

**INCLUSIVE INSTRUCTIONAL PRACTICES INFLUENCING COMPETENCY-
BASED CURRICULUM IMPLEMENTATION FOR EARLY YEARS
LEARNERS WITH DISABILITIES IN PRIMARY SCHOOLS,
NAIROBI CITY COUNTY, KENYA**

**BY
OWINO CLIFFORD OTIENO
E83/26790/2019**

**A PH. D RESEARCH THESIS SUBMITTED IN FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY
DEGREE IN EDUCATION (EARLY CHILDHOOD STUDIES) OF
KENYATTA UNIVERSITY**

JUNE, 2023

DECLARATION

I hereby declare that this thesis is my original work, which has not been presented for certification in any other institution. This thesis has been developed using sources, which have been appropriately acknowledged. The researcher borrowed text data from other sources, which have been acknowledged and referenced using the current APA system.

Sign: _____

Date: _____

Clifford Otieno Owino

E83/26790/2019

SUPERVISORS' DECLARATION

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

Sign: _____

Date: _____

Dr. Beatrice Bunyasi Awori

Senior Lecturer,

Department of Early Childhood and Special Needs Education

Kenyatta University

Sign: _____

Date: _____

Dr. Rachel W. Kamau-Kang'ethe

Senior Lecturer,

Department of Early Childhood and Special Needs Education

Kenyatta University

DEDICATION

I dedicate this thesis to my dear wife Juliet Agonji Otieno for supporting me during my study. I also dedicate this thesis to my pretty children Daisy, Jeancrowford, Nancy, and Stafford. You have been very instrumental and source of motivation to me as I undertook my study. Similarly, I dedicate this thesis to Dr. Isiaih Ouro Ngenga for the immeasurable support you gave me throughout my studies. Lastly, this thesis is dedicated to all people ready to join hands in changing the lives of children with disabilities in big and small ways.

ACKNOWLEDGEMENT

I wish to appreciate Kenyatta University's management through the able leadership of our Vice-Chancellor Prof. Paul K. Wainaina for the appointment as a tutorial fellow. The appointment has seen me through to the achievement of my long dream of attaining a Doctor of Philosophy Degree. I also recognize the immeasurable support from my supervisors Dr. Beatrice Bunyasi Awori and Dr. Rachel W. Kamau-Kang'ethe. You guided me through the completion of the thesis. Many thanks to Dr. Hudson Ouko for your input on the final manuscript which greatly shaped the thesis. Many thanks to Dr. Lubna Mazrui, Dr. Joyce Ogogo, Dr. Rosemar Olendo, Dr. James Oluoch, Dr. Samuel Mutweleli, Dr. Nyakwara Beggi, Dr. Catherine Murungi and Dr Mary Ndani for you're your pieces of advice. I also recognize all the other members of staff both teaching and non-teaching in the department of EC& SNE for their support during my studies. I also must recognize my nuclear family, relatives, and friends for according me the moral and social support necessary during the time of this course.

I cannot forget the support I received from my confidant Dr. Isaiah Ouro Genga during my studies; You have been with me every step of the way since I lost my sight. I am greatly indebted to all those who have read my thesis and given suggestions on the changes as well. Lastly but not the least, I recognize the support of the ministry of education officials, headteachers and teachers whose support or participation brought the study to fruition.

TABLE OF CONTENTS

DECLARATION.....	II
DEDICATION.....	III
ACKNOWLEDGEMENT.....	IV
TABLE OF CONTENTS	V
LIST OF TABLES	IX
LIST OF FIGURES	X
ABBREVIATIONS AND ACRONYMS.....	XI
ABSTRACT.....	XII
CHAPTER ONE	1
INTRODUCTION AND BACKGROUND TO THE STUDY	1
1.1 INTRODUCTION.....	1
1.2 BACKGROUND TO STUDY	1
1.3 STATEMENT OF THE PROBLEM.....	8
1.4 PURPOSE OF THE STUDY	9
1.5 OBJECTIVES OF THE STUDY.....	10
1.6 RESEARCH HYPOTHESIS	10
1.7 SIGNIFICANCE OF THE STUDY	11
1.8 LIMITATIONS AND DELIMITATIONS OF THE STUDY.....	12
1.8.1 Limitations of the Study	12
1.8.2 Delimitations of the Study	12
1.9 ASSUMPTIONS OF THE STUDY.....	13
1.10 THEORETICAL AND CONCEPTUAL FRAMEWORK.....	13
1.10.1 Theoretical Framework.....	13
1.10.2 Conceptual Framework.....	16
1.11 OPERATIONAL DEFINITION OF TERMS	19

CHAPTER TWO	21
REVIEW OF RELATED LITERATURE	21
2.1 INTRODUCTION.....	21
2.2 TEACHERS’ TRAINING AND CBC IMPLEMENTATION	21
2.3 INSTRUCTIONAL PRACTICES AND IMPLEMENTATION OF CBC.....	29
2.4 INSTRUCTIONAL MATERIAL RESOURCES ADAPTATION AND IMPLEMENTATION OF CBC.....	37
2.5 ASSESSMENT STRATEGIES ADAPTATION AND IMPLEMENTATION OF CBC	44
2.6 SUMMARY OF LITERATURE REVIEWED.....	49
CHAPTER THREE	52
RESEARCH DESIGN AND METHODOLOGY	52
3.1 INTRODUCTION.....	52
3.2 RESEARCH DESIGN.....	52
3.2.1 Research Variables	53
3.2.1.1 Independent Variable.....	53
3.2.1.2 Dependent Variable	53
3.2.1.3 Intervening Variable	54
3.3 LOCATION OF THE STUDY.....	54
3.4 TARGET POPULATION	56
3.5 SAMPLING TECHNIQUES AND SAMPLE SIZE.....	56
3.5.1 Sampling Techniques	56
3.5.2 Sample Size	58
3.6 RESEARCH INSTRUMENTS.....	58
3.6.1 Questionnaire for Teachers.....	58
3.6.2 Interview Schedule for Education Officer and Head-teachers	59
3.6.2.1 Interview Schedule for Headteachers	60
3.6.2.2 Interview Schedule for Education Officers	60
3.6.3 Observation Check-list	61
3.7 PILOTING STUDY	61
3.8 VALIDITY OF THE RESEARCH INSTRUMENTS	62

3.9 RELIABILITY OF THE RESEARCH INSTRUMENTS	63
3.10 DATA COLLECTION TECHNIQUES	64
3.10.1 Questionnaire for Teachers:.....	64
3.10.2 Interview Schedules for Educational Officers and Head Teachers:	65
3.10.3 Observation Check-list	65
3.11 DATA ANALYSIS.....	66
3.12 ALTERNATIVE HYPOTHESES.....	66
3.13 LOGISTICAL AND ETHICAL CONSIDERATIONS.....	69
3.13.1 Logistical Considerations	69
3.13.2 Ethical Considerations.....	69
CHAPTER FOUR.....	71
FINDINGS, PRESENTATION AND DISCUSSION	71
4.1 INTRODUCTION.....	71
4.2 GENERAL INFORMATION	72
4.2.1 Research Instruments' Return Rate	72
4.2.2 Demographic Information	73
4.3 TEACHERS' TRAINING IN SNE AND CBC IMPLEMENTATION	76
4.3.1 Teachers' Level of Training on Learners with Disabilities.....	77
4.3.2 Categories of Disabilities Present in Schools for Specialized Training	88
4.3.3 Teachers' Level of Training in SNE	92
4.4 INSTRUCTIONAL METHODS ADAPTATION AND IMPLEMENTATION OF COMPETENCY- BASED CURRICULUM	99
4.4.1 Alternate Instructional Methods Appropriate for Learners with Disabilities....	99
4.4.2 Systematic Instruction for Learners with Disabilities	102
4.4.3 The Appropriateness and Use of Assistive Technology.....	106
4.5 INSTRUCTIONAL MATERIAL RESOURCES ADAPTATION AND COMPETENCY-BASED CURRICULUM IMPLEMENTATION.....	115
4.5.1 Availability and Use of Adapted Instructional Material Resources in Schools	115
4.5.2 Knowledge and use of specialized adaptive instructional resources	119

4.5.3 Challenges faced in the adaptation and use of instructional material resources	125
4.6 ASSESSMENT STRATEGIES ADAPTATION AND IMPLEMENTATION OF COMPETENCY-BASED CURRICULUM IMPLEMENTATION	131
4.6.1 Use of standard grade level assessment for learners with disabilities	131
4.6.2 Teachers' Perceptions of alternate assessment strategies	138
4.6.3 Alternate assessments used in Schools.	141
CHAPTER FIVE	152
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	152
5.1 INTRODUCTION	152
5.2 SUMMARY OF THE STUDY FINDINGS	152
5.3 CONCLUSIONS	156
5.4 RECOMMENDATION	158
5.4.1 Recommendation for Policy	158
5.4.2 Recommendation for Theory	159
5.4.3 Recommendation for Practice	159
5.4.4 Recommendation for Further Research	160
LIST OF REFERENCES	161
APPENDICES	175
APPENDIX I: A: INFORMED CONSENT FOR PARENTS	175
APPENDIX II: QUESTIONNAIRE FOR TEACHERS	179
APPENDIX III: INTERVIEW GUIDES FOR HEADTEACHERS	189
APPENDIX IV: INTERVIEW GUIDES FOR EDUCATIONAL OFFICERS	192
APPENDIX V: OBSERVATION CHECK-LIST	195
APPENDIX VI: MAP OF NAIROBI CITY COUNTY	197
APPENDIX VII: RESEARCH APPROVAL FROM KU	198
APPENDIX VIII: RESEARCH AUTHORIZATION FROM THE MINISTRY OF EDUCATION	201
APPENDIX IX: RESEARCH AUTHORIZATION FROM NACOSTI	203

LIST OF TABLES

TABLE 1 :	58
TABLE 2 :	63
TABLE 3 :	68
TABLE 4 :	72
TABLE 5 :	74
TABLE 6 :	75
TABLE 7 :	76
TABLE 8 :	80
TABLE 9 :	82
TABLE 10 :	83
TABLE 11 :	88
TABLE 12 :	90
TABLE 13 :	97
TABLE 14 :	100
TABLE 15 :	103
TABLE 16 :	110
TABLE 17 :	112
TABLE 18 :	117
TABLE 19 :	119
TABLE 20 :	128
TABLE 21 :	132
TABLE 22 :	134
TABLE 23 :	135
TABLE 24 :	137
TABLE 25 :	142
TABLE 26 :	148

LIST OF FIGURES

FIGURE 1 :	17
FIGURE 2 :	78
FIGURE 3 :	85
FIGURE 4 :	92
FIGURE 5 :	107
FIGURE 6 :	108
FIGURE 7 :	121
FIGURE 8 :	123

ABBREVIATIONS AND ACRONYMS

CBC	: Competency-Based Curriculum
CBT	: Competence Based Training
EC:	: Exceptional Children
EYL	: Early Years Learners
IE:	: Inclusive Education
IEP	: Inclusive Education Program
KCSE	: The Kenya Certificate of Secondary Education
KICD	: Kenya Institute of Curriculum Development
KISE	: Kenya Institute of Special Education
KNUT	: Kenya National Union of Teachers
LD:	: Learning Disability
LSN:	: Learner with Special Needs
NYCTF:	: New York City Teaching Fellows
SNE:	: Special Needs in Education
UNESCO	: United Nations Educational Scientific and Cultural Organizations

ABSTRACT

Inclusive education is fast taking centre stage in most educational programmes globally. It is therefore incumbent for all curricula and educational programs changes and implementation to take cognizant of this fact. This study focused on the inclusive instructional practices influencing inclusion of Early Years Learners with disabilities in the implementation of the competency-based curriculum (CBC) among primary schools. The study was to investigate the influence of inclusive instructional practices on CBC implementation for early years learners with disabilities who were learning in regular primary schools in Nairobi City County Kenya. The objectives of the study were to; establish an association between teachers' training in SNE and their implementation of CBC for EYL with disabilities in primary schools; determine the association between instructional methods adaptation and CBC implementation for EYL with disabilities in primary schools; determine the instructional material resources adaptation and CBC implementation for EYL with disabilities in primary schools and to analyse the assessment strategies adaptation and CBC implementation for EYL with disabilities in primary schools. The study was premised on the theory of Complexity and Education by Davis and Sumara (2006), which holds that the fruitfulness and range of systems in which ambiguity and uncertainty occur, should be embraced. A concurrent embedded design based on the mixed-method approach was employed. The study location was Nairobi City County, Kenya. A target population of 657 participants was used with a sample of 16 head teachers, 48 teachers, and 2 Educational Officers. Stratified, random sampling and purposive techniques were employed to select the locale and the study sample respectively. Questionnaires, check-list and interview schedule were employed to collect data. Piloting was done in one school with a special unit and helped test the efficacy of the instruments. Cronbach's alpha coefficient of $r \geq .75$ was deemed fit for reliability. Data were analysed using descriptive and inferential statistics. Statistical Package for Social Sciences version 22 was used. Research hypotheses were tested using chi-square (X^2) at a significant level of $\alpha \leq .05$. Findings of this study revealed that neither teachers with high nor low levels of training in SNE had significant association with the level of implementation of CBC with the learners with disabilities in the regular class and that teachers with a high mean score on instructional methods adaptation for learners with disabilities also had high mean scores on CBC implementation in regular class. Teachers with high mean scores on instructional material methods adaptation also had high mean scores on CBC implementation for learners with disabilities in regular class and that teachers with high mean scores on assessment strategies adaptation also had high mean scores on CBC implementation for learners with disabilities in a regular class. It was concluded therefore that majority of the teachers were not trained in SNE for the adaptation and implementation of CBC for the learners with disabilities. Further, Schools still did not employ alternative instructional methods for adaptation and implementation of CBC for learners with disabilities and lacked alternative instructional material resources for adaptation and implementation of CBC for early years learners with disabilities. Finally it was revealed that schools did not employ alternative assessment strategies for adaptation and implementation of Competency-Based Curriculum for early years learners with disabilities. The study recommended the need for mass training of early years primary school grade teachers in Special Needs Education to enable them employ appropriate instructional and inclusive of learners with disabilities in implementation of CBC.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This section presents the background of the study, the problem statement, and the study purpose. Also, research objectives, hypotheses and the significance of the study are discussed. On the other hand, the scope, limitations and delimitations, assumptions, theoretical framework and conceptual framework are discussed. Operational definitions of key terms are discussed too.

1.2 Background to Study

The rifts in education between children with and without disabilities have continued to play substantially over the last decades. This is because efforts to improve educational outcomes for children with disabilities have not been put into practice with children with disabilities in mind in developing countries (UNESCO, 2015). Ensuring all children have equal access to learning opportunities should therefore be embedded in the learning curriculum to end the persistent learning crisis. Any curriculum is only functional and relevant to meeting its needs when it allows the concerned society to achieve its educational goals (UNESCO, 2015). Subsequently, a curriculum is subjected to revision and reforms from time to time to align it with changing societal needs (KICD, 2017; UNESCO, 2015). Countries are reviewing their education curricula from learner-centered content-based to learner-centered competency-based approaches (KICD, 2019; KICD, 2017). Competency involves the efficient routine of a function and the use of knowledge, skills, attitudes, and values (KICD, 2019). A curriculum involves a planned sequence of knowledge and skills that guide learning (UNESCO, 2015). While a Competency-Based Curriculum (CBC) is a

learning design that provides every learner with the opportunity to identify his/her potential through engaging in hands-on learning at school where the learner's potential is nurtured (Oroszi, 2020; KICD, 2019; KICD, 2017).

The modern Competency-Based Education (CBE) training movements began around the 1960s in the U.S.A. with the main aim of reforming teacher education and training (Brown, 1994). By 1965, Chomsky managed to develop a design from generative grammar to bring forth reforms in teacher training and vocational education (Ford, Vignare, Mulherrin, Davis & Cini, 2014; Butova, 2015). Currently, CBE in the United States as an education system, make programs that are more reputable making students proud of their degree and school (Oroszi, 2020). In South Africa, Competency-Based Training (CBT) was introduced in 2007 as a national qualification framework for education (Parker & Walters, 2008). In 2005, the CBE was adopted in Tanzania to improve education quality in secondary schools (Kayili & Dođru, 2012); Komba & Mwandanji, 2015). In 2017, CBC was introduced in Kenya, to replace the content-based with the learner-centered curriculum (KICD, 2019; KICD, 2017). This move would be presumably have learners with disabilities in view and in line with the need for inclusive education.

Inclusive education (IE) encompasses provision of high-quality education to all learners regardless of disabilities (Anderson & Boyle, 2015; Republic of Kenya, 2009). Therefore, it is helpful to employ special education pedagogies for learners with diverse disabilities in the inclusive learning setting given the policy of inclusivity (Davis & Florian, 2004). The provision of IE is currently increasing in many countries. In the U.S.A for instance, the inclusion of children with special needs in early childhood was first effected in 1975, to allow learners with special needs (LSN) to learn in the least restrictive environment (All-

Star-Staff, 2018; Hossain, 2012; U.S.A. Department of Education, 2014). In Australia, it was until recently that special education was accepted, though, parent advocacy for educational acceptance for learners with disabilities had started in the 1970s without success (Chambers & Forlin, 2021). South African National Policy on Education (1986) and revised policy (1992) emphasized on the need for the integration of children with mild disabilities into mainstream schools (Marion & Neelima, 2015). Also, Special Needs Education (SNE) deliberations began in Tanzania Mainland in 1950 through the effort of the Church Missionary Society(CMC). Despite the lengthy period of advocacy, there was still no clear policy guide to inclusive education (Mwajabu, Possi & Milinga, 2017). In Kenya, a national Special Needs Education Policy Framework was developed by the act of the parliament (Republic of Kenya, 2009). It highlights the strategies and procedures for improving services for persons with disabilities. It further creates activism and consciousness by revamping the program to incorporate technology, teacher training, and data collection improvement (Hammill Institute on Disabilities, 2018). there is need for investigation of the extent or manner the recommendations of the act are being achieved in the light of learners with disabilities. The current study focused on investigating educational practises and inclusion of learners with disabilities in the implementation of the competency based curriculum.

Inclusive practices would involve proper communication, organization of the classroom, planning of lessons, individualized planning, individual support, and employment of additional support strategies(UNESCO, 2015). In an inclusive classroom, education should be organized to focus on the correlation between goals, work organization (individual,

frontal, group), curriculum content, teaching strategies (teaching methodology and educational resources) as well as evaluation strategies (MANEA, 2013). West et al., (2013) maintains that inclusive Lecture Strategies should include accommodations, Resources, inclusive Assessment, and accessible Course Materials. Subarna et al., (2022) further argues that teachers who are well informed about various ways of teaching tactics for LSN such as getting started and getting ready, therefore gain the capacity to choose the right instructional staff who would appreciate learning and accommodation of learners with disabilities.

In the United States of America, implementing IE for children under the head start program faced many challenges (Ford, Vignare, Mulherrin, Davis, & Cini, 2014). Some of these challenges included inadequately trained teachers to handle exceptional children (Chen & Mickelson, 2015). Exclusion of LSN was a common phenomena (Dudley-Marling, & Burns, 2014). Further, Nethra et al., (2019) argued that the concepts of disability were not integrated into the curriculum. Competency-based learning, therefore, failed to address the individual educational needs of LSNs who were learning using the Headstart program (Lassnig, 2017). These findings imply that curriculum change and implementation failed and should have addressed the educational needs of learners with disabilities.

In Australia, there has been an ineffective implementation of IE brought about by teachers' unpreparedness (Boyle, Topping, Jindal-Snape, & Norwich, 2012). Also, the Australian education system lacks the policy provisions for modification of the curriculum for LSN Australian Government Department of Education (AGDE, 2013). Further, Moyle (2016) indicates that The Australian disability policy was unclear on curriculum activities for LSNs. However, teachers were inadequately trained in the assessment criteria for

Competency-Based Training (CBT) (Boon, Wilson & Curwood, 2014; Smith, 2018). These revelation imply that learners with disabilities in Australia are grappling with learning accommodation.

Gumede and Biyase (2016) indicated that South African teachers were inadequately trained in the National Qualifications Framework (NQF) curriculum. Additionally, Donohue and Bornman (2014) revealed that inclusive early childhood education in South Africa faced constraints brought by inadequate teacher training. Adewumi and Mosito (2019) further revealed that the South African CBT was constrained by limited material resources, limited infrastructure, and limited assistive devices. These findings also imply that learners with disabilities still face lots of challenges since the curriculum is not favourable in meeting their educational needs.

Miles, Westbrook, and Croft (2018) identified that in Tanzania, inadequate knowledge of the use of resources, negative attitudes, and poor pedagogy have resulted in education inequality for LSNs compared to their typically developing peers. Similarly, the CBE in Tanzania challenged many teachers because they had received inadequate skills to modify teaching and assessment strategies for LSN; the resources in schools were limited; and the time to implement CBC was limited (Paulo & Tilya, 2014). These revelations therefore would mean that teachers' lack of relevant knowledge in supporting the LSN contributes significantly to poor implementation of the CBC for the learners.

In Kenya, the inclusion policy requires that special needs learners get enrolled in mainstream schools in their neighbourhood and therefore have to be provided with the right and adequate support for their learning to take place (Republic of Kenya, 2009).

However, challenges to the implementation of IE are increased by inadequacy in teacher training in SNE, poor school facilities, inadequate teaching resources, poor inclusive environment, and low participation of male teachers (17%) (Owino, Kamau-Kangethe & Mwoma, 2019). Mutembei (2014) adds that many schools lack teaching as well as learning resources and their teachers were not adequately trained in SNE. Wanjiku (2010) further disclosed that teachers teaching learners with multiple disabilities were trained only in one area of specialization, but were expected and working with learners with multiple disabilities in an inclusive setting (Janmohamed, 2012); NGECHS, 2016; Owino, Kamau-Kang'ethe, & Mwoma (2019). Hence the question is whether the teachers in regular schools can ably teach CBC to LSN in their schools amidst these challenges.

Kenya Institute of Special Education (KISE) carried out a national survey on the population of children with disabilities by type of disabilities in both integrated primary schools and special primary schools. Findings showed that about 11.4% of the total population of children in Kenya have disabilities. This is about 2,489,252 children. The report maintains that out of this number, 1,261,877 children were males and 1,227,375 were females. The report further reveals that the Integrated primary schools recorded the highest number of children with intellectual disabilities at an average of 9 boys and 7 girls per integrated school while the least enrolment recorded was that of learners with deaf blindness (KISE, 2018). According to KICD (2019); KICD (2017), CBC for learners with special needs is based on the foundation of diversity celebration through the identification and valuing of all learners in their progress and achievements in inclusive settings and assessment takes keen on educational needs of LSN through assessment accommodation. It is profound in the development of crucial soft skills such as communication and collaboration, critical

thinking and problem-solving, imagination and creativity, citizenship, learning to learn, self-efficacy, and digital literacy (P, 20).

However, Momanyi and Rop (2019) revealed that teachers still have minimal knowledge of CBC and that Many Early Grade Education teachers were challenged in designing and preparing a CBC test hence relying on commercial exams that are set to cover topics not to test competencies. Similarly, Ngeno et al., (2022) conducted a study on the implementation of CBC in Kericho County and pointed out that teacher training had a positive moderate influence on CBC, but limited instructional resources hindered its effective implementation. Further, Andiema (2021) focused on teacher competencies for evaluating CBC among SNL in public primary schools in Kapsaret Sub County, Kenya, and disclosed that the abolishment of exclusion and adoption of inclusion policy has resulted in special needs learners enrolled in mainstream schools, but SNE teachers are unprepared and inadequately understand CBC curriculum which makes it difficult for them to effectively instruct LSN during the implementation of CBC in public primary schools. Additionally, the Kenya National Union of Teachers (KNUT) argued that teachers were not prepared for CBC implementation (Momanyi & Rop, 2019), and Over 90% of teachers had inadequate knowledge of CBC (Koskei& Chepchumba, 2020). Further, CBC implementation for children in pre-primary schools in Nairobi Kenya was greatly challenged due to lack of resources and lack of training (Isaboke et al., 2021). These findings imply that teachers generally still have limited knowledge of CBC and are therefore facing challenges in its implementation to all learners including those with disabilities. However it is clear that most of these studies focused on either inclusive

education or CBC implementation with little focus on CBC implementation for learners with disabilities, which was the main focus of the current study.

1.3 Statement of the Problem

Studies have demonstrated that countries like the U.S.A., Australia, South Africa, Tanzania, and Kenya have adopted inclusive education. The studies further revealed that these countries have both CBC programme and IE implemented simultaneously. The government of Kenya adopted inclusive education to ensure equitable and affordable education for all children inclusive of those with disabilities. The implementation of inclusive education obligated teachers to have additional knowledge, skills and attitude to support the LSN. That is teachers need to be endowed with the knowledge, skills, and attitude to include children with disabilities in their neighbourhood schools. The change of curriculum design from the 8.4.4 teacher centred and objective based to CBC which is a learner-centered and outcome-based curriculum, the teachers are obligated to receive relevant training both in IE and in CBC to enable them to implement the curriculum for learners with disabilities. It is imperative therefore that teachers have the right skills, knowledge, aptitude, and attitude geared towards supporting LSN. Nevertheless, several setbacks were found to challenge the implementation of CBC. For instance, studies revealed that teachers in regular primary schools were not trained to teach learners with disabilities in CBC (Andiema, 2021). The teachers trained in Special Needs in Education (SNE) were only trained in a specific area of specialization and were unable to accommodate all the different categories of learners with disabilities that were found in the regular schools (Wanjiku, 2010; Owino et al., 2019). Further, teachers were not ready for CBC since there was no training, resources were limited and the transition was not seamless

(Momanyi & Rop, 2019; Isaboke et al., 2021; Ngeno et al., 2022; Koskei& Chepchumba, 2020). However, none of the studies reviewed focused on implementing CBC in an inclusive setting, especially in Nairobi County. This is happening even with the studies revealing that most pupils with disabilities and special needs were in regular schools with Nairobi City County having the highest number in regular schools. The report further contends that teachers could not identify learners' needs due to limited training (KISE, 2018). It is worth noting therefore that the same teachers identified to have inadequate training in SNE were the same teachers implementing CBC in the regular schools in Nairobi City County without an iota of training in special needs education.

As a result, the question which bothered the researcher was “What would the implementation of CBC for EYL with disabilities in regular schools be like? Do regular schools have the capacity to not only include learners with disabilities but also to implement CBC among learners with disabilities in the schools? This study sought to investigate CBC implementation and instructional practices lower primary grade teachers used in integrating learners with disabilities in regular public primary schools.

1.4 Purpose of the Study

This study sought to investigate the influence of inclusive instructional practices on CBC implementation for early years learners with disabilities who were learning in regular primary schools in Nairobi City County Kenya.

1.5 Objectives of the study

The study intended to:

- i. establish the association between teachers' training in SNE and their competency-based curriculum implementation for early years learners with disabilities in primary schools;
- ii. determine the association between instructional methods adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools;
- iii. determine the association between instructional material resources adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools and
- iv. analyse the association between assessment strategies adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.

1.6 Research Hypothesis

H0₁: There is no significant association between teachers' training in SNE and their implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H0₂ There is no significant association between instructional methods adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H0₃: There is no significant association between instructional material resources adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H0₄: There is no significant association between assessment strategies adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.

1.7 Significance of the Study

It is envisaged that teachers in regular schools attached to special units or with LSNs may use the findings of this study to reconsider their training in SNE status. This would make them want to acquire and learn requisite skills and knowledge on appropriate strategies for administering inclusive practices for the to accommodate LSNs during the implementation of CBC.

Further, the contribution of this thesis would provide a basis upon which teachers' professional development can be anchored especially now that Teacher professional development (TPD) is continuous for all teachers. TPD enhances teachers' content and pedagogical skills, which partly imply to the SNE teachers.

Non-Governmental Organizations (NGOs) interested in supporting the education of LSNs may use this study findings to redirect and support programmes on teacher professional development which includes SNE education teachers.

The Kenya institute for curriculum development (KICD) may use the findings to design a training programme for lower primary school teachers on content and pedagogy for learners with disabilities.

1.8 Limitations and Delimitations of the Study

Limitations and delimitations of the study are discussed hereafter.

1.8.1 Limitations of the Study

The first limitation was institutional procedures and protocols to access some institutions. There were also challenges for Some individual teachers, especially in private schools to give information regarding their schools. These limitations were overcome by producing the research permit from NACOSTI, the Nairobi County commissioner, and a research authorization letter from the Nairobi County regional office of education. As for the teachers, the researcher assured them that information that they would give would be kept confidential and would not leak to their respective school administration. Secondly, this research was limited to self-filled questionnaires by the teachers of lower primary who could give a dishonest answer. This limitation was overcome by exploring the use of other data collection instruments such as interview schedules for the headteachers and educational officers and the use of an observation check-list to collect the data in its status quo. Finally, this research was limited to Nairobi City County because the three-year period to complete a Ph.D. degree could not allow the researcher to conduct the study in all 47 Counties in Kenya. This limitation was overcome by the researcher recommending a study of a similar nature in other Counties to compare the findings.

1.8.2 Delimitations of the Study

The study only focused on lower primary school grades (1,2&3) reason being these are the earliest grades CBC is implemented. The study further was delimited one county(Nairobi City County) which would be used to generalize the findings to other counties with similar

characteristics. Further, Nairobi City County had the highest number of children with disabilities in primary schools (KISE, 2018).

1.9 Assumptions of the Study

The study assumed that learners with disabilities were present in lower grades in public primary schools. The study also assumed that the implementation of CBC was ongoing in all schools.

1.10 Theoretical and Conceptual Framework

In this section, the researcher describes the theoretical framework and conceptual framework as conceptualized in the study.

1.10.1 Theoretical Framework

The study was guided by Complexity theory and Education by Davis and Sumara (2006). The theory holds that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced. It maintains that there is a need for accommodation of the uncertainty and ambiguity in educational programs during evaluation. Complex systems have many components, including Self-organization, emergence, nested, interactions, and feedback loops. These individual parts can be examined and the whole represents the sum of the parts. The behaviors of complicated systems operate through linear causes and effects. However, the components are not fixed but, are adaptive and in continuous flux. This complex thinking encompasses the adoption of a relational, system(s) view. Complexity theory challenges teachers to take a complex view and resist the simplification of teacher and student learning. Therefore, complexity theory offers the potential to develop powerful explanations of teacher education (Davis & Sumara, 2006). Walker (2014) remarked that by Applying complexity theory in the classroom, a teacher

shifts his traditional role as a ‘director’ and ‘driver’ of learning to an ‘enabler’ seeking to ‘influence’ learners’ progress. Walker Maintains that it encompasses the adoption of a relational and systems view, offering the potential to develop powerful explanations of teacher education. Additionally, Li et al., (2023) employed complexity theory in examining pre-service EFL teachers’ practicum experiences and revealed that the contextual factors influence each other in a non-linear and complex way.

The following is how the components work for the objectives of this study.

Self-organization: This is where elements are interconnected for a better outcome. In this study, teacher training in SNE, instructional methods adaptation, material resources adaptation, and assessment strategies adaptation are interlinked to each other. In this case, a trained teacher in SNE is capable to use the appropriate instructional method, selecting appropriate material resources, and is capable to assess his/her learners in line with his/her educational individualized needs.

Emergence: This is where complex systems are always in the process of changing and becoming, and what they become is more than the sum of the individual traits of the agents. In this study, Instructional methods adaptation and assessment methods adaptation must remain dynamic from one individual learner to the other. Therefore, the teacher must be adequately trained to endure the change.

Nested: This is where complex systems exist within and are comprised of other complex systems. In this study, instructional methods adaptation, material resources adaptation, and assessment strategies adaptation all exist within teacher training in SNE. Adequately trained teachers in SNE are capable of supporting their learners through the appropriate choice of instructional methods that meet their learners' individual needs, conducting an

appropriate selection of material resources, and applying the most appropriate assessment strategies for their learners amidst the complexities of inclusive education and competency-based curriculum implementations.

Interactions: Interactions with complex systems are non-linear and occur across multiple levels. Within complex systems, diversity and redundancy live in tension, but both are necessary for change within systems. In this study, diversity refers to instructional methods adaptation, material resources adaptation, and assessment strategies adaptation. Redundancy, often in the form of common language and shared purpose or responsibility, can be considered “sameness among agents” which in this study is teacher training in SNE. The teacher training normally is the same for all the teachers. Teacher training in SNE enables the teachers to use adapted instructional methods, use the various material resources, and adapt the assessment methods relevant to the needs of the learner.

Feedback loops: Feedback loops occur within and across systems. These feedback loops can be positive, in which action is continually reinforced for the agent, or negative, in which the agent becomes aware of other options for action. These loops can enhance or detract from change within the system. In this study, it is an assessment strategies adaptation. Trained teachers provide adequate feedback through assessments for their learners even amidst diversity.

this theory suggests therefore that the independent variable (teacher training in SNE, instructional methods adaptation, instructional material resources adaptation, and assessment strategies adaptation) influences the dependent variable (implementation of CBC for EYL with disabilities in primary schools) because ___ inclusive instructional

practices should be understood in its complexities in the regular class and applied in the context which in this case is CBC implementation. The implementation of CBC depends on the non-linear interaction of training in SNE, instructional methods adaptation, material methods adaptation, and assessment strategies adaptation with CBC implementation to produce learning accommodation for learners with disabilities in a regular class. The learning accommodation comprises choosing instructional methods, developing and using appropriate material resources, and modification of assessment strategies to suit learners' educational needs in the integrated setting both of which require trained teachers in SNE to understand complex adaptation skills. This theory, therefore, was deemed appropriate for this study. The theory has been reflected in the conceptual framework in Figure 1.1.

1.10.2 Conceptual Framework

Figure 1.1 shows the association between inclusive instructional practices (independent variable) and the implementation of a Competency-Based Curriculum for EYL with disabilities in primary schools (dependent variable).

Figure 1:
Conceptual Framework Diagram

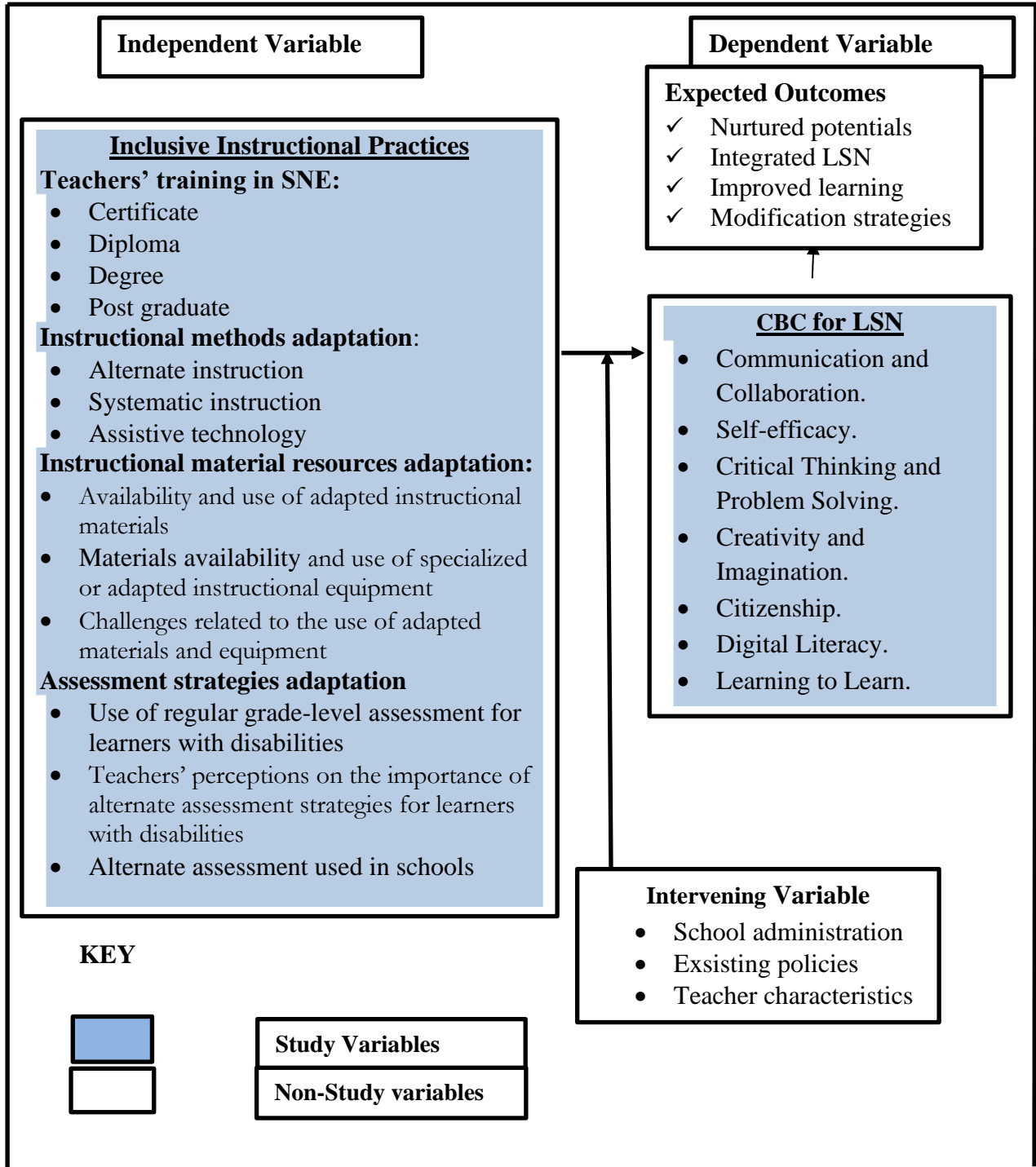


Figure 1 above illustrates the conceptualized interactions and interrelationship between the independent variable (Inclusive instructional practices) and the dependent variable (Implementation of CBC for EYL with disabilities). The independent variables had other variables including teacher training in SNE, instructional methods adaptation, material resources adaptation, and assessment strategies adaptation. The association structure is such that independent variables are influencing the dependent variable to produce a result. The intervening variables also interfere with the independent variable as it affects the dependent variable.

1.11 Operational Definition of Terms

- Strategies Adaptation** : This refers to the modification of the standard grade-level assessment to serve the educational needs of an early-year learner with a disability in a regular school.
- Early years** : This term refers to children in below Grade 3
- Implementation of CBC** : This involves the application of Co-competencies when teaching EYL in lower grades in a regular class.
- Inclusive Education** : This is where early years learners with disabilities share the same regular class with learners without disabilities
- Practices** : This involves training a teacher in SNE, adapting instructional methods, adapting material resources, and modifying assessment strategies in a regular class with a learner with a disability.
- Adaptation Resources:** Involves adapting instructional resources available, usage in class, and knowledge of material aids in a regular class
- Instructional Adaptation:** Alternative instruction, systematic instructions, and assistive technologies in a regular class.

Teachers training in SNE: Involves professional achievement in certificate, diploma, degree, and postgraduate degrees

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This study reviewed literature thematically guided by the themes drawn from the study objectives. A funnel approach was employed where the review proceeded from global to local and national literature. The summary reviewed literature highlighting on gaps in literature is presented too.

2.2 Teachers' Training and CBC Implementation

Teacher capacity is paramount in successful curriculum implementation. Training in Special Needs Education enables teachers to acquire solid theoretical and practical skills which are particularly designed to help them meet the unique needs of learners with disabilities. Ries, Cabrerab, and González-Carriedo (2016) compared three main predictors of teacher training models for general secondary school teachers including duration, curriculum, and induction process. The study took place in Spain, the United States (Texas), and in Europe. The study employed Correlational research design to gather data. The findings revealed that upon completion of the training, teachers were able to resolve, reflect and solve a problem in educational settings. The study focused on predictors of teacher training models, particularly in general secondary education. However, it did not focus on the early years level of education for LSN which was the main focus of this current study. Similarly, Viviani, Cooley, and Griffin (2020) also investigated how the New York City Teaching Fellows (NYCTF) improved the diversity of mathematics teachers. Data was gathered using a longitudinal design and had a target population of 620 mathematics teachers in secondary schools. The findings established that NYCTF did not address gaps

in teacher quality of training. The study only examined mathematics teacher diversity in secondary schools but could not focus on mathematics teachers' diversity to teach learners with disabilities. The study equally did not examine on the teaching of CBC to learners with disabilities. The current study sought to bridge this gap and focused on teacher-training in SNE for the smooth implementation of CBC. The training could enable the teachers accommodation of early years learners with disabilities in an integration setting. Deng, Kiramba, and Viesca (2020) examined factors related to new teachers in general education perceptions of their readiness to teach learners who have multilingual capacities in the classroom. The researcher used a multilevel modelling approach to gather data. The results showed that teacher preparedness was affected by both teacher education and the support acquired while working with multilingual learners in their classrooms. The study focused on the teachers' readiness to teach learners with multi-lingual capacity but failed to focus on teachers training in SNE to support LSN to learn using CBC. However, the study did not focus on learners during the early years' level of education. Hence the need for the current study which focused on the early year's learners with disabilities' inclusion in public schools learning settings.

Lorenza (2018) employed a case study approach to investigate art and music curriculum change in Australia. Results revealed that the curriculum change challenged the teachers' capacity to teach. However, the study did not focus on curriculum implementation, which was the focus of the current study. Smith (2018) similarly investigated the Australian-accredited CBT in the vocational education-training sector. Results indicated that the introduction of CBT was over-hasty and teachers acquired limited capacity and teaching competencies training before its introduction. This study was conducted at the tertiary level

of education where vocational training was the main focus, and there was a need for a study of similar nature at the early year level of education for learners with disabilities in a regular class. Noguera and McCluskey (2016) compared Australian and Spanish teachers' preparedness for their careers through training in which Eleven secondary teachers participated. A correlation design was adopted in gathering data. Results indicated that most of the teachers were unfamiliar with proper strategies for conveying the acquired knowledge to their learners. The reported study focused on teacher preparedness for regular learners, while the current study investigated teachers' training in SNE for the implementation of CBC in a regular classrooms for learners with disabilities. Anderson & Boyle (2015) also investigated Australian inclusive education. The study drew literature from related educational policies and reports. The findings revealed that all the eight educational jurisdictions in Australia enacted IE differently, which led to different levels of access to learning that are inconsistent with educational results for students across the jurisdictions. The reported study gathered data from documentary reviews which could fail to provide the real state of affairs. Further, the study examined IE in Australia and there was a need for a study of similar nature in Kenya, hence the current study.

Mpu and Adu (2016) investigated the challenges experienced while implementing IE in South Africa. Through multiple case study designs of qualitative nature, 3 schools within Buffalo City and 3 participants from each school were chosen for the study. It was found that overcrowding, poor training, and inadequate knowledge and skills of teachers were the main themes indicating the feeling of inadequacy in teaching in an IE class. Nevertheless, this study focused on challenges facing the implementation of IE, while the current study focused on teacher training in SNE for implementation of CBC among EYL with

disabilities in regular classes. Rieckmannstats and Hericks (2016) explored the contribution of CBE to quality enhancement in higher education in South Africa. The data was gathered through document reviews and desk-top-based research. Findings revealed that teachers had a generally positive attitude towards CBE, which contributed to the quality enhancement of higher education as it resulted in explicit definition and interactive communication of the intended learning outcomes. This study focused on enhancing higher education through teacher attitude to implement CBE but failed to focus on teacher training. Equally, the study did not focus on learners with disabilities, especially during the formative years, a gap that the current study focused on.

Further, Adewumi, Rembe, Shumba, and Akinyemi (2017)) employed a case study design to conduct a study in the schools in the Fort Beaufort District in South Africa. Curriculum adaptation for LSN was the focus and had a sample size of 8 teachers, 10 principals, 4 district education officials as well as 1 provincial officer. The study established that only a few teachers managed to employ individualized learning, grouping, and extra work. Results of the study further disclosed the majority of teachers were unable to modify the curriculum for LSN. The reported study took place in South Africa, and there was a need for a study conducted locally in Kenya. Additionally, Adewumi and Mosito (2019) conducted a study in the selected Beaufort District in South Africa. The study focused on the pockets of good practice for the inclusion of LSNs in primary schools. A total of eight teachers, eight principals, one provincial officer, and three district officials participated. It was found that the majority of teachers were untrained in special needs but accommodated LSNs in their classes. The study further revealed that teachers faced varied hindrances during the inclusion of LSN. The reported study investigated the pockets of good practices

in inclusive education. However, the study did not focus on teacher training which resulted in pockets of good practices. Consequently, the current study investigated teacher training in SNE in the implementation of CBC in regular primary schools.

Mwaimu and Swai (2015) employed a qualitative method in gathering data to explore teacher effectiveness on pupils' performance in primary schools in Tanzania. The target population comprised school inspectors, head teachers, educational officers, and teachers. Findings maintained that teachers who were skilled in the use of learner-centered teaching methodologies were very motivated to teach. This study focused on regular learners' performance and failed to focus on learners with disabilities. The current study, therefore, focused on teacher training in SNE for the implementation of CBC in a regular class. However, Namamba and Rao (2017) investigated educators' preparation and employed document review methods to analyse and review literature. Findings indicated that the preparation of teacher educators focused on undergraduate programs and educators did not get professional development activities. The reported study focused on the teacher trainers and did not focus on the early years level of education. The study also did not focus on training for the inclusion of learners with disabilities through training. On the other hand, Kabuta (2014) conducted a study that focused on the problems that learners with physical disabilities in higher learning institutions in Tanzania faced. Documentary analysis was used to examine the infrastructure situation in five institutions. Twelve learners with physical disabilities, five heads of institutions, twenty-one tutors, forty parents, and eighty-two students without disabilities participated. Results revealed a high inadequacy in trained staff. This study focused on the learning environment for only learners with physical

disabilities, and there was a need for a study focused on teacher training in SNE for the inclusion of all EYL with disabilities in the implementation of CBC in regular schools.

Kenya Institute of Special Education (KISE) conducted a survey that sought to identify the distribution of children with disabilities in special and integrated schools at a time when CBC was rolled out. The research used a cross-sectional descriptive research design adopting the Washington Group tool used in the household survey to gather data. All 47 Counties in Kenya participated. The study findings revealed that a majority of teachers in integrated schools and special units (78.8%) were not competent in Braille, 72.6% were not competent in Kenyan Sign Language and 62.8% were not competent in assistive technology. The findings also revealed that very few teachers (2.8%) were very competent in Kenyan Sign Language and 3.0% were very competent in Braille. The study similarly revealed that teachers were more aware of reading difficulties, but they had limited knowledge of listening skills for learners with special needs. Training in SNE had a positive impact on teacher awareness of learners' difficulties and was able to make observations, but only a few could complete the identification process successfully (KISE, 2018). This study by KISE focused on the national distribution of learners with disabilities in both public and private schools but failed to focus on the implementation of CBC to this category of learners identified in the integrated primary schools. Owino et al., (2022) investigated the influence of training in SNE in implementing IE in lower grades primary schools. The study locale was Awendo, Migori County in Kenya. The study employed a descriptive survey design to collect data. Respondents were 37 comprising; one-education officer, 9 school heads, and 27 teachers. Findings indicated that over 70 % of teachers in lower grades primary schools with special units were not trained in SNE, and classes were

congested with a combination of learners with different categories of disabilities in addition to 'normal' pupils making class control difficult. Findings further indicated that recently employed teachers (30-34) years (29.6%) were the majority who taught the lower grades and the number was reduced with experience. This study was conducted in Awendo in Migori County and which was a different County from Nairobi and hence a need of this study to compare the findings together. Also, the study focused on the implementation of IE, and not CBC implementation to EYL with disabilities which formed the focus of the current study.

Hammill Institute on Disabilities (2018) investigated the intervention in schools and clinics in special education. The research involved targeted desktop research for the search for literature about Kenyan special education. Findings revealed a need for adequately trained special education expertise to meet the needs of LSNs. The reported study was desktop-based research that had second-hand information, while the study at hand was a mixed research study that had three different tools of data collection including a questionnaire, interview schedule, and observation checklist which allowed the researcher to triangulate the data for valid and detailed information. Janmohamed (2012) investigated inclusive education challenges in Parklands District, Nairobi. Two public primary schools participated and a purposive sampling technique was employed to select teachers handling LSN in their classes. Findings maintained that about 81% of teachers were inadequately equipped with training and expertise to work with learners with learning disabilities. This study had a small sample of 2 schools and was conducted long before the adoption of the CBC system of education, and there was a need for a current study that would help in the comparison of the status of inclusive education with the CBC dispensation of learning.

Additionally, the study was conducted at a time when the old curriculum 8.4.4. was in effect and the results could not be relevant with the current dispensation known as CBC.

Nyangige (2014) study also used descriptive research design to investigate IE in regular schools in Kasarani Division in Nairobi County where 40 primary school teachers and their head teachers participated. The findings disclosed that the majority of regular schools had inclusive education and teachers were trained in the provision of resources, facilities, and teaching. However, the majority of teachers were not trained in SNE. The study was conducted a long time ago before the introduction of CBC. The study also employed a descriptive survey design in gathering data. However, the current study took place with the CBC, a new dispensation currently adopted. The current study was also employed mixed research methodology which had both qualitative and quantitative data collected in Nairobi City County on integration of learners with disabilities.

Koskey and Chepchumba (2020) investigated teachers' competency as a cornerstone of the implementation of CBC in lower primary schools. The study was conducted in Nakuru County, Kenya. A descriptive survey design was employed With a sample of 200 teachers and 100 head teachers. The result of the study finding indicated that teachers' competency significantly influenced the implementation of the CBC. Findings further revealed that over 90% of lower grades teachers had not received training in CBC. The reported study was conducted in Nakuru County and there was a need for a study conducted in Nairobi City County. Additionally, the study failed to focus on learners with disabilities, which was the focus of the current study. Further, Isaboke, Wambiri, and Mweru (2021) explored the CBC implementation challenges in public pre-primary schools. The study was located in Nairobi City County, where it adopted the Concern-Based Model by Hall, Hord, and

Rutherford (2006). The target population was 225 public pre-primary schools. The result showed that CBC implementation was greatly challenged due to inadequate teacher training in the Curriculum implementation, large class sizes, few teachers, inadequate teaching-learning materials, and inadequate cooperation from parents. The reported study focused on pre-primary schools with caregivers and school managers, while the current study was conducted in lower grades primary schools with teachers as the main respondents. Further, the study failed to focus on learners with disabilities, which the current study did.

Based on the literature review, limited studies combined teacher training for IE and CBC implementation together. More specifically, scarce studies had been conducted in Nairobi City County that focused on teacher training in SNE for adaptation and implementation of CBC for EYL with disabilities. Additionally, the studies that focused on early years teacher training in SNE for inclusion of LSNs with disabilities in regular schools were equally understudied and specifically in Nairobi City County which was the location of the study. These gaps, therefore, prompted the choice of the current objective.

2.3 Instructional practices and Implementation of CBC

Instructional adaptations are the changes and modifications teachers make in delivery of content matter which provide learners equal access to the curriculum material. The Adaptations may include accommodation-changes that are made to the way in which an individual student learns, and modifications in making changes to the actual content for learning (Ikwumelu et al., 2015). Oroszi (2020) examined an alternative method of instruction at Boonshoft School of Medicine, Wright State University, USA. The study involved document review and desktop research. Findings disclosed that an all-inclusive

approach to education was necessary for the Universities. The findings further revealed that traditional CBE problem-solving, capabilities, and approach, all were important in education according to the resources and the audience. The study was conducted at the tertiary level of education with students from the school of medicine at the University which involved a desktop review which dealt with secondary data, while the current study used mixed research and was conducted with teachers of learners with disabilities during the early years of education in a regular class. In the USA, Meidl & Meidl (2011) studied teachers' beliefs on teaching and learning for Learner-Centered Design (LCD). Three teachers and their learners from low-income-urban schools participated. A case-study methodology was used to gather data. Findings established that professional judgment was required to adapt curriculum activities. The study-investigated teacher believes in using a learner-centered design but did not focus on learner-centered design with learners with disabilities and especially during the early years level of education. the current study also focused on instructional practices adaptation for implementing CBC to EYL with disabilities in a regular class. Further, Hossain (2012) investigated using new communication technology to enhance education for learners with exceptions. A case study was employed in gathering data. Findings established that LSNs who learn in regular schools: attended special classes for half of the school day or attended distinct special classes with a different curriculum for a full day depending on the severity of the impairment. This study tested the relevance of different curricula for communication technology for instruction among LSNs with different types and different severity of disabilities but failed to focus on the CBC implementation to EYL in regular classes. Further, Bitter, Meylani, and Castaneda (2011) studied achievement in mathematics using the adapted curriculum. Descriptive,

correlational, and comparative analyses were used to gather data. Findings showed that Adaptive Curriculum improved learners' performance in mathematics in grades 6 and 8 respectively. Nonetheless, the reported study evaluated an adapted curriculum for mathematics achievements for grades six and eight and not at the early years level of education. Secondly, the reported study failed to focus attention on EYL with disabilities in a regular class which is the focus of the current study.

In Australia, Sweller, Graham, Van, and Bergen, (2012) conducted an in-depth analysis of 13 years of enrolment data from the state of New South Wales. Findings indicated that the strategies and practices were unclear in instruction and evaluation. This study focused on enrolment, while the current study focused on instructional pedagogy employed with EYL with disabilities while implementing CBC to EYL with disabilities in a regular class. Further, Anderson and Boyle (2015) conducted a study on inclusive education in Australia: reality, rhetoric, and the road ahead. The study adopted an in-depth document analysis of the original intent of the IE movement. Findings revealed that there existed several barriers to the implementation of inclusive practices that had no quick fix, and no single path that could be followed to achieve the desired educational outcomes. The study further revealed that the Australian National Curriculum and Testing regimes lacked instructional adaptation for the accommodation of LSN. The reported study investigated the original intent of the IE movement while studying the various instructional methods. However, this study only focused on the original intent of IE but failed to study instructional adaptation to children with disabilities during the formative years. Additionally, McMillan Et al., (2018) studied making sense of trial math. A national online survey was adopted to draw data from 151 educators of Students with Disabilities in special schools, mainstream

schools, and schools with special units. It was evident that on-site planning, content demonstration, and feedback in the context of collegial learning were key. However, the study was conducted in secondary schools, and the data was gathered on-line in which the respondent could have given answers which were convenient to them. The study at hand was conducted among teachers of EYL in regular classes and employed a mixed-method design in data collection.

Hay, Smith, and Paulsen (2001) focused on teachers' preparedness for a policy of inclusion. A sample of 2 577 Free State teachers from 12 districts filled questionnaire. Results establish a lack of paradigm shift towards inclusion. The study had a large sample of 2 577 which could be very difficult to handle, the reported study also focused on teacher preparedness toward inclusion and failed to single out instructional methods of adaptation toward inclusion. However, the study at hand focused on the implementation of CBC and used a small sample of 66 with mixed methods research to get accurate information. Adewumi and Mosito (2019) maintain that teachers in South Africa were not in a position to modify different strategies of teaching without staff support. This study was conducted in South Africa and there was a need for a study of similar nature conducted in Kenya. Further, Adewumi, Rembe, Shumba, and Akinyemi (2017) argued that although a few teachers use diverse teaching approaches like individualized education, group work, and extra work, still the majority of teachers were unable to modify the curriculum for LSN. This study was also conducted in South Africa and hence the need to conduct a study of a similar nature in Kenya and particularly in Nairobi. Riggall and Croft (2016); Miles, Westbrook, and Croft (2018), investigated the use of assistive devices in South Africa. Findings indicated that assistive devices provided basic strategies for adapting the teaching

of an individual learner based on her impairment and that when teachers are supported; they co-plan, co-instruct, and co-assess. The study focused on the use of assistive technology in the adaptation of individualized learning and did not focus on assistive technology as a constituent of instructional method adaptation. The current study focused therefore on the implementation of CBC to EYL with disabilities by adapting instructional methods in a regular class with early years learners.

Miles, Westbrook, and Croft (2018) focused on inclusive education, where video lesson observations were employed in collecting data from fifteen (15) schools in four (4) districts in Tanzania. Results showed that an insignificant number of teachers adapted speech, seating, and posture and created instructional materials to facilitate the learning and participation of LSNs. The reported study was conducted in Tanzania, and there was a need for a study of a similar nature conducted in Kenya. Secondly, the reported study focused purely on IE, but the current study combined both IE and CBC. The reported study also used video observations in gathering data which could have not given reliable data, while the current study used a mixed research methodology employing both questionnaires, interviews, and an observation checklist to corroborate the findings. Lekule and Beckford (2016) conducted a study on school culture matters for student performance. The research was conducted in Tanzania and mainly reviewed literature and the findings reveal that varied programs of instruction and quality of teaching needed improvement. Nevertheless, the study investigated the school culture, in instructing LSNs, but failed to look at instructional adaptation for LSNs with disabilities during the early years level of education.

The National Gender and Equality Commission (NGECHS, 2016) investigated access to basic education by LSNs. The study locale was Kenya. Findings revealed that the curriculum itself was rigid making it difficult to monitor educational institutions for LSNs. The study investigated access to basic education and did not go ahead and investigate learners with disabilities' access to CBC, which was the study at hand's main focus. A descriptive study conducted in the Rift Valley region in Kenya further focused on the integration of SNE in PTE. The findings noted that teachers had inadequate skills in the use of Individualized Education Plans (IEPs), the adaptation of learning resources, and the use of supplementary activities (Tabot & Too, 2017). This study was conducted in the rift valley region and there was a need for a similar study in Nairobi City County. Also, the study failed to focus on instructional methods for access to CBC among early years learners who have disabilities.

Mutagi (2018) conducted a study in public primary schools in the Mvita division, Mombasa County. The study investigated learning challenges faced by LSNs. The descriptive-survey research design was employed. The study targeted all head teachers, teachers, parents, and pupils with special needs. Findings established that schools lacked the instructional resources for use by LSNs. This study used a descriptive design and focused on the challenges LSNs faced in regular schools, while the current study focused on the instructional methods adaptation for the implementation of CBC to EYL with disabilities in the regular class and used an embedded mixed-method research design. Further, Gitari (2018) examined the role of assistive technology on the performance of the Kenya Certificate of Secondary Education (KCSE) among visually impaired students. The locale of the study was Thika School for the Blind. The study targeted 133 students and 10

teachers. Findings established that braille was the most preferred reading and writing mode to revise and do assignments. However, computers and iPods were the least used. The assistive devices available limited their access to various digital content formats. Most teachers and learners were illiterate in the usage of computer technology. This study focused on performance in KCSE among learners with visual impairments and hence failed to focus on CBC, The study was also conducted in secondary schools and not in primary schools. Therefore, the current study focused on the instructional methods adaptation for the implementation of CBC by teachers for EYL with disabilities in a regular class.

Makewa and Mutie (2018) conducted a study in Makeni County that investigated assistive technology for managing LSN. A concurrent mixed methods design that employed descriptive statistics and content analysis was adopted. The study findings established that the usage of assistive technology-enabled teachers develops effective teaching-learning resources. Findings also indicated that teachers faced challenges using the different instructional strategies for over forty students in a single class all with different educational needs. The reported study investigated the use of assistive technology to manage to learn and did not focus on instructional methods adaptation for the implementation of CBC. Similarly, Owino et al., (2019) revealed that primary schools in Awendo with special units had a combination of learners with various categories of learners with disabilities and that the classes were congested with a combination of learners both with and without disabilities which challenged the teachers, especially those who were not trained in SNE to manage the classes. However, the study took place in Awendo in Migori County and also focused on the implementation of IE. Hence there was a need for a study conducted in Nairobi City

County that focuses on instructional adaptation for implementation of CBC for EYL with disabilities in Nairobi City County in Kenya.

Further, Wanjiku (2010) conducted a study that investigated teaching strategies used by teachers for learners with multiple disabilities. The study was located in the counties of Baringo, Kiambu, Kisumu, and Nairobi where the study employed a triangulation mixed-method design. Nine (9) head teachers and 57 teachers participated. Findings revealed that instructional methods used by most teachers of deaf-blind were tactile Kenyan sign language, task analysis, and Tadoma. The majority of teachers of the autistic blind used braille, pre-braille activities, and oral methods. The majority of teachers of cerebral palsy and intellectual disability used task analysis, activities of daily living, and real objects. Further, the study revealed that it was only the needs of an individual learner that determined the choice of the instructional method. However, this study focused on instructional methods for learners with multiple disabilities and did not focus on their access to CBC. Secondly, the study failed to focus on the early years' learners. Finally, the study only focused on the instructional methods employed by teachers in a special needs class but failed to focus on the instructional methods adaptation for early years learners with disabilities to access CBC.

The reviewed studies showed that the majority of these studies were conducted outside Nairobi City County. Secondly, the studies concentrated on special education separately from the competency-based curriculum. Finally, scarce studies were found in Nairobi City County that focused on instructional methods adaptation to implement both IE and CBC for LSN in the county. These gaps in knowledge informed the choice of the current objective.

2.4 Instructional Material Resources Adaptation and Implementation of CBC

Materials adaptation involves making changes to existing materials to enable them to suit the specific education needs of learners, teachers, and contexts to facilitate effective learning (early Intervention Technical Assistance, 1995. Volt, Sims, and Nelson (2010, P. 76) indicated that: materials commonly used to support learning in a standard classroom include textbooks, workbooks, manipulative resources, number-line sets, globe, video software, and Internet resources. The book further holds that when using these common supplies in a standard classroom, their alternative formats like Braille texts, large-print text, and CDs with audio output should be provided for learners with disabilities. This is information gotten from a book showing the materials required in an inclusive classroom and a standard classroom and there was a need for an empirical study to compare the theory in books and the reality of the state of affairs in The City County of Nairobi. Aspen Institute (2018) surveyed improving access to high-quality instruction. The report revealed that instructional materials must be developmentally appropriate to meet the learning needs of a learner. This study had been conducted in the U.S.A., and there was a need for a study of a similar nature conducted locally in Kenya. Also, the study was focused on instructional materials for general classes with learners with disabilities and did not focus on learners with disabilities. It did not also focus on the early years. These were areas of focus of the current study. U.S.A. Department of Education (2015) investigated the use of computer instructions in a class with LSN. The study employed a case study design. Findings revealed that the use of computer resources highly supported LSN. This was a case study conducted in the U.S.A, while there was a need for a mixed study conducted in Nairobi in Kenya to compare the findings.

Rennie, Goodrum, and Hackling (2001), conducted a study that focused on science teaching in Australian schools. The literature was gathered from an in-depth analysis of national and international reports. Teachers, students, and other Australian stakeholders in science education participated. The result indicated that curriculum resources were not field-tested for class suitability and for flexibility to meet the needs of individual learners before its rollout. The reported study focused on science teaching, while the current study focused on the material resources adaptation for the implementation of CBC for EYL with disabilities in a regular class. Australia Government Department of Education (AGDE, 2013) reported that inadequate training, resources, time to use resources, difficulty in the use of individualized education, and minimal support were major barriers to inclusion. This was compiled report to the government to assess inclusive education in Australia, Hence a similar study was also lacking in Kenya. Secondly, the report was on improving IE and not IE and CBC combined a gap which was filled by the current study. Further, Organization for Economic Cooperation and Development (OECD) (2016) reported that limited educational resources impeded learning in most schools. This study was conducted in OECD countries in Europe, while there was a need for a study done locally in Kenya to compare the findings. Consequently, Griffith University (2020) indicated that Australian national distribution and sharing of digital resources through education portals needed to be utilized to remedy the limitation of resources in schools. However, this study focused on a remedy for limited resources in Australia. Secondly, the remedy to limited resources did not focus on learners with disabilities. Moreover, it failed to focus on the formative years, a gap that the current study focused on.

Hoadley (2012) adopted a cumulated literature review to study existing knowledge-based instruction in South African primary schools. Findings indicated that Oral discourse dominated teaching in South Africa and the material resources were inadequate. This study was involved in a literature search and could not give the status quo in the field, while the current study was based on an embedded mixed-method research design using a questionnaire, interview schedule, and observation check-list. Secondly, the study was conducted in South Africa and there was a need for a study of a similar nature conducted locally in Kenya to compare the findings. The study also failed to focus on early-year learners with disabilities. Adewumi and Mosito (2019) investigated good practices in implementing the inclusion of LSN. A case study-qualitative approach was used in gathering data. Purposively eight teachers, 8 principals from 8 primary schools, 1 provincial officer, and 3 district officials participated. Findings reveal that teachers experienced multi-grade challenges and inadequate resources. Nonetheless, the study focused on good practices in implementing IE and did not focus on good practices in implementing IE in CBT. The current study focused therefore on material resource adaptation influencing the implementation of CBC among EYL with disabilities in regular classes.

Kabuta (2014) employed a mixed method to examine problems facing students with physical disabilities. The study took place in five institutions of higher learning in Tanzania. Employed as a documentary analysis in the examination of the infrastructure situation. Twelve learners with physical disabilities, 5 institutional heads, 21 lecturers, 40 guardians, and 82 learners with impairments participated. Findings established that teaching-learning materials were inadequate, and there were limited special schemes. This

study was conducted among the higher institutes of learning in Tanzania, and there was a need for a study that focused on EYL in Kenya to compare the findings. The study also did not have an aspect of the implementation of CBC for learners with disabilities in mind, which was the focus of the current study. Similarly, Kikungwe (2015) conducted a study on human and material resources concerning quality education. Data collection involved document review along with observation techniques and was analyzed using record review. Respondents included nine principals, nine storekeepers, and one education officer. Findings established that the expansion and improvement of school facilities were not in tandem with the increase in enrolment. This study focused on human and material resources for quality education, but it failed to focus on the implementation of CBC for EYL with disabilities in a regular class. The data was also gathered through documentary review and this could have compromised the quality of the data. Therefore the current study was a mixed embedded research study conducted in Nairobi City County. Mwajabu, Possi, and Milinga, (2017) focused on special and inclusive education by employing a case study using Peters model. Findings showed that all schools had inadequate resources. It was also revealed that essential items like pens, eyeglasses, exercise books, white canes, pencils, textbooks, talking books, pictures, and teaching-learning maps were missed in schools. Other inadequate material resources include assistive devices such as crutches, orthopaedic shoes, and photocopy machines for enlarged prints. The study employed a case study and focused on inclusive and special education, but failed to focus on the implementation of CBC. Also, the study was conducted at other levels of education and not during the early year's level of education.

Okongo, Ngao, Rop, and Nyongesa (2015) employed a descriptive research design to investigate teaching-learning resources for the implementation of IE. The study was mainly conducted among the preschool centres in Nyamira North Sub-county. The target population comprised One hundred and thirty-four (134) head teachers in preschool centres, four hundred and two (402) Teachers, twelve (12) Education officers, and nine hundred and thirty-eight (938) parents. Findings established that learning resources at preschool centres were inadequate. This study was conducted in Nyamira County, while there was a need for a study in Nairobi City County to compare the findings. The study also failed to focus on learners with disabilities who are in the early years of their level of education, this was taken care of by the current study. In a descriptive study, Mutagi (2018) investigated learning problems faced by LSNs in primary schools in the Mvita division, Mombasa County. The study targeted head teachers, teachers, parents, and LSNs. Findings established that the majority of schools lacked material resources and that there was a need to increase funding to acquire the same. However, this study was descriptively conducted in Mombasa County and focused on learning challenges, but not on the implementation of CBC for learners with disabilities in Mind. There was also a need for mixed research conducted in Nairobi City County that focused on the implementation of CBC for early years learners with disabilities. Makewa and Mutie (2018) conducted a study that focused on the availability and usage of assistive technology. The study locale was Makueni County. The findings disclosed that the use of assistive technology enabled teachers to develop effective teaching-learning resources. Findings also indicated that learners with learning disabilities had better technology skills than their teachers and were interested in computers and other gadgets to learn. This study focused on assistive technology for the

management of learning among learners with disabilities and not on implementing inclusive education for the implementation of CBC among EYL with disabilities in a regular class.

Odero (2016), in a descriptive research design, investigated teaching and learning media for learners with mental retardation. The location of the study was in the Nyanza region. Twenty-eight (28 teachers and twenty-eight principals) were randomly selected to participate in the study. Findings showed inadequate teaching material resources such as weighing scales, communication boards, Charts, picture boards, substitution tables, graphic materials, and Audio-visual materials were inadequate in schools. The reported study focused on teaching media for learners with mental retardation in the Nyanza region. The study also failed to focus on CBC implementation. Therefore there was a need for a study conducted in Nairobi City County in the CBC dispensation of learning for all EYL with disabilities in a regular class. Mutembei (2014) investigated characteristics that influence inclusive education in public primary schools. The study locale was in Magumoni Division, Tharaka Nithi County, Kenya. Descriptive survey design informed data collection and analysis. The population targeted for this study was 2265. The sample size was totalling to 335 comprising of 12 head teachers, 48 teachers, and 175 pupils. Findings established that the majority of the schools had inadequate teaching aids. Some schools had teaching aids but were not enough. This study was conducted in Tharaka Nithi County and not in Nairobi. Secondly, the study employed a descriptive research design, and there was a need for a study that used a mixed-method research design. The study also did not focus on early years learners with disabilities.

Additionally, Ngeno et al., (2022) investigated schools' preparedness for CBC in grade one in Kericho County. The study combined the use of two designs including the descriptive survey design and correlation research design while targeting 24 children officers, 524 head teachers, and 610 Grade one teachers. Findings showed that there were inadequate teaching and learning resources like computers. The reported study focused on school preparedness in pre-primary schools and there was a need for a study focusing the lower primary level of early years. Besides, the study was conducted in Kericho on regular learners hence the need for a study focusing on the implementation of CBC for early-year learners with disabilities. Isaboke et al., (2021) explored challenges preschool teachers faced in the implementation of the CBC in public pre-primary schools. The study locale was Nairobi City County. The study adopted the Concern-Based Model by Hall, Hord, and Rutherford (2006). The study targeted 225 public pre-primary schools in Nairobi City County, with a population of 675 comprising 450 teachers, and 225 Early Childhood Development Center Managers. The result showed that CBC implementation faced challenges on inadequate resources, infrastructure, and physical facilities. This research was conducted on preschoolers hence the need for a study focusing on lower primary school grades. The study focused on regular learners rather than learners with disabilities against implementation of CBC.

The reviewed studies showed gaps in that there as few studies were available conducted in Nairobi City County with a focus on material adaptation in implementing CBC for learners with disabilities integrated in the regular classroom. Additionally, it was study that combined both IE and CBC implementation for early years learners with disabilities in the County. This gap of knowledge was addressed by the current objective.

2.5 Assessment Strategies Adaptation and Implementation of CBC

Assessment' adaptation is the process by which an assessment task actually remains the same for all learners, but the conditions of assessment have changed specifically for learners with disabilities (Lombardi, 2021).

In the U.S.A., a study examined 2533 student achievements in 10 middle schools during the implementation of textbooks. The study used hierarchical linear modelling (HLM). It was found that curriculum type was not a significant predictor of student achievement on the Balanced Assessment in Mathematics (BAM) (James, Robert, Barbara, Óscar, Jeffrey & Steven, 2008). This study focused on the implementation of the textbook and there was a need for a study that focused on textbooks that are used in the implementation of CBC among learners with disabilities. Ries, Cabrera, and González-Carriedo (2016) conducted a comparative study of the main elements that made up the three models analysed for teacher training. The study employed a documentary literature review. Results revealed that trained teachers resolved, reflected, and solved problems in educational situations. However, the reported study was a literature-based search and could have compromised data hence there was a need for a study that used a mixed methodology to obtain detailed data gathered using three different instruments including a questionnaire, interview schedule, and observation check-list. Additionally, the study focused on three models for a teacher of a regular teacher and failed to focus on learners with disabilities.

Chakraborty and Kaushik (2016) investigated Equitable Learning Assessments for Students with Disabilities. The thematic review presented desk-based research on inclusive learning assessments for LSNs in the Asia-Pacific region. Findings revealed that in many countries of the region, school education systems continued to focus on classroom-based

formative assessments. Secondly, Inequitable and fair school education teaching expertise was distributed unequally. Teachers faced problems in assessing written tests and oral examinations. The kind of accommodations that they usually include involve extended time for writing the tests or answering oral examinations. They also made test adaptations based on the impairment of the child such as different fonts, larger spaces between lines or prints, and extraction of too difficult or inappropriate tasks. Moreover, teachers drew fewer data from formative assessments (PAT/psychometric) tests because CWD did not have ready access to the content and it did not directly inform teachers of the student's learning or teaching needs. National assessments sometimes excluded children with disabilities or included them through accommodations. In total exclusion, the assessment did not include special educational needs and disabilities (SEN) children. In alternate systems, alternate assessment tools with different assessment criteria were used for SEN children instead of the state-wide assessment. In accommodated systems, accommodations or changes (response rate, scheduling, setting, etc.) were made within the assessment but assessment criteria remain the same. However, the reported study focused on assessment for children with disabilities in the Asia division and there was a need for a study of a similar nature conducted in Kenya. Secondly, the reported study was a desktop review, while the study at hand is mixed research which used three instruments including a questionnaire, an interview schedule, and an observation check-list. Moreover, the study only focused on the assessment of children with disabilities but did not specify the curriculum design that was focused on improvement. Moreover, the study failed to focus on learners during the early years' level of education. Therefore, the current study focused on assessment adaptation in implementing CBC for EYL with disabilities in a regular class. Australian Institute for

Teaching and School Leadership (N.D) indicate that a safe and stimulating environment is integral to enabling students to explore and build on their talents and achieve relevant learning outcomes. However, this report gave a wider view of Australia and not Kenya, hence the need for a study that could give a wider view of Kenya.

Adu (2014) conducted a study on curriculum continuous change in South Africa. The researcher adopted an in-depth review of policies in gathering data. Findings revealed that teachers were uninvolved in curriculum change; had problems in Screening, Identification, and Assessment to Support LSN. This study was a desktop review and could have its data compromised. Also, the study was conducted in South Africa and there was a need for a study that was conducted locally in Kenya to compare the findings. Similarly, Adu and Ngibe (2014) maintain that teachers had problems with Screening, Identification, Assessment, and Supporting LSNs. Nonetheless, the study was conducted in South Africa and hence there was a need for a study conducted locally in Kenya to compare the findings. Riggall and Croft (2016); Miles, Westbrook, and Croft (2018) revealed that teachers need to be supported to co-instruct and co-assess. However, this study failed to focus on the implementation of CBC in a regular class for learners with disabilities other than the fact that it was conducted in South Africa.

In Tanzania, Tarmo (2014) investigated Pre-service teachers' preparedness to implement CBC in secondary schools. A total of 16 teachers trained at the University of Dares-salaam were purposively selected for the study. Findings revealed that teachers had theoretical knowledge of competency methods, and used traditional paper and pencil assessment methods. The study was about preparedness for implementing CBC by pre-service teachers in secondary schools, while the study at hand focused on implementing CBC for early years

learners with disabilities. Additionally, the study was conducted in Tanzania and there was a need for a study conducted locally in Kenya to aid in the comparison of findings. Tarmo and Kimaro (2021) studied the Diploma in Secondary Education curriculum in Tanzania. The qualitative-content Analysis method was used in gathering and data analysis. Results established that a mixture of attributes that reflected traditional content-based education and those aligned with the CBE model characterized the program. However, this study focused on the evaluation of diploma and secondary school curricula and failed to focus on the early years' level of education. Further, Tarmo (2014) revealed that teachers' knowledge of competency methods was theoretical and teachers used traditional paper and pencil assessment methods. This study focused on curriculum implementation in Tanzania and not in Kenya, hence the need for a study of a similar nature conducted locally. Paulo and Tilya, (2014) investigated the Tanzanian 2005 curriculum reform. The study employed an in-depth literature review regarding the implementation of competency-based curriculum reforms. It was revealed that teachers still used unreconstructed traditional methods like recall-based oral questions, paper test quizzes, and pencil-filled examinations. Nonetheless, the study focused on curriculum reform, while the current study focused on CBC implementation for EYL with disabilities in a regular class. Secondly, the study was conducted in Tanzania and not in Kenya. Lekule and Beckford (2016) established that widening assessment practices, not examination results needed improvement. However, the studies were of Tanzanian origin and there was a need for a study conducted in Kenya to compare the findings.

Chomba et al., (2014) conducted a study that drew from an in-depth literature review in investigating education for children with intellectual disabilities in Kenya. The results

showed inadequate legal directives in sealing the glaring loopholes in assessing learners. This study focused on teaching learners with intellectual disabilities by use of a literature search, while the current study focused on the implementation of CBC for EYL with disabilities using a mixed research method. Additionally, there was a need for a study conducted in Nairobi City County with the new dispensation known as CBC to all learners with disabilities in regular schools to compare the findings. Momanyi and Rop (2019) focused on CBC implementation in the rift valley and established that teachers' had inexplicit knowledge of CBC, which disadvantage them during instruction and evaluation. This study was conducted in the Rift Valley region and there was a need for a study conducted in Nairobi City County to compare the findings. Furthermore, the study did not focus on learners with disabilities hence the need for a study that focused on both IE and CBC.

Andiema (2021), studied teacher competencies for evaluating CBC among SNL in public primary schools. The location of the study was Kapsaret Sub County, Kenya. The targeted population was 83 government schools with special needs teachers and 69 special needs teachers. The study findings indicated that a greater number of SNE teachers had inadequate preparation to undertake evaluation and assessment of children with special needs in line with the new curriculum. The lack of adequate understanding and application of formative assessment methods by special needs teachers denied the special needs learners opportunity to acquire competencies and skills as per CBC. However, the study was conducted in the Kapsaret sub-county and there was a need to conduct a study of a similar nature in Nairobi to compare the findings. Secondly, the reported study focused only on public schools, while the current study was conducted in both public and private

schools. Furthermore, the reported study failed to focus on early-year learners with disabilities hence the need for a study of a similar nature.

The studies reviewed revealed that there were limited assessment practices for learners with disabilities during the implementation of the CBC. Similarly, scarce studies were found in Nairobi that focused on the adaptation of assessment strategies in the implementation of both IE and CBC together. None of the studies attempted therefore to focus on early learners with disabilities in the regular classroom in Nairobi. These gaps in knowledge informed the choice of the current objective.

2.6 Summary of Literature Reviewed

One of the objectives of this study sought to establish the association between teachers' training in SNE and their implementation of CBC for EYL with disabilities in primary schools in Nairobi City County. Studies indicated that most of the teachers in regular schools had inadequate expertise and training to support LSN. The reviewed literature showed that majority of teachers were inadequately trained for competency-based curriculum implementation.

Most of the above studies however, were conducted elsewhere and there was a need for study focusing learners with disabilities and the implementation of the competency based curriculum particularly in Nairobi City County being the most endowed with infrastructural. Additionally, few studies were found on Nairobi City County that had focused on the training of teachers of EYL with disabilities to adapt and implement CBC in regular schools. Inadequate training among the majority of teachers in both SNE and CBC could result in early years learners with disabilities experiencing untold challenges during learning. However, limited studies were found that determine how teachers'

training in SNE affected the adaptation and implementation of competency-based curriculum implementation in a regular class with EYL with disabilities. Hence the gaps in knowledge and need to bridge it.

Another objective sought to examine the association between teachers' instructional methods adaptation and CBC implementation for EYL with disabilities in primary schools in Nairobi City County. Reviewed studies revealed that the majority of teachers had inadequate expertise to adapt instructional methods for LSN. It was also revealed that many teachers employed inappropriate instructional methods for learners with disabilities. Nonetheless, few studies attempted to identify the adaptation of the instructional method appropriate for CBC implementation in a regular class with LSN. Additionally, none of the studies reviewed had been conducted in Nairobi City County that had focused on instructional methods for adaptation and implementation of CBC for EYL with disabilities. This also informed the the current study.

Further the study sought to determine the association between instructional material resources adaptation and CBC implementation for EYL with disabilities in regular primary schools in Nairobi City County. Studies did reveal that resources were inadequate in most schools, and that teachers had limited knowledge of the adaptation and use of material resources. Few studies attempted to analyse the influence of adaptation of instructional resources had on the implementation of CBC in regular classroom setting with learners with disabilities. Thus, the need for the current study.

Lastly the study endeavoured to analyse the association between adaptation assessment strategies and CBC implementation for EYL with disabilities. Reviewed literature revealed that teachers had difficulties administering an assessment to LSNs. Studies also indicated

that teachers used inappropriate assessment methods for learners with disabilities. There were limited studies which focused on assessment strategies adaptation for adaptation and implementation of CBC for EYL with disabilities were difficult to come by in Nairobi City County. Further, the studies did not investigate the assessment for learners with disabilities, specifically during the early years level of education. These revelation could result in learners with disabilities being disadvantaged. Hence the need for the current study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The methodological techniques discussed in the achievement of the objectives of the study were research design, variables, and study location. Other topics include the target population, sampling techniques, sample size, and research instruments. Data collection techniques and analysis, logistical and ethical considerations are also discussed.

3.2 Research Design

The study employed concurrent embedded design which is a type of mixed research design. It involved the gathering, analysing, and integrating of qualitative and quantitative data in a single study to answer research objectives. The choice of this design was to enable the researcher to gain a more comprehensive picture of the study problem, through triangulation of the data collection strengthening the credibility of the conclusions. The researcher gathered both the quantitative data and the qualitative data simultaneously but used the quantitative data as the main data source. The qualitative data was then used to support the data obtained through quantitative means. According to Creswell (2014), the use of concurrent embedded design enables the researcher to gather both qualitative and quantitative data concomitantly with the qualitative data supporting the quantitative data, hence the researcher can get elaborate information.

The Use of this design supports the integration of both qualitative and quantitative methods of data collection in a single study. To gather quantitative data, the researcher employed a Questionnaire which was the main data collection tool and was used to gather the data among the teachers of grades one, two, and three. Qualitative data was gathered

using the interview schedule and observation check-list. the interview schedule was employed in gathering data, particularly among the education officers and headteachers. The qualitative data was further gathered by the use of the observation check-list to collect first-hand data on the state of affairs of inclusive instructional practices.

3.2.1 Research Variables

This section describes the study variables. The independent variable, dependent variables, and intervening variables are described in this section.

3.2.1.1 Independent Variable

The Independent variable of the study was ‘Inclusive instructional practices.’ It had four aspects namely; teachers’ training in SNE; teachers’ Instructional methods adaptation; Instructional material resources adaptation and teachers’ adaptation of assessment strategies. According to Fraenkel and Wallen (2010), opines that to assess the independent variables’ possible impacts on the dependent variable, it should be manipulated. The nominal scale level of measurement was used to test it adopting a four-point Likert scale.

3.2.1.2 Dependent Variable

The dependent variable for this study was ‘competency-based curriculum implementation for EYL with disabilities in primary schools. It would be measured on the seven basic co-competencies including communication and collaboration, self-efficacy, critical thinking and problem-solving, creativity and imagination, citizenship, digital literacy, and learning to learn. This was tested using a nominal level of measurement adopting a four-tier Likert scale to get the outcome. According to Fraenkel and Wallen (2010), This variable in producing an outcome should be tested to change its value depending on the manipulation of the independent variable.

3.2.1.3 Intervening Variable

The intervening variable in this study included; School administration, existing school policies and teacher characteristics which could not be manipulated or controlled. The sampling procedures sieved the relevant elements which could be included in the study sample to mitigate on the possible influence of the intervening variables on the overall results of the study. Therefore, randomization techniques used did minimize the interference on the independent variables. According to Fraenkel and Wallen (2010), if the intervening variable is not controlled, it might alter the result completely.

3.3 Location of the Study

This study was conducted in the city county of Nairobi. The study focused on public and private primary schools in Nairobi City County and specifically investigated EYL's in public primary schools(grades 1,2&3). the choice of the locale was informed by survey by KISE (2018) which revealed that 72.6% of children with disabilities lived in rural areas while only 27.4% lived in the urban areas with Nairobi city county taking the largest share. Similarly the National Coordinating Agency for Population and Development and Kenya National Bureau of Statistics (2008), did reveal that Regionally, at 55% Nairobi Province had the highest proportion of the population of children above five years with education above primary level. The report further maintained that Nairobi also had the highest number of PWDs completing school (49%). The revelation implies that among the urban centres, Nairobi takes the lead with the highest number of persons with disabilities in schools including children. These revelation informed the choice of Nairobi City County for the study locale. There are 17 Sub- counties that form Nairobi City County. Two sub-counties participated in the study including Roysambu Sub-County, which geographically

is situated in the East of Nairobi about 11km from the Central Business District. The Roysambu Sub-County was selected to participate in the study due to the study by Nyangige (2014) which revealed that the majority of public schools in the Kasarani district had inclusive education. Kasarani is currently one of the divisions in Roysambu Sub-County. However, the study was conducted a long time ago before the introduction of the new dispensation of learning known as the CBC currently adopted in Kenya. The study was also necessary to be conducted in regular schools in Nairobi City County to be responsive to the needs of learners with disabilities in the regular schools. Similarly, the study was only conducted in the then Kasarani district and not the entire Nairobi City County.

Westlands Sub-County was also selected to participate in the study. The choice of the Sub-County was informed by the study conducted in the Parklands district by Janmohamed (2012). Parklands currently is known as Westlands Sub-County. The study investigated inclusive education challenges in primary schools with two schools. Findings revealed that about (81% of teachers could not work with LSN.) Nonetheless, this study was conducted long before the introduction of CBC in Kenya. Further, only two schools participated in the Parklands district, while the current study focused on inclusive practices in the implementation of CBC with a sample of 16 schools, which the earlier study did not focus on. The study was also conducted a long time ago, and the result could have changed with a change in time. Therefore, studies that had focused on both IE and CBC were found understudied in the County, hence the choice of the study location.

3.4 Target Population

This study targeted teachers of lower grades in public and private primary schools as well as headteachers of the respective schools in Nairobi City County. This comprised of 100 headteachers, 300 teachers, and 17 sub-county educational officers. This gave a total target population of 657. The reason for this target was because the researcher purposed to get detailed information from various stakeholders in the field of inclusive education and would be useful to establish the rate at which teachers in regular schools had implemented CBC for EYL with disabilities who are beneficiaries of inclusive education.

3.5 Sampling Techniques and Sample Size

The sampling techniques and sample size are described in the sections below.

3.5.1 Sampling Techniques

The respondents who participated in this study comprised of 10% of the target population. According to Mugenda & Mugenda (2003), 10-30% of a target population is appropriate for generalization when using a descriptive design for a population of less than 1000. Two Sub-Counties were purposively selected to participate in the study because they possessed characteristics under investigation. The two Sub-Counties were selected as a result of the previous studies that had been conducted in the areas and indicated that both had learners with disabilities in the regular schools. The purposive sampling technique allowed the participants who possess unique characteristics needed for the study to be selected (Cohen, 2003; McCombes, 2019). A stratified sampling technique was then employed to select public and private schools to participate in the study. The researcher employed a stratified sampling technique because the researcher wanted a fair representation of both categories of schools as either public or private. According to Kombo and Tromp (2006), the choice

of stratified sampling techniques ensures that groups in the whole population are represented equally in the sample. The researcher listed the schools into two categories/strata, namely: Public and private primary schools. A simple random sampling technique was then utilized to select six schools from the public category and ten schools from a private category, totalling 16 schools that participated in the actual study. The researcher used the simple random technique because the researcher wanted to give all the targeted schools an equal chance to participate. Sidhu (2002) indicated that the employment of a simple random sampling technique in the selection of the sample size ensures a sample that is free from unfairness. The researcher assigned random numbers to all schools and then picked the tenth school from each stratum, resulting in a total of 16 schools. A purposive sampling technique was then used to select the heads of the 16 selected schools to participate in the study. The 2 Educational Officers in charge of the two Sub-Counties selected were further purposively selected because they were the custodian of the unique information that was very key for the study. Further, the teachers teaching grades 1, grade 2, and grade 3 in the sampled schools were also purposively selected. A simple random sampling technique was only employed in cases where a school had more than one teacher in charge of those grades/streams to select only one teacher to participate in the study on behalf of the others. These totalled 66 respondents. The use of a simple random sampling technique provided all the participants with an equal chance of selection (McCombes, 2019).

3.5.2 Sample Size

Table 1 provides a procedure used to select the sample size. The procedure was used to come up with sixty-six (66) respondents from a target population of 657.

Table 1:

Sample Size

Respondents	Target population (n)	Number sampled (s)
Educational officers	17	2
Headteachers of public schools	61	6
Headteachers of private schools	99	10
Teachers of lower grades in public schools	183	18
Teachers of lower grades in private schools	297	30
Total	657	66

Source: Registered Primary Schools in Roysambu and Westlands in Nairobi City County

3.6 Research Instruments

The questionnaire, an interview schedule, and an observation check-list were administered in the collection of data. The reason for the use of the three instruments was that the researcher was able to follow up with individual respondents after the self-filling questionnaires were completed through interviews and the administration of the observation check-list, hence getting detailed data for analysis. According to McLeod and Clarke (2014), the use of three instruments provides quick data which was utilized for triangulation.

3.6.1 Questionnaire for Teachers

The questionnaire was administered to teachers of lower grades in primary schools. Questionnaires were used to gather data among teachers. The questionnaire was self-made. It had two sections. The first section of the questionnaire was used to collect general

information from the respondents, while the second section collected data on teachers' training in SNE, instructional methods adaptation, instructional material resources adaptation, and assessment strategies adaptation and how they influence CBC implementation for EYL with disabilities in regular primary schools(see Appendix II). Both closed and open-ended self-filling questionnaires were used to gather data among teachers of lower grades. The use of the tool enabled the researcher to gather quick results from a large population of teachers in both public and private schools. When the questionnaire is adopted for the study, it is quite cost-efficient, scalable, and gives quick results (Hesse-Biber & Johnson, 2015; King, Horrocks & Brooks, 2019). The use of questionnaires also allows several respondents to respond to the same question of investigation, which makes it appropriate for collecting information regarding opinions, facts, and knowledge of the population (Johnson & Turner, 2003). The Questionnaire was administered first before the administration of the interview schedule and the observation check-list because the questionnaire was the main instrument of data collection. According to Creswell (2014) when employing a concurrent embedded technique, the quantitative data serves as the main data collection source, while the data collected qualitatively is used to support it.

3.6.2 Interview Schedule for Education Officer and Head-teachers

In this section, both the interview for the headteachers and the Education Officers are discussed. The interview is especially useful in research when the researcher wishes to gather very detailed information and allows asking respondents follow-up questions based on their responses to get a further explanation (Creswell, 2014; McLeod & Clarke, 2014). The questions of the interviews for the Education Officer and head teachers were different.

The questions in the interviews were also different from the questions in the questionnaire, but they built on them more (See Appendix III).

3.6.2.1 Interview Schedule for Headteachers

Interview schedules which were meant for the head teachers were used to gather information among the head teachers, which could not be provided by the teachers. The interview schedules had only one section testing the objectives of the study including teachers' training in SNE, instructional methods adaptation, instructional material resources adaptation, and assessment strategies adaptation and their influence on CBC implementation for EYL with disabilities in regular primary schools. The interview schedule had 9 questions. The researcher asked the headteachers questions and they responded verbally as the researcher took notes. Probing questions were included depending on how the respondent gave their answers. The interview schedule took 15 minutes. Its usage aided in further probing of in-depth information, which explained the information from questionnaires.

3.6.2.2 Interview Schedule for Education Officers

Interview schedules meant for the educational officers were used to gather information among the Educational Officers, which could not be provided by the teachers and heads of schools. The interview schedules had only one section testing the objectives of the study including teachers' training in SNE, instructional methods adaptation, instructional material resources adaptation, and assessment strategies adaptation and their influence on CBC implementation for EYL with disabilities in regular primary schools. The interview schedule had 9 questions. The researcher asked the officers the questions and they responded verbally as the researcher took notes. Probing questions were employed

depending on how the respondent gave their answers. The interview schedule took 10 minutes.

3.6.3 Observation Check-list

The observation check-list in this study was meant for the collection of information in the classroom by the researcher. Observation check-lists were also used to gather first-hand and visible information in the school. It provided specific feedback on aspects of the class which were used to support the data obtained from the questionnaire and interview schedule. Hesse-Biber and Johnson (2015); King, Horrocks, and Brooks (2019); Johnson and Turner (2003) Maintain that the use of an observation check-list help in the collection of information in its status quo. The researcher structured the checkpoints in a framework of 29 items that were marked in the schools to find out the association between the availability of adapted resources and the implementation of CBC for EYL with disabilities in regular primary schools.

3.7 Piloting Study

Piloting of the study was conducted in one of the primary schools, which had a functional special unit, and therefore it possessed characteristics under investigation that was expected of the actual study schools. The results of the pilot study assisted in evaluating the feasibility of instruments, resources, and data management. Arlene (2010); Cocks and Torgerson (2013) maintain that piloting helps in assessing whether the method of data collection section meets the criteria for the success of the actual study. The pilot schools later did not form part of the actual study size to avoid the duplication of data and situations where the respondents would interfere with the results. The pilot study was conducted one month earlier before the actual study to allow time to improve the contents of the data

collection instruments. Unclear, poorly structured data collection tools and common flaws were checked with the help of research assistants.

3.8 Validity of the Research Instruments

The instruments' validity was ensured by checking that all the indicators were closely associated with the research question. The validity of both quantitative data and qualitative data was established as guided by Creswell (2014). Where the quantitative data was validated by ensuring that the questionnaire had only relevant items testing the study objective. The questions were structured such that biases that could arise in the study design were eliminated, the sample size was representative of the target population selected and suitable statistical data analysis was conducted. The qualitative research was validated using incorporating a range of clear and objective interview questions and a clear standard observation check-list.

Specifically, the maximum validity of the questionnaires and interview schedule was ensured by cross-checking the items and ascertaining that there was a one-to-one correspondence between questions asked and causal competency under investigation. The criterion validity was attained by calculating the results of the measurement and had a high correlation. Face validity was ensured by informally subjecting assessment to individual construct with the help of experts from the School of Education of Kenyatta University. Content validity was attained through item analysis with the help of experts. According to Creswell (2014); Cocks and Torgerson (2013); Arlene (2010), conducting validity ensure that the measurements are not irrelevant or missing.

3.9 Reliability of the Research Instruments

The researcher used three types of instruments including a questionnaire, an interview schedule, and an observation check-list. These allowed for triangulation thus enhancing on reliability and efficacy of the data. The data gathered by the three instruments were triangulated to ensure the reliability of the information gotten. The instruments were developed under the guidance of experts. Internal consistency was ensured by cross-checking the individual content of the questionnaire and interview schedule used as well as the Codes used in feeding data. According to Middleton (2019), to ensure proper validity individual items should be thoroughly cross-checked. The interview questions and questionnaires had higher degrees of structure and drew higher rate agreement.

The pilot data was fed into the Statistical Package for Social Sciences (SPSS) and Cronbach's alpha coefficient was calculated. The correlation coefficient of above 0.7 was deemed appropriate to assess the instrument's validity. Orodho (2005) indicates that a coefficient index of .70 is good enough to assess the reliability of the tools.

Table 2:

Reliability Coefficients (Cronbach's Alphas)

Variable	Number of items	Cronbach's based on standardized items	Cronbach's alphas
Teachers' training	3	0.79	0.79
Instructional methods adaptation	7	0.81	0.82
Instructional material resources adaptation	9	0.69	0.60
Assessment strategies adaptation	8	0.78	0.80
Average	39	0.77	0.75

Source: Adopted from WAI- Weinberger Inventory Scale, SMS- inclusive practices Scale

The reliability of the data obtained during piloting using the instrument established a Cronbach's coefficient of $\alpha=.75$. This showed that the data obtained using this instrument was reliable. It was noted that, during piloting, items on material resources ($r = 0.60$) were below 0.70. This, therefore, necessitated adjustments for the items used during the actual data collection. The instruments were adjusted by deleting the unclear questions and rephrasing the questionnaires.

3.10 Data Collection Techniques

The data collection process followed the approval of the proposal by Kenyatta University's postgraduate board of examiners. The approval letter and letter of introduction by the graduate school of Kenyatta University were presented to the National Commission of Science, Technology, and Innovation which issued a data collection permit. The permit was presented to Nairobi City County Commissioner. The Nairobi County Commissioner provided an authorization letter to the regional educational officer who did the letter of authorization to collect data in the schools in the County. The letter was presented to schools and data was collected with the help of three instruments namely: questionnaire, interview schedule, and observation check-list.

3.10.1 Questionnaire for Teachers:

The researcher explained to teachers how they would score the questionnaire. The researcher with the help of the research assistants tagged the codes before giving individual teachers the questionnaires namely (P, PR, T1, T2 T3) to represent public schools, private schools, and teachers of grades 1, 2, and 3 respectively. The questionnaires were distributed to the participating teachers with the help of research assistants to self-complete. The teachers filled out the questionnaire in the presence of the researcher, and the

researcher collected them back. However, some teachers preferred to remain with the questionnaire and filled it at their own pace and time due to the busy schedule of their schools. The filled questionnaire was picked later at the agreed time. Nonetheless, some teachers who remained with the questionnaire failed to return, but the number was small and had an insignificant influence on the result.

3.10.2 Interview Schedules for Educational Officers and Head Teachers:

The data collected through the use of interviews with the headteacher took place as the teachers were filling out the questionnaires. During the session, the researcher asked questions and allowed the respondents to give their opinion as the researcher took notes. Depending on how the headteacher gave their answers, probing questions followed to seek further clarification.

Interview schedule to Educational Officers: The educational officer was the last to be interviewed after all the participating schools were finished. The reason for this was to avoid the change in the content of the main instruments (questionnaire and interview with headteachers) depending on the responses given by the educational officer, hence helped eliminated the biases that could arise during data collection. Like the headteachers, the educational officers were also asked the questions and the researcher recorded their responses. Depending on the answers given, a follow-up question at times could follow.

3.10.3 Observation Check-list

The researcher toured the classes and observed not only the teacher's teaching but also observed the material availability and usage in class. The researcher marked the Pre-defined check-lists using a (✓). The reason for the use of the instrument was that its use enabled the researcher to collect the data in its natural form.

3.11 Data Analysis

Once the data collection exercise came to a halt, the researcher together with the research assistants sorted out the research instruments. The process involved checking how the sections in the tools were filled, picking the relevant information, and discarding irrelevant information. This was followed by the quantitative data fed into Statistical Package for Social Sciences (SPSS) version 21, which was organized for further analysis. Boubire (2021). Asserts that the use of SPSS in research enables complex data organization for further analysis. The data entry accuracy was given priority before running any test. This was achieved by cross-checking the data and inspecting the minimum and maximum value for each variable to ensure that data was neither omitted nor duplicated. The process ensured valid values for each variable and did not exceed the scale of measurement. Data entry was followed with descriptive statistics mainly percentages, frequencies, standard deviation, means, and skewness which were used in making a summary of the data. The following alternative hypotheses were tested running a chi-square test.

3.12 Alternative Hypotheses

H0₁: There is no significant association between teachers' training in SNE and their implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H0₂: There is no significant association between instructional methods adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H03: There is no significant association between instructional material resources adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools?

H04: There is no significant association between assessment strategies adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.

Qualitative Data: Qualitative data from education officers and head teachers were analysed using thematic analysis. After the researcher was done familiarizing himself with the qualitative data from the interview schedule, open-ended questionnaire, and observation check-list, the sorting process kicked off. The data collected from the interview schedule and audio recordings were listened to before the Transcription kicked off with the help of the research assistants. The researchers listened to the audio and summarized the data. The researchers also assigned the codes for analysis. It involved reporting patterns (themes) during the data analysis. The data was cleaned and displayed, then a conclusion and verification were drawn. Verbal quotations were transcribed and coded as sub-themes and themes as advanced by (Braun & Clarke, 2006) As shown in Table 3 below.

Table 3:

Phases of Qualitative Data Analysis

Phase/Description of phase	Description of the phase process
1. Familiarizing with data	Data was transcribed, read, re-read, and noted down initial codes.
2. Generating initial codes	The interesting features of the data were coded systematically across the data set and collated relevant data to individual code
3. Searching for themes	The codes were collated into potential themes to depict the data.
4. Reviewing themes	The themes were checked to verify how they work with the coded extracts and the data set entirely.
5. Defining and naming the Themes	Specifics of the individual themes were analyzed and refined to generate definitions and names.
6. Producing the report	The researcher selected cleared extracts and analysed them by relating them to the research objectives and literature. A scholarly report was then produced.

Source: Extracted from Braun and Clarke (2006)

Finally, the researcher used the qualitative data to support what had been gathered by the quantitative data and triangulated the information gathered by the three sets of instruments including questionnaires, interviews, and observation check-lists. It involved carefully reviewing the common themes and their similarities with the quantitative analysis. The qualitative information was then used to complement the information presented in the form of tables, charts, and graphs. The voices of the interviewees were also captured in the analysis through direct quotes and narratives.

3.13 Logistical and Ethical Considerations

Logistical and ethical necessities are described in this section.

3.13.1 Logistical Considerations

An introduction letter from Kenyatta University Graduate School was used to acquire a research permit from the Ministry of Higher Education, Science and Technology and the National Commission for Science Technology and Innovation (NACOSTI). The permit was presented to the Nairobi County Commissioner and Nairobi Regional Director of Education for authorization to collect data. The research permit from NACOSTI and an authorization letter from the Nairobi Regional Director of Education were presented to the participating Sub-County's Directors of Education for an introduction letter to the sampled schools to collect data. The researcher presented research permits and introduction letters to the sampled schools to request a chance to collect data in the respective schools. The researcher explained the general objective of the study outlining the benefit of the study to the respondents.

3.13.2 Ethical Considerations

Ethical considerations involved the researcher observing responsible good practice. Before the actual data collection process, the researcher obtained an approval from the ethics committee of Kenyatta University, which ensured that the research instruments met the ethical standards. The researcher visited the sampled schools to book an appointment to collect data. The dates of data collection were set with the help of the various administrators of schools. This helped avoid interfering with the school programs. The heads of schools then introduced me to the respondent teachers. They were informed about the purpose of the research and were requested to participate voluntarily and their names will not be

required nor would their privacy respected. A consent form will suffice for all participants. The respondents were also assured that the data collected would be confidential and would be used for the purpose of research. Upon completion of this study, all the institutions concerned would be provided with a copy of the research findings.

CHAPTER FOUR

FINDINGS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter covers the studies' findings, interpretation and discussion *vis-à-vis* the studies' objectives and hypotheses. The study purposed to establish the influence of inclusive instructional practices on the implementation of CBC for EYL with disabilities in primary schools. The following objectives guided the study:

- i. To establish the association between teachers' training in SNE and their implementation of CBC for early years learners with disabilities in primary schools.
- ii. To Determine the association between instructional methods adaptation and implementation of CBC for early years learners with disabilities in primary schools.
- iii. To determine the association between instructional material resources adaptation and implementation of CBC for early years learners with disabilities in primary schools.
- iv. To analyse the association between assessment strategies adaptation and implementation of CBC for early years learners with disabilities in primary schools.

The null (test) hypotheses of the study were:

H01: There is no association between teachers’ training in SNE and their implementation of CBC for EYL with disabilities in primary schools.

H02: There is no association between instructional methods adaptation and implementation of CBC for EYL with disabilities in primary schools.

H03: There is no association between instructional material resources adaptation and implementation of CBC implementation for EYL with disabilities in primary schools.

H04. : There is no association between assessment strategies adaptation and implementation of CBC for EYL with disabilities in primary schools.

4.2 General Information

This section presents the statistics on the research instruments' return rate, demographic information, and school category.

4.2.1 Research Instruments’ Return Rate

This study had a sample size of 66 respondents, which involved 16 head teachers, 48 teachers of lower primary, and 2 Sub-County Education Officers. The data collection instruments’ return rate was as shown in (Table 4).

Table 4:

Research Instruments Return Rate

Respondents/ Research Instrument	Target		Actual/ Return Rate	
	Frequency	Percentage (%)	Frequency	(%)
Lower grades Teachers	48	100	44	91.67
Head Teachers	16	100	15	93.75
educational officers	2	100	2	100
Mean return rate				95.14

Table 4 above shows that the average mean return rate was over three quarters (95.14%). Regarding the return rate for individual instruments, the questionnaire which was the main source of data collection instrument had the lowest return rate (91.67%) compared to interview schedules (93.75%). These are very high return rates when compared to the argument of Diliman (2000) that a data collection instrument's return rate of at least 60% is adequate for analysis and subsequent generalization of the findings. In addition, Fincham (2016), argued that a 75% response rate is appropriate for the generalization of the results to the target population. Based on these findings, the data obtained was adequate for analysis and generalization since all were rated over 90%. However, it is worth noting that during the data collection process, some teachers opted to remain with the questionnaire and fill it at their own pace and free time due to the busy schedule of the school program, and this could be attributed to a low return rate of the questionnaire because some teachers remained with them and some failed to return them.

4.2.2 Demographic Information

This section presents the statistics of the bio-data of the respondent's sex, teachers' age category, and school category.

Table 5:

Respondents' Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	36	81.8	92.3	92.3
	Male	3	6.8	7.7	100.0
	Total	39	88.6	100.0	
Missing	No Response	5	11.4		
Total		44	100.0		

Table 5 shows that a low number of 3(6.8%) of male teachers were teaching in the lower grades. However, a high number of 36(81.8%) female teachers were teaching the lower grades. These findings could denote that many male teachers still do not participate in teaching learners during the lower grades and probably learners in the early years (lower grades) level of education miss the role played by a male teacher in their learning life and development in their formative years. This could affect their learning since both male and female teachers employ different teaching methodologies during their teaching and any child needs to benefit from both. Therefore, for early years learners with disabilities, the situation could be worse because not only are learners are grappling with learning and development, but challenge in adapting to the learning environment with the new dispensation (CBC) in a regular setting where the learning environment could be quite complex and challenging. These assertions support the ideas advanced by the theory by Davis and Sumara (2006) which holds that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced during evaluation. The information gotten from both gender was therefore very key for this study on CBC implementation for

LSN in regular schools which could be a complex program. These findings further conform with findings by Owino et al., (2019) which revealed that quality education was hampered by the low participation of male teachers in lower grades (17%) as opposed to their female counterparts (83%) in Awendo, Migori County, Kenya.

Table 6:

Teachers' Age Category in Years

Age range		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22-33	10	22.7	45.5	45.5
	34-45	3	6.8	13.6	59.1
	46-57	9	20.5	40.9	100.0
	Total	22	50.0	100.0	
Missing	System	22	50.0		
Total		44	100.0		

Table 6 shows that teachers in middle age (34-45) participated the least 3(6.8%) in teaching learners with disabilities. However, the teachers who were new in the profession (22-33) were the majority 10(22.7%), but the number of teachers who participated in teaching the lower grades reduced with the higher the experience. These findings show that all the category of ages of teachers teaches the lower grades, but newly employed teachers and teachers in the last years of their job still dominate in teaching lower grades. Therefore, these findings could imply that the data was good enough because it was obtained from teachers with all ranges of experience and had valid information on CBC implementation in regular schools. These findings are in line with findings by Owino et al., (2019) which indicated that teachers who are new in the teaching profession (30-34) years (29.6%) in

Awendo Sub-County in Migori in Kenya were the majority assigned to teach the lower grades.

Table 7:

School Category

Variable	Frequency	Percentage
School Category		
Public	21	47.7%
Private	19	43.2
No response	4	9.1
Total	44	100

Table 7 indicates that the teachers in private schools were the least 19(43.2%) compared to public schools 21(47.7%) in accepting participation in research. From these findings, it is clear that at least both the public and the private schools were involved in data collection. These findings could imply that the information gotten was good enough for analysis and generalization since it was obtained from both the public and private schools where CBC was being implemented, and it applies to EYL with disabilities in regular primary schools.

4.3 Teachers’ Training in SNE and CBC Implementation

Objective one, aimed at establishing the extent to which teachers had been trained in SNE and how it influenced the implementation of CBC for EYL with disabilities in regular primary schools in Nairobi City County, Kenya.

The variables which were measured included teachers' level of training in CBC for learners with disabilities, categories of learners with disabilities for specialized training, and effectiveness of training in SNE for teaching LSN in CBC classes. Descriptive statistics in the forms of percentages and frequencies, means, standard deviation, and skewness

were employed in making the data summary before being presented using figures and tables. The hypotheses were then tested using the chi-square test. The analysis was facilitated by the Statistical Package for Social Sciences (SPSS) version 22 since it produces simple and clear data. The following were the results as presented.

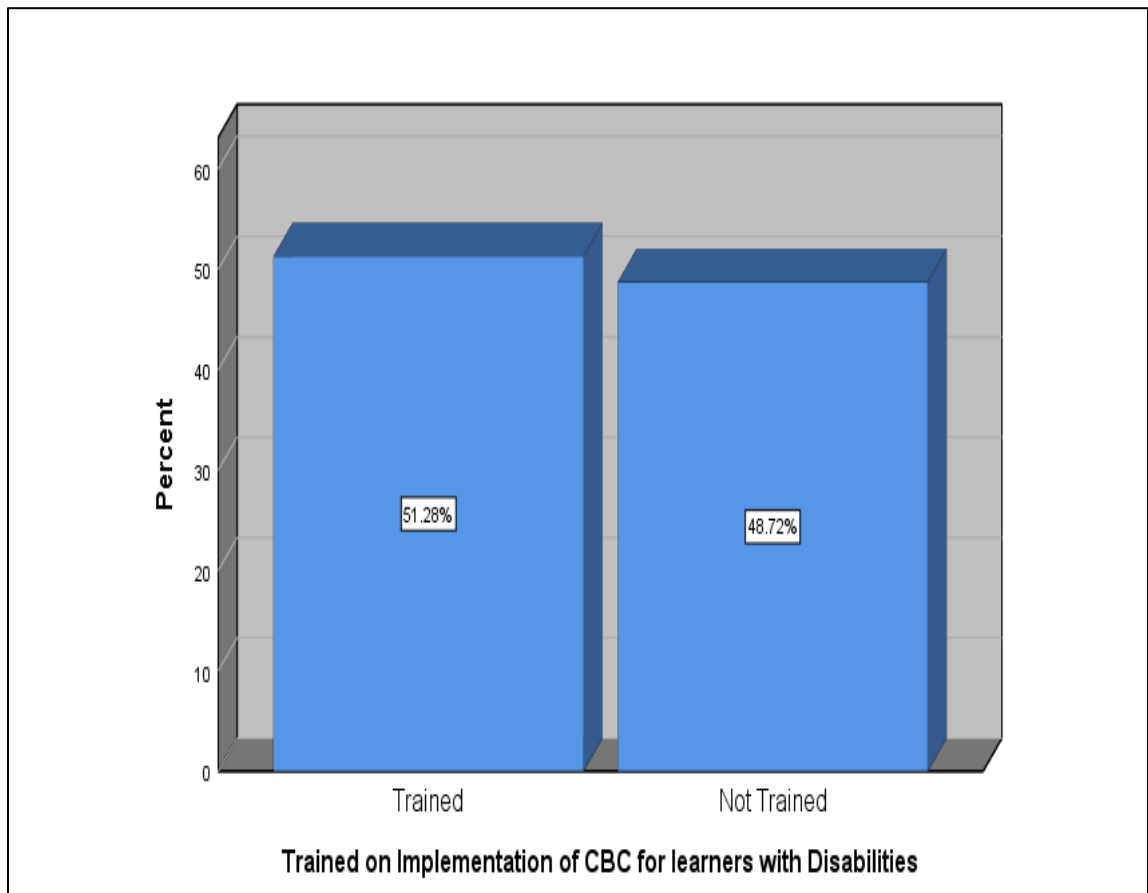
4.3.1 Teachers' Level of Training on Learners with Disabilities

Competency-Based Curriculum implementation for learners with disabilities was indicated by the extent of application of CBC co-competencies in the adaptation of instructional methods, material resources, and assessment strategies. The grades 1, 2, and 3 teachers responded through a questionnaire, and headteachers and Sub-County Educational Officers responded through interviews to CBC implementation in regular Primary Schools in Nairobi City County.

Teachers were asked about their training in CBC. The findings were as shown the Figure 2 below.

Figure 2:

Teacher Training in CBC



Over half (51.28%) of the teachers reported that they had been trained in CBC and were experienced enough to apply the skills acquired in teaching learners. Slightly lower than half (48.72%) had not received any form of training in CBC and were unable to apply any skills in teaching CBC classes. These findings therefore could imply that CBC implementation in regular primary schools was embraced and its implementation was ongoing because the majority of teachers were already trained. However, the teachers did not indicate whether they were trained in CBC to support learners with disabilities in regular schools. This therefore could indicate that CBC implementation for early years

learners with disabilities was a great challenge because teachers were not trained in it and were less competent. This statement was echoed by the findings from the interview with the headteachers and also an open-ended questionnaire for the teachers as follows:

“We were not specifically trained in CBC for learners with disabilities, but it was just general training. So maybe we can apply but the challenge is training in SNE”, said a teacher from a public school.”

Still, a headteacher from a private school maintained:

‘Those training were for CBC and did not touch on the aspect of special needs. So, no teacher here to handle the special learners since none of us have training in SNE.’

These findings were similar to findings by Andiemba (2021) which focused on teachers' competency in the evaluation of CBC for learners with disabilities in the Kapsaret Sub-County in Kenya. The reported findings revealed that teachers were incompetent in the evaluation of learners with disabilities since their training in CBC did not entail the content of special needs. On the same note, these findings conformed with the findings by Isaboke et al., (2021) who had observed that teachers of pre-primary schools in Nairobi City County were untrained in CBC and were being challenged in its implementation. These findings further support the findings by Momanyi & Rop (2019); which indicated that teachers in Bomet East Sub-County in Kenya had not been trained in CBC and had limited knowledge of CBC.

The training in CBC implementation was further interrogated across school categories (public or private) to indicate the application of CBC implementation for learners with disabilities. The result was as shown in Table 8.

Table 8:

Training in CBC Implementation According to School Category

			School Category		
			Public	Private	Total
Trained on the	Trained	Frequency	6	13	19
Implementation of CBC		% of Total	16.7%	36.1%	52.8%
for learners with	Not	Frequency	12	5	17
Disabilities	Trained	% of Total	33.3%	13.9%	47.2%
Total		Count	18	18	36
		% of Total	50.0%	50.0%	100.0%

From the above table it can be observed that about a third of teachers 13(36.1%) in private schools reported that they had been trained in CBC and were able to apply the knowledge to teach the learners with disabilities in their schools. A lower number of 6(16.7%) teachers in public primary schools had been trained in CBC compared to those in private schools. Therefore, these findings could imply that the majority of teachers already trained in CBC were in private schools compared to public schools. The findings that 36.1% of teachers in private schools and 13.7% of teachers in public schools trained in CBC could imply that the majority of teachers teaching in both private and public schools were still untrained in CBC and could be facing challenges teaching learners with disabilities. The findings could also imply that CBC implementation had been picked in both private and public schools with some teachers already trained and could be applying the skill in supporting the

learners with disabilities in those schools. However, it is worth noting that most teachers in public primary schools are not yet trained in CBC and this could result in low CBC implementation in the schools. These findings are in tandem with findings by Ngeno et al., (2022) who conducted a study on the influence of teacher training on the implementation of CBC in public primary schools in Kericho County. The findings revealed that teacher training moderately influenced CBC implementation in public primary schools.

However, data from the interviews with headteachers gave a contradicting finding. One of the head teachers in private schools revealed that all their teachers had been sent for CBC training. For example, the headteacher remarked:

“All our teachers do attend the seminars on CBC every holiday and so all of them are competent including the upper classes.”

From the findings, it was clear that information given by the head teachers contradicted those given by teachers which revealed that in both private and public combined only slightly more than half of the teachers were already trained in CBC. Specifically, only a quarter of the teachers in private and lower than a quarter in public schools respectively had attended the CBC training. The findings could therefore imply that most of the head teachers were unaware of the levels of CBC training among their teachers, and this could mean that there might be no learning taking place in CBC class and it is not within their knowledge. However, it could also imply that the untrained teachers were therefore teaching the CBC class making it difficult to support learners with disabilities since they were neither trained in SNE nor CBC. The findings conflicted with the findings by Koskei and Chepchumba (2020) which revealed that even though training in CBC moderately

influenced their implementation of CBC, over 90% were not yet trained in CBC in Nakuru County, Kenya, and were less competent.

The descriptive Analysis of Respondents’ scores on the Implementation of CBC was further done. The trained teachers in CBC were asked about the extent to which they had embedded the CBC co-competencies in teaching learners with disabilities in their classes and the following were the responses presented in Table 9.

Table 9:

Teachers Employing the CBC Co-Competencies in Teaching

	N	Min	Max	Mean	Std. Deviation	Skewness	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
ICBCS	44	20.00	77.00	49.41	21.54	-.18	.36
Valid N (listwise)	44						

The distribution of the teachers’ scores on implementation of CBC was negatively skewed (SK = -0.18) with M= 49.41 (SD= 21.54). These findings could mean that the majority of the teachers who had already attended training in CBC rated themselves highly in the implementation of CBC co-competencies for learners with disabilities. These findings, therefore, demonstrated that those teachers who had training in CBC could apply the basic curriculum co-competencies in their regular classes with both learners with and without disabilities. However, it also showed that a good number of teachers trained in CBC had no experience to apply the co-competencies in teaching LSN in their regular class and therefore rated themselves lowly in the skill. These findings further contradicted the findings by Isaboke et al., (2021) which had shown that CBC in Nairobi Kenya was greatly

challenged. The finding similarly did not support findings by Momanyi & Rop (2019) which had also revealed that teachers in Bomet East in Kenya were less prepared for the CBC system of education. Finally, it was not in line with the findings by Koskei and Chepchumba (2020) which also revealed that teachers in Nakuru County were challenged in the implementation of CBC due to a lack of training. This information was further analysed across the type of schools and is shown in Table 10.

Table 10:

Respondents' Scores on Implementation of CBC Across Types of Schools

School Category		N	Min	Max	Mean	Std.	Skewness	Std. Error
						Deviation		
Statistic		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Error
Public	ICBCS	21	20.00	68.00	45.8571	17.30978	-.202	.501
	Valid N (listwise)	21						
Private	ICBCS	19	20.00	77.00	54.0000	25.52559	-.538	.524
	Valid N (listwise)	19						
No Response	ICBCS	4	20.00	74.00	46.2500	22.51481	.184	1.014
	Valid N (listwise)	4						

Table 10 shows that private schools had a higher mean (M= 54, SD=25.53) than public schools (M= 45.86, SD= 17.31). This information revealed that public primary schools were doing poorly in the application of co-competencies as compared to private schools. These findings could imply that there are still low accommodative practices for learners with disabilities as they learn using CBC design in regular schools. The findings were

therefore similar to data gathered through an interview with A head teacher from a public school which revealed the following :

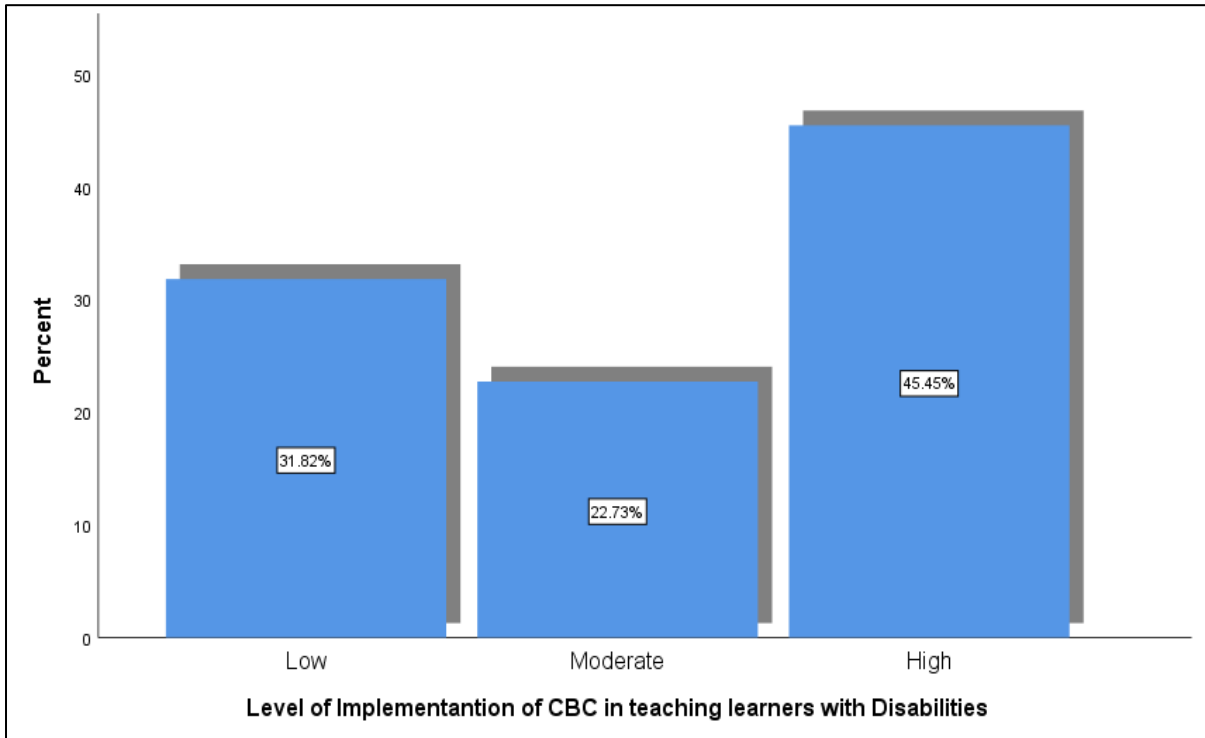
We lack trained teachers since the methods need Tailor-made to fit the needs of learners, expertise which our teachers lack”, HT1.

These findings are in agreement with the findings by Isaboke et al., (2021) which alluded that teachers in public pre-primary schools in Nairobi were untrained in CBC and were incompetent to teach because they had not attended training by TSC, KNEC, and KICD since they were under the County governments and lacked the sponsorship for the CBC training. The findings are also in agreement with the findings by Andiemba (2021) which stated that teachers in the lower primary in Kapsaret in Kenya had not received training in evaluating learners with disabilities using CBC design of learning.

A summary of the level of the extent to which teachers in regular schools implemented CBC in teaching and assessment of learners with disabilities was further sought, and the results were indicated in Figure 3.

Figure 3:

Level of Implementation of CBC in Teaching Learners with Disabilities



From Figure 3, it was observed that close to half (45.45%) of all teachers in both public and private schools had a high implementation of CBC and could teach learners with disabilities while about a third (31.82%) had a low implementation of CBC in teaching learners with disabilities. This could imply that CBC implementation for learners with disabilities in regular schools was still minimal. These findings are in conjunction with the findings by Andiema (2021) which revealed that teachers in Kapsaret in Kenya are unskilled in evaluating CBC to LSN in regular schools. These findings were further reflected in the interview with the headteachers about the implementation of CBC for learners with disabilities in their schools. The main theme that emerged is that CBC implementation for learners with disabilities faced a myriad of challenges. Some of the responses from teachers were as presented:

One of the head teachers from a public school said:

'CBC is new and not well familiarized with' to help learners with disabilities.

Another head teacher from a public school said:

'Became a challenge when we get several special learners yet they need individualized attention.

Still, a head teacher from a private school remarked:

'Mean score issue for regular learners' makes it difficult to concentrate on this category of learners.

These findings could indicate that most of the head teachers are overwhelmed by the presence of learners with disabilities in their schools because they had a limited number of teachers trained in SNE to teach these learners in line with the CBC design. These findings were in line with findings by Andiemba (2021) which indicated that the majority of special needs teachers in Kenya were inadequately prepared to undertake evaluation and assessment of children with disabilities in line with the new curriculum design. These findings further revealed that primary school teachers only received general training in CBC for 'regular' learners and not specialized training in CBC for learners with disabilities.

When the teachers who had been trained in CBC were asked to give their opinion on how their training in CBC and the extent to which they applied the co-competencies have influenced their implementation of inclusive education, the common theme that emerged was that it has contributed to the development of teachers competencies in the teaching using the design, as in the following responses:

T1 from a private school said:

'I have learned self-efficacy which helps me identify learners' self-esteem and encourage them.'

Yet, T3 from a public school had this to say:

"I have been able to implement creativity and imagination through activities involving CBC."

T1 from a private school said,

'I have learned to incorporate the learners with disabilities in doing activities that are done by others.'

Still, T2 from public school had the following to say:

'I have undergone training and I have been able to help them identify their talents.'

This was a response by T2 from a private school:

'It has borne fruits for most learners I have felt encouraged.'

Still, T1 from a public school said:

'The CBC curriculum design is inclusive and hence helps a great deal in the education.'

The findings could imply that teachers who had acquired training in CBC were competent and supported their learners during the early years level of education. These findings were parallel to findings by Tarmo (2014) which revealed that teachers' knowledge of competency methods in Tanzania was still theoretical and continued using traditional paper and pencil assessment methods.

4.3.2 Categories of Disabilities Present in Schools for Specialized Training

In this sub-section, the researcher sought to find out the various categories of learners with disabilities found in regular schools. The result is presented in Table 11.

Table 11:

Categories of Disabilities for Specialized Training (Category of Disability * Type of School Cross-tabulation)

			Type of School		Total
			Public School	Private School	
Category of Disability	Physical Disability	Count	7	0	7
		% of Total	10.9%	0.0%	10.9%
	Developmental Disability/Intellectual disability	Count	19	2	21
		% of Total	29.7%	3.1%	32.8%
	Emotional/ Behavioural Disability	Count	7	1	8
		% of Total	10.9%	1.6%	12.5%
	Sensory Impairment	Count	14	5	19
		% of Total	21.9%	7.8%	29.7%
	Other Health Impairments	Count	6	3	9
		% of Total	9.4%	4.7%	14.1%
	Total	Count	53	11	64
		% of Total	82.8%	17.2%	100.0%

Table 11. shows that In public schools, the majority of learners with a disability that is 14 (21.88%) were reported to have sensory impairment while learners categorized as having other impairments were the minority in public schools representing 9.38% (6). On the other hand in private schools, just like in public schools, the majority of the learners with a disability, representing 7.81% (5) were reported to have a sensory impairment. The category with the least number in private schools was learners with emotional/behavioural disabilities where only one learner was reported to be within this category. This result was

echoed by the data gathered by the observation check-list. It revealed that there were a large number of learners with disabilities in public schools as compared to private schools. Learners with different categories of disabilities were also observed sharing classes. These findings indicate that learners with various categories of disabilities are present in classes and are all lumped together in a single class without considering their disability category. This, therefore, means their learning needs are not met in these classes.

This data supports the finding by KISE (2018) which indicated that a large number of learners with disabilities are in integrated schools. Similarly, the findings are also in tandem with the findings by Owino et al., (2019) which revealed that regular schools in Awendo Sub-County were congested with learners with various categories of disabilities and shared classes. However, this data contradicts findings by KISE (2018) which showed that children with intellectual disabilities were the highest in integrated schools in Kenya and that the least were learners who were deaf-blind.

When the head teachers were asked whether they had adequate teachers to work with all the categories of learners with disabilities as observed, it emerged that schools had inadequate teachers trained in special needs education as shown in Table 12.

Table 12:

Head Teachers' Response to the Adequacy of Trained Teachers in SNE in Schools

				Valid	Cumulative
		Frequency	Percent	Percent	Percent
Valid	No Response	3	20.0	20.0	20.0
	Not adequate	12	80.0	80.0	100.0
	Total	15	100.0	100.0	

Table 12 indicates that, out of 15 schools, 12 schools had no teachers trained in SNE to implement inclusive education.

Further, data from the interviews with the head teachers had the following:

A head teacher from a public school said:

We do not have a special unit in this school, though I had thought of starting one but balancing between the administration and introducing the program is quite a challenge. Secondly, I am the only teacher trained in special education.

From the private schools, one of the head teachers said,

I have only one teacher trained in special education, but we just give her a normal workload as even the overall number of our teachers is less. We do not consider separating these learners. They just learn together with others in the classes

However, when the educational officer (EO1) in charge of one of the sub-counties was asked why the officer thought inclusive education was effective in the schools within the sub-county, the officer gave contradicting information from those given by the heads of

schools. The officer maintained that inclusive education faced several challenges. Here was how the officer responded,

There are trained and practising teachers and every school has a unit/inclusion of SNE. However, I lack an officer In charge of SNE in the Sub-County forcing us to refer most of our cases to the Kenya Institute of Special Education (KISE)

Yet, when the EO2 was asked why the officer thought the IE was operational in the Sub-County, the officer responded as follows:

I cannot say that the IE has been very successful, but it has its challenges. We have inadequate teachers to conduct the program. Most of our schools also lack facilities for use by learners with disabilities.

These findings support the study by KISE (2018) which indicated that learners with different types of disabilities were integrated into primary school, but the teachers lacked the skills to support them. The findings are also consistent with findings by Owino et al., (2019) who found out that in the schools with special units in Awendo Sub-County, the classes were congested with a mixture of learners with various categories of disabilities together with the ‘regular’ pupils.

From these results, it could be deduced that most regular (public and private) schools did not have adequate experts in special needs education to work with and support learners with disabilities in integrated schools. An implication could also be that teachers both in public and private schools faced the problem of teaching all the categories of learners with disabilities together in a common class because teachers trained in different areas of specialization as guided by the categories of disabilities were inadequate in regular schools.

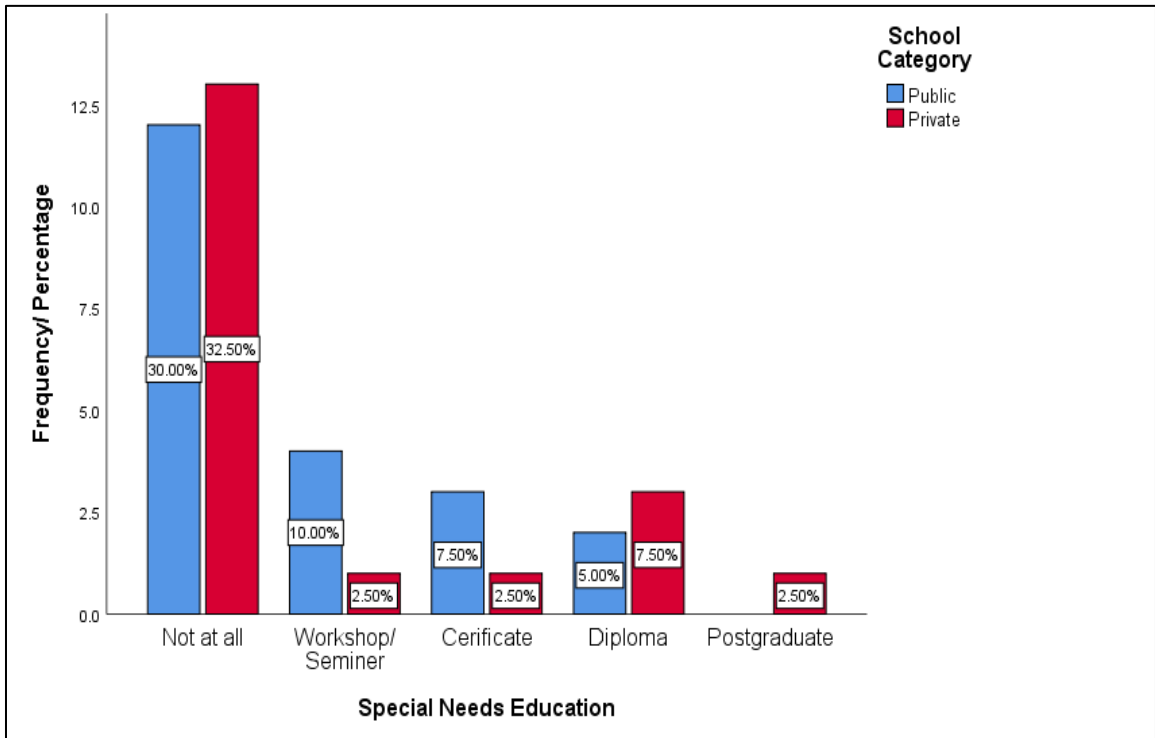
Additionally, it was found that the head teachers and the educational officers were not speaking in one voice regarding inclusive education. This could be attributed to the fact that there lacked an education officer in charge of SNE in the sub-counties who coordinate the SNE programs. This meant that most of the decisions made about the IE were not from an informed point of view.

4.3.3 Teachers' Level of Training in SNE

The researcher sought to find out the level of training in SNE of the lower grades' teachers in terms of workshops/seminars, certificates, diplomas, and undergraduate and postgraduate for effective implementation of CBC. The findings are shown in Figure 4.3.

Figure 4:

Level of Training in Special Needs Education



The findings in Figure 4 shows that about lower than a third (30 %) of teachers in public schools and about a third (32.5%) of teachers in private schools were not trained at all in special needs education. However, for those trained in SNE, only about a tenth (10%) of teachers in public schools had attended training through workshops/seminars, while in private schools it is only 2.5% have attended seminars and workshops training. Similarly, only 5.00% (had diploma qualifications in SNE in public schools while 7.5%) of teachers in private schools had diploma qualifications in SNE in private schools. Further, none (0%) of teachers who had degree qualifications in SNE were found in both public and private schools. Additionally, none (0%) of teachers with postgraduate qualifications was found in public primary schools, while in private schools about 2.5% had postgraduate qualifications in SNE. It could therefore imply that many teachers in lower grades in regular primary schools had no training in SNE and were incompetent to support the LSN who were in their CBC classes. These findings support findings by Owino et al., ((2019) which had alluded that over 70%of lower grades primary school teachers in Awendo in Migori, Kenya was untrained in SNE.

This question was further interrogated by asking the headteachers whether they had teachers trained in special needs deployed in their schools, and it emerged that most of the regular schools had no teachers deployed. For example, one of the head teachers from a public school said the following:

“We do not have a teacher deployed by TSC to be in charge of the learners with disabilities, instead, the learners are learning at the mercy of one of our teachers who had done diploma.”

Another head teacher still from a public school observed:

“I am specifically trained in special needs but none of my teachers is trained in the same. I have wanted to start the program, but mixing both administration and the special needs program is impossible.”

However, a headteacher from a private school said:

“We have learners with disabilities here though not many, they just learn in the regular classes as others since we do not have any special considerations.”

Still, a headteacher from a private school said,

“One of our teachers is trained in special needs, but she is teaching the upper classes.”

Here is what a head teacher from a private school remarked:

‘We have some learners with disabilities, but we lack trained teachers and also I have not heard of any seminar/workshop of the same I would automatically send my teachers.’

Further, the sub-county educational officers were asked to give a brief on the implementation of CBC to learners with disabilities through inclusive education policy.

The responses were as indicated:

“I lack an officer in charge of special education at the sub-county level to coordinate the special education and this hinders the effective delivery of quality and equitable education in the sub-county”,”, EO2 remarked.

“Inclusive education implementation in the Sub-County undergo multiple challenges ranging from inadequate facilities, inadequately trained teachers and

attitudinal issues from both the teachers, learners and even the community”, said EO1.

These findings could mean that the majority of teachers in primary schools had a limited number of teachers trained in SNE to support learners with disabilities in nurturing their potential as is required by the CBC design of learning. Similarly, the findings could also imply that the relevant bodies have not come up with strategies to identify, track and redeploy teachers trained in SNE to support inclusive education in regular schools. These findings conform to findings by Viviani et al., (2020) which focused on teacher diversity and revealed that the New York City Teaching Fellows (NYCTF) failed to address gaps in teacher quality. The findings are also in line with findings by Owino et al., (2019) which revealed that the majority of teachers about (70%) in Awendo in Migori County, Kenya were untrained in SNE and were incompetent. Still, the findings conform to the findings by Janmohamed (2012) which revealed that teachers were inadequately trained in Nairobi County in Kenya to teach learners with learning disabilities in a regular class. Additionally, the findings support the findings by Kabuta (2014) which indicated that teachers were untrained in SNE in higher institutions of learning in Tanzania and were inadequately equipped with skills to work with learners with disabilities.

The teachers trained in SNE were asked how their further retooling/training in CBC influence their teaching of the LSN, and it emerged that training in SNE was very critical for supporting learners with disabilities in CBC class. The following were some of the responses given by the teachers:

“I can incorporate all learners in the learning process”, T2 from a private school said.

“Helps me in creating an inclusive environment that caters to all learners”,
Another T1 from a private school said.

“Has enabled me to understand different disabilities”, T2 from a public school
said.

T1 from a different public school also said:

‘It has helped me in identifying different learners in a class.’

T1 from a given private school said:

‘It has helped build my empathy towards these learners.’

These findings could therefore indicate that when the teacher is trained, they are capable to understand their learners’ diversities and be able to accommodate them. These findings were in line with the ideas proposed by Davis and Sumara (2006.), in the theory of Complexity and Education. The theory illustrated that there is a need for accommodation of the uncertainty and ambiguity in educational programs during evaluation. Davis and Sumara further maintain that the behaviours of complicated systems operate through linear causes and effects. However, the components are not fixed but are adaptive and in continuous flux. The theorists added that complex thinking encompasses the adoption of a relational and system(s) view. Therefore, an inclusive class being a complex system, there are a lot of uncertainties and ambiguities involved in supporting LSN which require teachers to adapt and accommodate the learners, and this requires that a teacher is trained in SNE.

At this point, the first hypothesis was tested using a Chi-square at a significant level of $P < .05$. The null hypothesis stated H_{01} : There is no association between teachers’

training in SNE and competency-based curriculum in primary schools. The results of a chi-square test are given in Table 13.

Table 13:
An Association between Teachers' Training in SNE and Competency-Based Curriculum

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.033 ^a	2	.133
Likelihood Ratio	4.182	2	.124
Linear-by-Linear Association	3.928	1	.047
N of Valid Cases	39		

a. 3 cells (50.0%) have an expected count of less than 5. The minimum the expected count is 2.82.

The output in Table 13 shows the calculated $\chi^2 = 4.033$, $df = 2$, $P > 0.05$. The calculated p-value was more than the critical value of 0.05. This shows that there was no significant association between teachers' training in SNE and their capability to implement the CBC in regular primary schools for EYL with disabilities. This indicates that the level to which teachers are trained in SNE never influences CBC implementation in regular schools. The researcher, therefore, failed to reject the null hypothesis based on these findings.

These results denote that there are other variables other than teacher training in SNE explaining the successful implementation of a competency-based curriculum for EYL with disabilities in primary schools. In this case, the association was not statistically significant. Therefore, it meant that other than training in SNE, other training influences the

implementation of CBC for early-year learners with disabilities in regular primary schools. The hypothesis was therefore accepted.

Many teachers are not trained in SNE and therefore lack the necessary skill required to support learners with disabilities in regular schools. Many teachers were also not trained in SNE but were trained in CBC and were able to implement it in the regular class. However, they lack the knowledge of working with the LSN in their class. Further, teacher training was only in one area of specialization and so with very many learners with various categories of disabilities, they found it challenging to support all of them within a single lesson. CBC training had been conducted and many teachers have attended the training but are still challenged in implementing the co-competencies in the regular classes since it was a new concept and the teachers were not yet familiar even with the training. The CBC training was general on the implementation of the new dispensation of learning known as CBC, but there was no special training conducted concerning learners with disabilities. There were many learners with various types of disabilities and teachers who were not trained in SNE found it difficult to accommodate the learners with disabilities since their training was not centred on teaching children with disabilities. Even the teachers who were trained in SNE found it challenging to support the LSN in their class because training in CBC and SNE were two different skills and some teachers trained in SNE were also not trained in CBC.

These findings are in line with the theory by Davis and Sumara (2006) Which holds that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced through accommodation of the various uncertainties and ambiguity in educational programs. Similarly, the findings draw similarity from the findings by

Andiema (2021) which focused on teachers' competency in the evaluation of CBC for learners with disabilities in Kapsaret Sub- County in Kenya and indicated that teachers were incompetent in the evaluation of learners with disabilities since CBC training did not focus on the content of special needs. The findings are also in line with the findings by Isaboke et al., (2021) which had observed that teachers of pre-primary schools in Nairobi City County were untrained in CBC and were being challenged in its implementation. The findings further agree with the findings by Momanyi & Rop (2019); which indicated that the majority of teachers in Bomet East Sub-County in Kenya had not been trained in CBC and had limited knowledge of CBC. Additionally, the findings are in tandem with findings by Ngeno et al., (2022) which revealed that teacher training moderately influenced CBC implementation in public primary schools in Kericho County, Kenya. The findings were further in conformity with the findings by Koskei and Chepchumba (2020) which disclosed that over 90% were not yet trained in CBC in Nakuru County, Kenya, and could not effectively implement CBC.

4.4 Instructional Methods Adaptation and Implementation of Competency-Based Curriculum

This was the second objective that formed the second hypothesis tested. The variables, which were measured in this objective include appropriate instructional methods, the use of systematic instructional methods, and the appropriateness and use of assistive technology.

4.4.1 Alternate Instructional Methods Appropriate for Learners with Disabilities

In this section, the researcher sought to find out the various alternate instructional methods which could be appropriate in supporting the learners with disabilities in the regular class.

The results were as shown in Table 14.

Table 14:***Alternate Instructional Methods for Learners with Disabilities***

Instructional methods		Public		Private		Total	
		F	%	F	%	F	%
Oral Instruction	No	8	20	6	15	14	35
	Yes	13	32.5	13	32.5	26	47.5
Written Instruction	No	10	25	8	20	18	45
	Yes	11	27.5	11	27.5	22	55
Group Work	No	6	15	5	12.5	11	27.5
	Yes	15	37.5	14	35	29	72.5
Individual Work	No	5	12.5	5	12.5	10	25
	Yes	16	40	14	35	30	75
Reading aloud from text together	No	7	17.5	6	15	13	32.5
	Yes	14	35	13	32.5	27	67.5
Class Discussion	No	8	20	5	12.5	13	32.5
	Yes	13	32.5	14	35	27	67.5
Use of Models	No	5	12.5	5	12.5	10	25
	Yes	16	40	14	35	30	75
Mediated Learning	No	7	17.5	6	15	13	32.5
	Yes	14	35	13	32.5	27	67.5
Audio Taping of Textbooks	No	13	32.5	9	22.5	22	55
	Yes	8	20	10	25	18	45
Graphic Organizers	No	10	25	7	17.5	17	42.5
	Yes	11	27.5	12	30	23	57.5
Peer Tutors/ Child to child approach	No	4	10	6	15	10	25
	Yes	17	42.5	13	32.5	30	75
Doing or Manipulation	No	6	15	7	17.5	13	32.5
	Yes	15	37.5	12	30	27	67.5
Collaborative Teaching/ Co-teaching	No	6	15	5	12.5	11	27.5
	Yes	15	37.5	14	35	29	72.5
Self-directed Learning	No	9	22.5	8	20	17	42.5
	Yes	12	30	11	27.5	23	57.5

Table 14 indicates that the instructional method found most appropriate for use by teachers in Public schools was the peer tutors/child-to-child approach 17(42.5%). The most popularly used instructional method in private schools was group work/collaborative teaching/co-teaching at 14(35%). On the other hand, the least popularly used instructional methods for public and private schools included the audio-taping of textbooks by 13(32.5%) and 9(22.5%) of the respondents respectively. These findings could clearly show that the majority of teachers in both public and private schools were still not endowed with the knowledge to adapt and use the alternative instructional methods that support learners with disabilities in their classes. An implication can therefore be drawn that accessing CBC design by LSNs who are in regular schools could be a great challenge and could be lagging in learning compared with their typically developing peers. This information conflicted with the information gathered through the observation check-list. It was observed that all learners with various disabilities were lumped together with those without disabilities in a single class. It was also observed that most teachers did not use any specialized instructional methods in teaching to accommodate the learners with various disability types who were in their classes and required individualized educational plans. This information gathered through the observation check-list was in line with the findings from the teacher's interviews which touched on the adaptation and use of alternative instructional methods. The teacher's responses were as follows:

“It influences CBC negatively because there is limited time to employ all these instructional methods, and so we just employ the standard instruction for a standard class”, said a headteacher From a public school.

“You know it takes more time to attend to a few learners than many learners and use of the special methods require skills which we lack”, a head teacher from a private school remarked.

“Time taken on an individual learner with a disability is just too much, and if that be the case you end up neglecting the other learners who are the majority in class”, Another headteacher from a private school maintained.

These findings conflicted with the findings by Adewumi et al., (2017)) which indicated that even though most of the teachers in primary schools in the Fort Beaufort District in South Africa did not know SNE, they still accommodated the LSN in their classes. However, the findings were in line with the findings by Anderson & Boyle (2015) which revealed that inclusive education in Australia had several barriers that had not a quick fix and teachers had limited knowledge which could not allow them to adapt instructions and teaching approaches. Further, these findings do not support the findings by Miles et al., (2018) which revealed that an insignificant number of teachers in rural Tanzania could adapt speech, seating, and posture, and create instructional materials that facilitated learning and participation among LSNs.

4.4.2 Systematic Instruction for Learners with Disabilities

In this sub-section, the researcher sought to find out the frequently used systematic instructional methods in regular classes as shown in Table 4.12.

Table 15:

Useful Systematic Instruction for Learners with Disabilities

Systematic Instruction		Public		Private		Total	
		F	%	F	%	F	%
Defining the Skill to be taught	No	5	12.5	5	12.5	10	25
	Yes	16	40	14	35	30	75
Categorize the behaviors to be taught as discrete or chained	No	5	12.5	6	15	11	27.5
	Yes	16	40	12	30	28	70
Simultaneous prompting	No	10	25	5	12.5	15	37.5
	Yes	11	27.5	14	35	25	62.5
Time delays	No	13	32.5	8	20	21	52.5
	Yes	8	20	11	27.5	19	47.5
Least Intrusive Prompts	No	13	32.5	12	13	25	62.5
	Yes	8	20	7	17.5	15	37.5
Reinforcements	No	8	20	5	12.5	13	32.5
	Yes	13	32.5	14	35	27	67.5
Most to least intrusive prompts	No	13	32.5	6	15	19	47.5
	Yes	8	20	13	32.5	21	52.5
Generalization of teaching in the context in which skill is most likely to occur naturally	No	8	20	5	12.5	13	32.5
	Yes	13	32.5	14	35	27	67.5

Table 15 shows that the most frequently used systematic instruction for learners with disabilities in public schools was defining the Skill to be taught and categorizing the behaviours to be taught as discrete or chained. This was according to 16(40 %) of the respondents in each case. In Private schools, the most useful systematic instruction was Defining the Skill to be taught, Simultaneous prompting, Reinforcements, and Generalization teaching in the context in which the skill was most likely to occur naturally.

This was reported by 14(35%) of the respondents in each case. Further, Table 15 indicates that the least useful systematic instruction in the Public schools were Time delays, Least Intrusive Prompts, and most to least intrusive prompts. This was reported by 13(32.5) % of the respondents in each case. In the private schools, the least popular systematic instruction was Time delays 8(20 %) of the respondents.

From these results, it could be deduced that at least there were some pockets of accommodation for learners with disabilities in some regular schools. However, the majority of teachers are still unskilled in the use of the various alternate teaching strategies and found it difficult to support learners with disabilities in public schools. A similar scenario was also witnessed in the private schools where the majority of the teachers could not use other alternative strategies apart from defining the skill and categorizing the behaviour. Therefore, it could be deduced that the majority of the teachers teaching in regular schools lacked the knowledge of the usage of the alternate teaching strategies and were unable to support the LSN in their classes. these findings could therefore denote that LSN in regular school's lag in learning because the teaching strategies employed in the regular classes could not meet their individual educational needs.

Additionally, these findings drew similarities with the data gathered through the observation check-list. The data observed that teachers were using the standard methods and not alternate methods in their classes in both public and private schools. This information was further backed by the information gathered through the interviews with the headteachers who had asked about some of the instructional methods that have been adopted in their schools and revealed the following:

A head teacher in a private school remarked:

“We use demonstrations, questions, and answers as well as discussion’.”

Still, another head teacher from a private school indicated:

“We have Playing materials and we also do environment modification’.”

In the public school, a head teacher maintained:

“We go ahead to read for the learners who are not able to read but they can answer. The headteacher continued, ‘We also allow some extra time for these learners who work slowly’.”

A head teacher from a public school also said:

“We employ storytelling, singing songs, and greetings’ whenever we get to the class to make them feel at home.”

These findings indicate that the teaching strategies employed are not special and only a small number of teachers could be knowledgeable in employing the systematic instructional method. Hence, LSNs in regular classes could be facing a lot of difficulties during instruction. These findings do agree with the findings by Wanjiku (2010) which revealed that teachers in Kenya did not employ teaching strategies that were in tandem with the needs of individual educational needs of a learner and stated that the individual educational needs of a learner should determine the choice of the instructional method adopted. When the educational officer (EO2) was asked whether regular schools adapted instructional methods for learners with disabilities, the officer agreed that to some extent there was instructional methods adaptation. Further, the officer was asked how effective the adaptation of instructional methods to learners with disabilities was. The officer stated:

“In severe cases, the learners are accommodated at special units with the schools, but in mild cases are just included /integrated.”

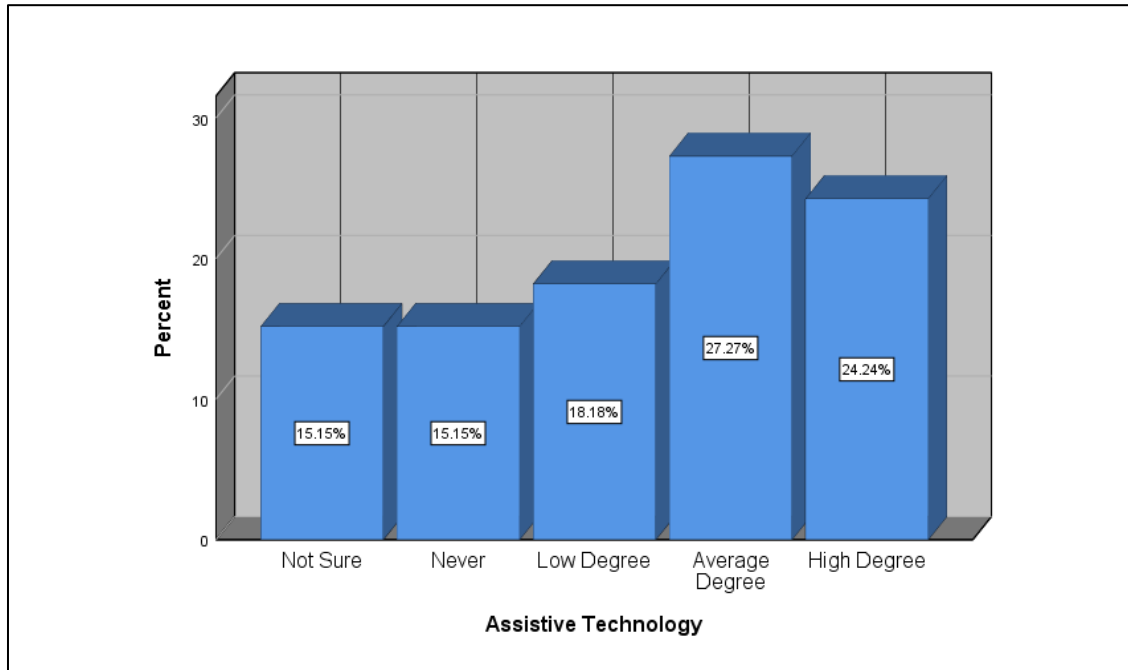
However, the officer indicated that she was unaware of how to mitigate the challenges faced by the teachers during the adaptation of the instructional method. These findings could indicate that the officer is not an expert in special needs education. In the Sub-County, there could be no officer in charge of SNE and as a result, there is a need for mass training of teachers and also the employment of an officer in charge of SNE to continue supporting IE.

4.4.3 The Appropriateness and Use of Assistive Technology

In this sub-section, the researcher sought to explore the extent to which the usage of assistive technology influenced instruction to LSN in regular classes. The researcher also sought to explore the extent to which assistive technology influenced instruction across the school category as shown in Figure 5.

Figure 5:

The Extent of the Influence of Assistive Technology on Instruction by Teachers



From the above figure, majority of the teachers (27.27%) maintained that assistive technology influenced their instruction to an average degree. However, 15.1% were not sure of the most appropriate assistive technology for LSN and never used it at all. These findings could indicate that at least there were some pockets of good practice in implementing digital literacy among learners with disabilities. These findings confirmed the findings earlier reported by Gitari (2018) which indicated that computers and iPads were the most appropriate assistive technology for use during KCSE for learners with visual impairments in Kenya. This was further shown in Figure 6.

Figure 6:

Influence of Assistive Technology on Instruction Across School Categories

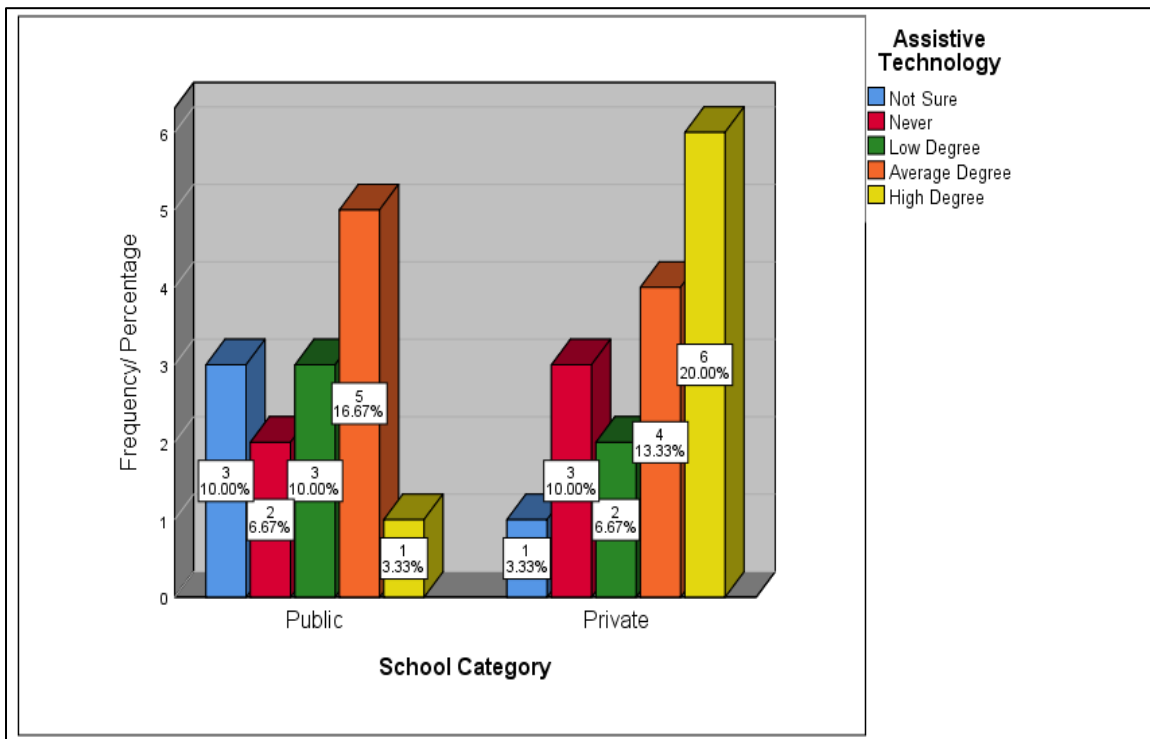


Figure 6 shows the result when the school category was considered. A low number of teachers 5(16.67 %) in public schools said that assistive technology influenced the instruction of learners with disabilities to an average degree while a high number of teachers 6(20%) of teachers in private schools reported that this technology influenced instruction to a high degree. These findings could imply that many schools do not emphasize the use of assistive technology among learners with disabilities. Secondly, it could also indicate that many schools lack the appropriate assistive technology that may support the LSN in regular schools. This information was supported by the data from the observation checklist which revealed that the teachers from both public schools and private schools were never observed or found using assistive technology during their lessons in

their classes. In addition, the data from the observation did not record any class which had assistive technology (pads, computers) installed or used in class. These findings could indicate that LSN in regular schools continues to lag in the acquisition of digital literacy knowledge since the teachers as well lacked the knowledge of the assistive technology that could help improve the learning among the learners. Therefore, these findings imply that both the absence of assistive technology in regular classes as well as the limited skill of operation among LSNs and their teachers resulted in the low adaptation of instructional strategies for quality education. These findings support the findings by Gitari (2018) which revealed that inadequate computers and lack of computer literacy skills among students and teachers challenged the usage of assistive technology among students to do KCSE in Kenya. However, the findings contradict the findings by Makewa and Mutie (2018) who pointed out that the teachers used assistive technology to develop effective teaching-learning resources in Makueni County, Kenya.

Further, the researcher sought to establish the extent to which assistive technologies were used during teaching. The result is shown in Table 16.

Table 16:

Extent of the Use of Assistive Technology during Teaching

Instructional methods		Public		Private		Total	
		F	%	F	%	F	%
Use of Videos	NU	17	42.5	12	30	29	72.5
	Used	4	10	7	17.5	11	27.5
Computer Assisted Instructions	NU	12	30	7	17.5	19	47.5
	Used	9	22.5	12	30	21	52.5
Radios	NU	17	42.5	8	20	25	62.5
	Used	4	10	11	27.5	15	37.5
Note Takers	NU	18	45	9	22.5	27	67.5
	Used	3	7.5	10	25	13	32.5
Obit Readers	NU	18	45	15	37.5	33	82.5
	Used	3	7.5	4	10	7	17.5
Magnifying Glass	NU	17	42.5	14	35	31	77.5
	Used	4	10	5	12.5	9	22.5
Interpreters	NU	20	50	17	42.5	37	92.5
	Used	1	2.5	2	5	3	7.5
Acoustic wall	NU	19	47.5	19	47.5	38	95
	Used	2	5	0	0	2	5
Talking Spell checker	NU	19	47.5	19	47.5	38	95
	Used	2	5	0	0	2	5
Sound Filled System	NU	19	47.5	19	47.5	38	95
	Used	2	5	0	0	2	5
Sip and Puff Systems	NU	18	45	19	47.5	37	92.5
	Used	3	7.5	0	0	3	7.5
Draft Builders	NU	19	47.5	18	45	37	92.5
	Used	2	5	1	2.5	3	7.5
Sandwiched Charts	NU	19	47.5	18	45	37	92.5
	Used	2	5	1	2.5	3	7.5
Math Talk	NU	19	47.5	17	42.5	36	90
	Used	2	5	2	5	4	10
Math Simulations	NU	19	47.5	18	45	37	92.5
	Used	2	5	1	2.5	3	7.5
Low Tech handouts	NU	20	50	18	45	38	95
	Used	1	2.5	1	2.5	2	5
Proofreading Software	NU	21	52.5	19	47.5	40	100
	Used	0	0	0	0	0	0
Gotit	NU	21	52.5	19	47.5	40	100
	Used	0	0	0	0	0	0

Table 16 shows that the most used assistive technology among public schools and private schools was computer-assisted instruction by 9(22.5%) and 12(30%) of the respondents

respectively. More evidence of the low usage of technology was seen when teachers indicated that the least used assistive technology among public schools and private schools were computer-assisted Proofreading Software and Gotit, which were reported by 21(52.5%) and 19(47.5%) of the respondents respectively. In other words, no respondents reported having used them. An implication could be drawn that the majority of teachers both in public and private schools did not know the use of assistive devices in instruction to learners with disabilities in regular classes. These findings could indicate that apart from the use of computer-assisted instruction other assistive technologies were never used. These results could imply that there existed little knowledge of technology use both among teachers and learners. This information conflicted with the data from the observation check-list. It was observed that there was no usage at all of the assistive devices during lessons. These findings support the findings by Gitari (2018) which had alluded that Braille was the primary reading and writing mode used by most learners to revise and do assignments and computers, while iPads and computers were not used though they were present and were the most preferred assistive technology by teachers. However, the findings were not in line with the findings by Makewa and Mutie (2018) which indicated that teachers used assistive technology in developing teaching-learning resources.

At this point, the second hypothesis was tested. To test this hypothesis, the Chi-square test was used at a significant level of $P < .005$, to determine the degree of association between each instructional method identified and the level of competency-based curriculum adaptation. The null hypothesis stated H_0 : There is no association between instructional methods adaptation and competency-based curriculum in primary schools. The results are shown in Table 17.

Table 17:

Test of Association between Instructional Methods Adaptation and Competency-Based Curriculum

Association between:		Chi-square Tests		
Level of CBCI	Instructional method adaptation	Value	Df	Asymptotic Significance (2-sided)
	Oral Instruction	12.02	2	.002
	Written Instruction	6.58	2	.037
	Group work	11.54	2	.003
	Individual work	14.22	2	.001
	Reading aloud from text together	11.38	2	.003
	Class Discussion	12.81	2	.002
	Use of Models	13.91	2	.001
	Mediated Learning	21.19	2	.000
	Audio Taping of Textbooks	7.12	2	.028
	Graphic Organizers	14.30	2	.001
	Peer Tutors/ Child to child approach	17.21	2	.000
	Doing or Manipulation	19.40	2	.000
	Collaborative teaching/ Co-teaching	17.44	2	.000
	Self-directed learning	5.89	2	.053

Table 17 shows the result of the hypothesis test. The researcher tested each item for measuring instructional adaptation independently. The findings show that all items had a calculated Chi-square value below 0.037 at 2 degrees of freedom with a significance value $p=0.000 < 0.05$ except for self-directed learning which had a calculated value of .053. The calculated p-value was therefore less than the critical value of 0.05. This shows there was a significant association between the levels of implementation of competency-based for learners with disabilities and adaptation of instructional methods. This means that the

extent to which teachers are trained on how to adapt and use the various instructional methods will influence the implementation of CBC. The null hypothesis, which stated H₀: There is no significant association between instructional methods adaptation and competency-based curriculum implementation for EYL in primary schools was therefore rejected based on these findings, and the alternative hypothesis which stated: "there is a significant association between instructional methods adaptation and competency-based curriculum implementation for EYL in primary schools" was adopted.

These findings imply that instructional methods adaptation and competency-based curriculum implementation varied together. Hence, the more instructional methods were adapted, the better the implementation of CBC for learners with disabilities in regular classes was observed. The majority of teachers in both public and private schools still lack the knowledge to adapt and use alternate instructional methods for learners with disabilities in their classes. The learners with various disabilities are still lumped together with those without disabilities in a single class. Teachers do not employ specialized instructional methods in teaching learners with various disabilities who are in their classes and required individualized educational plans. There are some pockets of effort to accommodate learners with disabilities in some regular schools. However, the majority of teachers are still unskilled in the use of various alternate teaching strategies and cannot support learners with disabilities in regular schools. majority of the teachers teaching in regular schools have inadequate knowledge of adaptation and use of the alternate teaching strategies and are unable to support the LSN in their classes. LSN in regular schools lags in learning because the teaching strategies employed in the regular classes could not meet their individual educational needs. Many schools do not emphasize the use of assistive

technology among learners with disabilities. The majority of teachers both in public and private schools do not know the use of assistive devices in instruction to learners with disabilities in regular classes.

These findings are in line with the Complexity theory and Education by Davis and Sumara (2006) which maintained that complex systems have many components, including Self-organization, emergence, nested, interactions, and feedback loops which can be examined and the whole represents the sum of the parts in which the behaviors operate through linear causes and effects. These findings similarly support the findings by Gitari (2018) which had alluded that braille was the primary reading and writing mode used by most learners to revise and do assignments, while iPads and computers were not used though they were present and were the most preferred assistive technology by teachers. These findings also do agree with the findings by Wanjiku (2010) which revealed that teachers in Kenya did not employ teaching strategies that were in tandem with the needs of individual educational needs of a learner. Additionally, the findings were in line with the findings by Anderson & Boyle (2015) which revealed that inclusive education in Australia had several barriers that had not a quick fix and teachers had limited knowledge which could not allow them to adapt instructions and teaching approaches. However, the findings were not in line with the findings by Makewa and Mutie (2018) which indicated that teachers used assistive technology in developing teaching-learning resources. The findings also conflicted with the findings by Adewumi et al., (2017)) which indicated that even though most of the teachers in primary schools in the Fort Beaufort District in South Africa did not know SNE, they still accommodated the LSN in their classes. Further, these findings do not support the findings by Miles et al., (2018) which revealed that an insignificant

number of teachers in rural Tanzania could adapt speech, seating, and posture, and create instructional materials that facilitated learning and participation among LSNs.

4.5 Instructional Material Resources Adaptation and Competency-Based Curriculum Implementation

This was the third objective and it formed the third hypothesis that the researcher tested.

The variables measured here include Availability and use of Adapted instructional material, knowledge of adaptation and use of specialized instructional materials/aids, and challenges faced in the adaptation and use of adapted instructional resources.

4.5.1 Availability and Use of Adapted Instructional Material Resources in Schools

The head teachers were asked to mention the available instructional material resources that could be adapted in their schools, it emerged that some schools at least had materials that could be adapted. The responses were as follows:

One of the head teachers from the public school said:

‘We have charts, blocks, toys, skipping ropes, balls, Therapy balls.’

Still another head teacher from a public school mentioned:

‘We have a television screen and radio.’

In the private schools, a head teacher mentioned:

‘We have radios, smart phones, and computers.’

Still another head teacher from a private school mentioned:

‘We have tables and chairs.’

Yet another head teacher from a private school mentioned:

‘We have screen, radio, and wall charts.’

To get more information concerning the availability of instructional material aids that could be adapted in the schools, the Educational Officers were further interrogated in an interview. The response of the educational officer (EO1) was as follows:

'We have Braille, balls, and sitting volleyballs for PH.'

Nonetheless, EO2 stated:

"I know that some schools have materials, especially in the special units though I am not in a position to remember all of them."

These findings imply that there were standard materials used in class and could be adapted depending on the needs of the learner. This information conflicted with the data from the observation check-list. During the researcher's observation, it was noted that most of the materials mentioned were missing in the class. It was also noted that most materials such as tables, charts, graphics, and computers were those used in a standard classroom, and were not adapted and used. The observation check-list had further results as shown in Table 18.

Table 18:

Materials Availability and Usage in Schools

Observation Check-list		Public		Private		Total	
		F	%	F	%	F	%
	Available and used	4	26.7	1	6.7	5	33.3
Diagrams/	Not Available	4	26.7	2	13.3	6	40
Embossed	Available	0	0	1	6.7	1	6.7
diagrams	Available and used	4	26.7	4	26.7	8	53.3
Table/ Embossed	Not available	1	6.7	2	13.3	3	20
Tables	Available	0	0	1	6.7	1	6.7
	Available and Used	7	46.7	4	26.7	11	73.3
Teacher Made	Not Available	0	0	2	13.3	2	13.3
Resources	Available	0	0	1	6.7	1	6.7
	Available and used	8	53.3	4	26.7	12	80
Presence of Co-	Not Available	7	46.7	4	26.7	11	73.3
teacher/	Available	0	0	1	6.7	1	6.7
Interpreters/	Available and used	1	6.7	2	13.3	2	20
teacher Assistant							
Use of videos	Not Available	0	0	2	13.3	2	13.3
	Available	0	0	1	6.7	1	6.7
	Available and used	8	53.3	4	26.7	12	80
Computer-	Not Available	4	26.7	3	20	7	46.7
Assisted	Available	0	0	1	6.7	1	6.7
Instruction	Available and not used	1	6.7	0	0	1	6.7
	Available and used	3	20	3	20	6	40

Table 18 disclosed that a large number of different materials for use by LSNs were missing in public schools like embossed diagrams 4(26.7%), use of videos none (0%), and

computer assistive instruction 4(26.7%). In private schools, observed were embossed diagram 2(13.3%), teacher-made resources 2(13.3%), and presence of co-teacher 4(26.7%). Similarly, most of the materials observed used were those belonging to the standard classroom for ‘normal’ learners. Some materials were never used despite their availability. These findings could indicate that instructional materials appropriate for instruction to LSN were missing in schools, and teachers also lacked the knowledge to adapt the existing materials to support the learners with disabilities in their schools.

Further, teachers were asked to describe how their level of knowledge in the usage of specially adapted teaching materials affected their accommodation of learners with disabilities, the teachers’ responded as follows.

“ I have to be very careful in selecting any teaching aids because they must fit the needs of my learner. Yet, I lack knowledge in the use of quite a good number”, said T3 from a private school.’

These findings could imply that in many regular schools, LSN faced difficulties since adapted material aids for learning by learners with disabilities were not available for use. This could also mean that in many schools, the CBC practical learning through the use of adapted instructional materials was hampered. These findings were not in conjunction with findings by Mwajabu, Possi, and Milinga, (2017) which revealed that most schools in Tanzania had no material resources to support individualized education for LSNs. However, the findings were similar to the findings by Odero (2016) which showed that most schools in the Nyanza region in Kenya had inadequate material resources for learning.

4.5.2 Knowledge and use of specialized adaptive instructional resources

This section looked at the knowledge of specialized teaching materials in regular schools to fit the needs of the LSN. This has been presented in Table 19.

Table 19:

Adaptation of Teaching Material by Teachers

				Valid	Cumulative
		Frequency	Percent	Percent	Percent
Valid	Undecided	9	20.5	20.5	20.5
	Never	11	25.0	25.0	45.5
	Sometimes	8	18.2	18.2	63.6
	Occasionally	13	29.5	29.5	93.2
	Always	3	6.8	6.8	100.0
Total		44	100.0	100.0	

The result in Table 19 indicates that the majority of teachers 13(29.5%) occasionally adapted teaching materials to learners with disabilities. This is followed by teachers who never 11(25%). These findings could imply that a good number of teachers still lack the knowledge of the specialized adapted instructional materials and do not use them in teaching learners with disabilities. This information was echoed by the data from the observation check-list. It observed some pockets of the use of individualized educational plans in teaching in some schools. This was observed in some schools where shadow teachers were spotted helping individual learners with disabilities as the lesson progressed.

Further, data from an open-ended questionnaire with the teachers revealed that teachers who knew special needs education found their knowledge very useful in adapting instructional material resources. For instance, T1 from a private school said:

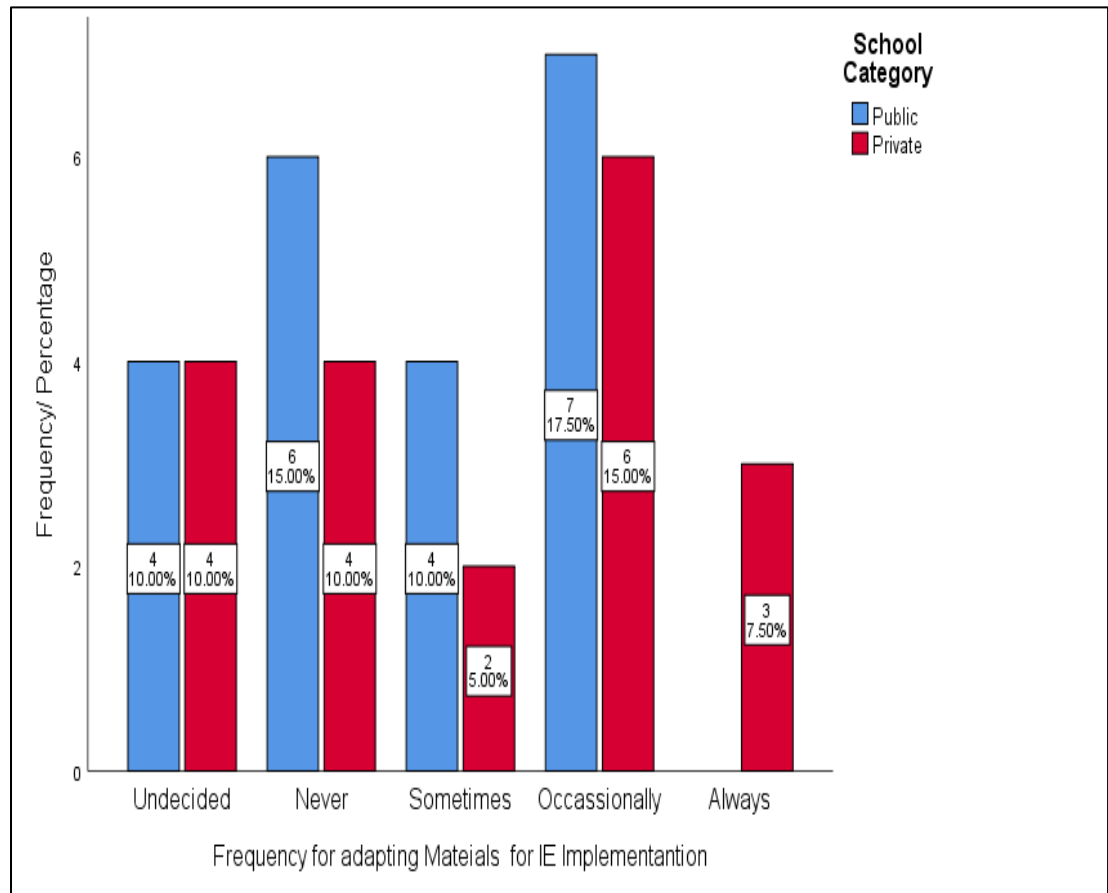
'It helps me in teaching children with special needs and the regular ones'

These findings confirm the findings by Makewa and Mutie (2018) which indicated that the use of assistive technology enabled teachers to develop effective teaching-learning resources in Makueni County Kenya. However, the findings contradict the findings by Adewumi and Mosito (2019) which disclosed that most teachers were incompetent to modify the teaching strategies for LSN in primary schools in South Africa. The findings were also not in tandem with findings by Hoadley (2012) which indicated that oral discourse still dominated teaching CBE in South African schools and the material resources were inadequate in schools. Similarly, the findings were parallel to findings by Kabuta (2014) which indicated that teaching-learning materials were inadequate in Tanzanian schools and there were limited learning schemes. Additionally, the findings were not in line with the findings by Mutagi (2018) which revealed that the majority of the schools lacked material resources, and funding needed to be increased to acquire the same in Kenya. Finally, the findings were not in conjunction with the findings by Mwajabu, Possi, and Milinga, (2017). Which revealed that material resources were inadequate in schools. However, the findings were in contradiction with the findings by Mwajabu et al., (2017) which indicated that teachers in Tanzania lacked the knowledge to use Individualised Education Programme (IEP) for LSN. These findings could imply that to some extent, in some schools there were trained teachers in SNE who were able to adapt material aids for the use by learners with disabilities.

When knowledge of the use of the adapted specialized material resource was analysed across the school categories, the results were as shown in Figure 7.

Figure 7:

Instructional Material Adaptation and Usage According to School Category



From Figure 7, it is observed that lower than a quarter 7(17.5%) of teachers in public compared to a low number six(15%) of teachers in private schools reported that they occasionally adapted materials for IE implementation. Interestingly, no teacher in the public school reported that they always adapted the materials, as was the case with 3(7.5%) of the teachers in private schools. These findings implied that the majority of teachers could be incompetent in the adaptation of the teaching materials and hence low

accommodation of learners with disabilities in learning. These findings could also imply that the teachers did not know the adaptation and use of specialized instructional materials. Subsequently, learners with disabilities faced difficulties as well in the usage of the material resources during their learning. Therefore, regular schools both public and private could have limited adapted instructional material resources for supporting learning among learners with disabilities. The results could also imply that the majority of teachers both in public and private had inadequate skills for the adaptation of material resources for learners with disabilities and as a result, the learners lagged in learning compared to their typically developing peers.

These findings were in conjunction with findings by Tabot & Too (2017) who noted that most teachers in Kenya had inadequate skills in the use of Individualized Education Plans (IEPs), an adaptation of learning resources, and the use of supplementary activities. However, These findings were not in line with findings by Wanjiku (2010) which revealed that instructional methods used by most teachers of deaf-blind in Kenya were Kenyan sign language, task analysis, and Tadoma. The researcher also maintained that Instructional methods used by teachers of the autistic blind were Braille, pre-Braille activities, and oral methods. Further, instructional methods used by the majority of teachers of cerebral palsy and intellectual disability were task analysis, activities of daily living, and real objects.

When teachers were asked whether they had attended any workshop where they were trained on the instructional material adaptation for the IE implementation, teachers' responses were as shown in Figure 8.

Figure 8:

Attendance of workshop on the Adaptation of Learning Materials

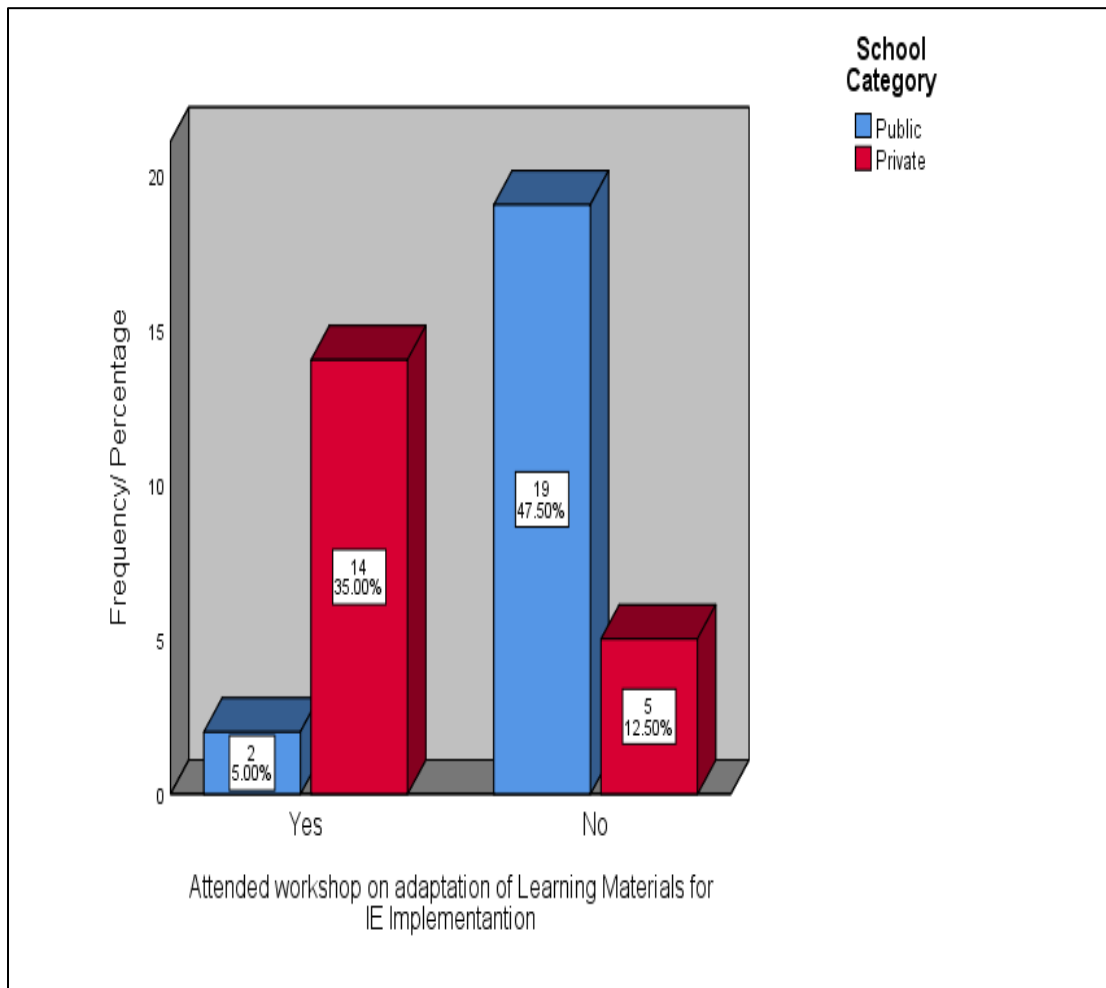


Figure 8 above, shows that the minority 2(5%) of the teachers who had attended seminars and workshops belonged to public schools, while the majority 14(35%) belonged to private schools. These findings contradict the findings from the data from the open-ended questionnaires as indicated below:

T1 from a private school said:

'I have never been given a chance.'

A T2 from a private school had this to say:

‘I never handled pupils with special needs.’

However, T3 from another private school said:

‘There has not been any to attend.’

These findings could imply that the number of teachers attending the seminars/workshops could be limited per school. It could also imply that the majority of teachers both in public and private schools have not been attending the retooling courses through seminars/workshops and are incompetent in supporting learners with disabilities. These findings could also imply that the Ministry of Education has not organized workshops specifically for teachers to learn about material alteration and adaptation for learners with disabilities as they support the CBC class. These findings were inconsistent with the findings by Owino et al., (2019) which revealed that most of the teachers in public primary schools with special units in Awendo in Migori in Kenya attended the SNE training through workshops and seminars.

Further, the teachers who attended the workshops were asked about the relevance of their training to classroom management.

‘It has equipped me with more knowledge and knowledge sharing amongst teachers’’, T3 from a public school.

“Has helped in knowing materials used for teaching learners with disabilities”, T2 from private school.

‘If I come across learners with disabilities in my class, I can assist them’, T1 from a private school.

It has helped in building concentration as the learners with disabilities enjoy learning.’ it has also helped me to know how to handle the learners, T1 from a public school. It is relevant because it assists in the understanding of learners

with special needs”, T2 from a private school. The learners can integrate well with others and also maintain good social skills’, T3 from a private school. Through creativity and imagination, learners with a disability can be incorporated in CBC and learn without a problem’, a T3 from a private school”.

These findings showed that training is key and it equips the teachers with basic knowledge and skills that help them in supporting learners with disabilities. The findings also could imply that there is a need for more seminars/workshops for the mass training of teachers that would work with learners with disabilities.

4.5.3 Challenges faced in the adaptation and use of instructional material resources

Headteachers were asked about the challenges their schools face during the adaptation and use of instructional material resources, and gave the following responses:

From the public schools: A head teacher maintained:

‘The inadequacy of the instructional material resources makes it even more difficult to think of adaptation.’

A head teacher from a public school argued :

‘We are not trained on the adaptation of materials for learners with disabilities in teacher training colleges.’

Still, a head teacher from a private school remarked:

‘The workloads, marking, and preparing lessons are too involving making it difficult to even adapt the instructional materials.’

From the private schools: a head teacher argued:

'Yes, making the instructional materials for these learners is impossible' because here we are expected to deliver, and so you rush with the syllabus so that you get some time, in the end, to revise before the exams.'

Still, a head teacher from a public school remarked:

'CBC requires the cooperation of the parents, and some parents are less cooperative making it very challenging.'

Still another head teacher from a private school maintained:

'Sourcing for funding' over the same is quite challenging.

The data from the interview with the educational officer (EO1) also had similar findings to those from the teachers' questionnaire, and the headteachers' interviews. It indicated that many schools had limited material resources for adaptation. Yet, EO2 stated that they lacked expertise and sought help from other institutions like KISE, and in terms of materials, they sought support from other players like the woman representative of Nairobi County. For instance,

EO2 remarked:

"We have a challenge acquiring some of the materials required for inclusion. Something like Braille, computers, and even diagrams are very expensive compared to the normal materials used by learners without disabilities."

These findings could imply that there were lots of challenges in the adaptation and use of the instructional materials. This could mean therefore that the learners with disabilities lagged in the use of adapted instructional resources in regular classes. These findings could also imply that schools had limited resources to support the adaptation of instructional material resources for learners with disabilities.

Furthermore, the teachers and the head teachers were asked to state how they mitigated the challenges which accrued from the lack of knowledge of the adaptation of materials/aids.

Here were some of their responses:

A T2 from a public school said:

'I had one learner who was very hyperactive, but I trained in special needs at KISE', and could easily support them. Though it was a total challenge to other teachers in my class and they kept on complaining about the boy.'

A head teacher from a public school said:

'We have requested a resource person (technician) at the Sub-County Educational Office to teach us how to adapt and use the materials.'

Still, a head teacher from a public school maintained:

'We are talking with the sub-county director to add more teachers.'

Yet, a head teacher from a private school said:

'We normally send our teachers to seminars for training'

From the private schools, a head teacher maintained:

'We are still looking for an expert to guide us on the usage of the materials.'

However, a head teacher from a public school disclosed,

"Our teachers avail time to make them."

These findings could mean that there are many challenges faced to include learners with disabilities, but most teachers remain positive about inclusion.

At this point, the third hypothesis was tested. The null hypothesis stated 'H₀: There is no association between material resources adaptation and competency-based curriculum in primary schools. The Chi-square test was done at a significant level of P=<.05. The results were as shown in Table 20.

Table 20:

Illustration of the Association between Material Methods Adaptation and Competency-Based Curriculum

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.857 ^a	8	.044
Likelihood Ratio	17.406	8	.026
Linear-by-Linear Association	5.603	1	.018
N of Valid Cases	44		

a. 13 cells (86.7%) have an expected count of less than 5. The minimum expected count is .68.

Table 20 shows the results of the chi-square test. It shows that there is a significant association between instructional material resources adaptation and CBC implementation for early years learners in primary schools ($\chi^2 = 15.85$, DF = eight, $P < \text{zero}$). This denotes that the extent to which teachers are trained on how to adapt and use instructional material resources will influence the implementation of CBC. This implies that the implementation of CBC in regular primary schools for EYL with disabilities is influenced by teachers' ability to adapt materials for CBC learning. The null hypothesis, which stated 'H0: There is no association between material resources adaptation and competency-based curriculum implementation for EYL in primary schools was therefore rejected, and instead the alternative hypothesis was adopted.

These findings meant that material resources adaptation and competency-based curriculum implementation co-varied. Hence the more materials were adopted, there was the better implementation of CBC for LSN with disabilities in a regular class. Most materials that were in schools were those used in a standard classroom and were not adapted for use by

learners with disabilities. Instructional materials appropriate for instruction to LSN were missing in schools, teachers also lacked the knowledge to adapt the existing materials to support the learners with disabilities in their schools. In many regular schools, LSN faced difficulties since adapted material aids for learning by learners with disabilities were not available for use. Similarly, in many schools, the CBC practical learning through the use of adapted instructional materials was hampered. The number of teachers attending the seminars/workshops could be limited per school. The majority of teachers both in public and private schools have not been attending the retooling courses through seminars/workshops and are incompetent in supporting learners with disabilities. Workshops specifically for teachers to learn about material alteration and adaptation for learners with disabilities have not been organized. These findings showed that training in instructional material adaptation is key and it equips teachers with basic knowledge and skills that help them in supporting learners with disabilities. There are lots of challenges in the adaptation and use of instructional materials. The learners with disabilities lagged in the use of adapted instructional resources in regular classes. Schools had limited resources to support the adaptation of instructional material resources for learners with disabilities.

These findings are in agreement with the Complexity theory and Education by Davis and Sumara (2006) which postulates that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced through accommodation of the various uncertainties and ambiguity in educational programs. The theory further holds that complex systems have many components, including Self-organization, emergence, nested, interactions, and feedback loops, the individual parts which can be examined and

the whole represents the sum of the parts by operating linearly. These findings are further in conjunction with findings by Mwajabu, Possi, and Milinga, (2017) which revealed that most schools in Tanzania had no material resources to support individualized education for LSNs. Similarly, the findings are similar to findings by Odero (2016) which showed that most schools in the Nyanza region in Kenya had inadequate material resources for learning. These findings also confirm the findings by Makewa and Mutie (2018) which indicated that the use of assistive technology enabled teachers to develop effective teaching-learning resources in Makueni County Kenya. Additionally, the findings are in line with the findings by Adewumi and Mosito (2019) which disclosed that most teachers were incompetent to modify the teaching strategies for LSN in primary schools in South Africa. The findings are also in tandem with findings by Hoadley (2012) which indicated that oral discourse still dominated teaching CBE in South African schools and the material resources were inadequate in schools. Similarly, the findings conform to findings by Kabuta (2014) which indicated that teaching-learning materials were inadequate in Tanzanian schools and there were limited learning schemes. Still, the findings are in line with findings by Mutagi (2018) which revealed that the majority of the schools lacked material resources, and funding needed to be increased to acquire the same in Kenya. The findings are also in conjunction with the findings by Mwajabu, Possi, and Milinga, (2017). Which revealed that material resources were inadequate in schools in Tanzania. These findings are further in conjunction with findings by Tabot & Too (2017) who noted that most teachers in Kenya had inadequate skills in the use of Individualized Education Plans (IEPs), an adaptation of learning resources, and the use of supplementary activities. However, These findings were not in line with findings by Wanjiku (2010) which revealed

that instructional methods used by most teachers of deaf-blind in Kenya were Kenyan sign language, task analysis, and Tadoma. The researcher also maintained that Instructional methods used by teachers of the autistic blind were Braille, pre-Braille activities, and oral methods. Further, instructional methods used by the majority of teachers of cerebral palsy and intellectual disability were task analysis, activities of daily living, and real objects. The findings are also inconsistent with the findings by Owino et al., (2019) which revealed that most of the teachers in public primary schools with special units in Awendo in Migori in Kenya attended the SNE training through workshops and seminars.

4.6 Assessment Strategies Adaptation and Implementation of Competency-Based Curriculum Implementation

This was the fourth objective that the researcher explored. The variables measured include the use of standard grade level assessment for learners with disabilities, teachers' perceptions on the importance of alternate assessment strategies for learners with disabilities, and alternate assessments used in schools.

4.6.1 Use of standard grade level assessment for learners with disabilities

In this particular section, the researcher presents the report on the use of standard assessment for learners with disabilities in a regular class. The results are shown in Table 21.

Table 21:

Usage of Standard grade level Assessment Across School Categories

Alternate assessment and School Categories Cross tabulation

		School Category			
			Public	Private	Total
Alternate assessment	Yes	Frequency	4	9	13
		% of Total	10.0%	22.5%	32.5%
	No	Frequency	15	8	23
		% of Total	37.5%	20.0%	57.5%
	No Response	Frequency	2	2	4
		% of Total	5.0%	5.0%	10.0%
Total	Frequency	21	19	40	
	% of Total	52.5%	47.5%	100.0%	

The results of Table 21 show that the majority of the teachers in public schools 15(37.5%) reported that they did not use alternative assessments based on grade level for a learner with a disability while slightly below a quarter of the teachers in private schools, 9(22.5%) reported that they used alternative assessments occasionally. These findings could mean that in regular classrooms, most teachers still did not use the alternate grade-level assessment for learners with disabilities. These findings support the findings by Tarmo (2014) who disclosed that teachers in Tanzania still had limited knowledge of competency skills and used traditional assessment methods of paper and pencil. However, these findings were inconsistent with the information given by Volt, Sims, and Nelson (2010) in their book “Supporting the Classroom with Materials” which holds that when using standard common supplies such as textbooks in a standard classroom, their alternative formats like Braille texts, large-print text, and CDs with audio output should be provided for LSN. These results blended well with the reasons why teachers feel they could not adapt

the assessment strategies as disclosed in the open-ended questionnaire. From their responses, three main themes emerged including lack of knowledge, lack of time, and lack of resources:

'It is because I don't know how to go about it', Said a teacher from a private school.

'Lack of different technologies', Said another T1 from a public school.

'We do not have crucial materials needed for teaching', Indicated T2 from a public school.

'Time does not allow', T1 from a private school argued.

These findings could indicate that the teachers lack the expertise to evaluate the learners with disabilities in regular schools. Therefore, it could mean that the learners are assessed using the standard grade level assessment without adaptation resulting in the recording of below expectations in the assessment rubric among the learners with disabilities. These findings are in tandem with the findings by Andiemma (2021) which revealed that teachers in public primary schools in Kapsaret in Kenya lack the knowledge to evaluate the learners with disabilities in their schools.

Further, the teachers who used the grade-level assessment were asked to state the frequency at which they used the alternate grade-level assessment, and their responses were as indicated in Table 22.

Table 22:

The Frequency of the Use of Alternate Grade-Level Assessment

Frequency of its occurrence and school category across tabulation

		School Category			
			Public	Private	Total
Frequency of its occurrence	not sure	Frequency	2	2	4
		% of Total	10.5%	10.5%	21.1%
	Sometimes	Frequency	4	3	7
		% of Total	21.1%	15.8%	36.8%
	Occasionally	Frequency	2	5	7
		% of Total	10.5%	26.3%	36.8%
Always	Frequency	1	0	1	
	% of Total	5.3%	0.0%	5.3%	
Total		Frequency	9	10	19
		% of Total	47.4%	52.6%	100.0%

Table 22 indicates that below a quarter of the teachers in public schools, 4(21.1%) reported that they occasionally used the alternate assessment based on grade level for learners with disabilities while a lower number 3(15.8%) of the teachers in private schools reported that they used alternate assessments sometimes. However, the total number of teachers both in public schools and private schools who sometimes and occasionally use the alternative assessment was about a third 7(36.8%). Further, 2(10.5%) of both public and private schools respectively were not sure of the grade-level assessment strategy. These findings indicated that the use of alternate grade-level assessments was a strategy most teachers were unskilled in and it was not given priority in both public or private schools and classes.

The extent to which the regular class teachers allowed their learners with disabilities to use the various assessment responses as alternative means was also sought, and the results are presented in Table 23.

Table 23:

Frequency of the Use of Assessment Responses

Assessment Responses		Public		Private		Total	
		F	%	F	%	F	%
Marking	Not sure	0	0	1	2.9	1	2.9
Answers in a Book	Not at all	9	26.5	6	17.6	15	44.1
	Occasionally	3	8.8	3	8.8	6	17.6
	Always	6	17.6	6	17.6	12	35.3
Using Reference Aids	Not sure	0	0	1	3	1	3
	Not at all	4	12.1	6	18.2	10	30.3
	Occasionally	7	21.2	4	12.1	11	33.3
	Always	6	18.2	5	15.2	11	33.3
Pointing Answers	Not sure	0	0	2	5.9	2	5.9
	Not at all	6	17.6	6	17.6	12	35.3
	Occasionally	7	20.6	5	14.7	12	35.3
	Always	5	14.7	3	8.8	8	23.5
Study Carrel	Not sure	3	9.7	1	3.2	4	12.9
	Not at all	7	22.6	6	19.4	13	41.9
	Occasionally	5	16.1	5	16.1	10	32.3
	Always	0	0	4	12.9	4	12.9
Special Lighting	Not sure	4	11				
	Not at all						
	Occasionally						
	Always						

From the public schools, lower than a quarter 9(26.5%) of teachers did not mark answers in a book, study carrel 7(22.6%) and 7(21.2%) could use reference aids occasionally. In the private schools, the lower number 6(19.4%) did not use study carrel, pointing answers, and marking answers in a book 6(17.6%) respectively. These findings could mean that most teachers were untrained and incompetent in the usage of the alternate assessment strategies by learners with disabilities. These findings suggest that the majority of the teachers never used the various assessment presentation and participation methods. It could also imply that the majority of the many teachers still lacked training in SNE to support the

learners with disabilities in their regular schools. The findings could also imply that the LSNs failed to achieve equitable and quality education received by their counterparts without disabilities since the assessment strategies used were not appropriate for their individual educational needs. These findings are in tandem with the data from the observation check-list, which disclosed that most teachers did not use alternative assessment procedures but instead used the standard assessment meant for a standard class. Similarly, these findings are also in line with findings by the Australian Institute for Teaching and School Leadership (N.D), which revealed in teaching children with disabilities, at least assessment accommodation was conducted, but faced multiple challenges.

The teachers were further asked about the extent to which the assessment responses affected their alternative assessment strategies in class, they gave the following responses as indicated in Table 24.

Table 24:

Effect of Assessment Responses

Effect of the following in assessment		Public		Private		Total	
		F	%	F	%	F	%
Study Carrel	Not sure	3	9.7	1	3.2	4	12.9
	Never	7	22.6	6	19.4	13	41.9
	Sometimes	5	16.1	5	16.1	10	32.3
	Always	0	0	4	12.9	4	12.9
Special Lighting	Not sure	4	11.8	1	2.9	5	14.7
	Never	11	32.4	4	11.8	15	44.1
	Sometimes	2	5.9	9	26.5	11	32.4
	Always	1	2.9	2	5.9	3	8.8
Separate room	Not sure	4	12.1	1	3	5	15.2
	Never	11	33.3	7	21.2	18	54.5
	Sometimes	2	6.1	8	24.2	10	30.3
	Always	0	0	0	0	0	0
Timing and Scheduling of Assessment	Not sure	2	5.9	1	2.9	3	8.8
	Never	7	20.6	4	11.8	11	32.4
	Sometimes	7	20.6	2	5.9	9	26.5
	Always	2	5.9	9	26.5	11	32.4

The results in table 24 above indicate that in private schools, about 6(19.4 %), of teachers had never considered special lighting 4(11.8), separate room 7(21.2%), and timing and scheduling of assessment 4(11.8%). In public schools, those who had never used a study carrel were 7(22.6%), special lighting 11(32.4%), separate room 11(33.3%), and timing and scheduling of assessment 7(20.6%). From these findings, it was vivid that public primary schools had many responses not sure and never. These findings could imply that most teachers had inadequate skills in the adaptation and usage of alternative assessment

responses for learners with disabilities in different grades and remain unsupported through assessment.

4.6.2 Teachers' Perceptions of alternate assessment strategies

In this part, teachers were interrogated on their perceptions of the importance of alternate assessment strategies for learners with disabilities.

When the teachers were asked how important the alternate grade-level assessment in their classes was, two themes emerged including accommodation of learners and learning achievements.

A T2 from a private school disclosed that:

'All learners get a good time enjoying education. In Another private school, T3 made it clear that; It encourages learners to explore their abilities in class.'

Still, a T1 from a private school said:

'Helped learners to finish their task.'

A T2 from a public school also indicated that:

'It ensures all learners are accommodated.'

Still, a T3 from a public school noted that:

'It helps monitor learners' achievements.'

Similarly, a T1 from a public school disclosed that:

'Learners feel appreciated and develop self-esteem.'

However, a T3 from a private school remarked that:

'It is not important.'

From these findings, it could be deduced that, many teachers already have a moderately positive attitude toward the use of alternative grade-level assessments. However, they are

unskilled to adapt the assessment strategies. Therefore, there needs a retooling workshop on the adaptation and use of assessment accommodation for LSN in regular schools. This information was in line with the information gathered by further seeking the teachers' opinions on the extent to which grade-level assessment influenced the implementation of CBC. The following were some of the responses given:

'Creates curiosity in learning and helps learners to grasp the content learned', T3 from a public school. Improves creativity and imagination in learning', T1 from a private school. It does not affect '. 'We grade them in the same class as other learners, T2 from a private school'; T3 from a public school'.

'It doesn't favour them with all the shortcomings they have', T3 from a public school.

'It has a positive influence since the teacher works towards the learners' achievement', Said a T1 from a public school.

'It has evoked creativity of the highest order among learners', said T1 from a private school.

'It has helped the learners to explore their different hidden talents', a T2 from a public school indicated.

'Regular grade-level assessment does not include special needs learners' issue', Indicated a T1 from a private school.

'Some learners are not able to perform due to their challenges', remarked a T2 from a private school.

'The special needs learners cannot be assessed using the same method as regular ones', said a T3 from a public school.

Concerning the adaptation of resources and their relevance to the assessment of the LSN, the interview was conducted with the Educational Officers. Data from the interview with the EO1 had the following:

'Learners enjoy the use and manipulation of the materials', EO1.

"Our learners can integrate well with others so well. Some could not learn using the same syllabus, which is there for normal learners, and with CBC; they enjoy learning and are very creative", EO2.

These findings implied that grade-level assessment is influenced by the adaptation of assessment strategies for learners with disabilities. It could as well imply that both the educational officer and the head teachers were very supportive of the LSN in their schools. Nonetheless, the head teachers were asked whether there were some challenges that their schools faced when administering an assessment to learners with disabilities which could result in negative perception. Here were some of the responses from the head teachers:

From the public schools, a head teacher disclosed that:

'We lack adequate learning materials which could be used by these categories of learners.'

Still, another head teacher remarked that:

'No enough materials, also methods of assessment are not familiar and durable.'

A head teacher also maintained that:

'Not all teachers are trained in SNE and so many teachers cannot handle the learners.'

From the private schools, a head teacher maintained that:

'Some of the learners are behind and do not think very fast so to accommodate the two is very hard.'

Another head teacher from a private school also stated:

'Taking a lot of time to learn a simple concept while we have other learners to attend to.'

Still, another head teacher from a private school said:

'Teachers are not SNE compliant and there is also a high expectation from the management as well as a parent.'

These findings could imply that in both public and private primary schools, the assessment criteria still face many hiccups and the assessment strategies employed could not accommodate the learners with disabilities due to a lack of knowledge of the assessment adaptation strategies.

4.6.3 Alternate assessments used in Schools.

This subsection's focus was to determine the extent to which teachers use the various alternate assessment presentations.

Table 25:

The Extent of Use of Assessment Presentation

Assessment Presentations		Public		Private		Total	
		F	%	F	%	F	%
Repeating	Undecided	5	12.5	5	12.5	10	25
Direction	Never	5	12.5	3	7.5	8	20
	Sometimes	6	15	2	5	8	20
	Always	5	12.5	9	22.5	14	35
Reading Aloud	Undecided	3	7.5	5	12.5	8	20
	Never	4	10	3	7.5	7	17.5
	Sometimes	4	10	5	12.5	9	22.5
	Always	10	25	6	15	16	40
Larger Answer sheets	Undecided	4	10	8	20	12	30
	Never	12	30	4	10	16	40
	Sometimes	5	12.5	1	2.5	6	15
	Always	0	0	6	15	6	15
Verbal/ oral answers	Undecided	3	7.5	5	12.5	8	20
	Never	5	12.5	3	7.5	8	20
	Sometimes	5	12.5	4	10	9	22.5
	Always	8	20	7	17.5	15	47.5

Table 25 above indicates that below a third (30%) of the teachers in public schools had never used large answer sheets, repeating direction/ verbal/ oral answers 5(12.5%). In the private schools, 4(10%) of teachers had never used the large answer sheet followed by repeating directions, reading aloud, and verbal/oral answers 3(7.5%) respectively.

The assessment procedure which was popular among both private schools and public schools was reading aloud 10(25%), followed by verbal/oral answers 8(20%). On the other hand, private schools had popular strategies such as repeating directions 9(22.5%), and

verbal/oral answers 7(17.5%). These findings could imply that learners with disabilities faced myriads of challenges in regular schools since most teachers lacked the expertise to adapt and use alternative assessment strategies for learners with disabilities. Similar results were achieved by the data from the observation check-list which confirmed that the teachers had no adapted formative assessment strategies in their classes. In our observation, teachers were not spotted assessing learners orally or by use of other assessment strategies especially those who could not write their answers. These findings were in line with the findings by Perie (2007) which maintained that assessment alteration required skilled teachers who would use the laid down procedures to support learners with disabilities. Similarly, the findings were in tandem with the finding by Andiema ()2021 which revealed that the majority of special needs teachers were not adequately prepared to undertake evaluation and assessment of children with special needs in line with the new curriculum. Data from the open-ended questionnaire, which required teachers to indicate how their selection of assessment presentations influenced the learning achievements among learners with disabilities in the class, had the main theme emerged that modification of assessments was beneficial for the learners and teachers who used them. This was shown in the following responses.

A T3 from a private school remarked that:

'It caters to all learners in the classroom.'

A T3 from a public school also maintained that:

'Helps the learner understand more.'

Another T1 said that:

'It allows them to express themselves in class and they gain confidence and raise their self-esteem.'

Yet another T3 from a public school also said:

'It helps them to fit better in regular grade level.'

A T1 from a private school indicated that:

'Learners learn at their own pace without nobody unconsidered.'

'A T1 from a private school also remarked that.'

'They can answer questions on time.'

'A T3 from a given private school also stated that.:

'They help learners to cope in the learning process and arouse interest in learning.'

However, a T2 from a public school disclosed that:

'Most learners with disabilities are not serious therefore the methods above are not applicable.'

These findings could imply that limited alternative assessments were administered for learners with disabilities in regular schools. The low usage of the various assessment strategies, therefore, resulted in the disadvantage of the LSN in learning in the regular class. These findings did not support the findings by Perie (2007) which maintained that assessment alteration required skilled teachers to use the laid down procedures to support learners with disabilities. Nonetheless, the findings are in tandem with the findings by Andiema ()2021 which revealed that the majority of special needs teachers in Kenya were not adequately prepared to undertake evaluation and assessment of children with special needs in line with the new curriculum.

When the teachers were asked to give their opinions on how their selection and use of assessment presentations affected learners with disabilities, the teachers responded as follows:

“Doesn’t affect”, T2 from private school. ‘Encourages the learner to be independent and ready to read’,

T1 from a private school.

‘Has improved my self-esteem toward learners with disabilities’,

T1 from public school. Helps them to adjust with assessment done’

a T1 from a public school. ‘It reduces their level of understanding and interaction with other members of the class’, T2 from a public school.

‘Motivates learners to learn’, T2 from a private school.

‘The learners can interact well with others and involve in-class activities’, said a T3 from a private school.

‘These types of assessment are not available hence it will limit the learners’ achievement’, a T3 from a private school remarked.

‘The learners feel appreciated and included while doing their assessment’, argued a T3 from a public school.

“Learners with disabilities are not able to cope with others and do not finish the assessment in time”, T3 from public school.

A T2 from a private school still had the following to say: *‘They help achieve positive results.’*

These results could indicate that the teachers who were knowledgeable in SNE have embraced the selection of the alternative assessment choice according to the individual educational needs of their learners to support them receive equitable education together with the rest in a regular/standard classroom. However, for a teacher who is not trained, the learners grapple with various challenges because of teachers' incompetency in the choice and use of alternative assessment strategies for the LSN in regular school.

The head teachers were also asked whether they have been forced to make some critical decisions as far as the use of assessment and accommodation of learners with disabilities was concerned, and they responded as follows.

A head teacher from a private school disclosed that:

'I have advised many parents to take the learner to a special school since we don't admit learners with disabilities here.'

Another head teacher also remarked that:

'Extension of time for the activities.'

And still, another head teacher said that:

'Placement /relocation.'

From private schools: A head teacher disclosed that:

'We are not admitting special learners in this school.'

Another head teacher remarked that:

'These learners are a burden.'

Still, a head teacher maintained that:

'We had a special child who could not attempt the interview because the child was to be assessed by a specialist.'

Still, a head teacher maintained that:

'I have referred some learners to a special school for assessment and placement.'

These findings imply that no special assessment strategies were used in both public and private schools for learners with disabilities due to a lack of expertise. It could also imply that the head teachers, as well as the teachers, had inadequate knowledge of special needs education. The findings could imply that in many schools, there are no specially trained teachers. This has resulted in negative attitudes towards these categories of learners where teachers feel that learners with disabilities should go to special schools. As a result, teachers do not have the knowledge to select, adapt and use alternative assessment strategies to support learners with disabilities in regular school. These findings were reflected in the data gathered through an interview with the Educational officers which had the following:

Inclusive education in regular schools is accompanied by some challenges including some specialities, which need technical support, and may not be within the school set up for example special assessment instruments, facilities that are not disability compliant, special services like medical attention, physiotherapy. In such cases individual schools may refer them to Kenya Institute for Special Education (KISE), Schools also advise the parents to maintain contact with their medical providers, explained EO2.

However, EO1 stated that:

Some teachers have problems admitting learners with disabilities in their school and so I have already directed that admission first and complaints

later, More importantly, we have asked for more teachers and I hope the response would be good.

These findings are in conjunction with the findings by Owino et al., (2019) which indicated that in most schools with special units in Awendo in Migori County, Kenya, their head teachers were not trained in special needs education and had challenges implementing the IE program.

At this point, the fourth hypothesis was tested using Chi-square at a significant point of $P < .005$. The null hypothesis, which was tested, stated, H_0 : There is no association between assessment strategies adaptation and competency-based curriculum in primary schools. The results are shown in Table 26.

Table 26:

Association between Assessment Strategies and Competency-Based Curriculum Implementation

Association between:		Chi-square Tests		
Level of CBC	Assessment strategies Adaptation	Value	df	Asymptotic Significance (2-sided)
	Repeating direction	13.05	6	.042
	Reading Aloud	25.87	6	.000
	Larger answer sheets	15.23	6	.019
	Verbal/ Oral Answers	29.59	6	.000

Table 26 indicates that the researcher tested each item independently and the highest calculated Chi-square value was 13.05 at 6 degrees of freedom with a significance value of $p=0.042$ which is <0.05 . The calculated p-value was less than the critical value of 0.05. This shows that there was a significant relationship between teachers' assessment

strategies adaptation and their ability to implement the CBC in primary schools for EYL with disabilities. This means that the extent to which teachers are trained on how to adapt assessment strategies will influence CBC implementation. The null hypothesis which stated, H₀: There is no significant association between assessment strategies adaptation and the implementation of CBC for EYL with disabilities in primary schools was therefore rejected and the alternative hypothesis was adopted.

These findings indicate therefore that assessment strategies and competency based-curriculum implementation in primary schools varied together. This means that the more the assessment strategies were adapted for the LSN in regular schools, the more the implementation of a competency-based curriculum for EYL with disabilities in regular primary schools. In regular classrooms, most teachers still did not use the alternate grade level assessment for learners with disabilities. The teachers lack the expertise to evaluate the learners with disabilities in regular schools. Therefore, it could mean that the learners are assessed using the standard grade level assessment without adaptation resulting in the recording of below expectations in the assessment rubric among the learners with disabilities. Most teachers were untrained and incompetent in the usage of the alternate assessment strategies by learners with disabilities. The majority of the teachers never used the various assessment presentation and participation methods. The majority of the many teachers still lacked training in SNE to support the learners with disabilities in their regular schools. The LSNs failed to achieve equitable and quality education received by their counterparts without disabilities since the assessment strategies used were not appropriate for their individual educational needs. Most teachers did not use alternative assessment procedures but instead used the standard assessment meant for a standard class. Many

teachers had inadequate skills in the adaptation and usage of alternative assessment responses for learners with disabilities in different grades and remain unsupported through assessment. Many teachers already have a moderately positive attitude toward the use of alternative grade-level assessments. However, they are unskilled to adapt the assessment strategies. Therefore, there needs a retooling workshop on the adaptation and use of assessment accommodation for LSN in regular schools. These findings implied that in both the public and private primary schools, the assessment criteria still face many barriers and the assessment strategies employed could not accommodate the learners with disabilities due to a lack of knowledge of the assessment adaptation strategies. Learners with disabilities faced myriads of challenges in regular schools since most teachers lacked the expertise to adapt and use alternative assessment strategies for learners with disabilities. Limited alternative assessments were administered for learners with disabilities in regular schools. The low usage of the various assessment strategies, therefore, resulted in the disadvantage of the LSN in learning in the regular class.

These findings are in tandem with the Complexity theory and Education by Davis and Sumara (2006). This theory holds that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced through the accommodation of the various uncertainties and ambiguity in educational programs. The theory maintains that Complex systems have many components, including Self-organization, emergence, nested, interactions, and feedback loops which can be examined and the whole represents the sum of the parts. Similarly, these findings are also in line with findings by the Australian Institute for Teaching and School Leadership (N.D), which revealed in teaching children with disabilities, at least assessment accommodation was conducted, but faced

multiple challenges. These findings are also in line with the findings by Andiemba (2021) which revealed that teachers in public primary schools in Kapsaret in Kenya lack the knowledge to evaluate the learners with disabilities in their schools. These findings also support the findings by Tarmo (2014) who disclosed that teachers in Tanzania still had limited knowledge of competency skills and used traditional assessment methods of paper and pencil. Additionally, these findings were in line with the findings by Perie (2007) which maintained that assessment alteration required skilled teachers who would use the laid down procedures to support learners with disabilities. Similarly, the findings are in tandem with the finding by Andiemba (2021) which revealed that the majority of special needs teachers were not adequately prepared to undertake evaluation and assessment of children with special needs in line with the new curriculum. The findings are also in conjunction with the findings by Owino et al., (2019) which indicated that in most schools with special units in Awendo in Migori County, Kenya, their head teachers were not trained in special needs education and had challenges implementing the IE program. However, these findings were inconsistent with the information given by Volt, Sims, and Nelson (2010) in their book “Supporting the Classroom with Materials” which holds that when using standard common supplies such as textbooks in a standard classroom, their alternative formats like Braille texts, large-print text, and CDs with audio output should be provided for LSN.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the studies' summary, conclusions, and recommendations *vis-à-vis* the studies' objectives.

The following objectives guided the study:

- i. *To establish the association between teachers' training in SNE and their implementation of a competency-based curriculum for early years learners with disabilities in primary schools.*
- ii. *To determine the association between instructional methods adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.*
- iii. *To determine the association between instructional material resources adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.*
- iv. *To analyse the association between assessment strategies adaptation and implementation of a competency-based curriculum for early years learners with disabilities in primary schools.*

5.2 Summary of the Study Findings

The study purposed to establish inclusive instructional practices influencing competency-based curriculum for early years learners with disabilities in primary schools. The study had a sample of 48 teachers, 16 headteachers, and 2 educational officers drawn from 8

public and 8 private schools in Nairobi City County, Kenya. The summary was organized in line with each of the four objectives which guided the study.

The first objective was to establish the association between teachers' training in SNE and their CBC implementation. After looking at the levels of scores of teachers training in SNE and CBC implementation in primary schools, output disclosed that teachers with either high or low levels of training in SNE had no significant association with the level of CBC implementation in the early years level of education for learners with disabilities in a regular class. Consequently, the level of training in SNE did not influence the implementation of CBC for learners with disabilities. Most teachers had inadequate training in SNE and hence were incompetent in supporting learners with disabilities in their classes. Therefore, either teachers' training through workshop/seminar on SNE, teachers' diploma training in SNE, teachers' undergraduate training in SNE, or teachers' post-graduate training in SNE was not a predictor of their ability to implement CBC for EYL with disabilities in regular primary schools.

There were many learners with various categories of disabilities in the regular schools, and the learners were taught together with their typically developing peers in a common classroom. Teachers who were trained in SNE had trained only in one area of specialization and had difficulty supporting the learners with different categories of disabilities which were not their area of training together with the learners without disabilities in a common classroom. training in SNE was an added advantage for the teachers who were already trained in CBC. There was no special training in SNE for adaptation and implementation of CBC for early years learners with disabilities in regular primary schools.

The second objective was to determine the association between instructional methods adaptation and the levels of implementation of CBC for EYL with disabilities in primary schools. The scores of instructional method adaptation and CBC in primary schools were scrutinized. Outcomes revealed that teachers with a high mean score on instructional methods adaptation also had high mean scores on CBC implementation in the early years level of education for learners with disabilities, while teachers with a low mean score on instructional methods adaptation also had low adaptation and implementation of CBC for early years learners with disabilities in primary schools. Consequently, the use of adapted teaching methods positively influenced the implementation of CBC among learners with disabilities. The alternate instructional methods which are appropriate for supporting effective learning among LSNs in regular classes were underused. Many teachers were not trained in SNE and therefore were unaware of the appropriate instructional methods for facilitating learning among learners with disabilities. The use of the various systematic instructional methods was not employed by many teachers because their training was not in SNE and they were not knowledgeable about the specially adapted instructional methods. The assistive technology use was a great problem among the teachers especially those who had not trained in SNE in addition to a lack of knowledge in the implementation of CBC. Therefore, there was nothing like instructional methods for adaptation and implementation of CBC employed for the learners with disabilities in regular primary schools.

The third objective was to determine instructional material resources adaptation and the levels of CBC implementation in primary schools. The study compared the scores of material resources adaptation and CBC in primary schools. Results showed that high mean

scores on the use of instructional material resources adaptation also had high mean scores on CBC implementation in the early years level of education for learners with disabilities. Glaring inadequacy in the material resources for LSNs hampered the quality of education. The majority of teachers were trained in PTE and ECE and had limited expertise in the development and use of alternate material resources. The materials for the adaptation and implementation of CBC were scarce. The majority of teachers did not know the adaptation of the material resources for the instruction to learners with disabilities in the schools. Further, the teachers had little knowledge of the use of Adapted instructional material to support learners with disabilities in schools. Therefore, the use of adapted instructional material resources faced many challenges because the teachers themselves could not understand the process.

The fourth objective was to analyse the association between assessment strategies adaptation and the levels of CBC implementation in primary schools. The study analysed the scores of assessment strategies adaptation and CBC in primary schools. Findings showed that teachers with high mean scores on assessment strategies adaptation also had high mean scores on CBC implementation in the early years level of education for learners with disabilities. Alternate assessment strategies were underused in regular classes with LSN. Most teachers could not use alternate assessments since their training was not focused on SNE.

The use of standard grade-level assessments for learners with disabilities was rampant without modification. This made the learners lag in learning since they could not move at the same pace as their typically developing peers. teachers' had moderate positive perceptions towards the use of alternative assessment strategies for supporting learners

with disabilities. However, they had not been trained in SNE and found it challenging to employ the various assessment strategies for adaptation and implementation of CBC for early years learners with disabilities in primary schools.

5.3 Conclusions

Four main conclusions were drawn from the findings of the study. They include:

Firstly, based on the finding that there was a significant negative correlation between teachers' training in SNE and their CBC implementation in primary schools at $p > 0.05$ level of significance, the conclusion could be logically made that the teachers' training in SNE alone does not predict their abilities to implement CBC among early years learners with disabilities in regular schools. However, teacher training in SNE gives them an upper hand in supporting learners with disabilities once they are retooled in the curriculum implementation strategies. Hence teachers in regular schools are not trained in SNE for adaptation and implementation of CBC for early years learners with disabilities in primary schools.

Secondly, concerning the finding that there was a significant positive association between the levels of implementation of a competency-based curriculum for learners with disabilities and adaptation of instructional methods at $P < 0.05$, a logical conclusion could be made that adaptation of instructional methods for learners with disabilities in regular class improves successful CBC implementation among them. That is when instructional methods are adapted for early years learners with disabilities, they recorded higher achievement in learning in the regular class. Therefore regular schools still do not employ alternative instructional methods for adaptation and implementation of CBC for early years learners with disabilities.

Third, with the finding that there was a significant positive association between instructional material resources adaptation and CBC implementation in primary schools at $P < 0.05$, a conclusion could be made that adapting and use of instructional material resources improve CBC implementation in regular schools for EYL with disabilities. That is the use of various adapted material resources for instruction highly influences and supports early-year learners with disabilities to learn from CBC co-competencies. Hence regular schools still lack alternative material resources for adaptation and implementation of CBC among early years learners with disabilities.

Finally, based on the finding that there was a significant positive association between assessment strategies adaptation and competency-based curriculum in primary schools at $P < 0.05$, It could be logically concluded that adaptation of assessment strategies helps in the adaptation of CBC implementation for EYL with disabilities in primary schools. That is the higher the assessment strategies are adapted, the better the CBC co-competencies are implemented among the early-year learners with disabilities. That is adaptation and use of alternative assessment strategies lead to improvement of CBC implementation strategies among early years learners with disabilities. Hence regular schools still do not employ alternative assessment strategies for adaptation and implementation of CBC for early years learners with disabilities in primary schools.

5.4 Recommendation

This section presents the recommendation for policies, theory, practice, and future research.

5.4.1 Recommendation for Policy

- i. Based on this findings on low numbers trained teachers in SNE the study recommends to the Ministry of Education(MoE), TSC, and KICD to jointly work together with training colleges and Universities to develop a policy guidelines on training more SNE teachers particularly on CBC delivery for learners with disabilities.
- ii. The study also recommends that regular schools to ensure no child is left behind on the basis of disability through embracing the principle of inclusion.
- iii. On the inadequacy of alternative instructional material resources for adaptation and implementation of CBC for early years learners with disabilities the Ministry of Education could come up with a policy on “100% alternative instructional material resources acquisition”. This can be made part of the annual budget for schools to acquire alternative materials for adaptation and adapted materials for instruction.
- iv. It was revealed that regular schools do not employ effectively alternative assessment strategies for adaptation and implementation of CBC for early years learners with disabilities, the study recommends that the Ministry of Education should consider coming up with aptitude assessment programme for learners with disabilities

5.4.2 Recommendation for Theory

This study was guided by Complexity Theory and Education by Davis and Sumara (2006), which proposes that the fruitfulness and range of systems in which ambiguity and uncertainty occur should be embraced by the accommodation of the various uncertainties and ambiguity in educational programs. This theory could be revised to replace the range of systems with the range of programs. This is because it is the range of programs that have a range of complexities in implementation and not the systems.

5.4.3 Recommendation for Practice

- i. The institutions of higher learning may come up with a course that is a blend of both early childhood and special needs education to cater to the needs of children with disabilities right from their formative years.
- ii. The Ministry of Education could task colleges and universities to come up with short courses in early years-special needs education done either on-line or during the holiday breaks.
- iii. A professional development course could be rolled out for teachers who would like to get training in SNE. The course is made short that could be done within the holiday break such that they may start in April, August and in December they are through and ready for graduation
- iv. The NGOs could partner with the government to create a database for all learners with disabilities in integrated programs for ease of special consideration during the administration of the regular grade-level assessment.
- v. Teacher retooling workshops/seminars could be organized especially on inclusive instructional practices to create teacher awareness where the best strategies and

practices for implementing CBC among learners with disabilities are discussed. NGOs may be brought on board to support the organization of such seminars and workshops.

5.4.4 Recommendation for Further Research

- i. This research focused on inclusive instructional practices influencing CBC implementation for early years learners with disabilities in primary schools in Nairobi City County with a sample of 66 respondents which may not be generalized to larger populations. Therefore, similar research could be done with a larger sample of more than 1000 respondents to compare the results.
- ii. The study also had the regular teachers in public schools as respondents. The recommendation would be that a large scale study be conducted with the learners as the key respondents.
- iii. Lastly, there is need for a similar study to be conducted at the pre-primary level to understand the how headteachers instructional strategies relate to implementation of CBC and formative assessment of learners with disabilities.

LIST OF REFERENCES

- Adewumi, T. M., & Mosito, C. (2019). Experiences of teachers in implementing inclusion of learners with special education needs in selected Fort Beaufort District primary schools, South Africa. *Cogent Education*, 6(1), 1703446.
- Adewumi, T. M., Rembe, S., Shumba, J., & Akinyemi, A. (2017). Adaptation of the curriculum for the inclusion of learners with special education needs in selected primary schools in the Fort Beaufort District. *African Journal of Disability (Online)*, 6, 1-5.
- Adu, E. O., & Ngibe, N. C. (2014). Continuous Change in Curriculum: South African teachers' Perceptions. *Mediterranean Journal of Social Sciences*, 5(23), 983-983.
- Al-Amin, H. S. (2012). Influence of school culture on students' performance at Kenya Certificate of Secondary Education (KCSE) in public secondary schools in Mombasa County, Kenya. (Unpublished Master's Thesis, Kenyatta University).
- Anderson, J., & Boyle, C. (2015). Inclusive education in Australia: rhetoric, reality and the road ahead. *Support for Learning*, 30(1), 4-22.
- Andiema, N. C. (2021). Teacher's competencies in the evaluation of competency-based curriculum among special needs learners in Kenya. *Global Journal of Educational Research* 19 (2):135-145. DOI: 10.4314/gender.v19i2.2
- Arlene, P. (2010). *Conducting Research: Literature Reviews* (third Ed.). Thousand Oaks. Aspen Institute (2018). Seizing the Moment: Improving Access to High-Quality Instructional Materials. Retrieved on 22nd September 2020 from <https://assets.aspeninstitute.org/content/uploads/2018/04/ESSA-Improving-Access-High-Quality-Instructional-Materials.pdf>
- Australian Government Department of Education (AGDE, 2013). Inclusive Education for Students with Disability A review of the best evidence concerning theory and practice A What Works for Kids Evidence Review. Chris Forlin Education Consultancy.
- Australian Institute for Teaching and School Leadership (N.D). Inclusive education: Teaching students with disabilities. <https://www.aitsl.edu.au/research/spotlight/inclusive-education-teaching-students-with-disability>
- Bauer, A., & Brown, G. (2001). Adolescents and inclusion - Transforming secondary schools. Baltimore: Paul H. Brookes.

- Bitter, G. G., Meylani, R., & Castaneda, R. (2011). Effects of adaptive curriculum on student achievement in middle school mathematics. <https://www.researchgate.net/publication/317369586><https://www.researchgate.net/publication/317369586>.
- Boon, R. T., Wilson, R., & Curwood, J. S. (2014). Inclusive Education in Australia: An Introduction to the Special Issue. *Journal of International Special Needs Education*, 17(2), 45-47. DOI: 10.9782/2159-4341-17.2.45.
- Boubier, N., (2021). What is SPSS and how does it benefit data analysis? Retrieved on March 4th from: <https://www.alchemer.com/resources/blog/what-is-spss/#:~:text=The%20SPSS%20software%20package%20was,analysis%20of%20social%20science%20data.&text=Most%20top%20research%20agencies%20use,out%20of%20their%20research%20projects>.
- Boyle, C., Anderson, J. The justification for inclusive education in Australia. *Prospects* 49, 203–217 (2020). <https://doi.org/10.1007/s11125-020-09494-x>
- Boyle, C., Topping, K., Jindal-Snape, D. and Norwich, B. (2012). The importance of peer support for teaching staff when including children with special educational needs. *School Psychology International*, 33, (2) 167–184.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology, in *Qualitative Research in Psychology*, Volume 3(2).
- Brent, C. E. (2020) Rights to inclusive education for students with disabilities in Kenya. Syracuse University, United States. Retrieved from [https://www.udpkenya.or.ke/wp-content/uploads/2020/03/Kenya-Inclusive Education in Kenya-Brent-Elder.pdf](https://www.udpkenya.or.ke/wp-content/uploads/2020/03/Kenya-Inclusive-Education-in-Kenya-Brent-Elder.pdf)
- Burdett, M. (2020). Case study: Urban problems in Nairobi, Kenya. <https://www.geographycasestudy.com/case-study-urban-problems-in-nairobi-kenya/>
- Butova, Y. (2015). The history of the development of competency-based education. *European Scientific Journal*, 11, (10). Retrieved from <https://ejournal.org/index.php/esj/article/view/5728>.
- Chakraborty, A. & Kaushik, a. (2016). Equitable Learning Assessments for Students with Disabilities NEQMAP Thematic Review. ACER India. https://research.acer.edu.au/cgi/viewcontent.cgi?article=1037&context=ar_misc

- Chen, C., & Mickelson, A. (2015). State licensure certification requirements for personnel serving infants and young children with special needs and their families. *Infants & Young Children*, 28(4), 294–307.
- Chomba, M. J. Mukuria, S. G. Kariuki, W. Tumuti, S. Bunyasi, B. A. (2014). Education for Students with Intellectual Disabilities in Kenya: Challenges and Prospects *Journal of disability studies: Vol 34, No 4 (2014)*. <https://dsq-sds.org/article/view/3846/3793>.
- Cochran-Smith, M., Ell, F., Ludlow, L., Grudnoff, L., & Aitken, G. (2014). The challenge and promise of complexity theory for teacher education research. *Teachers College Record*, 116(5), 1–38.
- Cocks K. & Torgerson, D. J. (2013). Sample Size Calculations for Randomized Pilot Trials: A Confidence Interval Approach. *Journal of Clinical Epidemiology*. 66(2):197-201.
- Collins, J. W. & O'Brien, N. P. (Eds.). (2011). *the Greenwood Dictionary of Education*. California: Greenwood.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.)*. Thousand Oaks, CA: Sage Muhammad Ishtiaq1,2: <https://asset-pdf.scinapse.io/prod/2935009127/2935009127.pdf>.
- Davis, B., & Sumara, D. (2006). *Complexity and education*. Mahwah, NJ: Lawrence Erlbaum.
- Davis, P. and Florian, L. (2004) in *Teaching strategies and approaches for pupils with special educational needs: A scoping study*. Annesley, Nottingham: DfES Publications.
- Deng, Q., Kiramba, L. K., & Viesca, K. M. (2020). Factors Associated With Novice General Education Teachers' Preparedness to Work With Multilingual Learners: A Multilevel Study. *Journal of Teacher Education*, 0022487120971590. Retrieved: <https://doi.org/10.1177/0022487120971590>
- Deng, Q., Kiramba, L. K., & Viesca, K. M. (2020). Factors Associated With Novice General Education Teachers' Preparedness to Work With Multilingual Learners: A Multilevel Study. *Journal of Teacher Education*, 0022487120971590. Retrieved <https://doi.org/10.1177/0022487120971590>.
- Diliman, K. (2000). The Influence of Time in Classroom Learning. *European Journal of Science Education*, 5(1), 35-48.

- Donohue, D., & Bornman, J. (2014). The challenges of realizing inclusive education in South Africa. *South African Journal of Education*, 34(2). <http://www.sajournalofeducation.co.za>.
- early Intervention Technical Assistance, (1995). *Adapting Activities & Materials for Young Children with Disabilities*. Retrieved on February 19th, 2023 from http://www.eclre.org/media/84761/adaptingactivitiesand_materialsec-1.pdf
- Eraut, M. (2003). National vocational qualifications in England: Description and analysis of an alternative qualification system. In G. Straka (Ed.), *Zertifizierung non-formell und informell erworbener beruflicher Kompetenzen* (Münster, New York, München & Berlin, Waxmann).
- Evans, C. M. (2018). *Competency-Based Education: Educational Reform. A Primer*. University of New Hampshire
file:///C:/Users/Clifford%20Owino/Downloads/PolicyBrief18-01Competency-BasedEducation.pdf
- Fincham, J. E. (2016). Response rates and responsiveness for surveys, standards, and the *Journal. American Journal of pharmaceutical education*, 72(2).
- Ford, K., Vignare, K., Mulherrin, B., Davis, C. & Cini, M. (2014). *Competency-Based Education: History, Opportunities, and Challenges*. UMUC Centre for Innovation in Learning and Student Success Resource, October 2014.
- Fraenkel, J. R., & Wallen, N. E (2010). *How to design and evaluate education research*, (5th Ed.). Boston: McGraw-Hill. s
- Gitari, J. M. (2018). Influence of assistive technology on Kenya certificate of secondary education (KCSE) performance for visually impaired students at Thika high school for the blind, Kenya. Med project at the University of Nairobi. Retrieved on 10 March 2022 from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/154272/Moses%20%20Johnson%20research%20project-26%20\(5\).pdf? Sequence=1](http://erepository.uonbi.ac.ke/bitstream/handle/11295/154272/Moses%20%20Johnson%20research%20project-26%20(5).pdf?Sequence=1)
- Glass, G. V & Hopkins, K.D. (1984). *Statistical Methods in Education and Psychology*, second edition. Englewood Cliffs, NJ: Prentice-Hall.
- Gonzalez-Chica, D. A., Bastos, J. L. Duquia, R. P. Bonamigo, R. R. & Martínez-Mesa, J. (2015). Test of association: which one is the most appropriate for my study? *Anais Brasileiros de Dermatologia*, 90(4), 523-528.

- Griffith University (2020). Special education diversity and inclusive education. Retrieved on December 30th, 2020 from: <https://libraryguides.griffith.edu.au/special-education/curriculum-material>
- Gumede, V. & Biyase, M. (2016). Educational reforms and curriculum transformation in post-apartheid South Africa. *Environmental Economics*, 7(2), 69.
- Hay, J. F., Smith, J., & Paulsen, M. (2001). Teacher preparedness for inclusive education. *South African Journal of Education*, 21(4).
- Hesse-biber, S. N., & Johnson, R. B. (eds.) (2015). *Oxford Handbook of Multi-Method and Mixed Methods Research Inquiry*. New York.
- Hoadley, A. U. (2012). What do we know about teaching and learning in South African primary schools? *Education as Change*, 16(2), 187-202. <http://dx.doi.org/10.1080/16823206.2012.745725><http://dx.doi.org/10.1080/16823206.2012.745725>.
- Hossain, M. (2012). An overview of inclusive education in the United States. In *Communication technology for students in special education and gifted programs* (pp. 1-25). IGI Global.
- Ikwumelu, S.N., Oyibe, O.A. & Oketa, E. C. (2015). Inclusive Education Practices: Adaptive Teaching: An Invaluable Pedagogic Practice in Social studies education. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.6, No.33, 2015: Available at: https://www.researchgate.net/publication/337153557_Practices_of_inclusive_education (Accessed: February 13, 2023)
- Isaboke, H., Wambiri, G. & Mweru, M. (2021). Challenges facing the implementation of the competency-based curriculum in Kenya: An Urban View. *International Journal of Education and Research* Vol. 9 No. 9 September 2021 71
- Jadhav, M. S., & Patankar, P. S. (2013). Role of teachers in curriculum development for teacher education. Conference: Conference: For National conference on Challenges in Teacher Education, Physical Education, and Sports. At Kolhapur, Maharashtra, India

- Janmohamed, N. S. (2012). Challenges facing the implementation of inclusive education program in public primary schools, in Parklands district, Nairobi, Kenya. <http://erepository.uonbi.ac.ke/handle/11295/10914>.
- Johnson, B. & Turner, L. A. (2003) Data Collection Strategies in Mixed Methods Research in Tashakkori, A.M., and Teddlie, C.B., Eds., Handbook of Mixed Methods in Social and Behavioural Research. SAGE Publications, Thousand Oaks, 297-319.
- Kabuta, L. G. (2014). Problems facing students with physical disabilities in higher learning institutions in Tanzania. The Med Thesis-Open University of Tanzania. <https://core.ac.uk/download/pdf/33425411.pdf>.
- Kayili, G. & Doğru, S. S. Y. (2012). Impact of inclusive education received in early childhood on school readiness: a case study. University Publications: 2(2):307–315.
- Kenya Institute of Curriculum Development (2019). Basic education curriculum framework: nurturing every learner’s potential. Nairobi: Author.
- KICD (2017). *Kenya Institute of Curriculum Development: Facilitator’s Training Manual for Early Years Education Curriculum*. Nairobi: Author. Retrieved from <https://kcpe-kcse.com>
- Kikungwe, T. E. (2015). The Contribution of Human and Material Resources on Quality Education in Arusha District (Doctoral dissertation, The Open University of Tanzania).
- King, N., Horrocks, C., & Brooks, J. (2019). Interviews in Qualitative Research. Thousand Oaks: Sage.
- KISE (2018). National survey on children with disabilities and special needs in education. Kenya Institute of Special Needs Education. (2018). Retrieved 22 May 2022, from: <https://kise.ac.ke/system/files/2022-01/National%20survey%20on%20children%20with%20disabilities%20and%20special%20needs%20in%20education%202018-min.pdf>
- KISE (2019). Role of teachers in identification and support for learners with learning disabilities in primary schools in Kenya. Available at: https://www.researchgate.net/publication/350957525_role_of_teachers_in_identification_and_support_for_learners_with_learning_disabilities_in_primary_schools_in_kenya (Accessed: February 9, 2023).
- Komba, S. C. & Mwandanji, M. (2015). Reflections on the Implementation of Competence-Based Curriculum in Tanzanian Secondary Schools. Canadian Center of Science and Education Journal of Education and Learning, 4(2), 73-80.

- Kombo, L., & Tromp, H. (2006). Academic Achievement and Self-regulated Learning. *Education Journal*, 1(2), 11-20.
- Koskei, B.K. & Chepchumba, E. (2020). Teachers' competency as a cornerstone in the implementation of competency-based curriculum in Kenya. A case of lower primary schools in Nakuru County, Kenya. *International Journal of Education and Research* vol. 8 no. 2 February 2020. Available at: <https://ijern.com/journal/2020/february-2020/01.pdf> (accessed: march 9, 2023).
- Lassnigg, L. (2017). Competence-based education and educational effectiveness In *Competence-based Vocational and Professional Education* (pp. 667-693). Springer, Cham.
- Lazarova, B. & Pol, M. (2002). On Efforts to Collegiality Develop Teacher Professionalism. Online Submission.
- Lekule, C. & Beckford, C. (2019). School culture matters a glance at Tanzania students' academic performance. *Journal of Teacher Education and Educational Leadership*, 101-118.
- Li, M., Kuang, F. & Dan, W. (2023). Exploring the characteristics of pre-service EFL teachers' practicum experiences: a complexity theory-based case study in China. *Asian-Pacific Journal of Second and Foreign Language Education*: <https://doi.org/10.1186/s40862-023-00187-4>
- Lombardi, P. (2021). The Roles and Responsibilities of the Special Educator. Retrieved on February 19th, 2023 from: <https://granite.pressbooks.pub/edu606-701/>
- Lorenza, L. M. (2018). Curriculum change and teachers' response: A NSW case study. Ph.D. thesis, The Sydney School of Education and Social Work. Retrieved online on 21st September 2020 from https://ses.library.usyd.edu.au/bitstream/handle/2123/18901/lorenza_lm_thesis.pdf?sequence=2
- Macleod, D. & Clarke N. (2014). *Concept of employee engagements and an analysis based on the workplace relations status*. London: Joe Dromey.
- Makewa L. N. & Mutie J.M. (2018). Assistive Technology for Managing Learners with Special Needs in Makueni County. *Journal of Research Innovation and Implication in Education*, 2(1), 32-43.

- Manea, A.D. (2013). Practices of Inclusive Education. Researchgate: (Available at: https://www.researchgate.net/publication/337153557_Practices_of_inclusive_education (Accessed: February 13, 2023).
- McCombes S. (2019). Descriptive research design: Definition, methods, and examples. Retrieved on September, 11th 2020 from <https://www.scribbr.com/methodology/descriptive-research/>
- McLeskey, J., Rosenberg, M. S., & Westling, D. L. (2009). Inclusion: Effective practice for all students. Upper Saddle River, NJ: Pearson Education, Inc.
- Meidl, T. & Meidl, C. (2011). Curriculum Integration and Adaptation: Individualizing Pedagogy for Linguistically and Culturally Diverse Students. *Current Issues in Education*, 14(1). Retrieved from: <http://cie.asu.edu/>
- Middleton, F. (2019). Types of reliability and how to measure them. Retrieved from <https://www.scribbr.com/methodology/types-of-reliability/>
- Miles, S. Westbrook, J. & Croft, A. (2018). Inclusions and Exclusions in Rural Tanzanian Primary Schools: Material Barriers, Teacher Agency, and Disability Equality. *Social Inclusion* 6(1), 73-81.
- Momanyi, J. M. & Rop, P. K. (2019). Teacher Preparedness for the Implementation of Competency-Based Curriculum in Kenya: A Survey of Early Grade Primary School Teachers in Bomet East Sub-County, Kenya. *The Cradle of Knowledge: African Journal of Educational and Social Science Research* Volume 7 No.1, 2019 ISSN 2304-2885-p, 2617-7315e: <http://www.serek.or.ke>
- Moyle, J. (2016). Including Disability in the Social Work Core Curriculum: A Compelling Argument P.503-511 | Received 03 Feb 2016, Accepted 18 Jul 2016, Published online: 04 Sep 2016
<https://doi.org/10.1080/0312407X.2016.1216575> CrossMark Logo
- Mpu, Y. & Adu, E.O. (2016). The challenges of inclusive education and its implementation in schools: The South African perspective. DOI: <https://doi.org/10.18820/2519593X/pie.v39.i2.16>.
<https://journals.ufs.ac.za/index.php/pie/article/view/4583>
- Mugenda, O. M & Mugenda, A.G. (2003). Research methods: Quantitative and qualitative approaches. Nairobi: Acts Press.
- Mulder, M., Weigel, T., & Collins, K. (2006). The concept of competence concept in the development of vocational education and training in selected EU member states is a critical analysis. *Journal of Vocational Education and Training*, 59(1), 65-85.

- Mutembei, M. R. (2014). School factors influencing implementation of inclusive education in public primary schools in Magumoni Division, Tharaka with County, Kenya University of Nairobi). Repository.
http://erepository.uonbi.ac.ke/bitstream/handle/11295/74218/Mutembei_School%20Factors%20Influencing%20Implementation%20Of%20Inclusive%20Education%20In%20Public%20Primary%20Schools%20In%20Magumoni%20Division%20C%20Tharaka%20Nithi%20County%20C%20Kenya.pdf?sequence=3
- Mutugi, L. W. (2018). Learning challenges faced by special needs education learners in public primary schools in Mvita Mombasa, Kenya. <https://ir-library.ku.ac.ke/handle/123456789/18964?show=full>.
- Mwaimu W. D. & Swai E. V. (2015). Teacher effectiveness on pupils' performance in primary school education in Tanga district the Open University of Tanzania. http://repository.out.ac.tz/1447/1/PRINT_MWAHIM.pdf.
- Mwajabu, K. Possi, M. K., Milinga, J. R. (2017). Special and Inclusive Education in Tanzania: Reminiscing the Past, Building the Future. Educational Process: International Journal, 6(4), 55-73. To link to this article: <http://dx.doi.org/10.22521/edupij.2017.64.4>
- Nairobi City County (N.D). Nairobi City County: education department data on Nairobi public ECD centres & primary schools and locations. Retrieved from <https://nairobi.go.ke/wp-content/uploads/Public-Primary-Schools.pdf/>
- Namamba, A. and Rao, C. (2017). Preparation and Professional Development of Teacher Educators in Tanzania: Current Practices and Prospects. Journal of Education and Practice, 8 (8). www.iiste.org.
- National Coordinating Agency for Population and Development and Kenya National Bureau of Statistics (2007). Kenya National Survey for Persons with Disabilities. National Coordinating Agency for Population and Development (NCAPD) and Kenya National Bureau of Statistics (KNBS: Nairobi). Retrieved February 22, 2023, from: <https://ncpd.go.ke/wp-content/uploads/2022/06/2007-Kenya-National-Survey-on-Persons-with-Disabilities.pdf>
- National Gender and Equality Commission Headquarters Solution (2016). Access to basic education by children with disabilities. Available at: www.ngeckkenya.org.

- Nethra, C.A., Glendaliz, B., Carley, S., Steven, S., Maya, T., Faren, W., Atkins, C., & Mayer, R.S., (2019). Competency -Based Curriculum Development to Meet the Needs of People With Disabilities: A Call to Action. *Journal of the Association of American Medical Colleges*. DOI: 10.1097/ACM.0000000000002686. https://www.researchgate.net/publication/331608617_Compentency-Based_Curriculum_Development_to_Meet_the_Needs_of_People_With_Disabilities_A_Call_to_Action
- Ngeno, B., Mwoma, T. & Mweru, M. (2022). Determinants of public primary schools preparedness for the implementation of competence-based curriculum in Kericho County, Kenya, Repository Home. Kenyatta University. Available at: <https://ir-library.ku.ac.ke/handle/123456789/23896> (Accessed: February 9, 2023).
- Noguera, J. S., and McCluskey, K. (2016). A case study of early career secondary teachers' perceptions of their preparedness for teaching: Lessons from Australia and Spain. Pages 101-117 | received 03 Mar 2014, Accepted 27 Apr 2015, Published online: 14 Nov 2016. <https://www.tandfonline.com/doi/full/10.1080/13664530.2016.1204353>
- Nyangige, R. P. (2014). Implementation of inclusive education for children with special needs in primary schools in Roysambu Division Nairobi County, Kenya. Med project Kenyatta University. <https://1library.net/document/z3n2p48q-implementation-inclusive-education-children-special-Roisambu-division-nairobi.html>.
- Odero, O. R. (2016). The availability of instructional media for teaching mentally retarded students in Nyanza Region, Kenya. *Journal of Education and Practice*, 7(19) 70-75.
- Okongo, R. B., Ngao, G., Rop, N. K. & Nyongesa, W. J. (2015). Effect of Availability of Teaching and Learning Resources on the Implementation of Inclusive Education in Pre-School Centers in Nyamira North Sub-County, Nyamira County, Kenya. *Journal of Education and Practice*, 6(35), 132. www.iiste.org.
- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376–407.
- Organization for Economic Cooperation and Development [OECD] (2016). Pisa 2015 results (vol.II) policies and practices for successful schools. Retrieved on September 16, 2020, from: <https://www.oecd-ilibrary.org/docserver/9789264267510-10-en.pdf?expires=1600348911&id=id&accname=guest&checksum=D431CCDA57FB933338EEB97515BA4EF8>.

- Orodho, J.A (2005). *Techniques of writing a research proposal and reports in Education and Social Sciences, 2nd Edition*. Nairobi: Kanezja Hp Enterprises.
- Oroszi, T. (2020). Competency-Based Education. *Creative Education*, 11, 2467-2476.
<https://doi.org/10.4236/ce.2020.1111181><https://doi.org/10.4236/ce.2020.1111181>
- Owino, C.O. Kamau-Kang'ethe, R, W. & Mwoma, T. B. (2019). Determinants of teachers' preparedness towards the implementation of inclusive education in lower grades primary schools in Awendo Migory, Kenya. Med. Thesis Kenyatta University.
<https://ir-library.ku.ac.ke/handle/123456789/19840>.
- Owino, C.O., Bunyasi, B.A. and Kamau-Kang'ethe, R.W. (2022). Influence of training in special needs education in implementing inclusive education in lower grades primary schools in awendo migoriy county, Kenya | *International Journal of Recent Advances in Multidisciplinary Research Vol. 08, Issue 03, pp. 35n-41*:
<http://ijramr.com/issue/influence-training-special-needs-education-implementing-inclusive-education-lower-grades>.
- Parker, B. & Walters, S. (2008). Competency-based training and national qualifications frameworks: insights from South Africa. *Asia Pacific Education Review*, 9(1), 70-79.
- Paulo, A. & Tilya, F. (2014). The 2005 Secondary School Curriculum Reforms in Tanzania: Disjunction between Policy and Practice in its Implementation. *Five* (35).
- Privitera, G. J. (N.D, Cap. 8). *Research Methods for the Behavioural Sciences Cap.8*. Retrieved from <https://www.sagepub.com/sites/default/files/upm-binaries/57732.pdf>
- Rennie, L. J, Goodrum D. and Hackling M. (2001). Science Teaching and Learning in Australian Schools: Results of a National Study. Article in *Research in Science Education* · December DOI: 10.1023/A: 1013171905815.
- Republic of Kenya (2009). *Final draft: The national special needs education policy Framework*. Government printer July 2009. Retrieved from <https://www.coursehero.com/file/153488410/SNE-Policy-Kenya-2009pdf/>
- Rieckmannstats, M. & Hericks, N. (2016). Competence-based Education and its Contributions to Quality Enhancement in Higher Education. Conference Paper · November 2016:
<https://www.researchgate.net/publication/310753942><https://www.researchgate.net/publication/310753942>

- Rieckmannstats, M. & Hericks, N. (2016). Competence-based Education and its Contributions to Quality Enhancement in Higher Education. Conference Paper · November 2016:
<https://www.researchgate.net/publication/310753942>
<https://www.researchgate.net/publication/310753942>
- Ries, J., Cabrerab, C. Y. & González-Carriedo, R. (2016). A Study of Teacher Training in the United States and Europe. The European Journal of Social and Behavioural Sciences EJSBS Volume XVII (eISSN: 2301-2218):
<https://files.eric.ed.gov/fulltext/ED565795.pdf>
- Riggall, A., & Croft, A. (2016). Eastern and Southern Africa regional study on the fulfillment of the right to education of children with disabilities. Reading, UK: Education Development Trust. Sciences EJSBS Volume XVII (eISSN: 2301-2218).
- Shulman, L.E.E.S. (1987). "Knowledge and Teaching: Foundations of the New Reform." Harvard Educational Review 57 (1):1–22.
- Sidhu, L. (2002). Effects of Self-regulated Learning on Academic Achievement. Journal of Developmental Psychology, 2(10), 1-5.
- Smith, E. (2018). Ten years of competency-based training: the experience of accredited training providers in Australia. Retrieved from [file:///C:/Users/Clifford%20Owino/Downloads/10yearsofcompetencybasedtraining%20\(3\).pdf](file:///C:/Users/Clifford%20Owino/Downloads/10yearsofcompetencybasedtraining%20(3).pdf)
- Subarna, T.N., Masud, N.A., Mensah, J., San2, S.S.S., Hasan, M. & Tania, J.S. (2022). Teaching strategies for students with disabilities in regular classes Journal of Creative Education. DOI: 10.4236/ce.2022.136116. Available at:
<https://www.researchgate.net/publication/361295438> Teaching Strategies for Students with Disabilities in Regular Classes
- Sweller, N., Graham, L. & Van Bergen, P. (2012) the minority report: disproportionate representation in Australia's largest education system. Exceptional Children, 79(1), 107–125.
- Tabot B. A. & Too J. K. (2017). Integration of Special Needs Education in Primary Teacher Education Curriculum and teacher trainees' skills for instructional efficacy in Kenya. International Journal of Education and Research, 5(7).

- Tarmo A. P. (2014). Pre-Service Teacher's Preparedness to Implement Competence-Based Curriculum in Secondary Schools in Tanzania. *International Journal of Education and Research* Vol. 2 No. 7 July 2014. Retrieved from <https://www.researchgate.net/publication/282074981><https://www.researchgate.net/publication/282074981>.
- Tarmo, A. & Kimaro, A. (2021). The teacher education curriculum and its competency-based education attributes|Digital Object Identifier. <https://onlinelibrary.wiley.com/doi/full/10.1002/cbe2.1255>
- U. S. Department of Education (2015). Archived: The Educational System in the United States: Case Study Findings. Retrieved on September 16, 2020, from: <https://www2.ed.gov/PDFDocs/UScasestudy.pdf>
- UNDP (N.D) (2015). Sustainable Development Goals Booklet. https://www.undp.org › SDGs_Booklet_Web_En.
- UNESCO. (2015). Training Tools for Curriculum Development: A Resource Pack(Module 6). Retrieved From Http://Www.Ibe.Unesco.Org/Fileadmin/User_Upload/Cops/Pages_Documents Http://Www.Ibe.Unesco.Org/Fileadmin/User_Upload/Cops/Pages_Documents/Resource/Resource_Packs/TTCD/Sitemap/Module_6/Module_6.Html
- United Nations (2015). Resolution adopted by the General Assembly on 25 September 2015, transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1 Archived 28 November 2020 at the Wayback Machine). Retrieved from: <https://upload.wikimedia.org/wikipedia/commons/d/d5/N1529189.pdf>
- Viviani, W., Cooley, L., & Griffin, M. (2020). Maintaining Gaps in Teacher Diversity, Preparedness, Effectiveness, and Retention? A Program Theory Evaluation of Mathematics Teacher Training in the New York City Teaching Fellows. *Educational Policy*, 0895904820951117. <https://journals.sagepub.com/doi/10.1177/0895904820951117>
- Voltz, D. L., Sims, M. J. & Nelson, B. (2010). Supporting the classroom with materials. Retrieved on December 29, 2020, from https://www.ahead.org/uploads/publications/jped/jped_29_4/jped29_4_fulldocument.pdf
- Walker, G. (2014). Using complexity theory to understand the teaching and learning process. <https://researchdirect.westernsydney.edu.au/islandora/object/uws:31563/datastream/PDF/view>

Wanjiku, W. N. R. (2010). Teaching strategies used by teachers to enhance learning for learners with multiple disabilities in four selected Counties in Kenya. Kenyatta University repository: <https://ir-library.ku.ac.ke/bitstream/handle/123456789/11935/Teaching%20strategies%20used%20by%20teachers%20to%20enhance%20learning%20to%20learners%20with%20multiple%20disabilities%20in%20four%20selected%20counties%20in%20Kenya.pdf?isAllowed=y&sequence=1>

West, E.A., Novak, D. & Mueller, D. 2013(). Inclusive Instructional Practices Used and Their Perceived Importance by Instructors. (). Journal of Post-secondary Education and Disability, 29(4), 363-374 363: https://www.ahead.org/uploads/publications/jped/jped_29_4/jped29_4_fulldocument.pdf

APPENDICES

Appendix I: A: Informed Consent For Parents

Study Title: **Inclusive instructional practices** influencing competency-based Curriculum for early years learners with Disabilities in primary schools in Nairobi City County, Kenya.

Researcher: Clifford Otieno Owino

Study location: Public and private regular primary schools in Nairobi City County.

Introduction: **My name is** Clifford Otieno Owino, a Ph.D. student at Kenyatta University. The program includes investigating learning activities for the implementation of CBC for learners with disabilities. I will administer an interview schedule to headteachers, questionnaires to teachers of lower grades primary schools, and observe as teachers teach. This will help me identify the inclusive practices to support learners with disabilities in regular classes.

Procedures to be followed: I will be using two research assistants and teachers to complete the process. I will also do recordings, which will be used only for this study. The researcher will monitor the progress of the program with the help of research assistants. You have the right to refuse or withdraw your child's participation in this study without giving reasons.

Discomfort and risks: The researcher will conduct the data collection training and no risks are anticipated.

Benefits: This will enhance teaching and learning among learners with disabilities in regular schools as well as support them in learning using the competency-based curriculum design.

Confidentiality: Your child's involvement will be highly appreciated and the information acquired will be confidential and will be for this research only. It is only the consent form

that will have your name. A personal code will be used to identify the questionnaire that the teachers of your child will fill out.

Contact information

If you have any reservations, you may reach me, on 0720859083 or my Supervisors... Beatrice A. Bunyasi on 0721943828 and Dr. Racheal W. Kamau-Kangethe on 0718722747 or the Kenyatta University Ethical Review Committee Secretariat on HYPERLINK "mailto:kuerc@ku.ac.ke" kuerc@ku.ac.ke.

Participant's statement

I have read/was read for the information above regarding my child's involvement in the research. I have been able to ask questions on the same and answered satisfactorily. I, therefore, consent voluntarily on behalf of my child's participation and myself.

Name of parent

Signature or thumbprint

Date

Investigator's statement

I, the undersigned, have explained to the parent in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

Name of **Investigator**

Investigator signature

Date

B: INFORMED CONSENT FOR TEACHERS

Study Title: Inclusive practices influencing competency-based curriculum for early year learners with Disabilities in primary schools in Nairobi City County, Kenya.

Researcher: Clifford Otieno Owino

Study location of public and private primary schools in Nairobi City County.

Introduction: My name is Clifford Otieno Owino, a Ph.D. student at Kenyatta University. The program includes investigating learning activities for the implementation of CBC for learners with disabilities. I will administer an interview schedule to headteachers, questionnaires to teachers of lower grades primary schools, and observe as teachers teach. This will help me identify the inclusive practices to support learners with disabilities in regular classes.

Procedures to be followed: I will be using two research assistants and teachers to complete the process. I will also do recordings, which will be used only for this study. The researcher will monitor the progress of the program with the help of research assistants. You have the right to refuse or withdraw from participation in this study without giving reasons.

Discomfort and risks: The researcher will conduct data collection training for the research assistants as well as the teachers on how to respond and no risks are anticipated.

Benefits: This will enhance support for teaching and learning among learners with disabilities as well as their management in regular schools.

Confidentiality: Your involvement will be highly appreciated and the information given will be confidential and will be for this research only. It is only the consent form that will have your name. A personal code will be used to identify the questionnaire that you fill out.

Contact information

If you have any questions you may contact me, at 0720859083 or my Supervisors Dr. Beatrice A. Bunyasi at 0721943828 and Dr. Racheal W. Kamau-Kangethe at 0718722747 or the Kenyatta University Ethical Review Committee Secretariat on HYPERLINK "mailto:kuerc@ku.ac.ke" kuerc@ku.ac.ke.

Participant’s statement

I have read the information above and I consent voluntarily to participate in the research.

Teachers Name: _____ Signature: _____ Date: _____

Investigator’s statement

I, the undersigned, have explained to the parent in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

Name of Investigator **Sign:**

Appendix II: Questionnaire For Teachers

Section 1: Biodata of Respondent

1. Sex: Male () Female ()
2. Indicate your age
3. Category of school: Public () Private ()

Section II: General Information

Teachers' Training in SNE

4. Professional qualification (multiple choice allowed): Training in:

	Not at all	Workshops/seminar	Certificate	Diploma	Degree	Postgraduate
Early childhood education						
Special needs education						
Primary teacher education						

5a). Does this school have learners with disabilities?

Yes () No ()

b) If yes, select their special needs categories (Multiple choice allowed)

	Cerebral Palsy	Stroke	Spina bifida	Arthritis	Spinal cord injuries	Epilepsy	Multiple Sclerosis	Chronic Asthma
1.)Physical:- -								

	Down syndrome	autism spectrum disorder	dyslexia	processing disorders	Cerebral palsy	Chromosome abnormalities such as trisomies	Fetal alcohol and drug-related syndromes	Fragile X syndrome	Genetic disorders	Intellectual disabilities	Tourette syndrome	Velocardiofacial syndrome
2.) Developmental:- -												

	Bipolar	Oppositional Defiance Disorder	attention deficit hyperactivity disorder (ADHD)	oppositional defiant disorder (ODD)	autism spectrum disorder (ASD)	anxiety disorder	Depression	learning disorders	conduct disorders
3.) Behavioural/Emotional:-									

	Blind	low vision	Deaf	hard of hearing	Albinism
4.) Sensory impaired:--					

	Diabetes	Heart conditions	Hemophilia	Lead poisoning	Leukemia	Nephritis	Rheumatic fever	Sickle cell anemia	Dysphagia
5. Other health impairments :-									

5. Other health impairments: - Diabetes () Heart conditions () Hemophilia () Lead poisoning () Leukemia () Nephritis () Rheumatic fever () Sickle cell anemia () dysphagia ()

6a). Have you attended any in-service training in special needs education?

b). If yes, how has the training in special needs education affected your teaching of learners with disabilities?

c) To what extent do you employ the following knowledge areas?

	Undecided	Not at all	Occasionally	Always
General knowledge				
Subject matter content knowledge				
Pedagogical content knowledge				
Curricular knowledge				

7a). Have you been trained in the implementation of CBC for learners with disabilities?

Trained ()

Not trained ()

b) If your answer in 7a above is 'trained', to what extent have you employed the following co-competencies in teaching learners with disabilities in your class?

	Undecided	Never	Sometimes	Always
I determine the degree to which the three goals of interaction; control, responsibility, and foresight are achieved in my inclusive class				
I take cognizance of appropriate modes of communication for learners with special educational needs at the early educational level				
I ensure that team-building games and activities are done in my classroom for learners with and without disabilities to work together to complete a task				

I ensure that learners with disability self-efficacy are internally motivated to establish and maintain healthy interpersonal relationships				
I do ensure that learners with disabilities develop intra-personal skills and values in my class				
My learners with disabilities set themselves challenging goals and maintain a strong commitment to them				
I provide age-appropriate activities and implement suitable programs in the school curriculum for my learners with disabilities				
I ask my learners with disabilities to come up with the best ways of addressing some of the challenges in the school				
I prompt my learners with disabilities to fulfil their potential by solving problems in their lives and communities				
I present knowledge in ways that encourage learners with a disability to think as an individual				
I encourage learners with disabilities to engage in imagination and to develop creations steered by their imaginations				
I create room for innovative ways of teaching as well as creating an environment conducive to learning that offers all learners opportunity to explore their full potential in and through creativity and imagination				

I prepare my learners with disabilities to deal with situations of conflicts and controversy knowledgeably and tolerantly in the school				
I encourage y learners with disabilities to develop personal respect and respect for others for global citizenship				
I ensure that my learners with disabilities effectively and safely use a wide range of digital content and devices within the category of network-enabled devices				
I ensure that my learners with disabilities can engage in online communication and social networks				
I ensure that my learners with disabilities safely and securely use technology while being able to assess the nature of the information acquired To support and enhance the environment				
I always ensure that my learners with disabilities learn to know				
I always encourage my learners with disabilities to learn to do				
I encourage my learners with disabilities to learn to be and live				

c) How have your answers in (a and b) above influenced the implementation of inclusive education using the CBC design?

8) In your opinion, can teachers implement inclusive education and at the same time implement a competency-based curriculum in regular schools?

Instructional methods adaptation

9). When implementing CBC, Does instructional methods adaptation necessary in this school?

Yes () No ()

10. To what extent do the following instructional methods are appropriate for your class with learners with disabilities?

	Not sure	Not at all	Occasionally	Always
Oral instruction				
Written instruction				
Group work				
Individual work				
Reading aloud from text together				
Class discussion				
Use of models				
Mediated learning				
Audio taping of textbooks				
Graphic organizers				
Peer tutors/child-to-child approach				
Doing or manipulation				
Collaborative teaching/team teaching/co-teaching				
Self-directed learning				

11. To what extent do you find the following systematic instruction useful in your class for learners with disabilities?

	Not sure	Not useful	Moderately useful	Highly useful
Defining the skill to be taught				
Categorize the behaviors to be taught as discrete or chained				
Simultaneous prompting				
Time delays				
Least intrusive prompts				
Reinforcements				
Most to least intrusive prompts				
Generalization teaching teaches in the context				

	Not sure	Not useful	Moderately useful	Highly useful
in which skill is most likely to occur naturally				

12. To what extent does the use of assistive technology influence instruction for learners with disabilities in your class?

Not sure () Never () Low degree () Average degree ()
 High degree ()

13a) To what extent do you normally use the following technologies in teaching your class with learners with disabilities?

	Undecided	Not at all	Moderately	Always
Use of videos				
Computer-assisted instructions				
Radios				
Note takers				
Obit readers				
Magnifying glass				
Interpreters				
Acoustic wall				
Talking spell checker				
Sound filled system				
Sip and puff systems				
Draft builders				
Sandwiched charts				
Math talk				
Marth simulation				
Low tech handouts/graphic organizers				
Proofreading software				
Got it				

b) In your opinion, do you think teachers can adapt the instructional methods for learners with disabilities and at the same time implement CBC in regular schools?

Material resources adaptation

14. Do you think an adaptation of teaching aids is necessary for the implementation of CBC for learners with disabilities in this school?

15a). How often do you adapt teaching materials for IE implementation in your class?

Undecided () Never () Sometimes () Occasionally ()
 Always ()

b) How does the level of knowledge you selected in 15a above affect the usage of teaching aids in your class?

16a). Have you ever attended a workshop for the adaptation of the learning materials for the implementation of IE?

Yes () No ()

b) If no, why?

c) If yes, how relevant is the training in teaching learners with disabilities during the roll-out of the competency-based curriculum?

d) In your opinion, do you think teachers are in a position to adapt materials for learners with disabilities and at the same time implement CBC in regular schools?

Assessment adaptation

17. Do you think assessment adaptation is necessary for the implementation of CBC for learners with disabilities in this school?

18) How does Regular grade-level assessment influence the implementation of IE in your class?

19a). Do you have an alternate assessment based on the grade level for learners with disabilities?

Yes () No ()

b) If not why?

c) If yes, what is the frequency of its occurrence?

Not sure () Sometimes () occasionally () Always ()

d) How important is the alternate grade-level assessment in your class?

20a) to what extent do you use the following assessment Presentations/accommodations in your class for learners with disabilities?

	Undecided	Never	Sometimes	Always
Repeating direction				
Reading aloud				
Larger answer sheets				

	Undecided	Never	Sometimes	Always
Verbal/ oral answers				

b) How does your choice in 20a above influence the learning achievements and standards for learners with disabilities in the CBC class?

21). To what extent do you allow the following assessment responses by learners with disabilities in your class? (Multiple choice allowed)

	Not sure	Not at all	Occasionally	Always
Marking answers in a book				
Using reference aids				
Pointing answers				

22a). To what extent does the following affect the assessment in your class? (Multiple choice allowed)

	Not sure	Never	Sometimes	Always
A study carrel				
Special lighting				
A separate room				
Timing and scheduling of assessment				

b) How do your answers in 23a above affect learners with disabilities?

**Appendix III: Interview Guides For Headteachers
Teachers' Training in SNE**

1. In your opinion, briefly explain why teacher training in special needs education is necessary for implementing inclusive education for learners with disabilities in this school.

2a). Do we have teachers trained in SNE deployed in this school?

Yes () No ()

b) If yes are they adequate?

3a). Does this school face challenges in implementing inclusive education and competency-based curriculum simultaneously?

Yes () No ()

b) If yes, what are the challenges?

c) If not why?

Instructional Methods Adaptation

4a). Does this school adapt instructional methods for learners with disabilities?

Yes () No ()

b) If yes, what instructional methods are adapted for learners with disabilities in this school?

c) When adapting the instructional methods, how does it influence the implementation of CBC?

Material Methods Adaptation

5a). Do we have adapted material resources for use by the learners with disabilities in this school?

Yes () No ()

b) If yes which materials are available?

c) How effective is the adaptation of the materials?

6a). Do teachers find it relevant to use the adapted materials in the era of CBC?

Yes () No ()

b) If yes do they face challenges?

c) How do you mitigate the challenges?

Assessment adaptation

7a). Do assessment strategies adaptation necessary for learners with disabilities in this school?

Yes () No ()

b) If yes what are the criteria for assessment administration to learners with disabilities?

8a) Are there challenges faced by your teachers in adapting assessments for learners with special needs during this era of CBC?

Yes () No ()

b) If yes, what are the challenges?

c) How do you mitigate the challenges?

9a). Are there times when you have been forced to make some critical decisions about the implementation of CBC for learners with disabilities in this school?

Yes () No ()

b). what was the decision?

c). what was the impact of your decision?

Appendix IV: Interview Guides For Educational Officers

Teachers' Training in SNE

1. State reasons as to why you think the implementation of inclusive education in this sub-County is effective.

2a). Do we have teachers trained in SNE deployed in all regular schools in this Sub-County?

Yes () No ()

b) If not why?

c) If yes, how adequate are they for each school?

3a). Does this Sub-County face challenges in implementing inclusive education

Yes () No ()

b) If no, why?

c) If yes, what are the challenges?

d) How do you mitigate the challenges?

Instructional Methods Adaptation

4a). Do regular schools adapt instructional methods for learners with disabilities?

Yes () No ()

b). If not why?

c) If yes, how effective is the adaptation of the instructional methods for learners with disabilities in regular schools?

D). How do you mitigate the challenges that accompany the adaptation of the instructional method in regular schools?

Material Methods Adaptation

5a). Do we have adapted materials for use by the learners with disabilities in the regular schools in this Sub-County?

Yes () No ()

b) If no, why?

c) If yes what materials are available?

d) If yes how effective are the adaptation of the material?

6a). Do the teachers in regular schools face challenges in the use of adapted materials?

Yes () No ()

b) If no, why?

C) If yes what are the challenges?

D) How do you mitigate the challenges?

Assessment adaptation

7a). Do we have assessment methods adapted for learners with disabilities in regular schools?

Yes () No ()

b) If no, why?

c) If yes what are the criteria?

8a) Are there challenges faced by regular schoolteachers in adapting assessments for learners with special needs?

Yes () No ()

b) If no, why?

c) If yes, what are the challenges?

d) How do you mitigate the challenges?

9a). Are there times when you have been forced to decide about the implementation of CBC for learners with disabilities in regular schools?

Yes () No ()

b). If no, why?

c) If yes, what was the decision?

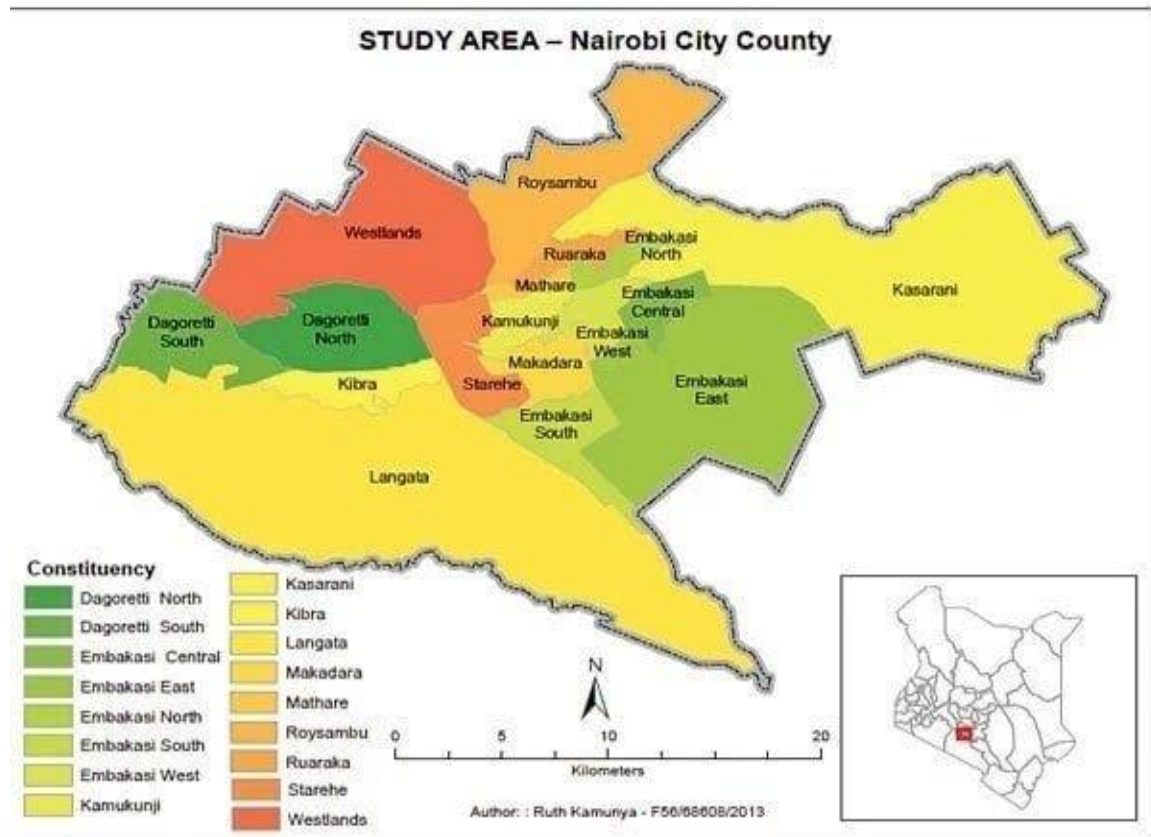
d). what was the impact of your decision?

Appendix V: Observation Check-List

Item	Scores			
	Not available	Available	Available but not used	Available and used
The alternative item for SNE				
Individualized Education Programmed				
Large print textbooks/braille TB				
Workbooks/Braille papers				
Diagrams/embossed diagrams				
Charts/embossed charts				
Tables/embossed tables				
Flow charts/embossed flow charts				
Graphs/embossed graphs				
Teacher made resources				
Computers with screen reader software				
Acoustic walls				
Presence of co-teacher/interpreters/teacher assistant				
Low-tech handouts/graphic organizers				
Use of videos				
Computer-assisted instruction				
Radios				
Note takers				
Orbit readers				
Magnifying glass				
Acoustic wall				
Interpreters				
Binoculars				
Text-to-speech assistive tools				

Draft builder				
Talking spell checker/ Proofreading software				
Sound filled systems				
Sip and puff systems				
Got it				
Math talk/ Math simulations				

Appendix VI: Map of Nairobi City County



Appendix VII: Research Approval from KU



**KENYATTA UNIVERSITY
GRADUATE SCHOOL**

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

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 31st August, 2021

TO: Mr. Clifford O. Owino
C/o Department of Early Childhood & Special Needs Educ.
KENYATTA UNIVERSITY

REF: E83/26790/19

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Graduate School Board at its meeting 25th August, 2021 approved your Ph.D. Research Proposal entitled "Impact of Inclusion of Early Years Learners with Disabilities on Competency-Based Curriculum Implementation in Primary Schools Nairobi City County, Kenya".

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking and Progress Report Forms. The Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you


REUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Early Childhood & Special Needs Educ.
Registrar (Academic) Att; Mr. Richard Chweya

Supervisors:

1. Dr. Bunyasi A. Beatrice
C/o Department of Early Childhood & Spe. Needs Educ.
KENYATTA UNIVERSITY
2. Dr. Kamau-Kang'ethe Rachel
C/o Department of Early Childhood & Spe. Needs Educ.
KENYATTA UNIVERSITY

EM/cao



KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Fax: 8711242/8711575

Email: kuerc.chairman@ku.ac.ke

Website: www.ku.ac.ke

P. O. Box 43844,

Nairobi, 00100

Tel: 8710901/12

Our Ref: KU/ERC/ APPROVAL WITH ADVICE/VOL.I

Date: 25th/10/ 2021

Clifford Otieno Owino
P.o BOX 43844-00100 Nairobi.
Dear Sir,

APPLICATION NUMBER: PKU/2356/11493- IMPACT OF INCLUSION OF EARLY YEARS LEARNERS WITH DISABILITIES ON COMPETENCY BASED CURRICULUM IMPLEMENTATION IN PRIMARY SCHOOLS, NAIROBI CITY COUNTY,KENYA

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research Impact of Inclusion of Early Years Learners with Disabilities on Competency Based Curriculum Implementation in Primary Schools, Nairobi City County,Kenya. Received on September, 2021.

2. APPLICANT

Clifford Otieno Owino

3. SITE

Nairobi City County,Kenya

4. DECISION

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines and APPROVED that the research may proceed ON CONDITION that you incorporate its advice as below

5. ADVICE/CONDITIONS

- State the care and protection of research subjects
- Explain clearly the procedure of getting consent
- Explain the protection of research participant's confidentiality
- Adopt KUERC format of assent form for under age children and Informed Consent for participants with over 18years of age -state community considerations

The above specific conditions must be fulfilled in writing before an approval can be granted.

The manner of fulfilling these conditions should be outlined and submitted to Kenyatta University Ethical Review Committee.

When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given @easesign in the space provided below and return to KU-ERC a copy of




of the letter



Prof. Judith Kimiywe
DIRECTOR - ETHICS REVIEW COMMITTEE

I, Clifford Otieno Owino accept the advice given and will fulfill the conditions therein.

Signature... :..... . Dated this day of 31/10/2020. cc. DVC-Research Innovation and Outreach

Appendix VIII: Research Authorization from The Ministry of Education

**MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION**

Telegrams: "Schooling" Nairobi
Email: deokasarani@gmail.com
Fax No: N/A
When replying please quote



REPUBLIC OF KENYA

SUB-COUNTY EDUCATION OFFICE,
KASARANI SUB COUNTY,
P.O Box 1274-00618,
RUARAKA.

REF: SCDE/KAS/GF/VOL 61

DATE: 29TH SEPTEMBER 2021

**TO THE HEAD TEACHER
KASARANI, KAHAWA GARRISON
GITHURAI, MUREMA, K.U, GSU
THIKA ROAD, ROYSAMBU.
KASARANI SUB COUNTY**

RE: RESEARCH AUTHORIZATION: CLIFFORD OTIENO OWINO

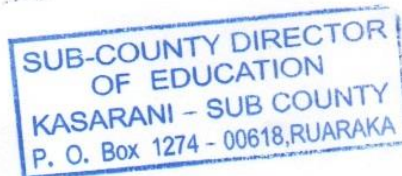
The above subject refers:


Mr. Clifford Otieno Owino a Postgraduate student from Kenyatta University is undertaking a research project entitled Impact of Inclusion of Early Years Learners with Disabilities on Competency Based Curriculum Implementation in Primary Schools.

He will therefore conduct his research at the addressed public schools. This office has no objection and authority is hereby granted for a period ending on 21st September 2022.

Please accord him any necessary assistance.

Thank you.




**VICTORIA N. MBWIKA
SUB-COUNTY DIRECTOR OF EDUCATION
KASARANI**



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

When replying please quote

Ref: RDE/NRB/RESEARCH/1/65 Vol.1

DATE: 27th September, 2021

Mr. Clifford Otieno Owino
Kenyatta University

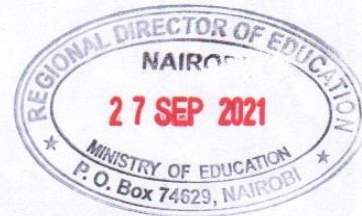
RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on the topic: *"Impact of Inclusion of Early Years Learners with Disabilities on Competency Based Curriculum Implementation in Primary Schools Nairobi City County. KENYA."*

This office has no objection and authority is hereby granted for a period, ending 27th September, 2021 as indicated in the request letter.

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



JAMES KIMOTHO
FOR: REGIONAL DIRECTOR OF EDUCATION
NAIROBI.



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




Appendix IX: Research Authorization From NACOSTI

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 758873	Date of Issue: 21/September/2021
RESEARCH LICENSE	
	
This is to Certify that Mr.. CLIFFORD OTIENO OWINO of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: IMPACT OF INCLUSION OF EARLY YEARS LEARNERS WITH DISABILITIES ON COMPETENCY-BASED CURRICULUM IMPLEMENTATION IN PRIMARY SCHOOLS NAIROBI CITY COUNTY, KENYA for the period ending : 21/September/2022.	
License No: NACOSTI/P/21/13040	
758873 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

 27/9/2021

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341666