of enrollment among students with physical disabilities in public secondary schools in Tharaka Nithi County. The lack of suitable physical infrastructure was identified as the cause of this issue. In a similar vein, Adoyo (2019) conducted a study which revealed a noteworthy disparity in the enrollment of kids with disabilities at schools located in Siaya County. The findings indicated a considerably low admission rate, with an average of merely four pupils per school. The primary contributing factor to this issue can be attributed to the restricted accessibility of ramps (12.3%), spacious entrances (13.8%), and inclusive restroom facilities (18.5%) within educational institutions. Therefore, the relatively low enrollment of children at schools located in the Kamkunji area may indicate a potential deficiency in the modifications made to the physical infrastructure to accommodate the requirements of students with disabilities.

Nevertheless, the aforementioned assertions are contradictory to the statistics provided by the Ministry of Education, which reveals a notable increase of 19% in the enrollment of students with disabilities between the years 2017 and 2019.

Availability of Suitable Teaching and Learning Materials

The primary aim of this study was to examine the impact of the availability and sufficiency of teaching and learning resources on the successful implementation of inclusive education.

Consequently, the researcher employed an observation schedule to assess the presence of adapted learning materials within educational institutions. Furthermore, the researcher evaluated the sufficiency of these materials and conducted a correlation analysis to ascertain the impact of teaching and learning materials on the execution of inclusive education. The subsequent sections of this paper will present the findings. :

Availability of Suitable Teaching and Learning Materials

Table 4.7 shows availability of modified teaching and learning materials among the 8 secondary schools in Kamukunji:

Table 4.7: Availability of Suitable Teaching and Learning Materials

Learning Material/Device	Available		Not Available	
	Number of schools	%	Number of schools	%
1. Large Print materials	8	100%	-	.
2. Braille	8	100%	-	-
3. Low-Vision and Talking Calculators	1	12.5%	7	87. 5%
4. Computers with enlarged screen images	-	-	8	100%
5. Portable audio tape recorder	2	25%	6	75%
6. Computers with Optical Character Recognition Systems	-	-	8	100%
7. Hearing Aids	3	37.5%	5	62.5%
8. Eye Glasses/Contact lanes	8	100%	-	-

According to the data presented in Table 4.7, it can be observed that each of the eight public secondary schools in Kamukunji possesses a collection of large print materials. These materials are specifically designed to cater to students with low vision who encounter difficulties in reading small print. By offering standard texts in enlarged formats, these schools aim to facilitate improved

readability for such students. Additionally, the schools also provide braille machines, which are utilized by learners with complete visual impairment to transcribe notes during classroom sessions. Learners with visual impairments in all eight schools utilized corrective eyewear, such as eyeglasses or contact lenses, to improve their visual acuity. All educational institutions are equipped with braille materials and large print resources to accommodate visually impaired pupils. Additionally, kids with low vision at these schools are provided with appropriate eyeglasses. This study contradicts the research conducted by Edwina (2022), which reported that 95.74% of students in public secondary schools expressed a lack of availability of educational resources in alternate formats, such as braille.

The absence of optical character recognition systems in the schools hinders the conversion of text into audible speech, hence impeding students with visual impairment. Additionally, the utilization of computers with magnified screen images may restrict the reading capabilities of students with low vision, particularly when it comes to maps and diagrams. A significant proportion of schools, specifically 75%, lack portable audio recorders. This gadget is utilized to capture audio format notes for students who are unable to transcribe notes as a result of physical disabilities affecting their fingers/hands and vision impairments. The absence of this device in the majority of schools may restrict the accessibility to audio-format notes for students with such needs. Likewise, a significant majority of pupils in 87.5% of the schools surveyed lack access to low vision aids, such as talking calculators. The calculators are equipped with enlarged keys, which are easily discernible by students with visual impairments. Additionally, these calculators utilize audio speech technology to audibly announce the inputted keys and the resulting calculations, catering specifically to students with visual impairments. Therefore, the absence of these calculators in the majority of schools could potentially create difficulties for visually impaired pupils in areas that

include mathematical computations. In 62.5% of the schools, students who have hearing issues lack access to hearing aids, which would improve the audibility of teachers. Hearing aids are only present among learners in 3 out of 8 schools, accounting for 37.5% of the total.

The results of this study align with those of Edwina (2022), who found that 95.74% of students in public secondary schools reported a lack of educational resources in alternative formats, such as audio. Additionally, all of the students (100%) claimed that their schools did not supply hearing aids. In a similar vein, Okongo et al. (2015) discovered that the insufficiency of appropriate teaching and learning resources in pre-schools in Nyamira North has had a negative impact on the enrollment and retention of students with special needs. This was evidenced by 78% of teachers and education officials. Hence, the absence of optical character recognition devices, PCs with expanded screen images, portable audio recorders, and low vision and talking calculators may impede the successful implementation of inclusive education in secondary schools in Kamkunji.

Suitability of Teaching and Learning Materials

at order to assess the appropriateness of materials, educators and administrators were mandated to indicate the degree to which students with various disabilities at their educational institutions possessed materials that catered to their specific disabilities. This assessment was conducted using a Likert scale, as outlined in Table 4.8:

Table 4.8: Suitability of Teaching and Learning materials

Statement	Mean	Std. Dev
Each learner with complete visual impairment has their own braille for taking notes in class.	2.557	.968
Each learner who cannot read small prints is provided with large print materials	2.663	.980

Each leaner with hearing challenges or difficulties has a pair of hearing aids to enhance their vision teachers audibility	2.476	.997
The school has computers with enlarged screen images to enable learners with low vision from reading maps and diagrams	2.802	1.004
The school has optical character recognition systems for converting texts into audio format for students with visual impairment.	1.620	.457
Each teacher has an audio recorder for recording audio format notes for students who cannot write notes in class	1.225	.928
Aggregate Mean and Standard Deviation	**2.223**	**0.889**

Based on the average score of 2.223, it was found that the teachers held divergent opinions regarding the adequacy of teaching and learning resources available in their individual educational institutions. The teachers held differing opinions regarding the provision of individualized braille materials for students with complete visual impairment, the provision of large print materials for students who struggle to read small prints, and the provision of hearing aids for students with hearing difficulties to improve audibility in the classroom. The educational institutions are deficient in crucial technological resources, as there is a disagreement among teachers regarding the provision of enlarged screen images to facilitate the reading of maps and diagrams for students with low vision, computers equipped with optical character recognition systems to convert texts into audio format for visually impaired students, and audio recorders for capturing lecture notes in audio format for students who are unable to take written notes in class. Hence, it can be observed that public secondary schools in Kamukunji lack appropriate teaching and learning resources to effectively incorporate students with disabilities into mainstream classrooms and facilitate the implementation of inclusive education.

The study conducted by Okongo et al. (2015) revealed that a deficiency in appropriate teaching and learning resources in pre-schools in Nyamira North has had a negative impact on the enrollment and retention of students with special needs. This conclusion was drawn based on the perspectives of a majority of teachers and education officials involved in the study. Consequently, individuals with impairments are less inclined to enroll in educational institutions that lack the necessary resources to facilitate their inclusion in mainstream classrooms. According to Mokalang (2019), the lack of teaching resources results in teachers approaching subjects in a conceptual fashion, which can be perceived as dull and unstimulating, thereby diminishing students' interest in the subject. Hence, the absence of appropriate instructional and educational resources for students with disabilities may impede the successful inclusion of these students in mainstream secondary school classrooms within Kamkunji Sub County.

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Influence of Teaching and Learning Materials on Inclusive Education

Pearson's Correlation Co-efficient was used to determine significance of the effect of teaching and learning materials on implementation of inclusive education as shown in Table 4.9:

Table 4.9: Influence of Teaching and Learning Materials on Inclusive Education

		Implementation of Inclusive Education	Large print materials	Computers with enlarged screens	Braille	Hearing Aids	Audio Recorder	Optical character recognition systems
Implementation of Inclusive Education	Pearson Correlation	1	.724**	.595**	.716**	.634**	.432*	.426**
	Sig. (2-tailed)		.000	.000	.000	.000	.041	.000
	N	71	71	71	71	71	71	71

Large print materials	Pearson Correlation	.724**	1					
	Sig. (2-tailed)	.000						
	N	71	71					
Computers with enlarged screens	Pearson Correlation	.595**	.891**	1				
	Sig. (2-tailed)	.000	.000					
	N	71	71	71				
Braille	Pearson Correlation	.716**	.971**	.917**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	71	71	71	71			
Hearing Aids	Pearson Correlation	.634**	.917**	.972**	.944**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	71	71	71	71	71		
Audio Recorder	Pearson Correlation	.432*	.303*	.270*	.294*	.278*	1	
	Sig. (2-tailed)	.000	.000	.001	.001	.001		
	N	71	71	71	71	71	71	
Optical character recognition systems	Pearson Correlation	.426**	.531**	.473**	.515**	.486**	.571**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	71	71	71	71	71	71	71

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The correlation coefficients (r) in Table 4.10 demonstrate a favorable relationship between the adoption of inclusive education and the various teaching and learning materials/devices. The results of the study indicate that there are several effective accommodations for individuals with visual impairments. Large print materials ($r=0.724$; $p=0.000<0.005$), computers with enlarged screens ($r=0.595$; $p=0.000<0.005$), and Braille ($r=0.716$; $p=0.000<0.005$) were found to have a significant positive correlation with improved accessibility. Additionally, the use of hearing aids ($r=0.634$; $p=0.000<0.005$), audio recorders ($r=0.432$; $p=0.000<0.005$), and optical character recognition systems ($r=0.426$; $p=0.000<0.005$) were also found to be effective accommodations

for individuals with visual impairments. Based on the observation that all coefficients of correlation exhibit positive values and the p-values are below the threshold of 0.05, it can be inferred that the utilization of teaching and learning resources has a positive and statistically significant impact on the implementation of inclusive education.

These findings align with those of Adeogun (2018), who discovered a robust and statistically significant correlation between instructional resources and the academic achievement of children in inclusive education. In a similar vein, Okongo (2015) conducted a study that demonstrated how the presence of teaching and learning tools within an inclusive educational environment might contribute to improved curriculum delivery and increased enrollment and retention rates among students with special needs. The assertions are further corroborated by the research conducted by Mokaleng (2019) and Mutungi (2018), which highlight that the insufficiency and unavailability of appropriate teaching and learning resources for students with disabilities impede teachers from successfully incorporating these students into mainstream classrooms, thereby impeding the implementation of inclusive education.

Furthermore, this study examines the impact of physical facilities on the integration of learners with disabilities in ordinary secondary schools, in addition to the provision of teaching and learning materials. This aspect will be discussed in the subsequent section.

Availability and Suitability of Physical Facilities in Public Secondary Schools

The primary aim of this research was to ascertain the impact of physical infrastructure on the successful implementation of inclusive education. Consequently, the researcher employed an observation schedule to assess the accessibility of physical facilities within the educational institutions. Additionally, the researcher evaluated the appropriateness of these facilities for

accommodating students with disabilities. Furthermore, a correlation analysis was conducted to examine the impact of physical facilities on the implementation of inclusive education, as elaborated in the subsequent sections:

Availability of Physical facilities

Table 4.10 presents findings on availability of physical facilities in public secondary schools in Kamukunji:

Table 4.10: Availability of Physical facilities

Physical Facilities	Available		Not Available	
	Number of schools	%	Number of schools	%
1. Modified Furniture (tables, chairs and desks)	-	-	8	100%
2. Spacious classrooms with sufficient space and non-slippery floor	7	87.5%	1	12.5%
3. Ramps	6	75%	2	25%
4. Accessible and passable Pathways	6	75%	2	25%
5. Accessible toilets	1	12.5%	7	87.5%
6. Adaptive sport facilities	-	-	8	100%

According to the data presented in Table 4.10, a significant proportion of the public secondary schools in Kamkunji (87.5%) possess classrooms that are characterized by ample space and non-slippery flooring. This particular infrastructure facilitates the smooth movement of learners with disabilities within the classroom environment, hence minimizing the likelihood of accidents or falls. Seventy-five percent of the schools surveyed possess ramps and paths that are both accessible and navigable. This suggests that educational institutions have implemented changes to classrooms, entrances, and paths in order to improve accessibility and facilitate movement inside the school premises. Ramps serve the purpose of providing access to school buildings and classrooms in situations where staircases present barriers to entry, notably for individuals utilizing wheelchairs or crutches. The presence of accessible paths enhances the mobility

experience for those utilizing wheelchairs and crutches, enabling them to navigate between buildings with minimal hindrances. This facilitates a safe and effortless movement, ensuring that learners with mobility impairments can traverse their surroundings without encountering obstacles.

These findings align with the research conducted by Adoyo (2019), which revealed that 73.8% of public secondary schools in Siaya County possessed adequately roomy classrooms. Additionally, 86.2% of these schools were equipped with non-slippery floors, while 58.2% had routes that were easily accessible. However, the results presented here are in contrast to the findings reported by Edwina (2022), who discovered that a significant majority of students (74.5%) attending public secondary schools reported the absence of ramps in their educational institutions. Additionally, a substantial proportion of students (85.1%) expressed that the classrooms were not adequately spacious to accommodate the needs of wheelchair users in terms of seating and mobility.

There is a lack of furniture modifications in the public secondary schools located in Kamukunji to cater to the needs of students with disabilities. The utilization of adjustable or customized furniture that accommodates the height of the individual promotes improved usability and facilitates a comfortable seated position, which is essential for engaging in activities such as reading, writing, and maintaining focus during classroom instruction. Modifying laboratory tables and library reading tables to accommodate those with disabilities, such as those using wheelchairs or individuals of shorter stature, facilitates their active engagement in experimental procedures and academic pursuits. This facilitates their assimilation and inclusion in crucial educational endeavors. Hence, the schools' incapacity to adapt their equipment could pose a substantial obstacle to their integration inside normal classes and impede students' involvement in essential learning activities conducted in laboratories and school libraries. There have been no modifications made to the sports facilities of any of the schools. The absence of necessary adaptations to school sports facilities hinders the engagement of students with disabilities, resulting in their exclusion and feelings of social marginalization. Moreover, it can be inferred that a significant majority of schools, specifically 7 out of 8 (equivalent to 87.5%), own toilets that are not easily accessible. Consequently, this lack of accessibility may result in learners experiencing difficulties or discomfort when utilizing the restroom facilities at school. According

to Malik (2018), the successful integration of learners with disabilities into mainstream schools necessitates the execution of structural modifications to establish an inclusive learning environment that accommodates the needs of these learners. Hence, the absence of adapted school furniture, restroom facilities, and sports amenities presents a hindrance that renders the learning environment inaccessible to students with disabilities, which contradicts the objective of inclusive education.

Nevertheless, the results align with the findings of Edwina (2022) about the alteration of sporting facilities, as all of the participants (100%) in our study said that individuals with disabilities faced barriers in participating in sitting volleyball, wheelchair basketball, and blind soccer. In a study conducted by Ireri et al. (2020), it was found that the low enrolment of students with disabilities in public secondary schools in Tharaka Nithi County can be ascribed to the absence of modified physical facilities. This was reported by 88% of the teachers surveyed. Hence, the absence of adapted classroom furniture, restroom facilities, and sports amenities may impose constraints on the enrollment of students with disabilities in public secondary schools within the Kamkunji region.

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Suitability of Physical Facilities in Public Secondary Schools

Teachers and school principals were required to indicate the extent to which facilities in their respective schools had been modified to accommodate learners with disabilities using a Likert scale as shown in Table 4.11:

Table 4.11: Suitability of Physical Facilities in Public Secondary Schools

Statement	Mean	Std. Deviation
The desks, tables and chairs in class, library and laboratory are modified to ensure learners with physical disabilities can use them comfortably	1.056	.232
The classes are large with sufficient spaces and non-slippery floors to facilitate ease of movement and safety of leaners using wheelchairs; crutches and those with white canes.	4.028	.166

The school buildings are accessible through wide ramps with gentle slopes for safe movement of leaners with disabilities	4.042	.202
The school buildings are connected through accessible pathways	4.041	.118
The school has modified sports facilities to facilitate participation of leaners with disability in sports such as sitting volleyball and wheelchair basketball	1.225	.928
The school toilets and bathrooms are modified and easily accessible to learners with disability.	1.619	.457
Aggregate Mean and Standard Deviation	**2.668**	**0.350**

Based on the average score of 2.668, it may be inferred that the teachers expressed a lack of agreement regarding the adequacy of the physical amenities in their particular schools. A standard deviation of 0.350 indicates that the individual data sets exhibit a high degree of proximity to the mean, as they deviate from the mean by a mere 0.3 points. According to the teachers, the schools possess classrooms that are characterized by their spaciousness and non-slip flooring, which promote both ease of movement and learner safety (Mean=4.028). Additionally, the school buildings are designed to be accessible, featuring wide ramps with gradual inclines to ensure the safe mobility of learners with disabilities (Mean=4.042). Furthermore, the school buildings are interconnected by pathways that are also designed to be accessible (Mean=4.042).

These findings align with those presented by Adoyo (2019), which demonstrated that a significant number of public secondary schools in Siaya County had made adjustments to their classrooms and educational programs in order to better meet the needs of students. Based on the findings of the study, it was observed that a significant proportion of schools, specifically 73.8%, possessed classrooms characterized by enough space. Furthermore, a substantial majority of schools, amounting to 86.2%, were equipped with floors that exhibited non-slippery properties. Additionally, more than half of the schools surveyed, precisely 58.2%, featured routes that were accessible in nature.

However, the findings presented in this study are in contrast to those reported by Edwina (2022), who found that a significant number of public secondary schools had not made any modifications to their classrooms and entrances to cater to the needs of students with disabilities. Based on the findings of the study, it was observed that a significant proportion of students, specifically 74.5%, reported the absence of ramps within their educational institutions. Additionally, a substantial majority of students, up to 85.1%, expressed that the classrooms lacked spaciousness. In a similar vein, the study conducted by Ireri et al. (2020) revealed that public secondary

schools in Tharaka Nithi County were equipped with multi-level structures featuring staircases, although they were deficient in providing alternative ramping approaches.

The results presented in Table 4.11 demonstrate that according to the responses of teachers, modifications have been made to school furniture in order to accommodate the needs of students with physical disabilities, as indicated by a mean score of 1.056. However, it was found that sports facilities have not been adapted to facilitate the participation of students with disabilities in sports, as evidenced by a mean score of 1.225. Additionally, the study revealed that school toilets were not accessible to students with disabilities, with a mean score of 1.619. Consequently, the furniture, sports facilities, and bathrooms have not undergone any modifications to ensure their suitability for individuals with impairments. The present findings align with those of Adoyo (2019), indicating that while a significant number of public secondary schools in Siaya County have made adjustments to their classrooms and pathways to cater to students with disabilities, only 18.5% of these schools have implemented accessible toilet facilities. In a similar vein, Edwina (2022) discovered that there had been no modifications made to the sport facilities in public secondary schools. Consequently, individuals with impairments were unable to engage in activities such as sitting volleyball, wheelchair basketball, and blind soccer.

Influence of Physical Facilities on Implementation of Inclusive Education

Pearson's Correlation Co-efficient was used to determine significance of the effect of physical facilities on implementation of inclusive education as shown in Table 4.12:

Table 4.12: Influence of Physical Facilities on Implementation of Inclusive Education

		Implementation of Inclusive Education	Modified Furniture	Classrooms	Ramps	Accessible Pathways	Modified Sports Facilities	Accessible Toilets
Implementation of Inclusive Education	Pearson Correlation	1	.697**	.702*	.583**	.402**	.432**	.624**
	Sig. (2-tailed)		.000	.001	.002	.000	.001	.000
	N	71	71	71	71	71	71	71
Modified Furniture	Pearson Correlation	.697**	1					
	Sig. (2-tailed)	.000						
	N	71	71					
Classrooms	Pearson Correlation	.702*	.440**	1				
	Sig. (2-tailed)	.001	.000					
	N	71	71	71				

Ramps	Pearson Correlation	.583**	.860**	.811**	1			
	Sig. (2-tailed)	.002	.000	.000				
	N	71	71	71	71			
Accessible Pathways	Pearson Correlation	.402**	.489**	.602**	.569**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	71	71	71	71	71		
Modified Sports Facilities	Pearson Correlation	.432**	.600**	.420**	.510**	.429**	1	
	Sig. (2-tailed)	.001	.001	.001	.001	.000		
	N	71	71	71	71	71	71	
Accessible Toilets	Pearson Correlation	.624**	.501**	.730**	.590**	.510**	.571**	1
	Sig. (2-tailed)	.000	.003	.001	.004	.000	.000	
	N	71	71	71	71	71	71	71

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.10 illustrates the favorable link between the physical facilities and the implementation of inclusive education, as denoted by the correlation coefficients (r). The results of the correlation analysis indicate significant positive relationships between modified furniture (r=0.697; p=0.000<0.005), classrooms (r=0.702; p=0.001<0.005), ramps (r=0.583; p=0.002<0.005), accessible pathways (r=0.402; p=0.000<0.005), modified sports facilities (r=0.432; p=0.001<0.005), and accessible toilets (r=0.624; p=0.000<0.005). Based on the observation that all coefficients of correlation exhibit positive values and the p-values associated with these correlations are below the threshold of 0.05, it may be inferred that there is a positive and statistically significant relationship between physical facilities and the successful implementation of inclusive education.

There exists a significant and favorable relationship between the integration of modified furniture, classroom adaptations, ramps, and accessible bathrooms and the successful implementation of inclusive education. The aforementioned phenomenon can be ascribed to the necessity of incorporating students with disabilities into mainstream classrooms alongside their non-disabled counterparts in order to achieve inclusive education. The utilization of modified furniture in the classroom setting contributes to improved usability and promotes a more ergonomic sitting posture, which is essential for facilitating activities such as reading, writing, and maintaining focused attention. Ramps contribute to the promotion of inclusivity and accessibility within educational institutions by facilitating convenient mobility throughout school

premises and providing easy access to buildings and classrooms where educational activities occur. Similarly, the provision of accessible toilets ensures that students with disabilities can independently utilize restroom facilities with enhanced privacy and hygiene, thereby further supporting their overall well-being and comfort. There exists a moderate and favorable link between the adoption of inclusive education and the presence of modified sports facilities and accessible routes.

The present study aligns with the research conducted by Malik (2018), which highlights the necessity of suitable physical infrastructure tailored to accommodate learners with disabilities in order to facilitate the successful implementation of inclusive education. The research findings additionally confirmed the existence of a statistically significant positive correlation between the sufficiency of physical infrastructure in educational institutions and the successful execution of inclusive educational practices. The research conducted by Fonseca and Conboy (2016) and MOEST (2020) yielded comparable results, indicating that the implementation of inclusive education is more successful when there are adequate and appropriate physical facilities that have been adapted to accommodate the requirements of students with disabilities. This survey has also revealed that the furniture, athletic facilities, and bathrooms in public secondary schools in Kamkunji have not been adapted to accommodate learners with impairments. The present study's results align with those of Onyuka (2015), who notes that the absence of adaptations to physical infrastructure hinders the inclusion of children with disabilities in ordinary schools, as it creates physical obstacles that impede their connection with the school environment.

In addition to educational resources and infrastructure, this study also examined the impact of teachers' professional development on the inclusion of students with disabilities in mainstream schools, as discussed in the subsequent section.

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Professional Training of Teachers in Public Secondary Schools

The primary aim of this study was to assess the impact of teachers' professional training on the implementation of inclusive education in public secondary schools located in the Kamukunji region. Consequently, it was necessary for teachers to disclose whether they had received pre-service professional training at the degree level. Additionally, they were asked to indicate if they

had received pre-service training in special needs education at the degree level or had participated in in-service training to improve their instructional abilities for students with disabilities. A correlation analysis was performed to examine the impact of Teachers Professional Training on inclusive education. The aforementioned findings are detailed in the subsequent sections:

Teachers Professional Training

Table 4.13 shows teachers with professional training at the degree level among public secondary schools in Kamkunji:

Table 4.13: Teachers Professional Training

Qualifications	**Teachers**		**Principals**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Degree	61	95.3	4	57.1
Masters	3	33.	3	42.9
Total	**64**	**100%**	**7**	**100%**

According to the data presented in Table 4.14, it can be observed that the educational qualifications of teachers and principals at public secondary schools in Kamukunji predominantly consist of professional training at the degree level, with a subset of individuals possessing advanced training at the masters level. This suggests that they possess the necessary professional qualifications to instruct at the secondary education level. As to the regulations outlined by the Teachers Service Commission (2021), it is required that a secondary school possess a Bachelor's Degree in Education along with two compulsory teaching subjects. This educational standard guarantees that educators possess a high degree of expertise in the subjects they teach and possess the essential

skills to provide high-quality instruction to students with special needs. Therefore, it is imperative for educators in public secondary schools to possess the necessary professional qualifications in order to effectively instruct students at the secondary school level.

Teacher Training in Special Needs Education

Table 4.14 indicates teacher who have undergone training in special needs educations among public secondary schools in Kamukunji:

Table 4.14: Teachers Training in Special Needs Education

Qualifications	**Teachers**		**Principals**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Degree in Special Needs Education	9	14.1%	1	14.3
In-service Training in Special Needs Education	-	-	1	14.3
Degree in Education	55	85.9	5	71.4
Total	**64**	**100%**	**7**	**100%**

According to the data presented in Table 4.14, it can be observed that public secondary schools in Kamukunji exhibit a relatively low percentage of teachers (14.1%) who possess pre-service training in the field of Special Needs Education. None of the educators have received in-service training to augment their talents and proficiencies in instructing students with impairments. The majority of teachers employed in schools consist of regular teachers, accounting for 85.9% (55 individuals), who possess the necessary professional training mandated at the secondary school level. Likewise, it is noteworthy that a mere 1 (14.3%) of the school principals has a formal educational background in special needs education, while an equivalent proportion of 1 (14.3%)

have received in-service training pertaining to the field of special needs education. The majority of principals, specifically 71.4%, lack formal expertise in special education.

Florian (2019) posits that the successful implementation of inclusive education by teachers is contingent upon their sufficient preparation, which can be achieved through training programs that equip them with the necessary skills and competences to effectively instruct learners with disabilities. Insufficient readiness in the domain of inclusive education among educators can lead to deficiencies in teachers' comprehension of pedagogical techniques and other facets of inclusion. Hence, the absence of adequate training in inclusive education could potentially have a negative impact on the successful implementation of inclusive education practices within secondary schools situated in the Kamkunji region.

These findings align with the study conducted by Edwina (2022), which indicated that a significant proportion (70%) of teachers in public high schools in Liberia lacked formal training in inclusive education. In a similar vein, Adoyo (2019) discovered that a mere 74.5% of teachers in ordinary schools within Siaya County have not received training in inclusive education, as reported by the head teachers.

Influence of Teachers Professional Qualifications on Implementation of Inclusive Education

Pearson's Correlation Co-efficient was used to determine significance of the effect of teacher's professional qualification on implementation of inclusive education as shown in Table 4.15:

Table 4.15: Influence of Teachers Professional Qualifications on Inclusive Education

		Implementation of Inclusive Education	Teachers Professional Training	Training in Special Needs Education
Implementation of Inclusive Education	Pearson Correlation	1	.538**	.624**
	Sig. (2-tailed)		.000	.000
	N	71	71	71
Teachers Professional Training	Pearson Correlation	.538**	1	
	Sig. (2-tailed)	.000		
	N	71	71	
Training in Special Needs Education	Pearson Correlation	.624**	.130	1
	Sig. (2-tailed)	.000	.000	
	N	71	71	71

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

*. Correlation is significant at the 0.05 level (2-tailed).

According to the data presented in Table 4.15, there exists a positive correlation between the professional training of teachers and their training in special needs education, and the successful implementation of inclusive education. The professional training of teachers has been found to have a statistically significant and favorable impact on the successful implementation of inclusive education ($r=0.538$; $p=0.000<0.005$). The training of teachers in special needs education has been found to have a substantial and statistically significant impact on the successful implementation of inclusive education ($r=0.624$; $p=0.000<0.005$). Hence, the professional training of teachers plays a crucial role in the effective implementation of inclusive education.

The present findings align with those of Gorika and Popovoski (2019), who noted that while general pre-service teacher training provides teachers with the necessary professional qualifications, additional in-service training on special needs education is required for teachers to effectively recognize and address the needs of students with disabilities. Florian (2019) posits that the successful implementation of inclusive education by teachers is contingent upon their sufficient preparation through training programs that equip them with the necessary skills and competences

to effectively instruct learners with disabilities. Consequently, the successful inclusion of students with disabilities in mainstream secondary schools in the Kamukunji region may face challenges due to a lack of specialized training among the majority of teachers in effectively instructing students with special needs. Educators are anticipated to incorporate students with disabilities into their classrooms, which may cause conventional teachers lacking specialized training in special needs education (SNE) to experience a sense of inadequacy in effectively addressing the needs of these learners. According to UNESCO (2018) and Florian (2019), it has been noted that inadequate readiness in inclusive education among instructors might lead to deficiencies in their understanding of pedagogical approaches and other facets of inclusion. The potential consequence of this situation could be a detrimental impact on the acceptance of integrating students into regular classrooms, hence impeding the successful implementation of inclusive education. According to Omamo (2017), it is imperative for teachers to engage in ongoing professional development in order to enhance their skills, pedagogical approaches, and competency in effectively supporting students with disabilities. Additionally, this continuous training enables teachers to stay updated with advancements in inclusive education. Therefore, the absence of ongoing professional development opportunities for ordinary instructors in public secondary schools in Kamkunji may impede their capacity to give high-quality education to students with disabilities.

Modification of Learners Assessment Procedures

The primary aim of this study was to investigate the impact of modifying evaluation methods for students with disabilities on the implementation of inclusive education in public secondary schools in the Kamukunji region. Consequently, educators were obligated to document the adaptations implemented within their individual educational institutions to address the constraints associated

with disabilities. A correlation study was performed to analyze the impact of modifying learners' evaluation techniques on the implementation of inclusive education. The aforementioned findings are delineated in the subsequent sections:

Modifications of Assessment Procedures in Public Secondary Schools

Table 4.16 indicates extent of teachers' agreement with modifications used in their respective schools to compensate for disability related limitations using a Likert scale:

Table 4.16: Modification of Learners Assessment Procedures

Statement	Mean	Std. Deviation
Time allocated to learners with disability during exams is determined by nature and severity of their disability	4.915	.499
Leaners with disabilities are given additional time during exams to compensate for their disability related limitations	4.929	.390
Learners with visual impairment are provided exams in braille format	4.985	.118
Large print format exams are used for leaners with low vision	4.957	.202
Written copies of oral instructions are provided to leaners with hearing difficulties during exams	4.774	.420
Alternative assessments or testing are used for learners with disability	2.211	.773
Aggregate Mean & Standard Deviations	**4.461**	**0.400**

The data shown in Table 4.16 indicates that there is a collective average of 4.461, suggesting that teachers have reached a consensus on the need to adapt assessment processes for students with disabilities in order to accommodate their limits arising from their disabilities. A standard

deviation of 0.400 indicates that the data sets exhibit a high degree of proximity to the mean, as they deviate by a just 0.4 units from the mean. The educators expressed that they adapt evaluation protocols by considering the duration of the examination in relation to the characteristics and extent of the students' impairments (Mean=4.915). Learners who possess limitations that restrict their ability to complete an exam within the designated time frame are provided with supplementary time to finalize their examinations (Mean=4.929). Examinations are administered to individuals with total visual impairment in a braille format, with a mean score of 4.985. Examinations are administered to individuals with visual impairments using a format that presents the content in large print (Mean=4.957). Learners who have hearing impairments are provided with written copies of oral instructions during examinations (Mean=4,774).

However, they had a differing opinion regarding the existence of alternate methods for evaluating learners with disabilities (Mean=2.211). This suggests that students with disabilities in public secondary schools in Kamukunji are administered standard examinations similar to their non-disabled peers. However, accommodations are made for these students, such as providing them with additional time and offering the exams in appropriate formats. For visually impaired students, the exams are provided in braille, while learners with low vision receive large print versions. Additionally, students with hearing difficulties are given written copies of oral instructions.

In accordance with the findings of Bulat et al. (2017), the evaluation of students with disabilities necessitates the implementation of appropriate modifications, including the provision of reasonable accommodations such as granting additional time for examination completion and ensuring that exams are available in suitable formats. According to Malik (2018), learners with impairments have challenges that necessitate additional effort and time to successfully undertake and pass their examinations. As a result, individuals with disabilities are unable to fulfill the

requirements of examinations, assignments, or exams within the designated timeframe, in contrast to their non-disabled counterparts. Likewise, learners with visual impairments necessitate the provision of exams in a format that accommodates their specific needs, such as braille.

The results of this study contradict the findings of the National Gender and Equality Commission (2016), which indicated that students with disabilities are not provided with sufficient time adjustments to compensate for the slower writing pace associated with physical disabilities, despite taking the same examinations as their non-disabled peers. This study elucidated that students with disabilities undergo the administration of standardized examinations akin to their non-disabled peers. However, the assessment protocols are adapted to accommodate additional time for completion of exams, as well as the provision of exam materials in formats that are tailored to the specific disabilities of the students.

Influence of Modification of Assessment Procedures on Inclusive Education

Pearson's Correlation Co-efficient was used to determine significance of the effect of modification of Assessment on implementation of inclusive education as shown in Table 4.17:

Table 4.17: Influence of Modification of Assessment Procedures on Inclusive Education

		Implementation of Inclusive Education	Extension of Exam time	Braille Format Exams	Large print format exams	Alternative Forms of Assessment
Implementation of Inclusive Education	Pearson Correlation	1	.781**	.542**	.583**	.512**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	71	71	71	71	71
Extension of Exam time	Pearson Correlation	.781**	1			
	Sig. (2-tailed)	.000				
	N	71	71			
Braille Format Exams	Pearson Correlation	.542**	.220**	1		
	Sig. (2-tailed)	.000	.000			
	N	71	71	71		
Large print format exams	Pearson Correlation	.583**	.380**	.420**	1	
	Sig. (2-tailed)	.001	.000	.000		
	N	71	71	71	71	

Alternative Forms of Assessment	Pearson Correlation	.512**	.500**	.434**	.463**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	71	71	71	71	71

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

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.17 presents the correlation coefficients (r) indicating a beneficial relationship between revisions of evaluation techniques and the implementation of inclusive education. The results of the statistical analysis indicate a significant positive correlation between the extension of exam time and academic performance ($r=0.781$; $p=0.000<0.005$). Similarly, there is a significant positive correlation between the provision of Braille format tests and academic performance ($r=0.542$; $p=0.001<0.005$). Additionally, the use of large print format exams is significantly correlated with academic performance ($r=0.583$; $p=0.001<0.005$). Lastly, the availability of other forms of assessment shows a significant positive correlation with academic performance ($r=0.512$; $p=0.000<0.005$). Based on the observation that all coefficients of correlation exhibit positive values and the p-values are below the threshold of 0.05, it can be inferred that alterations in assessment processes have a statistically significant and beneficial impact on the implementation of inclusive education.

The findings presented are in alignment with According to Malik (2018), individuals with disabilities face limitations that prevent them from completing tests, assignments, or exams within the same timeframe as their non-disabled counterparts. Hence, individuals with disabilities necessitate additional dedication and time in order to engage in and successfully accomplish their examinations. Likewise, learners with specific needs necessitate the provision of examinations in a format that accommodates their own requirements, for as utilizing braille for those with visual impairments. Bulat et al. (2017) suggest that when assessing learners with impairments, it is important to offer appropriate accommodations, such as allowing additional time for exams and providing assessments in suitable formats.

Analysis of Variance

Analysis of Variance was used to determine there was a significant variation of school-related factors in relation to the implementation of inclusive education. This is presented in Table 4.18 below:

Table 4.18: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.043	4	2.011	25.445	.000[b]
	Residual	5.216	67	.079		
	Total	13.259	71			

a. Dependent Variable: Implementation of Inclusive Education

b. Predictors: (Constant), Teaching and Learning Materials, Physical Facilities, Teachers Professional Qualifications, Modification of Learners Assessment Procedures

According to the findings presented in Table 4.19, the F-value of 25.445 is deemed significant due to the p-value of 0.00 being lower than the predetermined significance level of 0.05. This suggests that the regression model holds statistical significance. A significance level of 0.000, which is less than 0.05, indicates that school-related factors have a statistically significant impact on the implementation of inclusive education.

Regression Analysis

The researchers employed multiple regression analysis to assess the degree to which Teaching and Learning Materials, Physical Facilities, Teachers Professional Qualifications, and Modification of Learners Assessment Procedures impact the implementation of inclusive education. The study also examined the significance of the correlation between these variables, as outlined in the subsequent sections:

Model Summary

Model summary measures the percentage of variability in implementation of inclusive education as determined by school related factors as presented in Table 4.19:

Table 4.19: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.779[a]	.607	.583	.28112

a. Predictors: (Constant), Teaching and Learning Materials, Physical Facilities, Teachers Professional Qualifications, Modification of Learners Assessment Procedures

According to Table 4.19, the coefficient of determination (R-Squared) has a value of 0.607. This suggests that the factors of Teaching and Learning Materials, Physical Facilities, Teachers Professional Qualifications, and Modification of Learners Assessment Procedures account for 60.7% of the variation observed in the Implementation of Inclusive Education. The unaccounted portion of 39.3% can be attributed to variables beyond the purview of this research, including the disposition of educators towards inclusive education, the sufficiency of specialized training among teachers in addressing special needs, familiarity with policies promoting inclusive education, and the accessibility of financial resources for facilitating the implementation of inclusive education.

Coefficients of Correlation

Coefficients of Correlation were used to determine the extent to which changes in school-related factors influence implementation of inclusive education as shown in Table 4.20:

Table 4.20: Coefficients of Correlation

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

		B	Std. Error	Beta		
1	(Constant)	5.210	2.366		2.302	.001
	Teaching and Learning Materials	.162	.032	.556	5.024	.000
	Physical Facilities	.198	.209	.164	3.944	.000
	Teachers Professional Qualifications	.525	.293	.294	4.791	.000
	Modification of Learners Assessment Procedures	.416	.317	.188	3.312	.001

a. Dependent Variable: Implementation of Inclusive Education

The following equation is derived from Table 4.20:

Implementation of Inclusive Education=5.210+0.162*Teaching & Learning Materials +0.198*Physical facilities+0.525*Teachers Professional Qualifications +0.416* Modification of Learners Assessment Procedures +e

Therefore,

$Y= 5.210+0.162X_1+0.198X_2+0.525X_3+0.416X_4+e$

Table 4.20 shows that when all school-related factors are constant, implementation of inclusive education=5.210. A unit rise in availability of adequate teaching and learning materials that are suitable for learners with disabilities leads to an increase in implementation of inclusive education by 0.162 units ($p=0.000<0.05$). A unit rise in availability of suitable physical facilities that are modified to accommodate learners with disabilities while other school related factors are constant leads to an increase in implementation of inclusive education by 0.198 units ($p=0.000<0.05$). A unit rise in teachers professional training while other school related factors are constant leads to an increase in implementation of inclusive education by 0.525 units ($p=0.000<0.05$). A unit rise in modification of assessment procedures while other school related factors are constant leads to an increase in implementation of inclusive education by 0.416 units ($p=0.001<0.05$).

Given that all the p-values are less than the significance level of 0.05, it can be concluded that teaching and learning materials; physical facilities; teacher professional qualifications; and modification of learners' assessment procedures have a positive and statistically significant effect on implementation of inclusive education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This study aimed to examine the impact of school-related factors on the implementation of inclusive education in public secondary schools in Kamukunji Sub-County, Nairobi City County.

Data collection in this study involved the utilization of questionnaires to gather information from instructors, while an observation checklist was employed to assess the presence and adequacy of physical facilities, as well as teaching and learning materials within the schools. The Statistical Package for Social Science (SPSS) was employed to conduct an analysis and generate descriptive statistics. These statistics were then presented in the form of percentages and frequency tables, allowing for a comprehensive and understandable conclusion to be drawn. The qualitative data underwent analysed through the method of content analysis. Regression analysis and the Pearson correlation coefficient were employed to examine the potential association between school-related characteristics and the implementation of inclusive practices, as well as to determine the statistical significance of this correlation. . Hence, this chapter provides a concise overview of the research outcomes aligned with the study's aims. It encompasses the inferences derived from the findings, policy suggestions, and recommendations for future research endeavors.

Summary of the Findings

The findings are summarized in accordance with the research objectives:

Influence of Teaching and Learning Materials on implementation of Inclusive Education in Public Secondary Schools in Kamukunji

This study has demonstrated a favorable association between the utilization of teaching and learning materials/devices and the implementation of inclusive education. There is a notable and statistically significant relationship between the use of large print materials and the adoption of inclusive education, as evidenced by a correlation coefficient of 0.724 and a p-value of 0.000, which is less than the significance level of 0.005. The implementation of inclusive education demonstrates a robust positive link with the utilization of Braille, as evidenced by a statistically significant correlation coefficient of 0.716 ($p < 0.005$). There is a robust and statistically significant

link between the use of hearing aids and the adoption of inclusive education ($r=0.634$; $p=0.000<0.005$). There is a robust and statistically significant link ($r=0.595$; $p=0.000<0.005$) between the utilization of computers with larger screens and the adoption of inclusive education. The research findings indicate that there is a moderate positive and statistically significant correlation ($r=0.432$; $p=0.000<0.005$) between the use of audio recorders and the implementation of inclusive education. Additionally, the study reveals a strong positive and statistically significant correlation ($r=0.426$; $p=0.000<0.005$) between the utilization of optical character recognition systems and the implementation of inclusive education.

This study revealed that all eight (100%) public secondary schools in Kamukunji possess extensive print materials catering to students with low vision who struggle with reading small print. These materials consist of standard texts that have been enlarged, facilitating easier reading for these students. Additionally, learners with complete visual impairment utilize braille machines to transcribe notes during class. Furthermore, it was observed that all schools provide eye glasses or contact lenses to students with low vision, thereby enhancing their visual capabilities. Nevertheless, it is worth noting that none of the educational institutions own computer systems equipped with optical character recognition technology or computers featuring magnified screen graphics. Approximately 75% of the schools surveyed lack portable audio recorders, while 87.5% of the schools surveyed do not possess poor vision and talking calculators. In 62.5% of schools, students with hearing impairments lack access to hearing aids, which are essential for improving the audibility of teachers.

Influence of Physical Facilities on implementation of Inclusive Education in Public Secondary Schools in Kamukunji

This study has proven a positive association between physical infrastructure and the implementation of inclusive education. There is a robust and statistically significant relationship between the adaptation of classrooms to cater to students with disabilities and the successful implementation of inclusive education. This is evidenced by a correlation coefficient of 0.702 and a p-value of 0.001, which is below the threshold of 0.005. There is a robust and statistically significant correlation between the utilization of modified furniture and the implementation of inclusive education ($r=0.697$; $p=0.000<0.005$). Similarly, the presence of accessible toilets exhibits a strong positive and statistically significant correlation with the implementation of inclusive education ($r=0.624$; $p=0.000<0.005$). Furthermore, the provision of ramps demonstrates a strong positive and statistically significant correlation with the implementation of inclusive education ($r=0.583$; $p=0.002<0.005$). This study provides additional evidence supporting the notion that there exists a moderate positive and statistically significant correlation between accessible pathways and the implementation of inclusive education ($r=0.402$; $p=0.000<0.005$). Furthermore, the study also reveals a moderate positive and statistically significant correlation between modified sports facilities and the implementation of inclusive education ($r=0.432$; $p=0.001<0.005$).

The findings of this study indicate that a significant proportion, specifically 87.5%, of public secondary schools in Kamkunji possess adequately sized classrooms with flooring that are not slippery. This feature facilitates the mobility of learners with disabilities within the classroom, hence reducing the likelihood of accidents or falls. Additionally, it was observed that 75% of these schools have implemented the provision of ramps and paths that are accessible and navigable for individuals with disabilities. Nevertheless, it is noteworthy that none of the public secondary schools in the Kamukunji region have undertaken the necessary modifications to their furnishings

in order to ensure accessibility for learners with disabilities. Additionally, none of these schools have made any adjustments to their sports facilities, thus exacerbating the lack of inclusivity. Furthermore, a staggering 87.5% of these schools have failed to provide accessible restrooms for learners with disabilities.

Influence of Teachers Professional Training on implementation of Inclusive Education in Public Secondary Schools in Kamukunji

The present investigation ascertained that the acquisition of specialized education training by teachers has a constructive and statistically noteworthy impact on the execution of inclusive education. This assertion is supported by a correlation coefficient of 0.624 and a p-value of 0.000, which is less than the predetermined significance level of 0.005. The implementation of inclusive education is positively and significantly influenced by the professional training of teachers, as evidenced by a correlation coefficient of 0.538 and a p-value of 0.000, which is less than the significance level of 0.005.

The present investigation revealed that all educators in public secondary schools within the Kamukunji region possess a professional training in education at the degree level. Nevertheless, the percentage of instructors with pre-service training in Special Needs Education is limited to a mere 14.1%. None of the educators have received in-service training to augment their talents and proficiencies in effectively managing and instructing kids with impairments. Therefore, a significant proportion of educators in secondary schools located in the Kamukunji region may lack the necessary training to effectively incorporate and provide high-quality education to students with disabilities. Consequently, their ability to cater to the unique requirements of these learners is compromised.

Influence of Modification of Assessment Procedures on implementation of Inclusive Education in Public Secondary Schools in Kamukunji

The present study aimed to investigate the impact of extending exam time for learners with disabilities on the implementation of inclusive education. The findings revealed a strong and statistically significant positive correlation between modifications in assessment procedures and the promotion of inclusive education, as evidenced by a correlation coefficient of 0.781 ($p < 0.005$). There exists a significant and favorable link (correlation coefficient = 0.583, $p < 0.005$) between the implementation of inclusive education and the utilization of large print format tests. The provision of tests in braille format exhibits a positive and statistically significant association with the implementation of inclusive education, as evidenced by correlation coefficients of 0.542 and a p-value of 0.001 (<0.005). There is a strong and statistically significant positive relationship between the implementation of inclusive education and the utilization of alternative forms of assessment, as evidenced by a correlation coefficient of 0.512 and a p-value of 0.000, which is less than the significance level of 0.005.

This study has revealed that. Students with disabilities at public secondary schools in Kamkunji are provided with the opportunity to take normal exams with their non-disabled peers. However, they are granted additional time to complete their exams in comparison to their non-disabled counterparts. The examinations are made available in a suitable braille format for those with visual impairments, in big print for learners with limited eyesight, and in written form for learners with hearing impairments to accommodate their specific needs.

5.2.4 Implementation of Inclusive Education in Public Secondary Schools in Kamukunji

This study reveals that the implementation of inclusive education in public secondary schools in Kamukunji is unsuccessful, as learners with disabilities have not been adequately and comprehensively integrated into these schools. Despite the inclusion of learners with disabilities in regular classroom settings alongside their non-disabled peers, there is a notable disparity in enrollment rates for learners with disabilities. Specifically, learners with disabilities make up a mere 1.6% of the total population of learners enrolled in public secondary schools in the Kamukunji region. Schools have implemented inclusive practices to accommodate learners with impairments within certain restricted categories. Only students with albinism, physical disabilities, visual impairments, and hearing impairments have been included in the integration efforts inside schools. There is a lack of inclusion of additional disability categories inside educational institutions. Learners with physical disabilities make up a substantial share (63.6%) of the total enrollment, whereas learners with albinism (18.1%), vision impairments (9.1%), and hearing impairments (9.1%) represent a smaller fraction of the student body.

Conclusions of the Study

This study's findings indicate that the implementation of inclusive education in public secondary schools in Kamukunji is ineffective. The enrolment rates of learners with disabilities in these schools are significantly low, and only learners with physical, visual, and hearing difficulties have been admitted.

In the context of Kamukunji, it has been observed that public secondary schools possess just 50% of the necessary teaching and learning materials to effectively facilitate the inclusion of students with disabilities inside regular classrooms. Some of the accommodations provided for students with visual impairments include the provision of big print materials, braille resources, hearing aids, and the use of eyeglasses or contact lenses for those with low vision. Nevertheless, the educational institutions are deficient in terms of possessing computers equipped with optical character recognition systems, audio recorders, low vision calculators, and computers featuring larger screen images.

changes have been implemented in public secondary schools located in Kamkunji with the aim of enhancing accessibility and mobility for learners with disabilities within the school premises. These changes specifically target classrooms, ramps, and pathways. Nevertheless, the school furniture, sports facilities, and school restrooms have not undergone any modifications to cater to the needs of students with disabilities.

A minimal fraction of the teaching population possesses formal training in the field of special needs education. The prevailing demographic of educators in public secondary schools within the Kamukunji region primarily consists of conventional instructors who possess the necessary professional qualifications in education, yet have not received any in-service training pertaining to special needs education.

Despite learners with disabilities in public secondary schools in Kamukunji taking the same standard exams as their non-disabled peers, the assessment procedures are adjusted to accommodate their needs. This includes granting more time for learners with disabilities to finish their exams and providing them with appropriate formats for assessment materials.

Recommendations of the Study

Based on these findings, this study recommends that:

1. The Ministry of Education allocates adequate funds for purpose of enabling public secondary schools to undertake structural adjustments of their environment and physical facilities to accommodate learners with disabilities.
2. Kamkunji Sub County education officer in collaboration with key stakeholders to constitute a committee that will be mandated with conducting regular assessment checks to determine level of compliance with regulations structural adjustments and modification of school facilities in public secondary schools.
3. Principals of public secondary schools in Kamukunji to liaise with the Ministry of Education through the sub county education officer and partner with other stakeholders to ensure that they have adequate resources to procure sufficient and appropriate learning materials suitable for learners with disabilities in their schools.

4. The Teacher Service Commission in collaboration with KISE to provide in-service training for teachers on special needs education and the inclusive education policy to enhance ability of the teachers to effectively implement inclusive education.
5. The Kenya National Examination Council, Teachers and stakeholders in the education sector to first track implementation of policy guidelines on modifications of assessment procedures to ensure that time allocated to learners with disability during exams is determined by nature and severity of their disability and exams are provided in appropriate formats accessible to leaners with disabilities.

Recommendations for Further Studies

1. This study recommends that a comparative study be conducted to establish extent of implementation of inclusive education among private secondary schools in Kamkunji as private schools tend to be equipped with more teaching and learning materials as well as physical facilities in comparison to public secondary schools as established in this study.
2. This study established that there is ineffective implementation of inclusive education. Hence there is need to carry out a study to assess effectiveness of the 2018 Sector Policy for Learners and Trainees with Disabilities in enhancing implementation of inclusive education.
3. There is also need to assess the extent to which factors such as attitude of teachers towards inclusive education; adequacy of teachers with training in special needs education; awareness of inclusive education policy; and availability of funding influence implementation of inclusive education as these factors were outside the scope of this study.

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APPENDICES

Appendix I: Letter of Introduction

THE UNIVERSITY OF NAIROBI,
DEPARTMENT OF EDUCATIONAL MANAGEMENT POLICY AND CURRICULUM STUDIES,
FACULTY OF EDUCATION
P.O Box 92, KIKUYU

Sir/Madam,

RE: INFLUENCE OF SCHOOL FACTORS ON IMPLEMENTATION OF INCLUSIVE EDUCATION IN KAMKUNJI SUB COUNTY NAIROBI CITY COUNTY.

I am a registered master of education student, Reg No.E55/11967/2018 at the University of Nairobi in the department of Educational Management Policy and Curriculum studies. I am conducting a study on the above title. I hereby seek permission to carry out the study in your school. This will be done by responding to an attached questionnaire designed to collect data on the proposed topic of my research. You are guaranteed that all data given on the survey will be dealt with secretly and for the reason of study only.

Yours sincerely,

Carey Ungaya Kamonsozi

Reg No. E55/11967/2018

Appendix II: Questionnaire for Head Teachers

Instructions

The questionnaire below is used to collect data for purely academic purposes on influence of school-related factors on the implementation of inclusive education in public secondary in Nairobi city County. Kindly do not indicate your name or the name of your school in the questionnaire.

SECTION A: BACKGROUND INFORMATION

1. What is your gender? Male [ ] Female [ ]

2. What are your academic qualifications? Diploma in Education [ ] Bachelor's Degree in Education [ ] Mater of Education [ ] Other (specify)……..

4. How many years have you been a teacher? Less than a year [ ] 1-9 years [ ] 10-19 years [ ] 20-29 years and 30 years and above [ ]

5. How many years have you been in this school? Less than a year [ ] 1-9 years [ ] 10-19 years [ ] 20 years and above [ ]

SECTION B: Implementation of Inclusive Education

6. Provide statistics on the following aspects of enrollment in your school:

Aspect of Enrolment	**Number**
Current number of learners with disabilities enrolled in your school	
Total number of leaners enrolled in your school currently	

7. Provide statistics on the number of leaners enrolled under the following categories of disabilities in your school:

Category	**Number of Learners**
Physical impaired	
Albinism	
Visual impaired	
Hearing impaired	
Intellectually impaired	
Learning disabilities such as Dyslexia	
Autism	
Speech impairment	
Others (specify)	
Others (Specify)	

8. Indicate the extent to which you agree with statements on the level of integration of learners with disability in your school in the Table below:

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Learners with disabilities undertake learning in regular classroom settings with non-disabled peers					

Teachers use a variety of teaching approaches that accommodate the diverse strengths and different learning styles of learners with disabilities					
Learners with disabilities have access to sufficient modified learning materials that are suitable to their disabilities					
Structural adjustments have been made to school facilities to create a barrier free and disability friendly school environment that is accessible to learners with disabilities					
Assessment of learners with disabilities provides for reasonable accommodations/modifications to compensate for their disability related limitations					

Section C: Teaching and Learning Resources and Implementation of Inclusive Education

9. Below is a list of teaching and learning resource required for leaners with disabilities Tick appropriately to indicate the availability of the items in your school.

Item	**Available**	**Unavailable**
Braille		
Audio or braille format materials		
Audio tape recorder		
Large print materials		
Low-vision calculator		
Computers with enlarged screens		
Computers with optical recognition systems		

10. How does the availability of the above teaching and learning materials influence integration of learners in your school?

    ……..

11. Indicate your level of agreement on the availability and adequacy of teaching and learning materials that are suitable for learners with disabilities in your school:

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Each learner with complete visual impairment has their own braille for taking notes in class.					
Each learner who cannot read small prints is provided with large print materials					
Each leaner with hearing challenges or difficulties has a pair of hearing aids to enhance their vision teachers audibility					
The school has computers with enlarged screen images to enable learners with low vision from reading maps and diagrams					
The school has optical character recognition systems for converting texts into audio format for students with visual impairment.					
Each teacher has an audio recorder for recording audio format notes for students who cannot write notes in class					

Section D: Physical Facilities and Implementation of Inclusive Education

12. Indicate availability of the following facilities that are modified to accommodate leaners with disabilities in your school:

Item	Available	Unavailable
Spacious classrooms		
Ramp		
Accessible toilets		
Modified furniture's		
Wide pathways		
Adapted sport facilities		

13. How does the availability of suitable physical facilities influence enrolment of students with impairment in your school?

……

……

14. Indicate your level of agreement on the suitability of physical facilities in your school for learners with disabilities

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
The desks, tables and chairs in class, library and laboratory are modified to ensure learners with physical disabilities can use them comfortably					
The classes are large with sufficient spaces and non-slippery floors to facilitate ease of movement and safety of leaners using wheelchairs; crutches and those with white canes.					
The school buildings are accessible through wide ramps with gentle slopes for safe movement of leaners with disabilities					
The school buildings are connected through accessible pathways					
The school has modified sports facilities to facilitate participation of leaners with disability in sports such as sitting volleyball and wheelchair basketball					
The school toilets and bathrooms are modified and easily accessible to learners with disability.					

Section E: Teachers' Professional Training and Implementation of Inclusive Education

15. Indicate which of the listed professional training you have undergone. Select the items by putting a tick (✓)

Professional Training	
Pre-service training in Education	
Pre-service training in Special Needs Education	
In-service training on Special Needs Education/Inclusive educations	

16. Indicate your level of professional qualifications. Select the items by putting a tick (✓)

Professional Qualification	
Diploma in Education	
Diploma in Special Needs Education	
Degree in Education	
Degree in Special Needs Education	
Master's Degree in Education	
Master's Degree in Special Needs Education	

Section F: Learners' Assessment and Implementation of Inclusive Education.

17. Indicate your level of agreement on modifications that are undertaken in assessment procedures to compensate for disability related limitations among learners with disabilities.

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Time allocated to learners with disability during exams is determined by nature and severity of their disability					
Leaners with disabilities are given additional time during exams to compensate for their disability related limitations					
Learners with visual impairment are provided exams in braille format					
Large print format exams are used for leaners with low vision					

Written copies of oral instructions are provided to leaners with hearing difficulties during exams					
Alternative assessments or testing are used for learners with disability					

Appendix III: Questionnaire for Teachers

Instructions

The questionnaire below is used to collect data for purely academic purposes on influence of school-related factors on the implementation of inclusive education in public secondary schools in Nairobi city County. Kindly do not indicate your name or the name of your school in the questionnaire. Please give your honest responses by responding to the following questions by either ticking (√) or filling the spaces provided where applicable.

Section A: Demographic information

1. What is your gender? Male [ ] Female [ ]
2. What are your academic qualifications? Diploma in Education [ ] Bachelor's Degree in Education [ ] Mater of Education [ ] Other (specify)……..
3. How many years have you been a teacher? Less than a year [ ] 1-9 years [ ] 10-19 years [ ] 20 years and above [ ]
4. How many years have you been in this school? Less than a year [ ] 1-9 years [ ] 10-19 years [ ] 20 years and above [ ]

SECTION B: Implementation of Inclusive Education

5. Indicate the extent to which you agree with statements on the level of integration of learners with disability in your school in the Table below:

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly**

					Disagree
Learners with disabilities undertake learning in regular classroom settings with non-disabled peers					
Teachers use a variety of teaching approaches that accommodate the diverse strengths and different learning styles of learners with disabilities					
Learners with disabilities have access to sufficient modified learning materials that are suitable to their disabilities					
Structural adjustments have been made to school facilities to create a barrier free and disability friendly school environment that is accessible to learners with disabilities					
Assessment of learners with disabilities provides for reasonable accommodations/modifications to compensate for their disability related limitations					

Section C: Teaching and Learning Resources and Implementation of Inclusive Education

6. Below is a list of teaching and learning resource required for leaners with disabilities Tick appropriately to indicate the availability of the items in your school.

Item	**Available**	**Unavailable**
Braille		
Audio or braille format materials		
Audio tape recorder		
Large print materials		
Low-vision calculator		
Computers with enlarged screens		
Computers with optical recognition systems		

7. How does the availability of the above teaching and learning materials influence integration of learners in your school?

   ……..

   ……

   ……

   ……

8. Indicate your level of agreement on the availability and adequacy of teaching and learning materials that are suitable for learners with disabilities in your school:

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Each learner with complete visual impairment has their own braille for taking notes in class.					
Each learner who cannot read small prints is provided with large print materials					
Each leaner with hearing challenges or difficulties has a pair of hearing aids to enhance their vision teachers audibility					
The school has computers with enlarged screen images to enable learners with low vision from reading maps and diagrams					
The school has optical character recognition systems for converting texts into audio format for students with visual impairment.					

Each teacher has an audio recorder for recording audio format notes for students who cannot write notes in class					

Section D: Physical Facilities and Implementation of Inclusive Education

9. Indicate availability of the following facilities that are modified to accommodate leaners with disabilities in your school:

Item	**Available**	**Unavailable**
Spacious classrooms		
Ramp		
Accessible toilets		
Modified furniture's		
Wide pathways		
Adapted sport facilities		

10. Indicate your level of agreement on the suitability of physical facilities in your school for learners with disabilities

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
The desks, tables and chairs in class, library and laboratory are modified to ensure learners with physical disabilities can use them comfortably					
The classes are large with sufficient spaces and non-slippery floors to facilitate ease of movement and safety of leaners using wheelchairs; crutches and those with white canes.					
The school buildings are accessible through wide ramps with gentle slopes for safe movement of leaners with disabilities					
The school buildings are connected through accessible pathways					

The school has modified sports facilities to facilitate participation of leaners with disability in sports such as sitting volleyball and wheelchair basketball					
The school toilets and bathrooms are modified and easily accessible to learners with disability.					

Section E: Teachers' Professional Training and Implementation of Inclusive Education

11. Indicate which of the listed professional training you have undergone. Select the items by putting a tick (✓)

Professional Training	
Pre-service training in Education	
Pre-service training in Special Needs Education	
In-service training on Special Needs Education/Inclusive educations	

12. Indicate your level of professional qualifications. Select the items by putting a tick (✓)

Professional Qualification	
Diploma in Education	
Diploma in Special Needs Education	
Degree in Education	
Degree in Special Needs Education	
Master's Degree in Education	
Master's Degree in Special Needs Education	

13. In your opinion, what should be done about teachers' professional training to improve implementation of inclusive education in public primary schools?
……

Section E: Learners' Assessment and Implementation of Inclusive Education.

14. Below is a list of assessment accommodations and adjustments please tick appropriately the ones learners in your classroom are offered.

ACCOMMODATIONS	AVAILABLE	NOT AVAILABLE
Time adjustments		
Transcription services		
Alternative formats of texts		
Larger font sized texts		
Adjustment in assessment procedure		

15. Indicate your level of agreement on modifications that are undertaken in assessment procedures to compensate for disability related limitations among learners with disabilities.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Time allocated to learners with disability during exams is determined by nature and severity of their disability					
Leaners with disabilities are given additional time during exams to compensate for their disability related limitations					
Learners with visual impairment are provided exams in braille format					
Large print format exams are used for leaners with low vision					
Written copies of oral instructions are provided to leaners with hearing difficulties during exams					
Alternative assessments or testing are used for learners with disability					

Appendix IV: Observation Checklist

Tick (√) according to indicate availability and adequacy.

Learning resources and physical facilities	Available		Adequate	
	Yes	No	Yes	No

Braille writer and papers				
White cane				
Hearing aids				
Magnifying lenses				
Large print textbooks				
Spacious classroom				
Adapted desks and chairs				
Wheelchairs				
Level playground				
Adapted toilets				
Ramps				
Wide pathways				
Adapted sport facilities				

Appendix V: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **457524**

Date of Issue: **22/October/2022**

RESEARCH LICENSE

This is to Certify that Miss.. Carey Kamonsozi Ungaya of University of Nairobi, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: INFLUENCE OF SCHOOL RELATED FACTORS ON IMPLEMENTATION OF INCLUSIVE EDUCATION IN KAMUKUNJI SUB-COUNTY, NAIROBI CITY COUNTY, KENYA. for the period ending : 22/October/2023.

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