

**INSTITUTIONAL DETERMINANTS OF THE IMPLEMENTATION OF
INCLUSIVE PHYSICAL EDUCATION AND SPORTS PROGRAMMES IN PUBLIC
PRIMARY SCHOOLS IN NAIROBI CITY COUNTY, KENYA.**

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Declaration

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

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Dedication

This work is dedicated to my parents Jackson Mugweru Ndu'ngu and Alice Warira Kibera who instilled a great value for education in me that has given me a positive attitude towards education. To my siblings George, Purity, and Silvia who supported me unconditionally, to my husband Joseph whose constant encouragement and prayer have made it bearable to do my work and to my sons Klaus and Kylan.

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List of abbreviations and acronyms

APE	Adapted Physical Education
FPE	Free primary Education
KISE	Kenya Institute of Special Education
KICD	Kenya Institute of Curriculum Development
LWDs	Learners with Disabilities
PE	Physical education
MoEST	Ministry of Education Science and Technology
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organizations

Abstract

The purpose of this study was to establish institutional determinants of the implementation of inclusive physical education and sports programmes in public primary schools having a special unit in Nairobi City County, Kenya. Four specific objectives that guided the formation of four research questions were designed to achieve this purpose. They included: availability of facilities and appropriateness, availability of equipment and appropriateness, head teacher and teacher preparedness and teacher's perceptions. This was against the backdrop of the need for Learners with Disabilities (LWDs) to participate in physical education and sports. The study reviewed related literature from different scholars' works informed by the study objectives. The theory of the zone of proximal development and social model of disability was used in this study. The target population for the study was 471 respondents. Simple random sampling and stratified sampling was used to select 7 public primary schools having a special unit in 5 sub-counties in Nairobi City County Kenya respectively. A total of 7 head teachers, 13 PE teachers, and 64 LWDs were sampled, making 84 respondents for the study. To adequately achieve the objectives of the study, qualitative and quantitative methods of data collection and analysis were used. This involved the use of questionnaires, interview schedules, an observational checklist, and a focus group discussion protocol. Descriptive analysis techniques (frequencies, percentages) and content data analysis were used. Piloting was conducted to determine the reliability and validity of the instruments. The study found that, in terms of facilities and equipment, the biggest challenge was in their acquisition due to lack and inappropriate funds allocation to various disciplines. This may have led to the limited supply of equipment and facilities that in turn may have affected the participation of LWDs in sports. The facilities and equipment available were not modified for use by LWDs such as the playgrounds and balls. This in turn may have affected the choice and number of different activities and sports LWDs could participate in to the best of their ability. The study also revealed that, although most teachers were trained and had relevant teaching experience, they were not trained in Adapted Physical Education (APE), and hence modification of facilities and equipment to include all LWDs was a challenge to them. This may have impacted heavily on the negative perceptions teachers had towards inclusive sports programmes. The study revealed that a majority of teachers preferred teaching typical pupils without mixing them with LWDs. This also impacted heavily on the competencies of the head teachers as it was hard to promote key sports programmes within their schools with the limited facilities and equipment and their teachers' need in training in APE. Based on the findings of the study it is recommended that schools should consider the provision of adequate and suitable facilities and equipment for LWDs. This can be done through sourcing funds from the Constituency Development Fund, parents, and non-governmental organizations (NGOs). The ministry of education should consider organizing regular in-service training and seminars for head teachers and teachers to improve the standards of physical education for LWDs in their schools to promote inclusivity of sports programmes for all learners. The findings of this study will provide valuable data to various educational stakeholders such as curriculum developers and policy makers.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Physical Education (PE) plays a fundamental role in the holistic growth of a child. It is valued for its vast contribution to the physical, social, mental, and emotional development of a child. (Kahiga, 2018). According to UNESCO (2001), physical education and sport should be adopted and made accessible to all regardless of intellectual, social-emotional, and physical conditions. This should include persons with disabilities and gifted children from cultural or ethnic minorities, from marginalized and disadvantaged groups. The need for promoting physical activity, healthy nutrition, and better lifestyles have taken a crucial phase worldwide as, without the benefits of physical exercise and a healthy diet, individuals face a reduced quality of life and society's increased health care (Kahiga, Gatumu, & Nteere, 2015).

Physical Education is unique to the school curriculum as it is the only programme that provides learners with opportunities to learn motor skills, develop physical fitness and gain an understanding of physical activity (Kahiga, 2014). Improvements in technology and distresses over outdoor safety limit children's physical activity opportunities (Nel, Joubert, & Hartell, 2017). This has led to global concern over high sedentary behaviour among children (Steyn, Schuld & Hartell, 2012). Physical Education in primary schools can be a well-situated approach to enlist children to participate in physical activities. PE can also be a key foundation for schools and elite sports participation (Bailey, 2006).

Physical education and sports play a fundamental role in the lives of the entire community, both for people with disabilities and without disabilities. They include exercise, play, competitive games, recreational activities that contribute to physical fitness, mental well-being and social interactions (Kentiba 2013). The United Nations acknowledged 2005 as the international year of physical

education and sports with the prospect that everyone regardless of gender, challenge, or ability has the right to participate in physical education and sports (United Nations, 2005). This includes persons with disabilities. The need for appropriate access and opportunities for persons with disabilities to be addressed with comparable emphasis as that of their peers cannot be overstated. Even persons with disabilities need to attain physical literacy which is the growth of important movement through quality physical education rather than by *faux pas* of nature (Hannon, 2005). Some United Nations (UN) declarations and conventions (UNESCO, 2005) such as the 1994 Salamanca Statement and Framework of Action on Special Needs Education, state that regular schools with an inclusive orientation are the most effective means of creating respective communities, building an inclusive society, combating discriminatory attitudes and achieving education for all.

Riungu (2002) carried out a study on the effects of PE and sports programmes on deaf pupils' health-related fitness and assessed the impact of PE and sports on primary school pupils. The study revealed that participation in sports and physical education improved health-related fitness. The study recommended regular involvement in physical education and sports activities. Maithya (2008) also studied the efficacy of using structured physical exercise as an intervention for managing stereotyped behaviours in autism. The study sample was 34 autistic children at the Nairobi Special Unit. This study recommended structured physical exercise as a means to manage challenging behaviour and enhance better health and wellness amongst individuals with disabilities. This study goes beyond the effectiveness of sport participation for an individual and sought to establish factors determining sports participation for learners with different kinds of disabilities.

In Kenya, the introduction of Free Primary Education (FPE) programmes in 2003 opened up the way for the inclusion of learners with special needs (GOK, 2003). Since the introduction of FPE, the government through the Ministry of Education ratified and domesticated various global policy

frameworks in education to enable children with special needs to gain access to education (Ministry of Education, 2009). The government also signed Article 26 of the Universal Declaration of Human Rights (1948), as a result committing and recognizing itself to the right of every child to access education (Ministry of Education, 2009). The persons with disability PWDs Act of 2003 was intended to end all forms of discriminative treatment of persons with disabilities (Ministry of Education, 2009).

Physical facilities play a major role in the teaching and learning of PE, hence their adequacy and quality determine the quality of education (ROK, 2005). Resources for learning are not the same for students with a disability as compared to the others because they require specialized facilities for them to participate in the sports programme. According to the report by UNESCO (2003), there have to be simple ramps in the school set up to facilitate movement and access to the sports facilities. The current study went out to find the status of facilities in terms of quality and quantity in Kenyan primary schools in Nairobi City County. As of December 2002, a new regime elected on a mandate of multi-party politics, espousing reforms in Kenya declared that Free Primary Education (FPE) would begin in January 2003, (Republic of Kenya, 2005; UNESCO, 2005). The reaction from the public was overwhelming (Republic of Kenya, 2008). The enrolment increased in public primary schools from 5.9 million in December 2002 to 6.9 million in January 2003 (Republic of Kenya, 2007). This increase created a logistical challenge for learning in terms of infrastructure, facilities, and equipment (UNESCO, 2005; Republic of Kenya, 2007). In situations like these, learners with special needs end up being the biggest losers (UNESCO, 2005, Munayi, 2015). The researcher hence sought to find out if the situation had improved, and whether there are adequate quality physical facilities to facilitate the implementation of physical activities and sports programmes for learners with different kinds of disabilities in public primary schools having a special unit situated within Nairobi City County, Kenya almost two decades later.

Sports equipment is part of the teaching and learning resources among the learners with different kinds of disabilities for an effective realization of the implementation of inclusiveness in physical education. UNESCO (2003) said that the government resources are not enough to cater to the basic needs of education for the children living with a disability. Munayi (2015) claimed that the quality of interaction between the students as well as the equipment plays a critical role in the actual transmission of knowledge between the teacher and the students. Indeed, there is a need for the teacher to appreciate the relationships between learners and equipment to make the transfer of knowledge of consequence to the learners. The researcher acknowledged the significance of equipment in the teaching and learning process in physical education and the fact that equipment plays a major part in creating a conducive classroom climate for the learners. The study, however, did not address the views on the participation levels of LWDs in different sports hence the need to fill this gap.

Consequently, researches show that teachers in inclusive classrooms often express dissatisfaction with how the educational system addresses their lack of special education knowledge and teaching techniques. The feeling that they are left to deal with inclusion on their own with no proper preparation is shared by many teachers from different countries, such as Hong Kong (Lee, Yeung, Tracey & Barker 2015), Spain (Chiner & Cardona, 2013), Japan (Yada and Savolainen, 2017), Croatia and Poland (Ćwirynkało, Kisovar, Gregory, Żyta, Arciszewska & Zrilić, 2017), Israel (Einat & Sharon, 2015) and Kenya (Omamo, 2017). Studies have demonstrated that the success of inclusion programmes depends mostly on teachers' attitudes towards inclusion and professional special education knowledge (Sokal & Sharma, 2017).

To encourage a healthy and active lifestyle, it is essential to expose all learners to a variety of sports and let their desires and abilities act as a guide to further exposure and interest (Hill & Hannon, 2008). Several intrinsic and extrinsic motivators are at play in facilitating or impeding sports

participation for all learners. Weiss and Williams (2004) identified three elements in facilitating sports participation: attraction towards the activity, self-esteem, and support from peers. Salman and Naz (2012) investigated the factors that motivate the participation of students with challenges in sports in eight special schools in Karachi in Pakistan, Asia. The study was based on the premise that participation in sports enhances physical and social rehabilitation for persons leaving with disabled people since it has a holistic development and increases awareness of self-worth, ability, courage, and capacity. The study reported that the most popular sporting activities were cricket, hockey, and football and that more boys than girls were involved in these sports. The findings show that motivational factors have a significant influence on the decision of students with disabilities to participate in sports. These factors range from psychological, physical, to economic factors. Factors that satisfy personal enjoyment and competition were rated higher than financial and physical gain (Salman & Naz, 2012). Kenya and Pakistan could be having different experiences and challenges for their students with disabilities, this is what the current study wants to find out.

The government allocates Ksh.1, 020 to every public primary school child and the addition of ksh.2, 000 to special units (Kenya Education Sector Support Programme, 2009). It is further noted that the government set an additional amount of 20,000 to every school to eradicate environmental barriers to facilitate inclusive education by making the school friendlier to learners with special needs. FPE had opened doors for many children to enrol in schools; it had not made any provision for the needs of children with disabilities (UNESCO, 2005). Additionally, records educed on children with disabilities tend to lean more towards learners with a physical disability (Republic of Kenya 2007; Republic of Kenya, 2008), a factor that compelled this study to focus its investigation on learners with different kinds of disabilities such as physical disability, hearing impairment and visual impairment enrolled in the public primary school having a special unit in Nairobi City County.

1.2 Statement of the Problem

The national goals of education in Kenya are geared towards the promotion of individual development, self-fulfilment, and the promotion of positive attitudes towards good health among other benefits (Kenya Institute of Curriculum Development, 2008). In line with the national goals of education, the researcher went out to investigate the teaching and learning of physical education for learners living with different kinds of disabilities in public primary schools having a special unit in Kenya. Inclusive education is seen as a suitable education for all learners as it seeks to address all the learning needs and barriers for all, with an explicit focus, on those who are physically, mentally, or emotionally challenged (UNESCO, 2001). In addition, the government of Kenya has included inclusion as a new addition to the Kenya educational structure, which was introduced in 2005 within a five-year programme (2005-2010) known as the Kenya Education Sector Support Programme (KESSP) (Republic of Kenya, 2009). The government of Kenya, therefore, has taken cognizance of the need for inclusive education through the setting up of special classes to cater to learners with special needs (the Republic of Kenya, 2007).

The introduction of the Free Primary Education (FPE) programme in 2003 opened up the way for the inclusion of learners with special needs (GOK 2003). Since the introduction of FPE, the government through the ministry of education ratified and domesticated various global policy frameworks in education to enable children with special needs to gain access to education (Ministry of Education, 2009), yet the already overstretched teachers involved in (FPE) are unable to cope with additional tasks (UNESCO,2005). This situation also collides with the fact that most of the teachers are not trained to handle various disabilities and special learning needs including the dyslectic and hyperactive children (Government of Kenya, 2004).

The government also signed Article 26 of the Universal Declaration of Human Rights (1948), as a result committing and recognizing itself to the right of every child to access education (Ministry of Education, 2009). The persons with disability PWDs Act of 2003 was intended to end all forms of discriminative treatment of persons with disabilities (Ministry of Education, 2009). The new Constitution of Kenya, therefore, recognizes the need for all learners with a disability to access educational institutions and facilities (the Republic of Kenya, 2010). Whether the teaching and learning process for learners with different kinds of disabilities also take cognizance of this need for equal opportunities was a subject of this study.

According to Vision 2030, education is the social pillar for the government of Kenya. It forms the framework for the government policy of implementation up to the year 2030 (the Republic of Kenya, 2008). It is recognized that there is a need to provide appropriate, quality, and adequate educational facilities, equipment, learning materials, trained teachers, and; other professional as well as support staff (the Republic of Kenya, 2008). Whether this is the situation in institutions referred to as schools with a special unit was one of the concerns this study was designed to establish.

1.3 Purpose of the Study

The purpose of this study was to investigate the institutional determinants in schools having a special unit that influence the implementation of inclusive sports programmes for learners with different kinds of disabilities such as the physically challenged, visual impairment in Nairobi City County.

1.4 Objectives of the study

The study was guided by the following objectives:

1. To investigate the availability and appropriateness of facilities for the implementation of inclusive sports programmes in public primary schools in Nairobi City County, Kenya.
2. To establish the availability and appropriateness of sports equipment for the implementation of inclusive PE and sports programmes in public primary schools in Nairobi City County, Kenya.
3. To assess head teachers' and PE teachers' preparedness in the implementation of inclusive PE and sports programmes in public primary schools in Nairobi City County, Kenya.
4. To determine the teacher's perceptions in the implementation of inclusive PE and sports programmes in public primary schools in Nairobi City County, Kenya.

1.5 Research questions

Based on the objectives, the following research questions were developed to guide this study.

1. What is the availability and appropriateness of facilities in the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City County, Kenya?
2. What is the availability and appropriateness of equipment in the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City County, Kenya?
3. What are the head teacher's and teachers' levels of preparedness in the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City County, Kenya?
4. What are the teacher's perceptions of the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City County, Kenya?

1.6 Significance of the Study

This study went out to establish the status of the delivery of inclusive sports programmes for learners with different kinds of disabilities in schools having special units in Nairobi City County. It is hoped that the findings will provide a useful reference to curriculum developers and curriculum policy developers including schools, teachers, and parents whose children attend these schools. Further, it is hoped that these results will be useful to institutions for teachers training colleges to help them skew their training towards APE and; to help teachers handle learners with different kinds of disabilities with a lot of confidence in schools having a special unit, hence helping even the Teachers Service Commission in their placement. Lastly, the finding of this study is hoped will be useful to head teachers and teachers teaching in these schools who want to know learners' views on the implementation of the inclusive sports programmes.

1.7 Limitations of the Study

It was possible that head teachers may not have given the real status on the availability of facilities and equipment in their schools. The researcher mitigated this, by using the observational tool checklist to gather more information. The head teachers were also given an assurance that this information is for research purposes only and will be held in confidence. Where it was thought there was the possibility of a low return rate of questionnaires from respondents. The researcher mitigated this, by using a large population sample that gives the opportunity of a large number of respondents, thus still receiving sufficient data for the study.

1.8 Delimitations of the Study

This study was conducted in Nairobi City County; it was based on institutional determiners influencing the implementation of inclusive sports programmes for learners living with different kinds of disabilities. The study did not include secondary schools, as the researcher had planned to focus on primary schools only. Special needs schools were not included in the study because by

their very nature they do not embrace inclusiveness. The study was confined to public primary schools having a special unit in Nairobi City County admitting learners with disabilities such as the physically challenged, and visual impairment.

1.9 Assumptions of the study

The study focused only on primary schools having special units in Nairobi City County, which admit learners with different kinds of disabilities such as physical challenges and visual impairment. It was also assumed that the respondents would give factual information without fear of being prejudiced or victimized. That PE was taught in the schools under survey. That learners were in a state of being able to comprehend the interview and questions advanced to them. That the teachers would co-operate and give accurate information. Lastly, the instruments used to collect data would give valid and reliable data.

1.10 Operational Definition of terms

Inclusive education: refers to the modification of the curriculum, school programmes, school facilities, school policies to meet the needs of learners with different kinds of disabilities.

Institutional determinants: refer to factors within the school set up that influence effective implementation of inclusive sports programmes such as availability of facilities, equipment, teachers qualifications, and professions and teachers perception towards inclusive education.

Implementation: refers to putting into practice effective factors in an educational system to produce the intended result and objectives of inclusive sports programmes for persons living with different kinds of disabilities.

Inclusive sports programmes: Refers to modified games and sports activities provided by an education system that allows students with different kinds of disabilities to participate and practice with ease like other normal students in their school.

Special needs schools: Refers to schools that have education services for students with different kinds of disabilities.

Special unit/Special Classes: These are classes set aside either in regular schools to cater to the needs of learners with special needs. The classes should not be less than 15 children.

Sports: Activities involving physical exertion and skill in which an individual or team competes against another or others for entertainment.

Available and appropriate facilities: Present or ready for immediate use available modified sports facilities for learners with different kinds of disabilities.

Available and appropriate equipment: Present or ready for immediate use available modified sports facilities for learners with different kinds of disabilities.

Teachers' perceptions: The thoughts or mental images which teachers have about their professional activities and their students, which are shaped by their background knowledge and educational experiences which influence their professional behaviour either positively or negatively.

Participation level: Purposeful active participation in sports-related physical activities by learners with different kinds of disabilities.

1.11 Organization of the Study

This study has five chapters. Chapter One includes the background of the study, statement of the problem, the purpose of the study objectives of the study and research questions, the significance of the study, limitation of the study, delimitation of the study, assumptions of the study, the definition of significant terms and organization of the study. Chapter Two comprises of review of literature, which includes literature on the availability of the facilities, availability of equipment, and teacher training and teacher perception on inclusive education, a summary of literature review, theoretical framework, and conceptual framework. Chapter Three describes the research methodology this includes Research design, target population, sample size and sampling procedure, instruments of data collection, the validity of research instruments, reliability of research instruments, data collection procedures, data analysis techniques, ethical issues, references, and appendixes. Chapter Four includes the analysis and discussions of the findings. Finally, Chapter Five provides the conclusions and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter has eight- sub-sections, they include literature review related to inclusive education, availability and appropriateness of sports equipment and facilities, the head teachers' and PE teachers' preparedness, PE teachers' perceptions towards inclusive education, a summary of the literature review, theoretical framework to guide this study, and the conceptual framework of the study.

2.2 Concept of Inclusive Education

Inclusive education is where learners with special education needs receive appropriate service and support according to their individual disability needs in the general education setting (Hardman 2008). Inclusion involves a series of a shift from focusing on children with different kinds of disabilities as a problem for the school to focusing on changes and modification of activities in classroom management. This benefits all including those who are traditionally excluded from learning. It aims at achieving a quality education by making changes to accommodate all learners regardless of their social, psychological, mental, and physical differences (Otieno, 2014).

Angie and Eskay (2013) observed that education in an inclusive setting appears to be a concept in this 21st century through ratifying the United Nations (UN) 2005 Convention on the Rights of People with Disability. This has seen the policy being ratified by a majority of countries across the world. Walsh (2018) reported that the inclusion of learners with special needs in normal classrooms is a legal requirement in the United States of America according to the Individuals with Disabilities Education Act [IDEA]. In Kenya, the Basic Education Act (2013) champions progressive inclusion, non-discrimination, encouragement, and protection of persons with disabilities in the education sector right from pre-primary to universities.

In Kenya, a competency-based curriculum was introduced at a time that Kenya is vigorously pursuing vision 2030 and this has seen its implementation reaching grade five in the year 2021 (Momanyi and Rop, 2019). The CBC seeks to ensure that all learners benefit from education irrespective of their abilities. This has happened through inclusive education practices. Inclusive education is the full integration of learners with and without special needs into the same classrooms and schools and hence exposing them to the same learning opportunities (Angie and Eskay 2013). Lumumba, Ayungo, and Oracha (2017) indicated that inclusive education involves the transformation of regular schools into a barrier-free environment to accommodate all learners irrespective of their abilities. Whether this is the situation for learners with different kinds of disabilities such as the physically challenged, hearing impairment, and visual impairment in schools having a special unit Nairobi City County is what this study looked into by highlighting factors such as availability and suitability of facilities and equipment, teachers and head teachers teaching qualifications, teachers perceptions and the levels of participation in sports by this learner in the implementation of the inclusive sports programme.

2.3 Availability and appropriateness of Sports Facilities

Physical facilities such as playgrounds, swimming pools, and gymnasiums play a major role in teaching and learning, hence their adequacy and quality determine the quality of education (ROK, 2005). Resources for learning are not the same for students with a disability as compared to the others because they require modified facilities for them to participate in sports and PE. The lack of resources and inclusive skills on the part of the teachers makes it a hard task to create a fully sustainable inclusive education environment for the persons living with a disability.

According to the report by UNESCO (2003), there have to be simple ramps in the school set up to facilitate movement and access to the sports facilities. Kochung, (2011) noted that learners living with disabilities need an environment free from any barrier to maximize their full participation in

sports. Hence the environment in which to operate must be accessible to all learners. In 2003 the Kenyan government set up a task force to review the implementation of Free Primary Education (FPE) and gave a general report on the environment required for pupils living with disabilities. This includes barriers free environment with compounds used by the children to hold on while showering or going to toilets, ramps that have recommended slopes to allow for entries and exit to the playgrounds (MoEST 2004).

The Special Needs Education Policy Framework (2009) notes that there is inadequate provision of the relevant teaching and learning facilities for pupils with a disability because most of the materials available are mainly developed for regular students. Anejo and Okwori (2004) in their findings said that the existence of sports facilities is of great importance in the conduct of physical education lessons, and other sports programmes. Kiupuss (2018) identified that over the previous years, UNESCO expected to accomplish the usage of the core value of incorporating the dimensions of inclusion strategies at every level of the education setting worldwide. This includes the issues of the provision of facilities. The possibility that nations 'should guarantee a comprehensive inclusion framework at all dimensions' is likewise a focal target of the UN convention on the rights of individuals with disabilities. This acknowledgement of a special problem investigates what interest as a part of incorporation implies, and what it means in sports as well as the quality of physical equipment specifically Kiupuss (2018).

Hardman (2000) in his research on the critical status of physical education showed the essential status of PE around the globe, despite the social and economic class. One of the main issues identified by Hardman (2000) is resources. According to the audit report, the reduction of funding compromises the quality and quantity of physical education programmes in schools. The provision of amenities and their maintenance is insufficient in many schools across the globe. Besides, worldwide, only 31% of countries have enough amenities. In the poor countries, there are major

challenges in providing a full variety of amenities: But even in countries with more recognized systems of physical education programmes, there were cases of poor maintenance and loss of amenities noted (Hardman, 2000). Jenkinson and Benson (2010) reported that the challenges to physical education and physical activities are due to the lack of provision of adequate facilities. Edward (2015) reported that PE is allocated lower status and priority in learning institutions, lack of achievement measures for PE and physical activity, and inadequate infrastructure.

Mungai (2015) did a study on teachers' perception of the influence of facilities and equipment on the implementation of PE curriculum in Nyandarua County, Kenya. The study adopted the descriptive survey research design. The study involved 116 teachers, 38 principals, and 78 PE teachers, who were selected using stratified, purposive, and simple random sampling techniques. Data was collected using questionnaires and an observation checklist. The study showed that most schools had few or no sports facilities. Lack of facilities may be a major drawback to the implementation of inclusive education for all children in public primary schools in Kenya. The current study investigated whether the availability and suitability of sports facilities affected the implementation of inclusive sports programmes of physically challenged, hearing impairment, and visual impairment learners in schools having a special unit in Nairobi City County.

2.4 Availability and appropriateness of Physical Equipment

The main objective of special education for children with disabilities is for the recipient to attain full participation in social life and equality (MoEST, 2004). UNESCO (2003) said that the resources provided by the government are not enough to cater to the basic needs of education for the learners living with a disability. UNESCO (2008) report suggested that there is a need for educational reforms to plan for inclusive education to make the schools environmentally friendly to the learners living with a disability. Learners' participation should be in such a way that it allows for accommodation for all the learners regardless of their abilities.

In a study carried out by (Sanni, Ede & Fashina, 2018) it was noted that physical training was intended to enable understudies to build up their physical, mental, and social capacities. As such, they investigated the advancement of games in various primary schools in Nigeria. The survey was done in fifteen grade schools from the four instructive zones in the Area Council. The survey was regulated to 195 instructors from chosen schools where the information gathered was examined utilizing the basic rate approach. The investigation distinguishes the elements that impact the non-interest of schools in this physical education. The scholarly and social effects of giving sufficient physical exercises, equipment were discussed before suggesting the proper projects that can help improve sport advancement at the primary school level. The findings of the researcher are relevant to this context because it introduces the after-effects of a study that gives bits of knowledge on the impact of lacking donning offices and equipment on the advancement of physical education in primary schools.

The findings in the study by Hardman (2008) established that in the UK many schools lacked the prescribed material resources, which is a great challenge for the implementation of good physical education. One whole half of the primary and secondary schools in Vojvodina failed to fulfil the equipment standards for PE teaching. Hardman's (2008) study was grounded on the Second Worldwide Survey of the circumstance of physical training (PE) in schools. The general motivation behind the survey was to evaluate the overall circumstance of the school of Physical Education World Summit held in Berlin (1999). A study by Okakah and Gabriel (2015) analyzed if the equipment was an indicator of games improvement in Edo State, Nigeria. The examination went to analyze how the gears would be an indicator of games advancement in Edo State. The finding was that; the equipment did not fundamentally anticipate sports improvement. This implied that the teachers played a critical role in the promotion of physical education within the school settings. The suggestion was that the advancement of games offices ought to be arranged and taken in stages

having in view the different games and the social enthusiasm of the general population; likewise, the arrangement of sports equipment ought to be upgraded through the arranged yearly target.

2.5 Head Teachers' and PE teachers' preparedness

In the last two decades, there has been a growing effort to implement inclusive education around the globe. Abegglen and Hessels (2018) note that although most teachers tend to approve of inclusion, implementing inclusion in mainstream classrooms poses considerable challenges for general education. Teachers are required not only to modify their teaching methods according to the special needs of their students but at the same time also to maintain a high standard of academic achievements. UNESCO (2004) noted that teachers could experience greater job satisfaction and a higher sense of accomplishment when all pupils are taking part in school activities at the best of their abilities. There is a need therefore to train teachers to allow them to handle all learners professionally. Omamo (2017) reported that teachers need to be competent to handle all learners with special needs. This however can only be possible when they undergo training. This is because training enables the teacher to feel comfortable while handling learners with special needs as they will be able to utilize the acquired knowledge and skills during training to teach their learners.

Over recent years, there is considerable interest in the preparedness of curriculum implementers in terms of knowledge, skills and right attitudes towards inclusive education. This is to enable them to effectively cater for the diverse needs of learners in mainstream schools. Research reveals that training in inclusive practices impacts positively on teachers' preparedness. Sharma, Simi and Forlin (2015) carried out a study on the preparedness for inclusive education of 121 pre-service teachers in the Solomon Islands. The study utilized the pre-post survey design. The study reported an increase in the post-test of mean scores on attitudes and self-efficacy and a decrease in the participants' concern about being effective in inclusive classrooms. Forlin and Chambers (2011) also investigated pre-service teachers' perceptions of their preparedness for inclusive education. The study utilized the pre-

post design. It found out that 54 trainings in inclusive education increased the teachers' knowledge and confidence to work in inclusive settings. Pre-test-post design, like most quantitative designs, lacks the voice of the participants' which is key in gaining a better understanding of participants' perspectives of the phenomenon under study and in this case the preparedness of teachers and head teachers for inclusive practices. The current study mitigated against the delimitation of the two aforementioned studies by utilizing a mixed-methods approach which sought in-depth information on teachers and head teachers' preparedness through the use of interview schedules.

The effectiveness of school administrative support for inclusive education practices was assessed by Buhere, Ndiku and Kindiki (2014) in Bungoma County involving 30 head teachers, 120 teachers, and 8 special education teachers. The findings of the survey indicated that the school administrators have put little effort to ensure that inclusive education is well understood in their schools. The question that arises is whether the head teachers have the knowledge and skills to implement inclusive education. Research shows that efficient leadership is a critical factor in the implementation of effective inclusive education practices (Oswald & Engelbretcht, 2013; Riehl, 2000; Ainscow & Sandill, 2010; Hoppey & McLeskey, 2010). Angelides (2011) noted leaders was a factor in inclusive education. The current study thus examined public primary schools with a special unit head teachers' preparedness for inclusive education.

Research carried out by Ajowi & Ogadho (2013) in Kisumu showed that the dropout rate of learners with disabilities was consistent with the number of professionally trained teachers in special needs in schools. He observed that schools with more teachers trained in special needs retained more learners with disabilities compared to those with few professionally trained teachers. Studies by Nyaigoti (2013), and Wachira (2012), indicate that teachers need to be professionally trained and supported for them to handle inclusive classrooms. The National Development Plan 2002-2008 (Republic of Kenya, 2002) states that there are approximately 1.8 million children with disability

aged 0-19 years of whom only 100,000 or 5.5% have been assessed and only 22% (22,000) of those assessed are enrolled in both regular and special schools. Low enrolment is caused by reasons such as the high cost of developing adequately trained teachers, specialized equipment and instructional material (Republic of Kenya, 2002).

In a study conducted by Munayi (2015) it was established that 70.96% of the instructors associated with the guidance of physical training are graduates and just 3.23% have a P1-certificate. This infers all instructors have the required proficient capability to deal with physical education in schools for students with intellectual disabilities. He recommends these instructors in a perfect world would have no issue deciphering the curriculum schedule set out by the Ministry in charge of education. Whether this is the case for learners who are physically challenged, hearing impairment and visual impairment in schools having a special unit was one of the concerns that this study had sought to address.

2.6 Teachers' Perception on Inclusive PE & Sport Programmes

Successful implementation of inclusive education is greatly dependent on teachers' positive attitude and their perception towards inclusive education (Mwaimba 2014). A study by (Muwana, 2012) in Zambia showed that teachers positive or negative attitude towards inclusion was influenced by the level and type of training, exposure of students with special needs, nature of student disability and the school support system. The research showed that those teachers that had completed training in special education projected a positive attitude towards inclusion as compared to those who had no training (Muwana, 2012). It was however noted that educating pupils with special needs in ordinary schools leads to a great demand on teachers and other staff members in the school (Hegarty & Alur, 2002).

Peebles and Mendaglio (2014) analysed literature on teacher preparedness and found that although inclusion training has a positive effect on the attitude of pre-service teachers it had little effect on teachers' perceptions of preparedness. This was attributed to the fact that the training focus was heavily biased on theory. Similar findings were reported by Buford and Casey (2012) in a survey they conducted to examine the attitudes of Pre K -12 regular and special education teachers regarding their preparedness to teach special needs education students in a rural district in southwest United States of America. The study reported positive attitudes towards inclusive education with strong suggestions of practical training needed in order to prepare teachers for effective inclusive education practices.

Teachers are more positively disposed towards the inclusion of pupils with physical or sensory disabilities and less so for pupils with emotional and behavioural problems (Farrell, 2000; Lindsay, 2007). Lindsay goes on to note that there is mixed evidence on the effect of the experience of contact with children with special educational needs. Many teachers, when faced with the prospect of including a child with disabilities in their class, become less positive and experience anxiety and stress. This, however, can be moderated by access to training, resources, and additional supports (Lindsay, 2007). Chrispen, Patrick, and Tapiwa (2011) in Zimbabwe did a study entitled "Is Physical Education a Form of Exclusionary Closure to Children with Disabilities". The study used a descriptive survey of which both qualitative and quantitative types of research designs were used. Both questionnaires and interviews were used to draw, from the respondents, information about exclusionary factors for pupils with disabilities in physical education. The target population was 7,000 teachers. From this population, 72 primary trained teachers, 32 males, and 40 females were randomly selected to participate in the study. The study also wanted to find out the attitudes of teachers and heads towards children with disabilities in physical education classes. Results of the survey revealed that generally, teachers have a negative attitude towards children with disabilities (41. 7%). They look at these children with pity (22 %), but all the same, they are friendly (13. 9%).

Another 13.9% indicated that they are over-protective. It was noted that although expressed by only 23% of the respondents, who were the teachers, they do not even notice the existence of learners with a disability when it comes to their involvement in sports and physical education. Whether this is the case in public primary schools in Kenya was what the current study addressed.

2.7 Summary of Literature Review

The review of the literature incorporated the analysis of relevant theories linked to the study. The primary aspects covered in this section include the availability and appropriateness of sports equipment and facilities, the head teachers' and PE teachers' preparedness and the PE teachers' perceptions towards inclusive education.

Reviewed studies focusing on inclusion noting the need for full engagement of learners with a disability whether mild, moderate, and severe in a regular classroom with the typical learners. This is so to ensure that they can learn together with typical learners in ordinary school or community educational settings with an appropriate system of support. Thus it should be a process of strengthening the education system and a key strategy to achieve Education for All (UNESCO 2005). For the successful implementation of inclusive education to happen, there is a need to emphasize inclusive teaching practices that have more personalized instruction, a large variety of differentiation, and cooperation from all stakeholders (Tjernberg & Mattson, 2014). Additionally, for a successful implementation of inclusion, the key issue is positive attitudes towards inclusion from all involved personnel (Florian & Spratt, 2013).

Further, the review illustrates that the training of teachers is key in promoting inclusive education. The success of inclusive education depends on the adequate knowledge and skills of teachers (Florian, 2013). Whereas it is easier for policy makers to promote inclusive education in primary schools, the

mere passage and implementation of policy is not a guarantee of success. This is because teachers need more than just positive attitudes in the translation of policy into practice. Teacher competency is the ability to plan, control and facilitate appropriate interaction in the classroom while taking into account the different needs and abilities of learners (Dyson & Squires, 2016). Research reviewed by (Carroll, Forlin & Jobling, 2003; Sokal & Sharma, 2014) has shown that teachers' attitudes towards inclusion are essential for successful inclusive teaching. Evidence from multiple countries suggests that while most teachers approve of inclusion and show a great willingness to teach in inclusive classrooms, many of them still question their ability to teach learners with special needs (Chiner & Cardona, 2013). In addition, Vaughn and Schumn (2020) reported that large class size, teacher preparedness, and experience, lack of resources for effective teaching, lack of teaching aids, facilities, and equipment, absence of parental involvement, lack of funding, excessive workloads, are a major impediment to teachers' attitudes towards inclusive education. This study goes out to find out the teachers' preparedness and perceptions in the teaching of physical education and sports to learners with special needs in public primary schools in Nairobi City County.

The literature review pointed out that sports facilities and equipment play a critical role in the learning and teaching of PE and sports. Throughout the years the provision of PE has been inadequate in many schools due to unsuitable facilities and lack of equipment and resources Ibrahim (2017). Oireachtas Report on the Status of PE (2005), noted that there was never a period of significant funding in the area of PE, nor had it ever been seen as worthy of serious investment or concentration either in terms of resources or planning. According to the Republic of Kenya, (2010) quality and adequacy of facilities and equipment, teaching, and learning resources determine the successful implementation of inclusive education. There is a need for simple ramps and internal classroom arrangements to accommodate the physically disabled (UNESCO, 2003). Environment requirements for learners with special needs in inclusive schools include a barrier-free environment, bathrooms with added bars, adapted toilets, ramps with recommended gradients to entries and exits

to classrooms and playground, spacious classrooms which are well lit and ventilated, large classrooms to allow the use of wheel chairs. UNESCO (2008) noted that there is still inappropriate infrastructure to make the learning environment friendly for the challenged learners. Therefore, the quality and adequacy of physical facilities for teaching and learning is an important determinant of quality education (RoK, 2005). This study goes out to find the situation in public primary schools in Nairobi City County having a special unit in terms of provision of sports facilities and equipment for learners with different kinds of disabilities.

2.8 Theoretical Framework

Chaiklin (2003) explains that according to Vygotsky's theory of the zone of proximal development learning and teaching of children with disabilities should be a joint or shared process in a responsive social context. It points out that children with disabilities can learn and perform better when they have proper assistance from their parents, teachers, and their capable peers. In this context, if children with disabilities are offered support by their parents, professional personnel capable peers, and society, it can promote their proximal development. This can however be effective if they are in institutions with adequate facilities, equipment, and trained personnel. This theory is suitable for this study in the sense that students with disabilities included in mainstream school get to interact with other students with the support of their teachers and parents, and with the availability of the appropriate facilities and equipment. With assistance from well-trained personnel, they can fully realize their potential by participating in a variety of sports and activities as disability is not an inability.

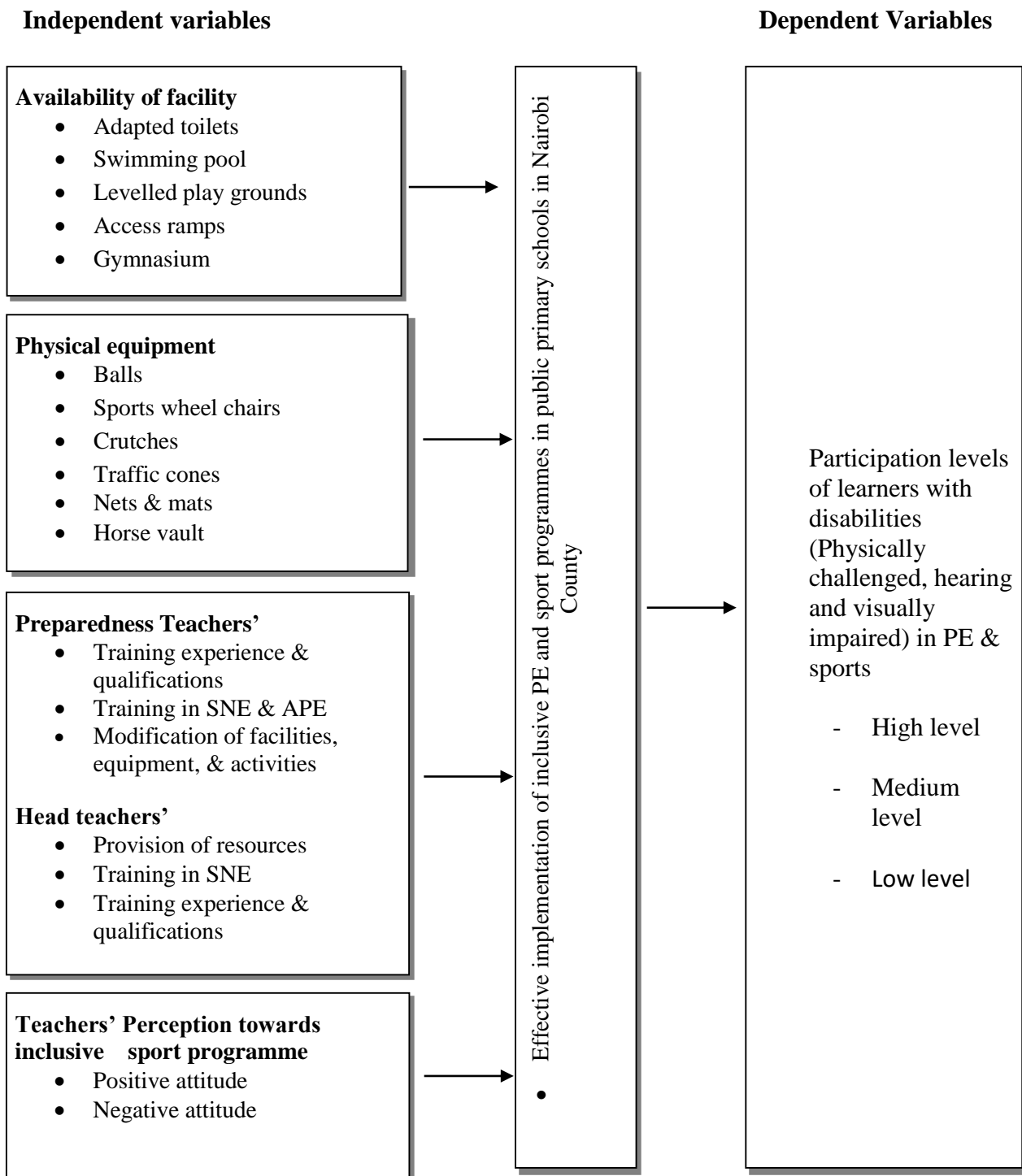
The theory of the Social Model of Disability was also used in the study as advocated by Oliver and highly popularized by Shakespeare and Watson (2001). The theory establishes that it is the society that disables individuals and that disability is something imposed on top of our impairments by the way we unnecessarily discriminate and isolate them from active participation in the society. Barriers

that exist in society can be categorized as cultural, economic and environmental. Cultural barrier is apparent in the way disabled are commonly viewed in society, as they are given unfair treatment as opposed to other people in the society without disabilities. Environmental barriers are evident, where the disabled are unable to move freely and function actively in society. Schools are a social setup, therefore, they are institutions where all these barriers can be eliminated and support the inclusion of all learners regardless of their disabilities. The social model assumes that schools should be restructured to accommodate LWDs in terms of training teachers in special education in order for them to acquire desirable knowledge and skills to handle learners with special needs, employ teaching methodology which caters to a diversity of all learners that promote a positive attitude of teachers and provide adequate and adapted physical facilities to suit the needs of different disabilities. Therefore, the model was applicable in the study since effective implementation of inclusive sports programmes greatly depends on how all these social factors are incorporated and adapted to incorporate LWDs in mainstream schools.

2.9 Conceptual Framework

The conceptual framework captures the relationship between the independent variable and the dependent variables.

Figure 1: Conceptual Framework



According to the conceptual framework in Figure 1.1, there is a relation between the independent variables, which include the availability and appropriateness of facilities, availability, and appropriateness of physical equipment, head teacher's and PE teacher's preparedness, PE teacher's perceptions towards inclusive education and the dependent variable which is the participation in PE/sports by LWDs. If these factors (independent variables) are favourable, adopted, and put into place then there will be the participation of learners with disabilities in physical education and sports with the success of the implementation of inclusive sports programmes in schools having a special unit.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter was divided into nine subsections; it described the methods and procedures that were used in carrying out the study. This included: research design, target population, sample size and sampling procedure, research instruments, validity and reliability of research instruments, data collection procedures, data analysis techniques, and ethical considerations.

3.2 Research Design

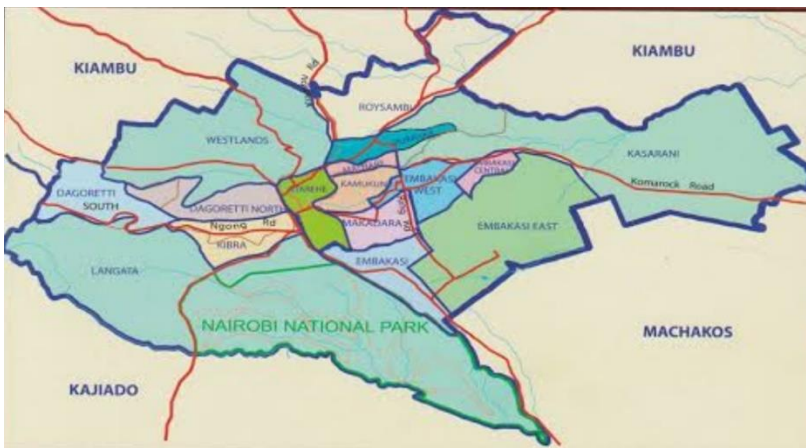
This study used a descriptive survey design. The design was suitable for the study as it assembles data on the characteristics or attributes of a large number of organizational entities by administering interviews or questionnaires to organizational informants or participants (Knoke, Marsden & Kalleberg, 2017). Descriptive survey design is used to gather in-depth information on a population's attitude, habits, behaviour, beliefs and ideal for educational concerns (Orodho, 2009). The basis behind the adoption of this research design for the present study was informed by the fact that it has a combination of both quantitative (teachers' questionnaire) and qualitative (head teachers' interview schedule and observational checklist) paradigms. The design was also deemed more appropriate for this study because the researcher concurrently collected both quantitative and qualitative data and then collapsed the whole information together into an overall interpretation of the study findings (Creswell & Clark, 2011).

3.3 Location of the study

The selected location for the study was Nairobi City County as seen in figure 2 below. The rationale for the choice of Nairobi City County is the fact that it has the biggest concentration of the Kenyan population. Nairobi City County is also unique because it offers both an urban and rural setting within a confined geographical location hence allowing for data that can be generalized throughout the

country. Nairobi is one of the 47 counties in Kenya which covers an area of 694.9 km². It's the city capital of Kenya. It's the second smallest county in Kenya after Mombasa. Nairobi County has the highest number of sub-counties in the country (17): Dagoretti North, Dagoretti South, Embakasi Central, Embakasi East, Embakasi North, Embakasi South, Embakasi West, Kamukunji, Kasarani, Kibra, Langata, Makadara, Mathare, Roysambu, Ruaraka, Starehe, Westlands. The researcher using simple random sampling sampled 5 sub-counties out of the 17, namely 5 (29.4%) (Westlands, Roysambu, Kasarani, Embakasi Central, and Embakasi East) for the study. The location was primarily chosen for the study since it has the specifics of the schools that the researcher was targeting. According to Nairobi Education County Office (2018), 35 public primary schools are having a special unit in Nairobi City County. The researcher was, therefore, able to collect data that represented public primary schools having a special unit in the county. In this way, the study represented public primary schools with a special unit in Kenya.

Figure 2: Study Area- Nairobi City County



3.4 Target Population

The target population is a complete set of individuals, cases, or objects with some common observable characteristics where a sample is drawn from (Mugenda & Mugenda, 2003). According to Nairobi Education County Office (2018), 35 public primary schools have a special unit in Nairobi City County. The target population for this study was 471 respondents. This included 79 physical

education teachers, and 357 class 7 pupils with a physical disability, hearing, and visual impairment. The study targeted head teachers, PE teachers, and class seven learners with different kinds of disabilities such as physically challenged, hearing impairment, and visual and who are deemed to possess valuable information due to their long stay in the schools. The choice of class seven was that this was the non-examination class that had the longest experience in the school. Most schools are afraid to expose their examination class to any form of activity not aligned to examinations.

3.5 Sample Size and Sampling Procedure

The study made use of simple random sampling and stratified sampling procedures to get the sample size for the study. A sample represents a portion, piece, or segment that is a representation of a whole (Biau, Kerneis & Porcher, 2008). Stratified random sampling allows the subdivision of the population into smaller homogenous groups in order to get more accurate representation while simple random sampling allows individuals to be chosen in such a way that each has an equal and independent chance of being selected (Best & Khan, 2010). There are 17 sub-counties in Nairobi City County. Out of these, the researcher used simple random sampling to select 5 sub-counties (29.4%) (Westlands, Roysambu, Kasarani, Embakasi Central, and Embakasi East) which represented the rest of Nairobi City County schools. A group of 20 (n=20) is usually considered an acceptable minimum sample size (Baumgartner, Strong and Hensley, 2002). Thus 20% of this population included 7 head teachers, 16 PE teachers, and 72 pupils who were sampled out using stratified sampling for the study. Two schools had been randomly selected from the 5 sub-counties for the pilot study and were not used for the final study. Hence the sampled population for this study was $7 + 16 + 72 = 95$ respondents. The table below shows the target and sample population of this study.

Table 1: Target and Sample Population for the Study

Sample size	Number of schools	Head teachers	PE Teachers	Class 7 LWDs
Target Population	35	35	79	357
Sample Population	7	7	16	72
Percentage %	20%	20%	20%	20%

Source: Nairobi County Education Office (2018)

3.6 Instruments for Data Collection

The study used the following research instruments: an observational checklist, an interview schedule, a questionnaire and a focus group discussion schedule.

3.6.1 A Facility and Equipment Observational Checklist

This instrument collected data on the availability and suitability of facilities and equipment in the schools, by ticking the facilities and equipment that were available, suitable and cancelling out those that were not available. The observational checklist was filled out when the researcher visited the schools sampled. The main reason for this was to find out and record what was available and suitable in terms of equipment and facilities to collect descriptive data.

3.6.2 Interview schedule

An interview schedule was administered to head teachers to guide the study. The interview schedule contained items that covered some of the objectives under the study to get an in-depth understanding of the interviewee's perceptions and experiences on inclusive education. It mainly focused on how the head teachers make inclusive sports programmes effective in their schools and the possible barriers that they face in the process of implementing inclusive sports programmes for students with different kinds of disabilities.

3.6.3 Questionnaires

Questionnaires give the respondent freedom to express their views and opinions and to make suggestions and they are also good in the collection of confidential information and are easy to administer. Questionnaires were issued out to PE teachers as it allows the collection of data from a large range of respondents at the same time. It mainly focused on teachers' training and qualifications in special education and their perception of inclusive education. How they make inclusive sports programmes effective in their schools and the possible barriers that they face in the process of implementing sports programmes for students with different kinds of disabilities.

3.6.4 Focus group discussion

The focus group discussion is a type of group interview where the participants interact, argue, and make a joint contribution on the topic of concern rather than making individualized contributions (Bryman, 2016). The Focus Group Discussion included 5 learners living with different kinds of disabilities per group (physically challenged, hearing, and visual impairment) in the sampled public primary schools having a special unit in Nairobi County. The focus group provided an interactive forum through which learners gave information that otherwise would not have been obtained through individual interview questionnaires. The researcher had consent from their parents and their teacher to carry out this activity.

3.7 Validity of Research Instruments

According to Mugenda and Mugenda (2003), validity refers to the accuracy and meaningfulness of inference, usually based on the research results. It indicates the degree to which an instrument measures what it is supposed to measure. To verify the content validity of the interview schedule, questionnaires, observation checklist, and focus group discussion the researcher used the supervisors, lecturers from the department of physical education and sport at the University of Nairobi and two experts from the field of physical education. They assessed the relevance of the

content used in the research instruments and necessary modifications and changes were made based on their feedback.

Further to this, the researcher also administered a pilot study to ensure the instruments were valid and collected the required data. The researcher carried out a pilot study in 2 randomly selected public primary schools in Mathare sub-county. The schools used for the pilot study were not used in the main study. The pilot study comprised of 2 head teachers 2 PE teachers and 13 learners with different disabilities who were sampled out using stratified sampling. All procedures to collect data were followed and all the instruments were administered to the subjects. Based on the results and observations from the pilot study, the instruments were refined by modifying or eliminating inappropriate items or by adding more items to capture more information. The pilot study indicated that the research instruments could be used to solicit information for the study.

3.8 Reliability of Research Instruments

Reliability is a measure of how consistent the results of the study from the tests Kombo & Tromp (2006). Out of the four tools developed for this study, the observation checklist, the interview schedule for head teachers, questionnaires for teachers and the focus group discussion protocol for the LWDs used a test-retest to validate the reliability of the tools. The test-retest was done on two different occasions within the two schools selected for the pilot study. The same questionnaires, interview schedule and focus group discussion were administered to the same group of subjects twice after two weeks to obtain appropriate instruments reliability. The results were scored and a comparison was made on the scores of the first test and the scores of the second test to provide a reliability coefficient. The Pearson product-moment correlation coefficient was used to compute the reliability coefficient of the instruments. It is a number ranging from +1 (a perfect positive correlation) through 0 (no relationship) to -1 (a perfect negative relationship). The coefficient for the instruments is listed in Table 2.

Table 2: Reliability Coefficient of the Instruments

Instrument	Reliability Coefficient
1. Head Teachers Interview Schedule	0.821
2. Teachers Questionnaire	0.861
3. Focus group discussion Protocol	0.844

According to Frankel and Wallen (2002), an alpha value of 0.7 is considered suitable to make group inferences that are accurate enough. This was accepted as a good indicator of reliability. As such, the outcome was valid and the instruments provided reliable outcomes. Inter-rate reliability was used to check the reliability of the observation checklist. The statistical package for the social sciences (SPSS) was used to calculate the correlation coefficient where the value 1 represented perfect agreement and 0 no agreement at all. The coefficient for the observation checklist were found to be 0.82. These were accepted as good indicatives of reliability.

3.9 Data Collection Procedures

After getting a letter of confirmation from the University of Nairobi to proceed with the field study, the researcher sought permission from the National Commission for Science Technology and Innovation (Appendix VIII). There after the researcher obtained clearance from the Nairobi City County Director of Education for purposes of data collection (Appendix IX). The researcher also prepared a letter of introduction to issue to the sampled school during the visits (Appendix VII). Respondents were expected to respond after signing the consent form. An interview schedule was administered to head teachers; the researcher requested a meeting with the head teacher and informed them of the reasons for the meeting. Questionnaires were administered to teachers on the same day after finishing with the head teacher. The researcher requested permission from the teacher to conduct the focus group discussion. The researcher also filled out an Inventory tool of facilities

and equipment with the guidance of the teachers and head teachers or a facility manager where applicable.

3.10 Data Analysis Techniques

The study made use of quantitative and qualitative data. Data analysis was done using the Thematic Network Analysis approach by using the NVivo computer software. This involved coding data from all the tools used for data collection. All the data was reviewed and codes were developed from the responses given by the respondents and were developed into basic themes. Codes that described similar situations were collected into single basic themes and consolidated into organizing themes to reduce ambiguity created by a large volume of data to make it easier for data interpretation.

3.11 Ethical Considerations

This researcher assured total confidentiality to all the participants. This was done by ensuring that confidentiality was taken into consideration at all stages of the study and their identities were not revealed to anyone. The school administration got an introductory letter informing them of the reason for the study and assurance that the findings of this study were not used to victimize the institution under any circumstances. Teachers got assurance that the study was not to comment on their line of work but to gain insights into their practice. The researcher also got the consent of the teacher and parents of the learners with challenges as they are minors.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the results of analysis of the data collected and discussion on the findings on institutional determinants of the implementation of inclusive physical education and sports programmes in public primary schools in Nairobi City County Kenya. The analysis of data collected and its interpretation was guided by the following research questions:

1. What is the availability and appropriateness of facilities in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
2. What is the availability and appropriateness of equipment in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
3. What are the head teacher's and teacher's level of preparedness in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
4. What are the teacher's perceptions to the implementation of inclusive sports programmes in public primary schools in Nairobi City County?

4.2 Response Return Rate

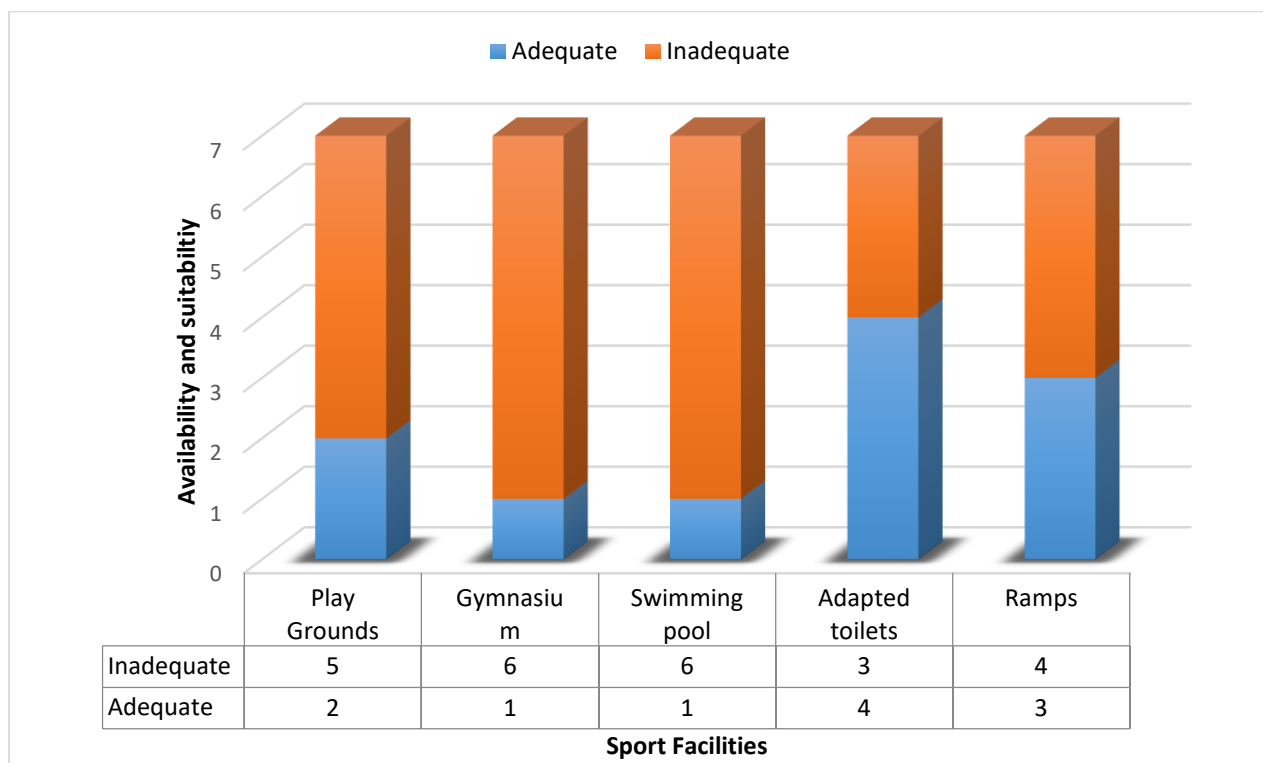
The researcher targeted 72 standards 7 pupils with disabilities, 16 teachers, and 7 head teachers. Therefore, in total all the respondents for the study were supposed to be 95. However, only 64 pupils participated in the focus group discussion representing 88.8%. Out of 16 targeted PE teachers, only 13 completed the questionnaires representing 81.2%. The head teachers gave a 100% return rate. This response rate was excellent for statistical inference as it conforms to Mugenda and

Mugenda (2003) who stipulate that a response rate of 50 percent is adequate for analysis and reporting, a rate of 60 percent is good and a response rate of 70 percent and over is excellent.

4.3 Finding on research question 1: What is the availability and appropriateness of sports facilities?

The first research question sought to find out the availability and appropriateness of sports facilities in the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City County. Provision of modified facilities and adaptation of the school environment is essential for effective inclusive practices of PE/ sport programmes. To determine this, the researcher filled out an observational checklist with the help of the PE teachers. The results were shown in figure 3 below.

Figure 3: Availability of Physical Facilities for Inclusive Education



From the above figure, the researcher made observations on the availability and appropriateness of various sports facilities that create a barriers free environment and cater for learners with different kinds of disabilities in public primary school with a special unit, in Nairobi City County. The results

show that (28.5%) of the schools had playgrounds that were subdivided to create room for various sports such as football, volleyball, and netball when the season of a specific game rose. A large number (71.4%) of the playgrounds were not barrier-free to cater to learners with different kinds of disabilities, as these schools had open fields with no markings or goalposts for specific games this implies that inclusion was discouraged as learners could not participate in PE/sports on such playgrounds because they did not cater for their different disabilities and their safety. These findings correspond to findings of the Republic of Kenya (2009) report which stated that inclusive education was faced by lack of appropriate facilities as learners leaving with disability are left to cope with undesirable structures. These findings further concur with the findings of Ngugi and Thinguri (2014) who observed that most schools lack adequate and appropriate playing fields that can support both PE and sports programmes for learners with disabilities. Most of the sporting activities are carried out in the fields that are constructed for typical children. As such, learners leaving with disability are not able to use them. For instance, where the tracts have grass, it is difficult for learners with disability to use the racing wheelchairs even when they are available. The implication of these findings is that due to lack appropriate playgrounds, LWDs do not participate in PE/sports actively.

It was observed that (14.2%) schools had a gymnasium and a swimming pools. The gymnasium was not however sufficiently equipped and was poorly maintained, while the swimming pools, were not in use because they were drained up and only held dirty water. The implications of these findings is that LWDs therefore could not participate in swimming or gymnastics even if they would like to due to the lack of the structures. This could have been contributed to the high cost of equipping and maintaining the facilities. It was further observed that only (42.8%) had adapted toilets. The researcher found that as reported by teachers, these schools had a high enrolment rate of learners with a physical disability as opposed to other neighbouring schools. This is because the cost of building and maintenance of these toilets is very high and only a few schools can afford it. These findings were in line with those of Munayi (2015). According to the researcher, the absence of

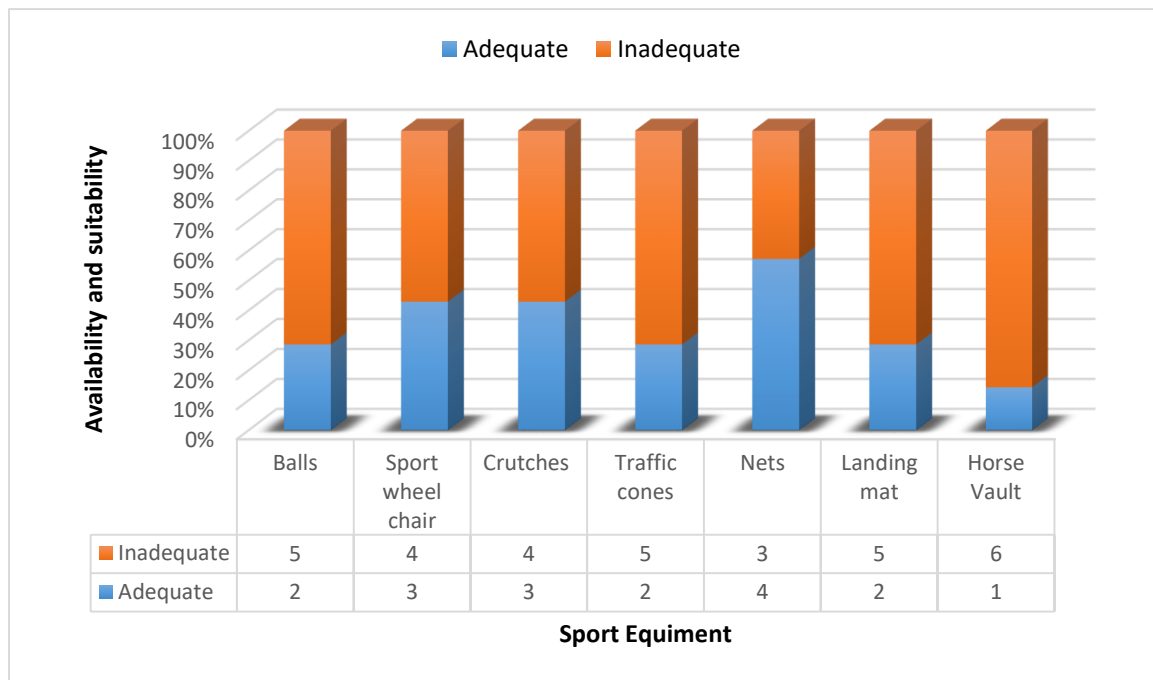
gymnasia adapted toilets, and a swimming pool could have been attributed to the sheer expense of building a gymnasium or a swimming pool or even maintaining one.

It was further observed that majority (57.1%) of the schools visited lacked ramps that are expected to facilitate the movement of LWDs around the school and the playgrounds. This as reported by teachers limited the movement of physically challenged learners in and out of the playgrounds and therefore implying that these learners could not participate in PE/sports to the best ability as reported by teacher. From the findings above it is suggestive that most public primary schools in Nairobi City County, have not put up enough structures in place to accommodate LWDs and hence do not support inclusive education 100%. This is in line with Wachira (2012) who had noted 55% of the teachers believed that physical facilities were not well structured to accommodate learners with disabilities.

4.4 Finding on research question 2: What is the availability and appropriateness of equipment?

The second research question sought to find out the availability and appropriateness of equipment for the implementation of inclusive PE/sports programmes in public primary schools in Nairobi City Council. To determine this, the research filled an observational checklist with the help of PE teachers and the results were shown in figure 4.

Figure 4: Availability of Physical Equipment for Inclusive Education



From figure 4, it was observed that (28.5%) of the schools had balls that were adapted for use by LWDs such as a bell or beeper balls and brightly coloured neon softballs. However, (71.4%) had typical balls which were either inflated, torn, and were not enough in terms of the number of learners. This result implies therefore that the participation of LWDs in PE/sports was limited due to the limited number of balls available. The majority of the PE teachers reported that the learners were willing to participate; however, it was very hard for them to balance out the number of available adapted balls to the number of learners. The LWDs, were therefore forced to use the typical balls available which affected their performance level. These findings concur with the findings of Ngugi and Thinguri (2014) who observed that sports equipment that is tailor-made for specific disabilities are very expensive thus, LWDs lack the necessary exposure and experience in sports and recreation activities. This concurred also with the findings of Kahiga (2014) who observed that the quantity of play equipment and materials did not match the number of children. The researcher observed a lesson in a school where the teacher was using only two balls for a class of fifty children. This did not provide maximum participation for the children.

It was observed that (42.8%) had sports racing wheelchairs and crutches. They were however in poor condition and not enough to share among the students. It was further reported by most teachers interviewed, the school could not afford to buy, and when bought they would not last long before they spoilt and hence it became the obligation of the parents to buy the wheelchairs or crutches, however, most parents could not afford; This shows that mobility of learners was hindered which poses a great challenge for adaptation of LWDs into an inclusive set-up as lack of movement discourages participating in PE/sports. This finding concurs with the findings of Omamo (2017) who found that 90% of schools did not have assistive devices to aid in the movement of learners around the school.

Finally, it was observed that for the teaching aids and PE resources most schools did not provide. This study found that 28.5% had field traffic cones/ marking aids such as brightly coloured traffic cones to mark lines and lanes for athletics or to demarcate the fields to guide learners like the visually impaired, 57.1% schools had brightly coloured nets for various sports such as football goals and basketball and netball rings, and a minority 28.5% had landing mats and 14.2% vault horse in their gymnasium. The implication of these findings is that schools are not prepared to accommodate learners with special needs considering that they lack such basic resources. The findings confirm earlier reports that relevant equipment was not available for learners with special needs in schools (KISE, 2003).

4.5 Finding on research question 3: What are the head teachers and teachers preparedness?

The third research question sought to find out the head teachers' and teachers' preparedness. The indicators for these were head teachers and PE teachers' experiences and qualifications, training in SNE, APE, and ability of the teachers of PE to modify facilities, equipment and activities to suit the needs of LWDs in their classroom. The analysis is as below.

Table 3: Head Teachers and PE Teachers' Teaching Experience

Teaching Experience (years)	Head Teachers	Percentage	Teachers	Percentage
1-5	0	0.0%	1	7.7%
6-10	1	14.3%	4	30.7%
11-15	5	71.4%	6	46.2%
16 and above	1	14.3%	2	15.4%
Total	7	100%	13	100%

The data in Table 3 indicates that 14.3% of head teachers have working experience of over 16 years. Up to 71.4% have working experience between 11- 15 years and 14.3% have working experience between 6-10 years. For the teacher, it was noted that 46.2% have a teaching experience of between 11-15 years, 30.7% are between 6-10 years, 15.4% have over 16 years' experience and only a minority 7.7% had less than 5 years. The finding implied that due to the good distribution of teaching experience among the head teachers and teachers, they had an opportunity to interact with learners who had diversified needs in their respective schools, either in the classroom during the instructional process or within the school compound during co-curriculum activities. A clear indication that most head teachers and teachers in public primary schools in the County of Nairobi have enough experience which makes them conversant with inclusive PE/sports and hence could support learners and encourage their participation in PE/sports.

These findings are in line with Roul, Brunet, Belley, Carbonneau and Fortier (2015), who found in their study that the majority of head teachers had acquired some professional experience in the teaching profession, therefore, they were in a better position to handle the issues of inclusive education for all learners as the working experience among the head teachers and teachers was well distributed. This could be beneficial to the implementation of the inclusive education. This is in line with the findings of Mutungi and Nderitu (2014) who reported that most head teachers would handle

inclusive education for all learners with their teaching experience. Otieno (2014) reported that the majority of the teachers have a teaching experience of between 11-15 years, a clear indication that most teachers are experienced which make them conversant with inclusive education and can support learners learning.

4.5.1: Head teachers and PE teacher’s academic qualification

An item was included on the head teacher’s questionnaire, which sought information on head teachers and teacher's academic qualifications. Table 4 captures this information.

Table 4: Head Teachers and PE Teacher’s Academic Qualification

Academic Qualification	Head teachers	Percentage	PE Teachers	Percentage
Certificate	0	0%	1	7.7%
Diploma	1	14.2%	3	23.1%
Degree	3	42.9%	7	53.8%
Masters	3	42.9%	2	15.4%
Total	7	100%	13	100%

According to results in table 4 shown above, 42.9% of the head teachers have a postgraduate education qualification up to master’s in education, 42.9% have a degree in education, with only a minority 14.2% who had attained up to a diploma in education. Among the teachers 53.8% had attained a degree in education, 15.4% had a master's in education, 23.1% had a diploma in education, and a minority 7.7% had a certificate in education. This P1Certificate in education is the actual qualification that Teacher Service Commission expects for this level of teaching. This implies that all head teachers have the required professional qualification to implement inclusive education in their schools. This means that the stakeholders were aware of the requirements such as training teachers in SNE and supporting them by providing them the necessary basic sports facilities and equipment. It implies that the PE teachers can handle the teaching of physical education in their

respective schools and can support participation in sports by LWDs in different kinds of sports of their choice. This finding is in line with Munayi (2015) who found that 70.96% of the teachers involved in the instruction of physical education are graduates hence teachers have the required professional qualification to handle physical education in schools for learners with disabilities.

Some teachers reported that for them to have achieved a bachelor of education and subsequently a master of education degree, it was due to their extra effort. Additionally, most would like to undergo training in special needs education and especially adapted physical education to widen their knowledge in the field of inclusive education to be able to offer their best to LWDs such as being able to modify equipment and activities as a way of encouraging LWDs to participate in PE/sports.

4.5.2: PE Teacher’s training level in special needs education

A question was formulated in the questionnaire which sought further PE teachers' level of SNE and adapted physical education (APE) training. The analysis is shown in table 5 below.

Table 5: Teacher’s Training Level in SNE and APE

Teacher training level	Training in SNE (n)	Percentage	Training in APE (n)	Percentage
Certificate	1	7.7%	9	69.2%
Diploma	6	46.2%	3	23.1%
Degree	4	30.7%	1	7.7%
Masters	2	15.4%	0	0%
Total	13	100%	13	100%

Table 5 indicates that 46.2% had SNE training up to diploma level, 30.7% had up to degree level, 15.4% had up to master’s level, while only a minority 7.7% had up to certificate level. This is attributed to the availability of continuous professional development programmes commonly

referred to as school-based programmes since 2003 that allow experienced teachers to study during the school holidays. Holding a degree in education implies that the said teacher has knowledge on inclusive education since Special Needs Education (SNE) is a compulsory unit for a degree course in education and inclusive education is one of the topics in the SNE course. This implies that the PE teachers are knowledgeable enough to handle LWDs in a mainstream school in the teaching of PE and can encourage the interested learners in sports participation after school.

In APE training, 69.2% of PE teachers' were trained up to a certificate level, 23.3% of PE teachers had up to diploma level and a minority 7.7% had up to a degree level with none with a master's level of training. This results could explain the negative attitude teachers had towards inclusive education. The PE teachers had little knowledge of APE, which made it difficult for most of them to deliver the teaching of PE to LWDs successfully. This was because it was difficult for them to modify the available facilities, equipment, and activities to allow all learners with special needs to participate in PE successfully.

This is in line with the finding of Andiemba (2020) who found that the SNE teachers teaching in public primary schools have the required qualifications, 60.9% (42) possessed diploma in special needs education and 34.8% (24) had a bachelor degree in special needs education to enable them to teach and support special needs learners in their schools. However, as noted, the majority of the teachers 69.2% were not trained in APE. This finding is in line with the findings of Mwangi (2013) who noted that although teachers were well trained in special needs education, they had little training in the area of adapted physical education and this gave them challenges in the successful teaching of P.E to an extent that they overlooked the subject. Mwangi further found that teachers' also suggested refresher courses on adapted physical education. This confirms the findings of the studies by Nyaigoti (2013) and Wachira (2012), which indicated that teachers need to be professionally trained and supported for them to handle inclusive classrooms comfortably.

Further to the investigation on the availability of sports facilities and equipment, the researcher wanted to find out if the available facilities and equipment were adapted/modified by PE teachers to suit the needs of LWDs. Below are the findings as reported by teachers interviewed.

Table 6: Adaptation/modification of facilities and equipment by PE teachers

Adaptation/Modification	Frequency	Percentage
Modified a variety of equipment	3	23.1%
Modified activities/sport by adjusting the rules to suit learners' ability	5	38.4%
Reduced the size of the playing area/field	3	23.1%
Lowed goalpost (basketball and netball)	2	15.4%
Total	13	100%

Table 6 illustrates that only 3(23.1%) modified equipment to suit learners with different kinds of disabilities. They made use of a bell or beeper balls, put a bright-coloured stripe around a ball so that it has a flicker effect when it moves, to make it easy for learners with hearing impairment to hear the movement of the ball, and use brightly coloured (neon) nets and balls for basketball and netball. It was noted that only 38.4% (5) modified different activities by adjusting some rules of the sport to suit learners' needs to ensure they were able to perform some of the activities to the best of their ability. It was further noted that only 23.1% (3) reduced the size of the field/court and used colourful cones to mark the field/courts this ensured that learners with physical disability did not have to get tired by playing for long and the visually impaired could see the marked field. Finally, only 15.4%(2) lowered their goal post to allow learners with physical disabilities not to strain while scoring especially for the basketball and netball goalposts, and also used brightly coloured nets to enable the visually impaired to see the goal/rings easily while scoring.

The teachers reported that, where they were able to modify either the facility, equipment or the activity, LWDs would participate in PE/sports actively. The LWDs concurred with this and mentioned that they preferred sports where the PE teacher was able to modify either the facility, equipment or activity to suit their specific need. This finding therefore indicates that, where the PE teacher is well trained in SNE, and especially in APE, it has a positive effect on the participation levels of LWDs in PE/sports.

This concurred with Gichia, Njoroge, and Mwisukha (2009) who reported that most of the facilities and equipment were not appropriately adapted to meet the unique needs of learners with disabilities. Learners mainly in a wheelchair could not access most of the facilities and equipment. This adversely affected learners' performance and even marginalized others. The study further found that the lack and inadequacy of APE facilities and equipment were the major problems facing the teaching of APE. Munayi (2015) also noted that 45.16% of teachers were observed to have poor use of sports facilities and equipment. The study observed that sometimes teachers use the whole field for few students making the field too big for the learners. This has a tendency of the lesson becoming unstructured and tending towards basic play. Munayi further noted that good teachers tend to structure the lesson by reducing the size of the sports fields used by learners. This has a tendency to increase the number of times the learners interact with the equipment. The use of equipment forms an important part of the learning process. The more interaction a learner has with equipment; the more learning takes place. This finding is also in line with the findings of Mwangi (2013) who found that most head teachers and teachers suggested that the government of Kenya should provide adequate equipment for adapted physical education in the special units. The provision of adapted physical education equipment would enable them successfully teach physical education to their learners with disabilities as the APE equipment would suit the diverse abilities of the learners.

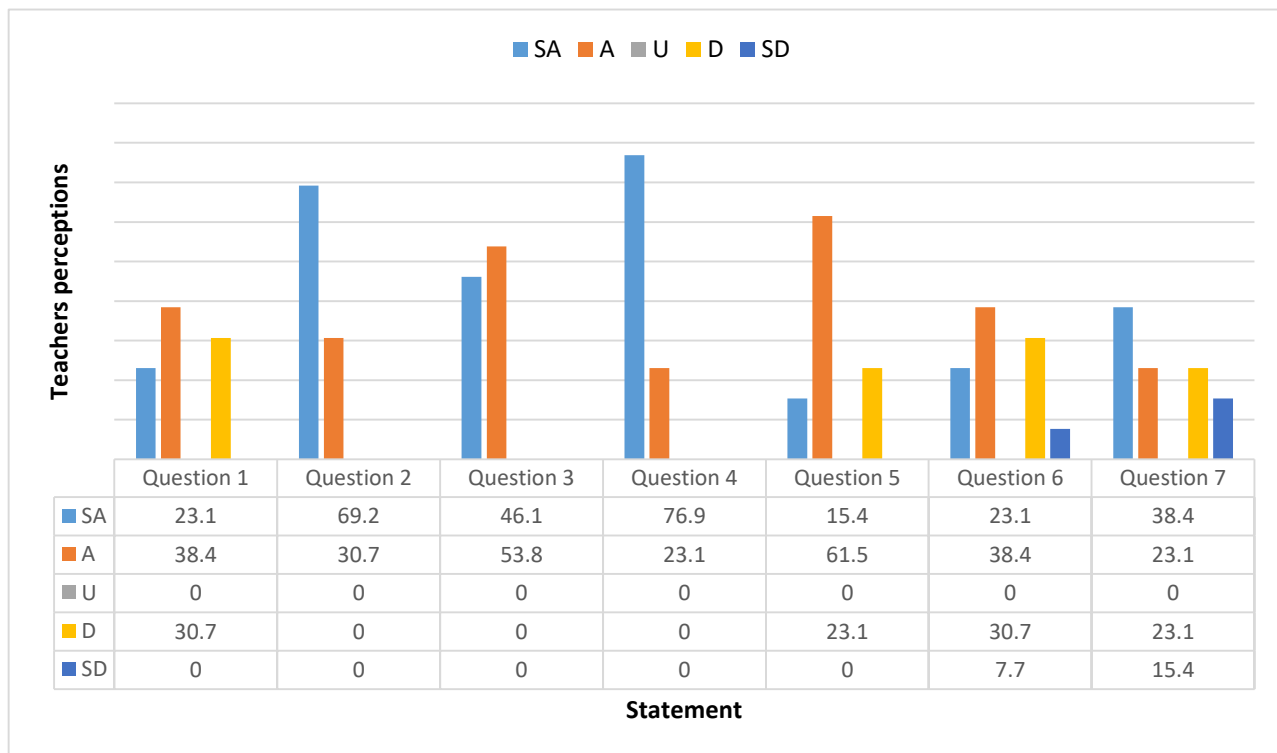
4.6 Finding on research question 4: What are the PE teacher’s perceptions towards inclusive PE and sport programmes?

The fourth research question sought to find out about teachers’ perceptions towards inclusive sports programmes. A total of 13 PE teachers drawn from the sample schools were asked to respond to the question below. Their response was captured in Table 7

Table 7: Teacher’s Perception towards Inclusive Sport Programme

Challenges	SA	A	U	D	SD
Q1. Lack of training in SNE	3	5		4	
Q2. Lack of training in APE	9	4			
Q3. Inadequate facilities	6	7			
Q4. Inadequate sports equipment	10	3			
Q5. Lack of support from the school administration	2	8		3	
Q6. Nature of students disability	3	5		4	1
Q7. Lack of support from parents	5	3		3	2

Figure 5: Teacher’s Perception towards Inclusive Sports Programmes



From the analysis in figure 5, question 1 indicates that 38.4% of teachers agreed, 23.1% strongly agreed that lack of training in SNE was a major reason for their negative attitude towards inclusive sports programmes, while 30.7% disagreed with this. Question 2, indicates that the majority 69.2% strongly agree, while 30.7% agreed that lack of training in APE was a major reason for their negative attitude towards inclusive sports programmes. Question 3 indicates that the majority 58.8% teachers agreed while 46.1% strongly agreed that the lack of facilities was a major reason for their negative attitude towards inclusive sports programmes. Question 4 indicates that the majority 76.9% teachers strongly agreed while 23.1% agreed that the lack of facilities was a major reason for their negative attitude towards inclusive sports programmes. Question 5 indicated that 61.5% of teachers agreed, while 15.4% strongly agreed that lack of support from school administration was a major reason for their negative attitude towards inclusive sports programmes, while a minority 23.1% disagreed. Question 6 indicates that 38.4% of teachers agreed and 23.1% strongly agreed that the nature of student disability was a major reason for their negative attitude towards inclusive sports programmes.

However, 30.7% disagreed with 7.7% strongly disagreed with this. Finally, question 7 indicates that 38.4% of teachers strongly agreed and 23.1% agreed that lack of parents' support was a major reason for their negative attitude towards inclusive sports programmes while 23.1% of teachers disagreed and 15.4% strongly disagree with this. The results imply that due to the above factors such as lack of training in SNE, APE, support from the administration, lack of inadequate facilities and equipment, parents support, and the nature of disabilities, the PE teachers' were not able to deliver the teaching PE/sports effectively and successfully to the LWDs in their respective schools and hence the participation levels of learners in their schools were very low.

This finding is in line with the findings of a study by Muwana (2012) who found out that teachers positive or negative attitude towards inclusion was influenced by the level and type of training, exposure of students with special needs, nature of student disability, and the school support system. This concurs with Mwaimba (2014) who quoted that successful implementation of inclusive education is greatly dependent on teachers' positive attitude and their perception towards inclusive education.

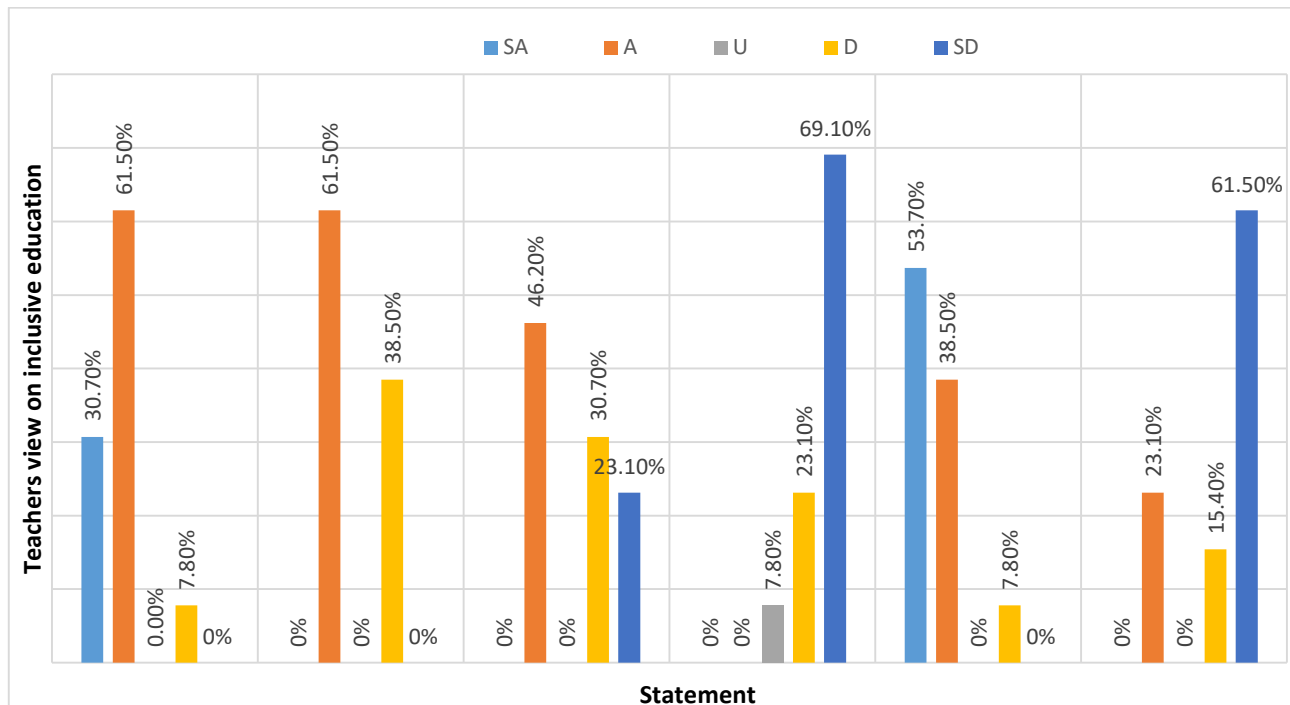
4.6.1 Teacher's views on inclusive education

The table below was used to gauge teachers' perceptions towards the teaching of inclusive sports programmes to learners with different kinds of disabilities. Their views were as indicated in table 8.

Table 8: Teacher View on Inclusive Education

Statement	SA	A	U	D	SD
Q1. An all-rounded education has a positive effect on the social and emotional development of learners living with disabilities	4	8		1	
Q2. All rounded education is beneficial for both normal and challenged learners		8		5	
Q3. Teachers have positive perceptions towards an all-rounded education		6		4	3
Q4. An all-rounded education lowers the quality of education for all learners			1	3	9
Q5. An all-rounded education is not fully established in most schools to cater to all learners with special education needs.	7	5		1	
Q6. Learners do not have a positive perception of an all-rounded education.		3		2	8

Figure 6: Teacher View on Inclusive Education



From the analysis in figure 5, 4(30.7%) teachers strongly agreed while 8(61.5%) agreed that inclusive education has a positive effect on the social and emotional development of learners living with

different kinds of disabilities. They reported that these positive traits helped in building the learner's self-esteem and developed their social communication skills, while only a minority 1(7.8%) disagreed with the statement. Question 2, 8(61.5%) teachers agreed that inclusive education is beneficial for both normal and challenged learners. The teachers reported that having all the learners both normal and challenged in the same school, was beneficial as it helped improve their health, physical and social wellness, while (38.5%) disagreed with this statement, reporting that it was disruptive for other learners. Question 3, 6(46.2%) teachers agreed that they have positive perceptions towards inclusive education, while 4(30.7%) disagreed and 3(23.1%) strongly disagreed with this statement. This indicated that most teachers had a negative perception of inclusive education. They reported that, because we're not trained in APE, it made it hard for them to include all learners with different disabilities.

Question 4, 23.1% (3) disagreed, while 69.1%(9) strongly disagreed that inclusive education lowers the quality of education for all learners, while 7.8%(1) was undecided about this statement, this revealed that even though most teachers had a negative perception towards inclusive education, most still believed it was worth it and beneficial for learners with different kinds of disabilities. Question 5, up to 53.3% (7) teachers strongly agreed while 38.5% (5) agreed that inclusive education is not fully established in most schools to cater for all learners with disabilities. while a minority 1(7.8%) disagreed with this statement. The teachers report that the ministry of education has not provided them with all the necessary teaching and learning resources such as facilities and equipment hence making it difficult for them to accommodate all LWDs in sports/ games to the best of their ability. Finally, in question 6, only 23.1% (3) teachers agreed that learners do not have a positive perception towards inclusive education, while 15.4%(2) disagreed and 61.5%(8) strongly disagreed with this statement, reporting that most learners and especially the normal learners, showed positive perception towards learners with disabilities. The results imply that majority of the PE teachers have

negative attitude towards the implementation of inclusive PE/sports programme and hence are not able to support the learners 100% in the participation of PE and sports in their respective schools.

The findings above concurred with the finding of Hawkins and Sutton (2009) who found that although perceptions are not the only factors that account for teaching and learning they directly influence teaching and learning considerably. As when the majority of the teachers have positive perceptions towards inclusive sports programmes it can significantly influence their implementation in the school. This is also in line with Ross-Hill (2009) who said that, in general, teachers do not share a universally positive perception towards inclusion and acceptance of learners with disabilities in an inclusive classroom. He further noted that inclusive educators who feel less prepared to address behaviour challenges may also be less willing to implement individual behaviour plans or deliver individualized reinforcement.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This section provides a summary of the key findings of the study. This is followed by the conclusions based on these findings and thereafter recommendations based on the study.

5.2 Summary of the findings

The purpose of this study was to find institutional determinants of the implementation of inclusive physical education and sports programmes in public primary schools in Nairobi City County Kenya. The researcher was guided by the following research questions:

1. What is the availability and appropriateness of facilities in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
2. What is the availability and appropriateness of equipment in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
3. What are the head teacher's and teacher's level of preparedness in the implementation of inclusive sports programmes in public primary schools in Nairobi City County?
4. What are the teacher's perceptions to the implementation of inclusive sports programmes in public primary schools in Nairobi City County?

A summary of the literature was provided to illustrate the relevant theories linked to the subject matter. The theoretical framework and the theory of zone proximal development and the social model of disability portray the foundation of the research. Additionally, the data collection

frameworks were discussed and the findings from the interviews schedules, questionnaires, observational checklist, and the focus groups discussion were discussed in brief. The analysis of the findings is summarized including how the data provided by the participants related to the theories presented by various researchers. Further key evaluations and recommendations are provided.

The study was conducted using the descriptive survey design. The study targeted head teachers, PE teachers, and class seven with different kinds of disabilities such as physically challenged, hearing impairment, and visual and who are deemed to possess valuable information due to their long stay in the schools. The researcher targeted 72 standards 7 pupils, 16 teachers, and 7 head teachers. Therefore, in total all the respondents for the study were supposed to be 95. However, only 64 pupils participated in the focus group discussion representing 88.8%. Out of 15 targeted teachers, only 13 completed the questionnaires representing 81.2%. The head teachers gave a 100% return rate.

5.2.1 Summary of the findings on availability and suitability of sports facilities for the implementation of inclusive sports programmes

Objective one of the study sought to determine the availability and appropriateness of sports facilities on the implementation of inclusive physical education and sports programmes in public primary schools having a special unit in Nairobi City County. The researcher made observations on the availability and appropriateness of various sports facilities that create a barrier-free environment for learners with different kinds of disabilities such as the physically challenged and the hearing and visually impaired learners. The findings of the study revealed that sports facilities were not adequately available and appropriate to accommodate all learners with different kinds of disabilities. The study looked into facilities such as playgrounds, goal posts, gymnasium, swimming pool, adapted toilets and, ramps. Facilities available were basic and limited hence limiting the breadth a teacher had in the provision of activities/sports learning experiences, limited the modification of facilities, and the level of LWDs participation in various types of sports. The few facilities available

were serviceable but mostly designed for use by normal/regular learners. Hence the objectives of a typical PE/games lesson for LWDs are partially achieved due to the insufficient sports facilities.

5.2.2 Summary of the findings on availability and appropriateness of sports equipment for the implementation of inclusive sports programmes

Objective two of the study sought to determine the availability and appropriateness of sports equipment on the implementation of inclusive physical education and sports programmes in public primary schools having a special unit in Nairobi City County. The researcher made observations on the availability and appropriateness of various sports equipment that create a barrier-free environment for learners with different kinds of disabilities such as the physically challenged and the hearing and visually impaired learners. The findings of the study revealed that sports equipment was not adequately available and appropriate to accommodate all learners with different kinds of disabilities. The study revealed that some schools made efforts to provide balls for different kinds of sports such as football, volleyball, and basketball. These balls however were not adapted to suit the abilities of all learners. As just a few schools 26.6% provided bell and beeper balls, some provide soft lighter balls. Sports wheelchair and crutches are inadequate and got damaged easily and repair takes long, leaving learners and teachers frustrated as this limits the movement of learners. The availability of a simple landing mat and horse vault for the gymnasium was limited in numbers and poorly maintained in most schools. This in turn led to the low participation of learners in gymnastics as it was dangerous and unsafe for learners while performing. The availability of nets for football goals, netball and basketball rings, and volleyball was inadequate. This made it very difficult for LWDs to participate in sports effectively hence an indication that inclusive sports programmes are not successfully implemented in public primary schools in Nairobi.

5.2.3 Summary of the findings on head teacher's and teacher's preparedness in the implementation of inclusive sports programmes

Objective three of the study sought to determine the head teacher's and teachers' training preparedness in the implementation of inclusive physical education and sports programmes in public primary schools having a special unit in Nairobi City County. The study revealed that the majority of the head teachers and teachers had a teaching experience of over 10 and above years and most had attained up to a master's degrees in education. This implied that they were able to handle inclusive education comfortably as with the number of years they had in teaching they were bound to be conversant with inclusive education and hence the implementation of inclusive sports programmes should be something that they were be able to implement and facilitate with easy. The study also revealed that one of the major barriers to the successful implementation of inclusive sports programmes was the inadequacy and appropriateness of sports facilities and equipment to suit the needs and abilities of all learners. The study also revealed that the teachers were well trained in special needs education but not well trained in APE therefore they lacked skills and knowledge to enable them to tailor-make physical education activities and sport by modifying various sports facilities and equipment to suit the needs and abilities of LWDs since the majority 69.2% of the teachers had only a certificate in adapted physical education. These findings imply that the PE and sports programmes are not effectively implemented in public primary schools which consequently affects the participation level of LWDs.

5.2.4 Summary of the findings on teacher's perceptions in the implementation of an inclusive physical education and sport programmes

Objective four of the study sought to determine the teacher's perception in the implementation of inclusive sports programmes in public primary schools having a special unit in Nairobi City County. The study revealed that several drawbacks influenced the teachers negatively towards the

implementation of an inclusive sports programme. Some of these reasons were the limited supply of sports facilities and equipment, which made it difficult for the teachers to offer a variety of sports activities that would suit each learner's needs and abilities and promote the participation level of LWDs in PE and sport. Lack of training in APE made it difficult for the teacher to deliver tailor-made PE/sports programmes to all learners as it was challenging for them to modify activities, rules, equipment, and facilities to allow all learners to participate in sport on an equal basis with others. The lack of support from the school administration influenced their negative attitude towards inclusive sports as the efforts put in the purchase of facilities and equipment by the teachers were unsuccessful. The nature of student disability and lack of support from parents also contribute to the negative attitude teachers had towards the successful implementation of inclusive PE and sports programmes for learners with physical disability and hearing and visually impaired in public schools in Nairobi City County.

5.3 Conclusions

From the data analysis, this study made the following conclusions:

From objective one on the investigation of the availability and appropriateness of facilities for the implementation of inclusive physical education and sports programmes in public primary schools in Nairobi City County Kenya, the following conclusions were made:

The study revealed that sports facilities were inadequate and inappropriate to suit the needs and abilities of learners with different kinds of disabilities. These findings suggest that there is a need for a policy on allocation of funding in public primary schools enrolling different learners with disabilities such as the physically challenged, visually, and hearing impaired. This is so to ensure that standardization of public funds is well utilized especially in the purchase of sports facilities. The fact that there is an inadequate supply of facilities implies that the teachers need to think more creatively to enrich the learning opportunities for all learners irrespective of their disabilities.

The second objective on the investigation of the availability and appropriateness of equipment for the implementation of inclusive physical education and sports programmes in public primary schools in Nairobi City County Kenya, revealed that sports equipment in public primary schools having a special unit in Nairobi City County were inadequate and in some case inappropriate. This inhibited the successful implementation of inclusive sports programmes for learners with different kinds of disabilities as what was available was modelled for typical learners and did not suit their needs or abilities. It is therefore important to make sports equipment available for all learners with different kinds of disabilities without any prejudice. This is so to ensure that regular PE and sports programmes are running and sufficient to allow all learners to participate in various sports to the best of their ability.

The third objective is on the assessment of the head teachers' and PE teachers' preparedness in the implementation of inclusive physical education and sports programmes in public primary schools in Nairobi City County, Kenya. The study revealed that the majority of the head teachers and teachers were well trained and had a wealth of years of experience and thus can comfortably implement inclusive education and support the programmes successfully. However, teachers need more training in adapted physical education to be able to deliver tailor-made PE and sports programmes in their schools to allow LWDs to participate in physical education and sports to the best of their ability. However, this can only be possible if there is enough supply of sports facilities and equipment to allow them to offer different sporting activities that accommodate all learners irrespective of their disabilities. There is a need therefore for the head teachers to follow up to ensure that finances required to facilitate these projections are availed.

The fourth objective on the teacher's perception in the implementation of inclusive PE and sports programmes in Nairobi City County revealed several reasons/challenges that influence teachers' perceptions negatively towards the implementation of an inclusive PE and sports programme. To

mitigate the negative attitudes, there is a need for further training of teachers in adapted physical education. This could be through in-service or pre-service training, seminars, workshops, or any other mode the government deems efficient. The school administration needs to support the physical education teacher in terms of providing appropriate sports facilities and equipment, creating a barrier-free environment to allow the accommodation of all learners in physical education and sports and; encouraging the participation of learners in PE and sports. The ministry of education most importantly needs to be made aware that the teachers are facing specific challenges. It should not be assumed that the teachers will be able to accommodate the specific learning needs of each child, adapting the learning environment and the curriculum. There is a need therefore for them to support inclusive education by supporting the teacher fully and promoting positive attitudes/ perceptions.

5.4 Recommendations

Based on this study the following recommendations were made:

- i) It was evident in this study that sports facilities and equipment were not uniformly distributed concerning different kinds of sports. Simple and easy-to-use facilities and equipment that accommodate different learners with disabilities should be established and adopted to make certain that programmes involving sports in schools provide a safe and supportive environment for all learners. This would help to address the issue of incapacitated learners participating and creating opportunities for active sports engagement among LWDs. The ministry of education has to therefore identify the current policies in which capitation that goes into the learning institutions for free education and ensure it is similar for all the institutions within the nation. The increased need for facilities and equipment for the challenged learners in various institutions varies thus, leading to the need for increased capitations to meet their needs.

- ii) The schools should consider immediate restructuring of the physical environment in schools aiming at making them barrier-free and disability-friendly so that learners with different kinds of disabilities can participate safely and with ease in the sports of their interests. This can be through sourcing for funds from Constituency Development Fund. This will ease accessibility to educational opportunities for learners with different kinds of challenges in public primary schools.
- iii) In a bid to produce teachers with skills in adapted P.E, the ministry of education should restructure teacher education for physical education in primary school Teachers Training Colleges. The ministry of education should enact a policy to increase the number of trained teachers in adapted physical education and any other staff who may wish to assist in the teaching of physical education and sports and embark on employing them to teach in inclusive schools.
- iv) The teachers and instructors within the learning institutions need to be provided with key facilities and equipment to maximize their potential. This calls for the need for equipment diversification to allow the teachers to offer imperative learning encounters for all learners regardless of their challenges. This can be organized in collaboration with the Kenya Institute of Curriculum Development and concerned NGOs to effectively implement inclusive sports programmes in inclusive schools.
- v) Perpetual participation in sports for LWDs is considered important as it helps promote benefits like physiological, psychological, intellectual, and societal benefits. Thus, inclusive PE and sports programmes should be supported in public primary schools to enable unceasing participation in sports and physical fitness for all learners. This would enable talents to be nurtured and sporting potentials witnessed in the special schools to be sustained.

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229.

APPENDICES

Appendix I: Interview Schedule for Head Teachers

Code:001

This research is meant for academic purposes. It will try to find out the **Institutional Determinants of the implementation of inclusive PE and sports programmes in public primary schools in Nairobi**. Kindly you are requested to provide answers to these questions as honestly and precisely as possible.

Section I: Head teachers' preparedness

1. Are you a professionally trained teacher?
2. How many years of teaching experience do you have? (1-5) (6-10) (11-15) (16 and above)
3. What is your highest academic qualification? Certificate Diploma Degree Master
4. Do you have any training in special needs education? Yes No
If so, specify the level of training. Certificate Diploma Degree Master
5. Have you and your teachers attended any in-service training on special education? Yes No
6. Was there a component of inclusive education in the training? Yes No Not sure
7. If your answer above is yes, did the training prepare you and your teachers to implement inclusive education in your school? Yes No Not sure

Section II: Adequate provision of facilities & equipment that are appropriate for LWDs for PE and sport

1. Does your school have sports facilities to cater for all enrolled learners with different kinds of disabilities? Yes No
 - a) List some of these facilities _____
 - b) Are they adequate and appropriate for use by learners with different kinds of disabilities _____?
2. Does your school have sports equipment to cater for all enrolled learners with different kinds of disabilities? Yes No
 - a) List some of these equipment _____
 - b) Are they suitable and appropriate for use by learners with different kinds of disabilities _____?
3. What level can you rate the participation of LWDs in your school?
 - a) High level
 - b) Medium level
 - c) Low level

Thank you for participating in the study

Appendix II: Questionnaires for PE Teachers

Code:002

This research is meant for academic purposes. It will try to find out **the Institutional Determinants of the implementation of inclusive PE and sports programmes in public primary schools in Nairobi**. Kindly you are requested to provide answers to these questions as honestly and precisely as possible. Please do not write your name or that of your school anywhere on this questionnaire. Please tick [] where appropriate or fill in the required information on the spaces provided.

Section 1: PE Teachers' professional training

1. Are you a professionally trained teacher? Yes () No ()
2. How many years of teaching experience do you have? (1-5) (6-10) (11-15) (16 and above)
3. What is your highest academic qualification? Certificate () Diploma () Degree () Master ()
4. What is your highest level of training in SNE and APE? Certificate () Diploma () Degree ()
Master

Section II: PE Teachers' preparedness in the teaching of PE/Sports

1. Have you attended any recent in-service training on special education? Yes () No ()
2. Was there a component of inclusive education in the training? Yes () No () Not sure ()
3. If your answer above is yes, did the training prepare you to implement inclusive education in your school? Yes () No () Not sure ()
4. Does your school have adequate and appropriate facilities and equipment?
5. Do you modify facilities to suit the need of each kind of disability? Yes () No ()
If so, how _____
6. Do you modify equipment to suit the need of each kind of disability? Yes () No ()
If so, how _____
7. Do you modify any activities to suit the needs of each kind of disability? Yes () No ()
If so, how _____

8. Do you modify the rules of the game/sport to suit different learners' abilities? Yes () No ()

If so, how _____

9. Do LWDs participate in PE/sports actively? Yes () No ()

10. If Yes, what could you say contributes to the active participation of LWDs in PE/sports?

11. If no, what could you say contributes to low participation of LWDs in PE/sports?

12. How do you rate the level of LWDs participation in PE/sports in your school?

a) High level

b) Medium level

c) Low level

Section III: PE Teachers' perception towards inclusive sports programmes.

13. For the following items, please indicate the extent to which you Strongly Agree (SA), Agree(A),

Uncertain (U), Disagree (D), Strongly Disagree (SD) with the statement.

Challenges	SA	A	U	D	SD
Q1. Lack of training in SNE					
Q2. Lack of training in APE					
Q3. Inadequate facilities & sports equipment					
Q4. Lack of appropriate facilities & equipment					
Q5. Lack of support from the school administration					
Q6. Nature of students disability					
Q7. Lack of support from parents					

14. For the following items, please indicate the extent to which you Strongly Agree (SA), Agree(A), Uncertain (U), Disagree (D), Strongly Disagree (SD) with the statement.

Statement	SA	A	U	D	SD
1. An all-rounded education has a positive effect on the social and emotional development of learners living with disabilities					
2. All rounded education is beneficial for both normal and disabled learners					
3. Teachers have positive perceptions towards an all-rounded education					
4. An all-rounded education lowers the quality of education for all learners					
5. An all-rounded education is not fully established in most schools to cater to all learners needs					
6. Learners do not have positive attitudes towards an all-rounded education.					

Thank you for participating in the study

Appendix III: Focus Group Discussion

Code:003

1. Do you attend PE lessons? YES () NO ()
2. How would you rate your level of participation in PE?
 - a) High level
 - b) Medium level
 - c) Low level
3. Does your school have adequate facilities to cater to all student's needs?
If yes, list them

4. Does your school have adequate equipment to cater to all student's needs?
If yes, list them

5. Do PE teachers modify facilities to suit your needs?

6. Do PE teachers modify equipment to suit your needs?

7. Do teachers modify activities to suit your needs?

8. Do you participate in any sports activity after school? YES () NO ()
9. How would you rate your level of participation in sports?
 - a) High level
 - b) Medium level
 - c) Low level
10. If the answer above is high level, what would you say contributes to the high participation in PE/sports? Give 2 reasons
 1. _____
 2. _____
11. What are the challenges that make it hard to participate in PE/sports?
 1. _____
 2. _____



Thank you for participating in the study

Appendix IV: Observational checklist of facilities and equipment

Code:001

Facilities/equipment	Availability		Suitability		Adequate	
	YES	NO	YES	NO	YES	NO
Playgrounds						
Gymnasium						
Swimming pool						
Adapted toilets						
Ramps						
Balls						
- Football						
- Netball						
- Volleyball						
- Basketball						
- Handball						
Sports wheelchairs						
Crutches						
Traffic Cones						
Nets						
Landing mat						
Horse vault						

Appendix V: Research Permit

Technology and Innovation National Commission for Science, Technology and Innovation	Permit No : NACOSTI/P/18/43643/24710
Technology and Innovation National Commission for Science, Technology and Innovation	Date Of Issue : 14th August,2018
Technology and Innovation National Commission for Science, Technology and Innovation	Fee Received :Ksh 1000
THIS IS TO CERTIFY THAT: MS. MARY WANGARI MUGWERU of UNIVERSITY OF NAIROBI, 30197-100 NAIROBI, has been permitted to conduct research in Nairobi County	
on the topic: INSTITUTIONAL FACTORS INFLUENCING IMPLEMENTATION OF INCLUSIVE SPORTS PROGRAMMES IN PUBLIC PRIMARY SCHOOL IN NAIROBI COUNTY, KENYA	
for the period ending: 14th August,2019	Director General National Commission for Science, Technology & Innovation
Applicant's Signature	

Appendix VI: Letter of approval from the Ministry of Education



**Republic of Kenya
MINISTRY OF EDUCATION**

STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telegrams: "SCHOOLING", Nairobi
Telephone; Nairobi 020 2453699
Email: rcenairobi@gmail.com
cdenairobi@gmail.com

REGIONAL COORDINATOR OF EDUCATION
NAIROBI REGION
NYAYO HOUSE
P.O. Box 74629 – 00200
NAIROBI

When replying please quote

Ref: RCE/NRB/GEN/VOL.1

Date: 28th August, 2018

Mary Wangari Mugweru
University of Nairobi
P. O. Box 30197- 00100
NAIROBI

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on "*Institutional factors influencing implementation of inclusive sports programmes in public primary school in Nairobi County, Kenya-*".

This office has no objection and authority is hereby granted for a period ending 14th August, 2019 as indicated in the request letter.

Kindly inform the Sub County Director of Education of the Sub County you intend to visit.



**DRISCILLA MOSIORI
FOR: REGIONAL COORDINATOR OF EDUCATION
NAIROBI**

Copy to: Director General/CEO
National Commission for Science, Technology and Innovation
NAIROBI

