

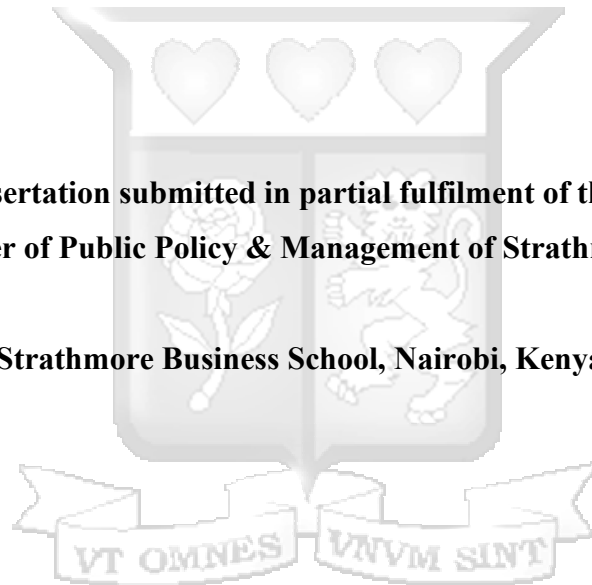
**THE EFFECTS OF TEACHER PREPAREDNESS ON COMPETENCY-BASED  
CURRICULUM IMPLEMENTATION IN PRIMARY SCHOOLS IN NAIROBI  
COUNTY KENYA**

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**A research project dissertation submitted in partial fulfilment of the requirements for the  
award of Master of Public Policy & Management of Strathmore University**

**Strathmore Business School, Nairobi, Kenya**



**MAY, 2025**

## DECLARATION

I affirm that this work has not been previously presented and authorized for the conferral of a degree by this or any other institution. To the utmost extent of my understanding and conviction, this dissertation does not include any material that was created by someone else, unless proper acknowledgment is provided within the proposal itself.

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## ABSTRACT

While the Competency-Based Curriculum (CBC) in Kenya is supported by a detailed policy framework, questions remain about the adequacy of its legal and regulatory backing—particularly in operationalizing certain policy provisions at the foundational levels of Pre-primary and Standards 1–3. Legal frameworks serve to formalize and enforce policy directives, yet some areas of the CBC policy—such as language of instruction, resource allocation, and teacher roles—may require further legal clarification to ensure consistent implementation across schools. Moreover, there have been concerns among stakeholders regarding the pace and process of CBC rollout, including the extent to which meaningful public participation was incorporated during its introduction. These concerns raise questions about the curriculum's sustainability and readiness for large-scale implementation. This study aimed to assess the effect of teacher preparedness on the implementation of the CBC in primary schools in Nairobi County, Kenya. Specifically, it sought to explore the legal and policy framework that governed primary education in Kenya and its adequacy in supporting CBC implementation; to identify the teaching factors influencing the successful rollout of CBC; to examine the teacher-government relationship and its role in facilitating CBC; and to provide policy recommendations to enhance CBC implementation. Guided by Constructivism theory and the Montessori Approach to Learning, this study adopted a descriptive survey methodology. The study focused on school principals and classroom teachers who taught Grades 1-4, as well as 20 curriculum support officers from the selected Sub-Counties. Population data sourced from the Teachers Service Commission revealed 203 public primary schools, 1710 teachers, and 203 head teachers in Nairobi County. Using Slovene's formula, a sample of 324 teachers was selected for the study. Questionnaires and key informant interview guides were developed for data collection, with both quantitative and qualitative analysis methods applied. Findings revealed that teacher competency, perceptions of the CBC, government support, and technological skills were crucial for successful implementation. Teachers with strong pedagogical skills and positive attitudes towards CBC were more effective in its application, while inadequate support and resistance hindered progress. The study recommends continuous professional development, enhanced teacher-government collaboration, and increased investment in technological training and infrastructure to ensure the successful and sustainable rollout of CBC in Kenyan schools.

**Keywords: Competency-Based Curriculum, teacher preparedness, legal framework, education policy, curriculum implementation, government support, Nairobi County, primary education, pedagogical skills, professional development**

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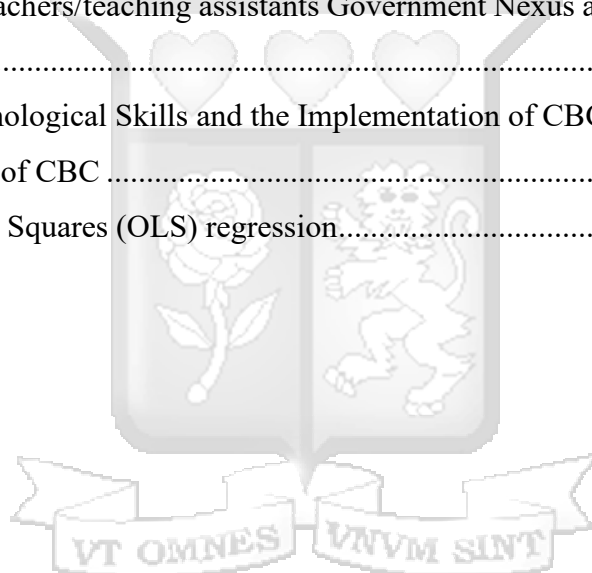
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## ACRONYMS AND ABBREVIATIONS

BECF: Basic Education curricular Framework

CBC: Competency-based curriculum

CEMASTEА: Centre for Mathematics, Science, and Technology in Africa

CSO: Curriculum Support Officer

EAC: East African Community

FY: Financial Year

GoK: Government of Kenya

ICT: Information, Communication & Technology

KICD: Kenya Institute of Curriculum Development

KISE: Kenya Institute of Special Education

KNEC: Kenya National Examinations Council

KNUT: Kenya National Union of Teachers

KNUT: Kenyan National Union of Teachers

KUCCPS: Kenya University and Colleges Central Placement Service

KUPPET: Kenya Union of Post-Primary Education Teachers

MTP: Medium Term Plan

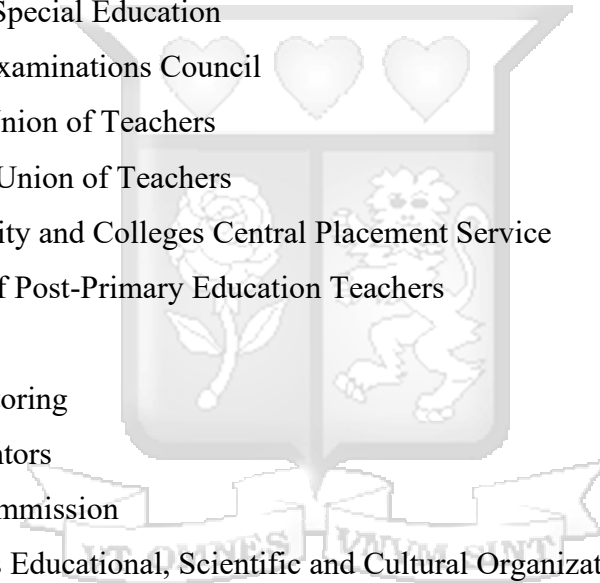
SBM: School-Based Mentoring

SBMs: School-Based Mentors

TSC Teachers Service Commission

UNESCO: United Nations Educational, Scientific and Cultural Organization

ZPD: Zone of Proximal Development



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## DEDICATION

I dedicate this research project to my husband and daughter for their moral support.



## DEFINITION OF TERMS

**Assessments:** Educators use a diverse range of techniques and instruments to assess, quantify, and record students' progress in academic preparedness, skill development, and educational requirements (KICD, 2018).

**Competence based curriculum:** The curricular system is developed by analyzing a possible or existing position in contemporary society. It aims to certify student growth by evaluating their performance in many parts of that role, which have been proven or proved (Edwards & Sanchez-Diaz, 2009).

**Curriculum:** An educational strategy designed to provide learners the necessary learning chances and experiences to achieve the educational aims and particular objectives mandated by Kenyan society (Republic of Kenya, 2018).

**Formative Evaluation:** Formative assessment is a systematic method used to continuously assess a student's understanding, educational requirements, and academic progress during the teaching time (Republic of Kenya, 2012).

**Implementation:** refers to the methods and strategies used by educators to efficiently implement the competency-based curriculum (Ondimu, 2018).

**Perception:** Refers to the comprehension, perspective, emotions, analysis, and perspectives about the competency-based curriculum (Ondimu, 2018).

**Quality Education:** An education system that equips all learners with the necessary skills and knowledge to be economically productive, build sustainable livelihoods, contribute to peaceful and democratic communities, and improve individual well-being (Republic of Kenya, 2018).

**Subject Content knowledge:** Mastery of the subject knowledge on the CBC (KICD, 2018).

**Summative Evaluation:** An assessment method used to measure a student's knowledge, skill development, and academic performance at the end of a certain term of training (Republic of Kenya, 2018).

**Technological skills:** Refers to the proficiency in using technical equipment, such as computers, phones, tablets, and projectors, to apply the Competency-Based Curriculum (CBC) throughout the facilitating process (KICD, 2018).

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the Study

The implementation of competency-based curricula has gained global traction as education systems strive to equip learners with practical skills, knowledge, and attitudes to navigate rapidly changing economic and social landscapes. Competency-based education (CBE) emphasizes learners' ability to demonstrate mastery of specific competencies through applied learning, aligning education with workforce demands and global challenges such as technological advancements and sustainable development (UNESCO, 2024). Globally, countries like Canada, Australia, and Finland have successfully integrated CBE, reporting improved learner engagement and employability, with 78% of CBE-adopting nations noting enhanced student outcomes in 2023 (World Bank, 2024). However, implementation challenges, including teacher readiness and resource constraints, persist, particularly in low- and middle-income countries, where only 55% of CBE programs meet quality benchmarks (UNESCO, 2024).

Regionally, African nations have embraced competency-based curricula to address educational disparities and foster skills relevant to local and global markets. Countries like Rwanda, South Africa, and Uganda have introduced CBE frameworks, with Rwanda reporting a 65% increase in learner participation in practical assessments since 2020 (African Union, 2023). Despite these gains, regional challenges include inadequate teacher training and limited technological infrastructure, with 40% of African teachers lacking sufficient CBE training in 2023 (UNESCO Institute for Statistics, 2023). These gaps hinder effective curriculum delivery, particularly in urban and rural schools, where implementation varies widely.

Locally, Kenya's Competency-Based Curriculum (CBC), introduced in 2017, represents a transformative shift from the knowledge-based 8-4-4 system to a learner-centered model. Designed to foster critical thinking, digital literacy, and practical skills, CBC aligns with Kenya's Vision 2030 and global education goals (Republic of Kenya, 2023). Implementation began in early childhood education and has progressed to primary and secondary levels, with full adoption targeted for 2029 (Kenya Institute of Curriculum Development [KICD], 2024). However, CBC implementation in Kenya, particularly in Nairobi County's primary schools, faces significant hurdles. A 2023 Ministry of Education report revealed that only 60% of primary schools in Nairobi County fully adhered to CBC standards, citing teacher unpreparedness and resource shortages as key barriers (Ministry of

Education, 2023). Additionally, a 2024 study found that 48% of Grade 6 learners in Nairobi's urban primary schools failed to demonstrate expected CBC competencies, raising concerns about curriculum effectiveness (Okeyo & Kanake, 2024). Teacher-related challenges are prominent, with 42% of primary school teachers reporting inadequate training and 35% expressing difficulties integrating digital tools into CBC delivery (Muchira, Morris, Wawire, & Oh, 2024). Furthermore, inconsistent learner engagement and parental involvement have led to uneven attendance rates, with some Nairobi schools reporting a 15% decline in regular attendance since CBC's rollout (Abdullahi, 2024).

These global, regional, and local trends underscore the need to investigate factors influencing CBC implementation, particularly teacher preparedness, which encompasses competency, perceptions, government collaboration, and technological proficiency (Akala, 2023). Globally, teacher training is a critical enabler of CBE success, yet in Africa, and specifically Kenya, gaps in training duration, frequency, and technological integration persist (Koskei & Chepchumba, 2023). Teachers' perceptions of CBC's relevance and ease of use also shape implementation outcomes, with negative perceptions linked to resistance in Nairobi County (Kubai, 2024). The teacher-government nexus, including resource provision and policy collaboration, further influences CBC delivery, with limited teacher involvement in decision-making cited as a barrier (Poulin, Matis, & Witt, 2025). Technological proficiency is increasingly vital, as CBC relies on digital tools, yet many Kenyan teachers lack basic computer literacy (Ngeno, 2024).

This study examines the effects of teacher preparedness on CBC implementation in primary schools in Nairobi County, Kenya. By exploring teacher competency, perceptions, government collaboration, and technological skills, the study seeks to identify barriers and enablers of effective CBC implementation, offering insights to enhance curriculum delivery and learner outcomes.

### **1.1.1 Teacher Preparedness in CBC**

Teacher preparedness in the context of the Competency-Based Curriculum (CBC) is an essential aspect that determines how effectively the curriculum can be implemented in classrooms. It refers to the extent to which teachers are equipped with the necessary knowledge, skills, and resources to successfully execute CBC principles. As CBC focuses on a learner-centered approach, teachers must be ready to adopt and adapt various teaching strategies that prioritize developing critical skills in students. Teacher preparedness is, therefore, a multifaceted concept that encompasses several components that collectively contribute to the effective implementation of CBC. These components include teachers' competency, perceptions of CBC, the teacher-government relationship, and

technological skills (Muchira, Morris, Wawire, & Oh, 2023).

One of the key components of teacher preparedness is teachers' competency. This refers to the teachers' ability to implement the curriculum effectively and meet the intended learning outcomes. To be competent in implementing CBC, teachers must undergo specialized training that equips them with the knowledge and skills required for delivering the curriculum in a way that fosters student engagement, critical thinking, and problem-solving (Koskei & Chepchumba, 2020). The quality of training, its duration, and frequency all influence how well teachers understand and apply CBC principles. Teachers' competency also involves their ability to integrate new methods into their everyday teaching practices, ensuring that they can effectively engage students in active learning. Without this competency, even well-designed curricula may fail to meet their objectives.

Another significant factor that influences teacher preparedness is teachers' perceptions of CBC. Teachers' beliefs about the value and relevance of CBC play a crucial role in their willingness to adopt and implement it effectively. If teachers view CBC as beneficial for their students and an effective means of fostering student learning, they are more likely to embrace the changes and put in the effort required for successful implementation (Akala, 2021). Teachers' perceptions are also influenced by the perceived ease of teaching within the CBC framework. If teachers find CBC too complex or difficult to implement, they may be hesitant to fully engage with it. Teachers' beliefs about the alignment of CBC with students' needs also significantly impact their approach to its implementation, highlighting the need for teachers to feel confident in the curriculum's effectiveness and relevance.

The teacher-government nexus, or the relationship between teachers and government bodies, is another critical component of teacher preparedness. Collaboration between teachers and government agencies ensures that teachers are well-supported in their efforts to implement CBC. This includes access to necessary teaching resources, professional development opportunities, and a robust support system that helps teachers navigate the challenges associated with CBC (Okeyo & Kanake, 2021). When teachers are involved in decision-making processes related to curriculum design and implementation, they are more likely to feel a sense of ownership and responsibility for its success. The provision of adequate resources and continuous support from the government are key to ensuring that teachers have the tools they need to implement CBC effectively. Furthermore, teachers'

technological skills are increasingly vital in the modern educational environment. Teachers who are proficient in using digital devices and educational technologies are better positioned to create engaging, interactive learning experiences that align with the flexible and dynamic nature of CBC (Murithi & Yoo, 2021). Teachers' ability to adapt to new technologies allows them to cater to diverse learner needs, making the integration of technology a fundamental aspect of CBC preparedness.

### **1.1.2 Implementation of the Competency-Based Curriculum in Kenya**

The implementation of the Competency-Based Curriculum (CBC) in Kenya refers to the process of adopting and applying a curriculum framework that emphasizes the development of learners' skills, attitudes, and values, rather than merely focusing on content knowledge. CBC aims to provide a more holistic education by equipping students with the competencies necessary to thrive in an ever-changing world. It involves shifting from traditional teacher-centered approaches to a learner-centered model, where students are actively engaged in their learning process, and the emphasis is on practical application, problem-solving, and critical thinking. The curriculum is designed to foster individual talents, creativity, and real-world skills, preparing students not just for exams, but for life (Muchira et al., 2023).

Key components of CBC implementation include curriculum design, teacher preparation, learning assessment, and resource allocation. The curriculum design is structured to cater to various age groups and learning stages, ensuring that students progress in a way that aligns with their cognitive and developmental stages. Teachers' preparedness is another crucial factor, as it involves equipping educators with the necessary skills to facilitate competency-based learning, which includes training on new teaching methods, continuous professional development, and adapting their teaching strategies to accommodate diverse learners (Koskei & Chepchumba, 2020). Furthermore, assessment under CBC focuses on continuous evaluation through formative assessments, portfolios, and project-based learning, as opposed to traditional summative assessments like exams. Resource allocation plays a critical role in ensuring that schools have the necessary infrastructure, materials, and technology to support the new curriculum (Kubai, 2023).

The effective implementation of CBC requires collaboration among various stakeholders, including the government, educators, parents, and the community. Support from the government in terms of policy frameworks, teacher training, and provision of educational materials is essential for the success of CBC. Moreover, the curriculum's success hinges on fostering strong partnerships between schools and communities to create a conducive learning environment. While CBC offers significant potential

for educational reform in Kenya, its implementation faces challenges, including insufficient teacher training, inadequate resources, and resistance to change from some educators. Nonetheless, ongoing efforts to address these challenges and strengthen the curriculum's foundations are crucial for its long-term success (Ngeno, 2023).

### **1.1.3 Primary schools in Nairobi County**

Primary schools in Nairobi County are at the forefront of Kenya's educational reforms, particularly with the introduction of the Competency-Based Curriculum (CBC). Nairobi, being the capital city of Kenya, has a diverse demographic that includes both urban and peri-urban communities, offering a unique blend of challenges and opportunities in the educational sector. These schools serve a wide range of students from different socio-economic backgrounds, which provides a complex environment for curriculum implementation. Nairobi County is home to some of the country's most progressive schools, making it an ideal setting for studying the dynamics of CBC adoption and its impact on teaching and learning. Primary schools in this context are expected to not only impart knowledge but also nurture skills that align with the broader educational objectives of CBC, including critical thinking, creativity, and problem-solving.

These schools play a pivotal role in shaping the future workforce of the country, particularly as Nairobi continues to develop as an economic and cultural hub. The study of primary schools in Nairobi County is vital because it offers insights into the challenges faced by educators, students, and policymakers in the capital. Understanding how the CBC is being implemented in Nairobi's primary schools helps assess the scalability of this new curriculum across the rest of the country. Moreover, with a large concentration of trained teachers and resources, Nairobi's primary schools are uniquely positioned to provide a comprehensive picture of how well the CBC framework is working in urban settings, which could inform strategies for improving implementation in other counties (Republic of Kenya, 2022).

The motivation behind this study stems from a growing concern over the slow pace of Competency-Based Curriculum (CBC) adoption in Kenyan primary schools. Despite substantial efforts by the government to roll out CBC, including extensive teacher training and the development of new teaching materials, the rate of implementation remains sluggish. This delay in full adoption can be attributed to a variety of factors, including teacher preparedness, resistance to change, inadequate

resources, and a lack of effective support systems in place. The researcher is motivated by the need to better understand the specific barriers teachers face in adopting CBC and the contextual factors that hinder its successful implementation in Nairobi's primary schools.

The study seeks to address these gaps by examining teacher preparedness, which includes specific factors such as teachers' competency in the new curriculum, their perceptions of CBC, the adequacy of government support, and their technological skills. Additionally, the research aims to investigate the impact of support systems, such as teacher training programs, curriculum resources, and governmental policy frameworks, on the ability of educators to implement CBC effectively. Ultimately, the study will assess how these variables influence student learning outcomes, particularly in terms of academic performance, engagement, and participation in classroom activities. By addressing these issues, the study aspires to contribute to more effective implementation strategies that can accelerate the adoption of CBC in Nairobi's primary schools and beyond.

The study focuses on several critical aspects that are central to the effective implementation of the CBC in Nairobi's primary schools. First, it investigates teacher preparedness, which encompasses a wide range of factors, such as the adequacy of teachers' training on CBC, their confidence in applying its methodologies, and their perceptions of its relevance to students' needs. Key to this investigation is identifying the specific factors that impact teachers' readiness to embrace the curriculum, such as the duration and quality of training, the availability of resources, and ongoing professional development opportunities.

Second, the research examines the support systems in place, such as government policy frameworks, teacher unions, educational resources, and community involvement. These support systems play a crucial role in facilitating or hindering the effective implementation of CBC. Understanding the types of support teachers receive and how they perceive this support can reveal gaps in the system that need to be addressed for CBC to be fully adopted. Finally, the study seeks to evaluate the impact of CBC implementation on learning outcomes. This involves assessing how well CBC has translated into improved academic performance, student participation, and overall engagement in the learning process. A thorough impact assessment is crucial to determine whether the shift to CBC is resulting in the intended educational benefits or if adjustments are necessary. The findings from this evaluation

will provide actionable insights into how the curriculum can be better tailored to meet the needs of both students and educators.

## **1.2 Statement of the Problem**

The implementation of the Competency-Based Curriculum (CBC) in Kenya, launched in 2017, aims to transform education by fostering practical skills, critical thinking, and learner-centered pedagogy, aligning with Vision 2030 and global education standards (Republic of Kenya, 2023). However, despite significant investments in teacher training and resource provision, CBC implementation in primary schools, particularly in Nairobi County, remains inconsistent. A 2023 Ministry of Education report indicated that only 60% of Nairobi's primary schools fully adhere to CBC standards, with teacher unpreparedness cited as a primary barrier (Ministry of Education, 2023). This gap in effective curriculum delivery has led to suboptimal student outcomes, with 48% of Grade 6 learners in Nairobi County failing to demonstrate expected CBC competencies in 2024 (Okeyo & Kanake, 2024). Teacher preparedness—encompassing pedagogical competence, technological proficiency, perceptions of CBC, and government support—is critical to bridging this implementation gap, yet it remains inadequately addressed, necessitating further investigation.

CBC implementation has been conceptualized in the literature as a multifaceted process involving teacher readiness, curriculum delivery, learner engagement, and systemic support (Akala, 2023). Scholars define successful CBC implementation as the ability of teachers to deliver learner-centered instruction, integrate technology, and achieve measurable learning outcomes, such as improved academic performance and active student participation (Muchira, Morris, Wawire, & Oh, 2024). Theoretical frameworks, such as the Concerns-Based Adoption Model (CBAM) and Technological Pedagogical Content Knowledge (TPACK), emphasize teacher preparedness as a dynamic interplay of knowledge, skills, attitudes, and external support (Koskei & Chepchumba, 2023). However, conceptual gaps persist due to an incomplete understanding of what constitutes teacher preparedness in the CBC context. For instance, studies often focus narrowly on training without exploring how teachers' perceptions of CBC's relevance or their technological competence influence implementation (Kubai, 2024). A 2024 review of CBC literature found that 70% of studies lacked a comprehensive definition of teacher preparedness, omitting critical dimensions like teacher-government collaboration or adaptability to CBC's learner-centered demands (Muchira et al., 2024). This conceptual ambiguity hinders the development of targeted interventions to enhance CBC delivery, as evidenced by

persistent teacher resistance and inconsistent curriculum adoption in Nairobi County (Ngeno, 2024). Contextual gaps further complicate CBC implementation in Nairobi County's urban primary schools. Unlike rural areas, where studies have highlighted resource scarcity (e.g., Wambua & Orodho, 2023), Nairobi's urban schools face unique challenges, including large class sizes (averaging 45–50 students per class), diverse student populations, and variable access to digital tools (Ministry of Education, 2023). A 2024 survey revealed that 35% of Nairobi teachers reported difficulties managing diverse learner needs under CBC, compared to 20% in rural areas (Okeyo & Kanake, 2024). These urban-specific factors, combined with limited research on Nairobi's CBC implementation (only 15% of CBC studies focus on urban contexts), underscore the need to examine how teacher preparedness operates in this setting (Kubai, 2024). Understanding these contextual nuances is essential for tailoring strategies to improve CBC outcomes in Nairobi County.

Methodological gaps also limit the understanding of CBC implementation. Existing research predominantly employs qualitative methods, such as teacher interviews, to explore preparedness, with 80% of studies lacking quantitative measures of teaching effectiveness or student outcomes (Koskei & Chepchumba, 2023). For example, while qualitative data highlight teachers' struggles with CBC pedagogy, there is little empirical evidence linking preparedness to measurable indicators like learner competency or attendance rates (Ngeno, 2024). A 2023 meta-analysis noted that only 25% of CBC studies in Kenya used mixed methods, limiting their ability to assess the causal relationship between teacher preparedness and implementation success (Muchira et al., 2024). This methodological shortfall restricts the ability to evaluate CBC's impact on education quality comprehensively.

This study addresses these conceptual, contextual, and methodological gaps by investigating the effects of teacher preparedness on CBC implementation in Nairobi County's primary schools. By examining specific dimensions of preparedness—competency, perceptions, technological proficiency, and teacher-government collaboration—using a mixed-methods approach, the study aims to provide a holistic understanding of how teacher readiness influences CBC success and learner outcomes, offering evidence-based recommendations for policy and practice.

### **1.3 Overall Objective of the Study**

The aim of this study was to assess the effects of teacher preparedness on competency-based curriculum implementation in primary schools in Nairobi county Kenya.

## **1.4 Research Objectives**

The following were the specific research objectives:

1. To establish the effects of teachers competency on the implementation of the competency-based curriculum in Kenya.
2. To determine the relationship between teachers' perceptions of CBC and the implementation of the competency-based curriculum in Kenya.
3. To establish how the teacher-government nexus could contribute to the successful implementation of CBC.
4. To establish the effects of teachers' technological skills on competency-based curriculum implementation in primary schools in Nairobi county Kenya.

## **1.5 Research Questions**

1. What is the influence of teachers' competencies on the implementation of the Competency-Based Curriculum in Kenya?
2. What role do teachers' perceptions of the Competency-Based Curriculum play in its implementation in Kenya?
3. What is the contribution of the teacher-government relationship to the effective implementation of the Competency-Based Curriculum?
4. What is the role of teachers' technological skills in the implementation of the Competency-Based Curriculum in primary schools in Nairobi County, Kenya?

## **1.6 Significance of the Study**

### **1.6.1 Policy Significance**

This study holds considerable policy significance, particularly for policymakers in the Ministry of Education and other stakeholders involved in curriculum development and teacher training. By highlighting the key factors that influence teacher preparedness for CBC, the findings will inform the development of targeted policies that address the gaps in teacher training, resource allocation, and support systems necessary for successful CBC implementation. The study could also contribute to the refinement of existing policies on teacher professional development and curriculum support, ensuring they align more closely with the specific needs of teachers in urban primary schools like those in Nairobi County.

### **1.6.2 Practical Significance**

From a practical standpoint, the study will offer valuable insights for education administrators, school heads, and teacher trainers in Nairobi and beyond. The research outcomes can guide the development of localized training programs, resources, and interventions that equip teachers with the necessary skills and tools to effectively implement CBC. Additionally, it will offer practical recommendations for improving support systems, such as government and institutional collaboration, which are critical for enhancing teachers' competency levels and their ability to integrate technology in classrooms. Ultimately, the study seeks to contribute to the overall improvement of CBC implementation, ensuring that teachers are better prepared to meet the demands of the new curriculum.

### **1.6.3 Theoretical Significance**

Theoretically, this study will contribute to the body of knowledge on curriculum implementation, particularly in the context of teacher preparedness for competency-based frameworks. While much research has focused on curriculum reforms in general, few studies have specifically explored the link between teacher preparedness and the effective implementation of CBC in Kenya's primary schools. This study will fill this gap by examining the key dimensions of teacher preparedness, such as teacher competency, perceptions, support systems, and technological skills, within the CBC framework. The findings are expected to contribute to the development of a conceptual framework that can be applied to other education systems implementing competency-based approaches.

### **1.7 Scope of the study**

This study focused on the effect of teacher preparedness on the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, Kenya. The study focused on primary schools in Nairobi County, where the implementation of CBC faced unique challenges due to the urban context. The scope included the exploration of various factors affecting teacher preparedness for CBC implementation. These factors included teachers' competency levels, their perceptions of CBC, the support systems available to them (such as government interventions and professional development opportunities), and their technological skills. This was carried out in primary schools in Nairobi County.

### **1.8 Organization of the Study**

The dissertation was organized as follows: Chapter One provided the foundation for all the chapters as it discussed the background of the study through a preliminary literature review, highlighting the

historical reforms in the education sector and the implementation of CBC. This chapter articulated the statement of the problem, objectives, significance, limitations of the study, and definition of terms within the study context. Chapter 2 was the literature review based on the specific objectives, followed by the methodology in Chapter 3. Chapter 4 presented the results and findings, while Chapter 5 presented the discussion, conclusion, and recommendations.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

This chapter focuses on the worldwide and regional literature about the potential and difficulties encountered by teachers in implementing the competency-based curriculum (CBC). The chapter also examines the theories pertinent to the research aims and gives the conceptual framework upon which the investigation is based. Subsequently, this research presents empirical studies, including their techniques, that align with the study aims and address the identified gaps.

### 2.2 Theoretical Framework

This study was guided by constructivism theories and the Montessori Approach to Learning

#### 2.2.1 Constructivism Theories

The anchoring theory is Constructivism Theories. The constructivist theory has been developed by several influential educators and psychologists, including Jean Piaget, Lev Vygotsky, Jerome Bruner, John Dewey, and more recently, Howard Gardner and John Hattie. Constructivism posits that learners actively construct their own understanding of the world by engaging in hands-on, experiential learning processes (Bada & Olusegun, 2015). Rather than passively receiving knowledge, learners engage in critical thinking and problem-solving, applying new information to their prior experiences. The theory emphasizes that knowledge is built upon the learner's prior knowledge and that learning occurs through meaningful social interactions and personal experiences. Additionally, it emphasizes that learners should be viewed as active participants in their education, taking responsibility for their own learning, and developing understanding through discovery, collaboration, and reflection (Fosnot, 2013).

Various advocates of the constructivist theory argue that individuals actively build knowledge via their engagement in diverse cognitive and sensory experiences. Constructivism is an educational theory that posits that learners develop their own understanding of the world via experiences and interactions. According to this theory, learning is not only about obtaining or transmitting information, but rather a process of actively producing knowledge. Notable supporters of this approach include Dewey, Vygotsky, Piaget, Bruner, and more recently Gardner and Hattie (Scholnik Kol & Abarbanel, 2006).

## **Dewey's Social Constructivism**

Dewey believed that the curriculum should finally yield pupils who had the capacity to successfully navigate the contemporary reality. Hence, curriculum must not to be shown as complete abstractions, but rather should include the child's preconceived notions and integrate the child's perspective of their own world. Dewey used four instincts, or impulses, to delineate the manner in which children's behavior might be characterized (Mann & MacLeod, 2015). Dewey categorizes the four inclinations as social, constructive, expressive, and artistic. The curricula should cultivate a systematic understanding of the child's environment. His intention was to use professions as a means of linking scaled-down representations of essential living activities with classroom activities. Dewey aimed to achieve this objective by integrating topic areas and resources. Through this action, he established correlations between academic disciplines and the child's personal experiences. According to Dewey, education is a process of personal development and not a final goal. Therefore, the curriculum should be derived from the students' interests and should focus on practical, experiential learning rather than theoretical concepts. This approach highlights the need of ongoing, collaborative, and hands-on learning. This highlights the practical component of the fundamental education curriculum in the ongoing curriculum revisions (Yoders, 2014).

Dewey's Social Constructivism underpins the CBC's emphasis on experiential, hands-on learning and the development of competencies through learner-centered pedagogy. Dewey advocated for curricula that are grounded in learners' real-life experiences, encouraging educators to integrate students' interests and social environments into the teaching process. In the context of this study, Dewey's theory highlights the importance of teacher preparedness in designing and delivering practical, integrated learning experiences that reflect students' realities. Teachers must be adequately trained and equipped to shift from traditional instruction to the learner-driven approaches demanded by CBC. Therefore, Dewey's principles support the study's focus on teacher competency, pedagogical skills, and curriculum delivery as critical factors influencing the successful implementation of CBC in Nairobi County.

## **Vygotsky's Social-Cultural Development Theory**

The social constructivism or social learning theory put out by Lev Vygotsky, which emphasizes the importance of group work in the learning process, is the theoretical foundation of this study. Soviet psychologist Lev Vygotsky, who came to prominence during the revolution, formulated the notion (Pathan, 2018). According to Vygotsky, the most influential factors in shaping the learning process are interactions between people, whether those people be adults, other students, or teachers. On top of that, he was of the opinion that bigger social, cultural, and historical elements impact both learning and the classroom setting. An involved community and family are necessary for a child's basic learning, which Vygotsky (1978) emphasized as happening via social interaction.

Vygotsky's socio-cultural theory highlights the significance of social interactions in teaching and learning. According to this theory, interactions with teachers, classmates, and instructional materials have a profound impact on the cognitive and emotional growth of learners. The notion posits that learning occurs via social interaction and touch between learners. Learners engage in the process of meaning negotiation with others in their surroundings, and they accomplish objectives by actively and indirectly engaging with the instructor, classmates, educational resources, and the whole environment present in the given context. The theory described by Lawton (2017) is the foundation of the basic education curriculum framework. It focuses on conceptualizing and planning the required changes in thinking that will enable the creation of engaging learning environments. These settings aim to inspire all learners and support them in reaching their full potential. The Zone of Proximal Development (ZPD) is a crucial concept in this theory. It refers to the difference between what children can do alone and what they can accomplish with the guidance of more competent individuals, such as parents and teachers (Kim & Baylor, 2006). It pertains to the phenomenon where youngsters, in the process of acquiring a certain skill or information, initially lack the ability to do the activity independently but are able to do so with the guidance of an adult. Educational experiences include both the domestic and extracurricular settings. This hypothesis is pertinent to the present research because after learners leave school and return home, parents assume responsibility for helping them complete tasks set by teachers and prepare necessary materials (Orla, 2000).

This idea posits that children are considered prepared not only when they possess their own knowledge, but also when they get additional assistance and support, which is likely to be provided

by both parents and teachers. Consequently, parental engagement in children's learning becomes necessary. The child's crucial learning occurs through social interaction with a proficient instructor. Consequently, the student seeks comprehension by following the instructions or actions provided by the parent or teacher, and subsequently internalizes the information or actions. This process guides the child's achievement and fosters the development of advanced thinking skills. Parents and families are considered primary educators because they possess knowledge about their own children's desires and requirements. They can effectively communicate their child's talents and traits to teachers (Wood, 1988). In the present CBC, parents are expected to act as co-educators alongside teachers. This involves assessing their children's inherent strengths and abilities and collaborating with teachers to foster their development (Ailincal et al., 2016). Vygotsky's theory highlights the need of mediation from others in the learning process of children, as opposed to adults who can learn independently. He referred to this transition from relying on others for guidance to acquiring autonomous learning skills as scaffolding. He discovered an ideal position inside scaffolding where learning occurs most effectively and referred to it as the Zone of Proximal Development (ZPD).

Vygotsky's Socio-Cultural Development Theory emphasizes the role of social interaction, scaffolding, and guided learning within the Zone of Proximal Development (ZPD), making it highly applicable to CBC implementation. The theory asserts that meaningful learning occurs when learners engage with more knowledgeable others—teachers, peers, and parents—in a collaborative environment. This aligns closely with CBC's emphasis on co-learning, formative assessment, and parental involvement. In this study, Vygotsky's framework supports the exploration of how teachers' ability to facilitate interactive, learner-centered environments and collaborate with families influences CBC rollout. Effective teacher preparedness—particularly in communication, instructional strategies, and understanding the social context of learners—is therefore essential for enabling students to progress within their ZPD and achieve intended competencies.

Constructivist theories, especially Dewey's and Vygotsky's contributions, are highly relevant to this study as they emphasize the importance of learner-centered education and the role of the environment and social interactions in shaping learning outcomes. The Competency-Based Curriculum (CBC) in Kenya, which aims to develop students' competencies through active, experiential, and collaborative

learning, draws heavily on constructivist principles. This theoretical framework helps to understand how learners engage with the curriculum and how their cognitive and social development is supported by teachers, peers, and parents.

### **2.2.2 The Montessori Approach to Learning**

The Montessori Approach to Learning is the supporting theory. The Montessori Method was developed by Dr. Maria Montessori, an Italian physician and educator, in the early 20th century. It is a child-centered approach to education that emphasizes the importance of self-directed activity, hands-on learning, and collaborative play. The Montessori Approach, created by Maria Montessori (1870-1952), promotes the cultivation of self-reliance, collaboration, and dynamic learning in accordance with the individualized progress of each child. This method emphasizes the development of uniqueness and freedom in children, as stated by Montessori (2013). Children are inherently interested and motivated to learn, thus any educational system that adopts this method must align with each learner's unique growth rate. It not only prioritizes academics, but also takes a comprehensive approach and focuses on the development of all talents, rather than just acquiring specialized knowledge. This approach is focused on the needs and well-being of the child and considers them to be crucial in driving any advancements in education. This is particularly important due to the legal obstacles and the adoption of the Competency-Based Curriculum (CBC). Conversely, the education systems traditionally enforced on children in Kenya have mostly prioritized the teacher's role, neglecting the unique requirements of the learner. Within the principles of the Montessori curriculum, the practice of punishing a child and imposing knowledge on them from a position of authority is discouraged. This strategy offers children options that are designed to cultivate autonomous thinkers capable of making their own choices and exploring the world around them via a practical approach, rather than passively receiving knowledge from adults (Saha & Adhikari, 2023).

An essential distinguishing aspect of the Montessori technique is the physical environment in which a child learns, specifically in terms of its physical arrangement. Hence, the learning environment must be furnished with easily accessible and meticulously arranged learning resources, while also being visually appealing from the student's standpoint, and limited to the specific elements the instructor intends for the learner to encounter. The content should include elements that may be enjoyed by children of all ages, with diverse traits and interests. Montessori classrooms facilitate unrestricted

inquiry and learning during continuous periods of time, maximizing the efficacy of their educational encounters. Montessori teachers play a less prominent role compared to teachers in other learning methods. Their main purpose is to assist a child's independent learning process. They decide which learning materials will be available and how they will be organized. After that, they step back and allow the learner to freely explore the environment (Isaacs, 2018).

Teachers play a crucial role in implementing and facilitating the Competency-Based Curriculum (CBC). They are responsible for ensuring that students have access to the accessible textbooks, maintaining and updating relevant data, and retrieving them in a timely manner. They engage in curriculum development and create lesson plans on a daily, monthly, and yearly basis. Their main objective is to impart comprehensive information to children, ensuring that they acquire the necessary skills and understanding to successfully transition to the following academic year. Additionally, they assist youngsters in acclimating and resolving conflicts among diverse persons inside the classroom (Marks, 2016).

In the educational ecosystem, various stakeholders play crucial roles in fostering a conducive learning environment and supporting students' holistic development. Head Teachers serve as key leaders, cultivating a positive climate within the school and overseeing curriculum implementation to ensure effective teaching and learning. The school board shoulders the responsibility of ensuring high-quality education and learning materials, while also advocating for favorable working conditions for teachers and staff. Additionally, they engage with local authorities to uphold the school's reputation as an educational expert. Complementing these efforts, professionals like social workers, volunteers, and psychologists contribute specialized support, particularly for students with diverse needs, fostering inclusivity and skill development. Meanwhile, support staff play an essential role in maintaining the school's physical environment, ensuring cleanliness, security, and logistical support, thereby creating a conducive atmosphere for teaching and learning. Together, these stakeholders form a collaborative network dedicated to nurturing student success and well-being within the educational community (İslamoğlu, 2018).

The Montessori Approach supports the notion of holistic education and underscores the importance

of fostering students' independence, critical thinking, and collaborative skills. These principles align well with the goals of the Competency-Based Curriculum (CBC) in Kenya, which aims to nurture not only academic knowledge but also life skills and personal development. The Montessori emphasis on creating a learning environment where children have freedom within structure supports the idea of learner-centered education, where the focus is on the learner's needs, interests, and pace of learning.

The Montessori Approach to Learning aligns seamlessly with the objectives of this study, which explores the integration of child-centered methodologies within the framework of the Competency-Based Curriculum (CBC) in Kenya. By emphasizing individualized learning, autonomy, and the holistic development of learners, the Montessori theory supports the CBC's aim to nurture not only academic competencies but also critical thinking, creativity, and social-emotional skills. The Montessori principle of allowing children to learn at their own pace in a prepared environment resonates with the CBC's focus on learner-centered instruction, where teaching is tailored to meet the unique needs, interests, and abilities of each pupil. Furthermore, the diminished authoritative role of the teacher in Montessori learning reflects the shift in CBC from teacher-dominated instruction to facilitative, interactive learning. Therefore, the Montessori approach provides a strong theoretical foundation for this study by reinforcing the importance of learner agency, experiential learning, and the cultivation of life skills in education.

## **2.3 Empirical Review**

### **2.3.1 Teachers Competency and Implementation of Competency Based Curriculum**

Teachers' competency plays a pivotal role in the successful implementation of the Competency-Based Curriculum (CBC) globally. As education systems worldwide continue to evolve, there has been a shift towards more learner-centered approaches that prioritize the development of critical skills and competencies over traditional knowledge acquisition. According to Muchira, Morris, Wawire, and Oh (2023), teachers' proficiency in pedagogical skills, subject knowledge, and technological competence is critical for adapting to and delivering CBC effectively. The integration of digital tools in classrooms, for instance, has been identified as a key factor in enhancing student engagement and learning outcomes (Murithi & Yoo, 2021). This trend is observed across countries such as Finland and Singapore, where high teacher competency is associated with the successful implementation of competency-based frameworks, resulting in improved educational outcomes.

Globally, teacher training programs have undergone significant transformations to align with the demands of modern educational frameworks like CBC. However, a gap in teachers' technological proficiency has been reported as a barrier to effective implementation in many regions (Akala, 2021). In countries like Canada, teacher preparedness is often linked to the integration of technology in classrooms. A study by Mauki, Kitur, Ileri, and Ngala (2020) highlighted that educators who receive ongoing professional development in digital tools and active learning strategies are better equipped to implement CBC effectively. The lack of professional development in certain regions, however, remains a challenge, limiting the full potential of CBC. This gap is particularly pronounced in developing countries, where digital literacy levels among educators are often low (Kubai, 2023).

The successful implementation of CBC depends heavily on teacher competencies, especially in adapting to diverse learning environments and addressing the needs of individual students. The ability to tailor teaching strategies to accommodate students' strengths and weaknesses is central to CBC's objectives (Koskei & Chepchumba, 2020). This shift towards personalized learning requires educators to be highly skilled in assessment and feedback, enabling them to provide continuous support and adjust learning goals accordingly. In the UK, a study by Okeyo and Kanake (2021) found that schools with well-trained and competent teachers were better able to implement CBC effectively, demonstrating the importance of teacher expertise in driving educational reform.

In Africa, the adoption of CBC is gaining momentum as countries aim to address the challenges of education quality, relevance, and access. However, the success of CBC implementation across the continent hinges on the competencies of teachers. In a study conducted by Gichuru et al. (2021) in Kenya, it was found that teachers' readiness to implement CBC is directly correlated with their understanding of modern pedagogical approaches, including the integration of ICT in teaching. This underscores the need for comprehensive teacher training and professional development programs that focus not only on subject knowledge but also on pedagogical methods and digital skills. African nations like South Africa and Kenya are increasingly emphasizing the importance of teachers' competencies to support the shift toward CBC in their education systems.

In the African context, there is a notable variation in the extent to which teachers are prepared to implement CBC, largely due to disparities in access to professional development opportunities and

educational resources. In Uganda, for example, a study by Abdullahi (2022) found that while some teachers were confident in their ability to implement CBC, many struggled due to a lack of adequate training and teaching materials. This challenge is compounded by inadequate infrastructure and limited access to digital tools, which are essential for the effective delivery of CBC. The research emphasized that teacher competency is a critical factor in overcoming these barriers, advocating for targeted interventions to improve both teacher skills and access to resources.

The role of teacher competency in implementing CBC in African countries is further complicated by socio-economic factors, including teacher salaries, workload, and the overall education environment. In countries like Ghana, where a significant portion of teachers still rely on traditional methods, the introduction of CBC has been met with resistance due to a lack of confidence in the required pedagogical shift (Momanyi & Rop, 2019). Teacher competency, particularly in adapting to new curriculum approaches, is a central concern in African educational reforms, and addressing these issues is essential for the long-term success of CBC across the continent. Research indicates that professional development programs tailored to local contexts and supported by government policy are key to enhancing teacher competencies for effective CBC implementation.

In Kenya, the implementation of the Competency-Based Curriculum (CBC) is seen as a way to improve the quality of education by focusing on skills and competencies rather than rote learning. According to the Kenya Institute of Curriculum Development (KICD, as cited in Ngeno, 2023), teachers are at the heart of this transition, and their competencies in curriculum delivery are crucial to its success. However, studies have shown that many teachers face challenges in implementing CBC effectively due to limited training and resources. A survey by Kubai (2023) found that teachers in Kenya often feel ill-prepared to deliver CBC due to gaps in their technological and pedagogical skills. This is particularly evident in rural schools where teachers have limited access to professional development opportunities and teaching aids that support the new curriculum.

Teacher competency in Kenya has been further highlighted as a barrier to the successful implementation of CBC. A report by the Teachers Service Commission (TSC, 2020) revealed that while there is a positive outlook towards the curriculum, many educators lack the necessary skills in technology integration and innovative teaching methods. The study noted that teachers who are not

well-versed in the use of digital tools struggle to implement CBC effectively, as they cannot leverage technology to enhance learning and assess students' progress. This has led to calls for targeted in-service training programs aimed at equipping teachers with the skills necessary to thrive under the CBC framework (Odera & Atieno, 2022).

In light of these challenges, several initiatives have been launched in Kenya to improve teacher competencies for CBC implementation. For instance, the Ministry of Education, in collaboration with development partners, has been organizing training workshops for teachers on CBC pedagogy and digital literacy (Gichuki, 2021). While these efforts are commendable, they are often insufficient to meet the scale of the challenge, particularly given the rapid expansion of CBC in primary schools. More comprehensive and continuous professional development programs are needed to ensure that teachers not only understand the CBC framework but also possess the practical skills to deliver it effectively. Furthermore, the success of these initiatives will depend on adequate funding, teacher motivation, and the provision of appropriate teaching materials that support the new curriculum.

### **2.3.2 Teachers' Perceptions in CBC and the Implementation of the Competency-Based Curriculum in Kenya**

In this research, perceptions denote the manner in which instructors understand the Competency-Based Curriculum (CBC). Research indicates that educators' attitudes significantly impact their adoption and subsequent execution of curriculum modifications. Muchira, Morris, Wawire, and Oh (2023) assert that teachers' perceptions might affect their attitudes toward change; hence, they are more inclined to embrace educational reforms if they believe these changes meet their own needs and those of the students. Teachers' attitudes may affect curriculum implementation, as shown by Koskei and Chepchumba (2020), who aimed to assess teachers' perceptions of curriculum development competence in Kenya. The findings indicated that instructors saw themselves as inadequate in managing fundamental elements of the curriculum, such as lesson preparation, and their judgments showed no significant variation based on gender or educational attainment.

A study conducted by Ngeno (2023) in Kenya examined the impact of teachers' attitudes on CBC implementation in primary schools. The findings indicated that most instructors were dissatisfied with their involvement in curriculum development, as they were only engaged in the implementation phase.

The research emphasized the need to include instructors in curriculum development since they comprehend the requirements and interests of learners. The absence of teacher input in the curriculum preparation process leads to a perception that the curriculum is being imposed upon them during implementation.

Kubai (2023) performed a study in Nairobi County, Kenya, to ascertain teachers' perspectives on the implementation of competency-based assessments within CBC. The research investigated the methods by which instructors developed lesson plans, implemented assessments, and evaluated the updated curriculum in their classroom practices. The results indicated that the absence of in-service training for teachers to enhance their abilities in competency-based assessment led to unfavorable opinions among educators, hence impacting the program's implementation. The analyzed research clearly indicates that educating teachers in curriculum implementation would foster a positive perception of the curriculum, thereby enhancing the implementation process.

Teacher perceptions have been identified as a factor influencing curriculum implementation, as emphasized by Gichuru et al. (2021), who investigated the impact of teachers' perceptions on curriculum transitions in Kenya. The study found that educators had unfavorable views of CBC due to insufficient in-service training on its implementation. The report advised the Ministry of Education and other stakeholders to collaborate closely to assist teachers in properly implementing the curriculum. These findings confirm that insufficient teacher preparation might foster negative perceptions about curriculum implementation.

Teachers' perspectives may affect the successful implementation of a curriculum, as shown by Abdullahi (2022), who examined primary school teachers' views on CBC in Kenya. The research revealed that instructors' perceptions of CBC were poor, leading to slow adoption and ineffective implementation across schools. The research advocated for the decentralization of the curriculum by enhancing teacher involvement in the curriculum creation process to foster a sense of ownership from the outset.

Teachers' perceptions impact the execution of curriculum changes in schools, as shown by Akala (2021), who conducted research on teachers' views regarding the CBC implementation process in

Kenya. The findings indicated that teachers' attitudes were largely unfavorable due to insufficient understanding of CBC, leading to its limited implementation in selected schools. The study advocated for more teacher training through seminars and workshops. This suggests that educators' negative perceptions toward a curriculum might obstruct its successful implementation.

Ngeno (2023) conducted a study on teachers' perceptions of CBC in Kenyan public primary schools. The results indicated that the majority of instructors had unfavorable attitudes toward the curriculum, which hindered its effective implementation. The research revealed that these negative perceptions were exacerbated by various challenges faced by teachers in CBC implementation, including inadequate teaching resources, a lack of capacity development, and limited awareness initiatives by stakeholders. Furthermore, the research disclosed that educators had little comprehension of CBC, thereby hindering their ability to execute it effectively in the classroom. The study recommended comprehensive training and retraining programs for educators to improve CBC implementation.

Teachers' perceptions of the Competency-Based Curriculum might affect its implementation, as noted by Okeyo and Kanake (2021), who studied the challenges obstructing CBC implementation in Kenyan primary schools. The results indicated that the unsuccessful implementation process was largely attributed to teachers' unfavorable perceptions of the curriculum. It was suggested that instructors need further training in CBC methodologies. The study contended that a comprehensive understanding of the curriculum by instructors would alter their perceptions of it as complex and burdensome, thus improving the execution process. The findings indicate that teacher training is essential, as it affects their perception of the program.

Mauki, Kitur, Ileri, and Ngala (2020) performed a study in Kenya to assess preschool teachers' impressions of play-based learning in CBC implementation. The findings indicated that educators had favorable views toward the use of a play-based instructional strategy. Nevertheless, the adoption of this method in classrooms was minimal due to instructors' insufficient knowledge and abilities for successful implementation. The research suggests that while instructors may have positive perceptions of CBC, they may fail to implement it successfully if they lack the requisite skills and knowledge for execution. The planned research will evaluate pre-primary school teachers' impressions of CBC and their proficiency in using the evaluation rubrics.

A research was undertaken in Kenya by Ondimu (2018) to assess teachers' preparedness to apply the Competency Based Curriculum in private preschools in Dagoretti North Sub-County, Nairobi County. The survey aimed to ascertain preschool instructors' attitudes toward the CBC. The research used a descriptive survey methodology, focusing on 38 private schools and 320 preschool educators. The survey revealed that the majority of preschool instructors (37.6%) saw the CBC as a favorable initiative; conversely, 11.1% opposed its implementation, and 1.1% preferred the 8.4.4 curriculum over the CBC. The results from the reviewed research indicate that the majority of preschool instructors in private schools had favorable opinions about the implementation of CBC.

### **2.3.3 Contribution of Teacher-Government Nexus to the Successful Implementation of CBC**

In Kenya, the collaboration between teachers and the government forms the cornerstone of successful implementation of the Competency-Based Curriculum (CBC). This partnership is vital for ensuring that the ambitious educational reforms set forth by the government translate effectively into the classroom environment. The government's role in crafting educational policies and frameworks is pivotal. Through extensive research, consultation with stakeholders, and engagement with educational experts, the government designs a curriculum that resonates with the evolving needs of society and aligns with global educational standards. Teachers rely on these policies as guiding principles in their day-to-day teaching practices, ensuring that their instruction remains aligned with the overarching objectives of the CBC. The government takes responsibility for resource allocation, ensuring that schools have the necessary funding, infrastructure, and teaching materials to support the implementation of the CBC. This includes investing in teacher training programs to equip educators with the requisite pedagogical skills and content knowledge necessary to effectively deliver the curriculum. By prioritizing equitable distribution of resources, the government ensures that all schools, regardless of their location or socioeconomic status, have the support needed to implement the CBC successfully (Rwigema & Andala, 2022).

The government plays a pivotal role in crafting the educational policies and frameworks that underpin the CBC. Through extensive research, consultation, and collaboration with education experts and stakeholders, the government designs a curriculum that reflects the evolving needs of the society and the demands of the global economy. Teachers rely on these policies as guiding principles in their daily instructional practices, ensuring alignment with the overarching goals of the CBC. Indeed, in Kenya,

the government's role in crafting educational policies and frameworks is pivotal, especially concerning the Competency-Based Curriculum (CBC). Extensive research, consultation, and collaboration with education experts and stakeholders are undertaken to design a curriculum that accurately reflects the evolving needs of society and aligns with the demands of the global economy. Teachers heavily rely on these policies as guiding principles in their daily instructional practices. They use them to structure their lesson plans, teaching methodologies, and assessment strategies, ensuring alignment with the overarching goals of the CBC. This alignment is critical for ensuring consistency and coherence across schools and grade levels, thereby maximizing the effectiveness of the curriculum in preparing students for the challenges and opportunities of the 21st century.

Moreover, the government shoulders the responsibility of resource allocation, providing the necessary funding, infrastructure, and teaching materials to support CBC implementation. This includes investing in teacher training programs to equip educators with the pedagogical skills and content knowledge needed to effectively deliver the curriculum. By prioritizing resource equity and accessibility, the government ensures that all schools, regardless of their location or socioeconomic status, have the tools and support needed to implement the CBC successfully (Murithi & Yoo, 2021).

Additionally, the government oversees the monitoring and evaluation of CBC implementation, employing robust assessment mechanisms to gauge its effectiveness and identify areas for improvement. Through regular feedback loops and data-driven insights, policymakers can make informed decisions to refine the curriculum and address emerging challenges. Teachers, in turn, play a crucial role in this process by providing firsthand observations and insights from the classroom, helping to shape policies that resonate with the realities of teaching and learning (Amunga, Were, & Ashioya, 2020).

Furthermore, the teacher-government nexus extends beyond the confines of the school walls, encompassing broader community engagement efforts. Together, teachers and the government collaborate to mobilize parents, community leaders, and other stakeholders in supporting CBC implementation. By fostering a sense of collective ownership and shared responsibility for education, this partnership strengthens the social fabric and creates a conducive learning environment for all students (Silas, 2020).

### **2.3.4 Teachers' Technological skills and the Implementation of CBC**

Technology serves as a fundamental catalyst for sustained competitiveness, with the capacity to enhance the economic growth of nations (Masoum, 2015). Consequently, nations are exploring the use of ICT in educational institutions to equip students with digital literacy. The Rwanda Education Board (2017) asserts that the incorporation of ICT in the Competency-Based Curriculum (CBC) would facilitate dynamic teaching and learning activities, hence enhancing learners' comprehension of ideas efficiently and expeditiously. The use of technology in pre-schools has substantially improved the educational system and stimulated interest and passion among students. Kapur (2019) asserts that when educators use computers and the internet to enhance students' understanding of academic subjects, they may invigorate their mindsets and foster enthusiasm.

Rupia (2022) examined the pivotal role teachers play in managing learning materials within the CBC framework. The study emphasized that effective planning, organization, and utilization of learning materials are essential for achieving CBC objectives. It was observed that neglecting the use of such materials could hinder curriculum implementation. The study recommended the establishment of dedicated units for the development of learning materials and the integration of this aspect into teacher training curricula to enhance CBC delivery.

Cherotich (2023) investigated how teachers' preparedness influences CBC implementation in public primary schools in Bomet East Sub-County, Kenya. The research utilized a descriptive survey design, involving head teachers, grade one to three teachers, and Curriculum Support Officers. Findings indicated that teachers' readiness, encompassing their skills and knowledge, significantly affects the successful adoption of CBC. The study underscored the necessity for comprehensive training programs to equip teachers with the competencies required for effective curriculum execution.

Adongo et al. (2024) assessed the resource development and utilization skills of Pre-Primary II teachers for CBC implementation in language activities in Nambale Sub County, Kenya. Employing a mixed-methods approach, the study involved head teachers, teachers-in-charge, ECDE teachers, and education officers. Results revealed a significant correlation between teachers' abilities to develop and utilize resources and the effective implementation of CBC in language activities. The study

recommended early teacher preparation, support for resource development, structured planning of learning experiences, and capacity-building initiatives to enhance CBC implementation.

Mwang'ombe (2021) explored teachers' understanding and skills concerning CBC implementation in Kenyan schools. The study highlighted that inadequate teacher preparation, particularly in technological skills, poses a challenge to effective CBC adoption. It was noted that many educators lacked sufficient technological competencies necessary for integrating ICT into teaching and learning processes. The study recommended extensive in-service training to enhance teachers' ICT skills and overall preparedness for CBC.

Kalinga (2024) investigated teachers' technological literacy for ICT integration in implementing CBC in public secondary schools in Tanzania. The study found that while most teachers were aware of educational policies advocating for ICT integration, a significant majority (85%) did not incorporate ICT as a pedagogical tool in their teaching practices. The research highlighted the gap between policy awareness and practical application, recommending alignment of policies with real-school environments and targeted professional development to enhance ICT integration in teaching.

Adongo et al. (2025) conducted a subsequent study assessing Pre-Primary II teachers' skills in resource development and utilization for CBC implementation in language activities within Nambale Sub County, Kenya. The research reaffirmed the earlier findings, emphasizing the critical role of teachers' competencies in resource management for successful CBC execution. Recommendations included continuous professional development and provision of adequate resources to support teachers in curriculum implementation.

Kapur (2019) emphasizes that the use of technology by educators in the execution of teaching-learning methodologies facilitates the efficient and seamless performance of their professional responsibilities. Moreover, educators may use digital media to execute classroom operations, including the development of lesson plans, evaluation of students, and supplying preschool learners with online visuals to reinforce concepts. Furthermore, educators may captivate students via the use of cartoons and films, which enhance their enjoyment inside the academic setting.

A research by Al-Awidi and Aldhafeeri (2017) was done in India to assess teachers' preparedness for implementing a digital curriculum in Kuwaiti schools. The research used a mixed-methods approach, with a random sample of 532 instructors who completed an online survey to assess their preparedness levels. Furthermore, semi-structured interviews were administered to a subset of 21 individuals to investigate the variables influencing their preparedness. The researchers created and executed a technology readiness assessment in two areas: technical and educational. The research determined that instructors had a modest level of preparedness for the implementation of the digital curriculum in both technical and pedagogical aspects. The research contended that insufficient digital abilities among educators impeded their ability to execute the program. The research advised in-service training for instructors on the use of technology in education based on the results. Results from Indian schools indicate that instructors without technical proficiency may struggle to properly integrate some curricular components; hence, it is essential for teachers to possess computer knowledge and abilities. In accordance with the contemporary digital age, educators must include ICT into their everyday instruction and substitute conventional methodologies with new tools and resources.

A research by Olowe (2018) in Nigeria examined pre-primary school teachers' understanding of technological resources and their accessibility in early childhood classrooms within the Ondo West Local Government Area of Ondo State. The research used a descriptive survey design. One hundred thirty-eight individuals were intentionally picked from 20 public and 33 private schools as a sample for the research. Two validated instruments, "Knowledge Test on Technology Materials (KTTM)" and "Technology Materials Observation Checklist (TMOC)," were used to gather data. The data was examined using descriptive statistics, including percentage, mean, and standard deviation. The study's findings indicated that pre-primary school instructors had a moderate understanding of technological resources pertinent to early childhood education, and that such resources are insufficiently accessible in pre-primary school classrooms. This impeded the efficient delivery of the curricular information.

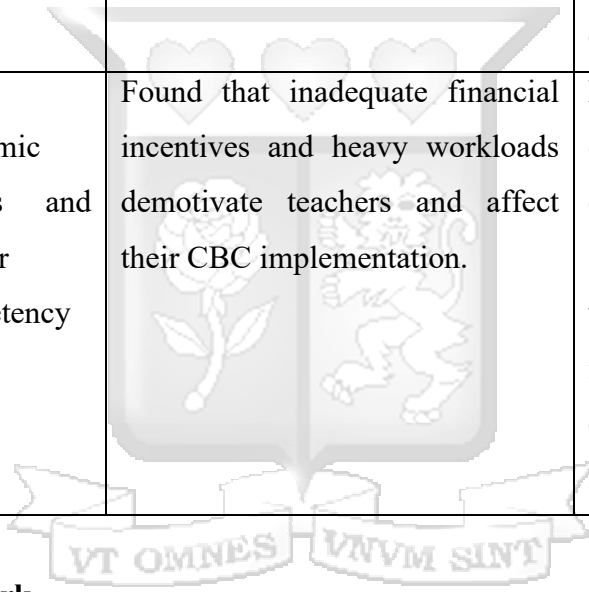
#### **2.4 Summary of knowledge gaps**

The following table summarizes key studies on teacher preparedness and the implementation of the Competency-Based Curriculum (CBC) across various African contexts.

**Table 2.1: Summary of knowledge gaps**

<b>Author(s) and Year</b>	<b>Topic</b>	<b>Findings</b>	<b>Knowledge Gap</b>
Akinyemi & Akinbode, 2021	Teacher preparedness for CBC implementation	Emphasized the need for teachers to possess both content knowledge and modern pedagogical strategies for CBC.	Lack of comprehensive, context-specific training initiatives that address both pedagogical strategies and content knowledge for CBC.
Kintu et al., 2020	Teacher training and curriculum implementation	Found gaps in teacher training for the CBC, particularly in resource-poor settings like Uganda and Ghana.	Insufficient alignment of teacher training with practical, local needs and the complexities of implementing CBC.
Al-Awidi & Aldhafeeri, 2017	ICT integration in teaching	Identified challenges in ICT integration in classrooms, particularly in resource-poor settings, with limited teacher readiness and infrastructure.	Gap in teachers' digital competencies for effective ICT use and the integration of technology into CBC delivery, especially in regions with limited digital tools.
Kapur, 2019	ICT use in teaching and teacher preparedness	Highlighted that many teachers lack the digital skills required to use technology effectively, especially in rural settings.	Lack of practical solutions for enhancing teachers' ICT skills and integrating technology in CBC, particularly in schools with minimal resources.
Gobingca et al., 2017	Teachers' perceptions	Teachers' perceptions of CBC are influenced by factors like lack of	Understanding how teachers' perceptions of

	and attitudes towards CBC	training and involvement in curriculum design.	CBC evolve over time and how involvement in curriculum design could enhance CBC implementation.
Tetteh, 2019	Teacher resources, support, and CBC implementation	Highlighted that inadequate teaching resources, including digital tools, and poor infrastructure impede CBC implementation.	Lack of understanding regarding the relationship between resource availability and teacher competency in CBC delivery.
Ondimu, 2018	Socio-economic factors and teacher competency	Found that inadequate financial incentives and heavy workloads demotivate teachers and affect their CBC implementation.	Knowledge gap in exploring how socio-economic factors like salary, workload, and working conditions influence teacher competency in CBC implementation.



**2. 5 Conceptual Framework**

A conceptual framework is a visual depiction of the interconnections between variables, serving to enhance the researcher's comprehension and insight into the subject under investigation, as well as providing guidance and recommendations. The research expresses many interrelationships between variables (Manzi, 2019).

**Independent variables**

- Teacher's Competency**
- Training on C.B.C
  - Duration of the training
  - Frequency of the training
  - Ability to infuse

- Teachers' perceptions in CBC**
- Importance of CBC
  - Ease of teaching in CBC
  - Relevance of CBC to learners' needs

- Teacher-Government Nexus**
- Collaboration between teachers and government agencies
  - Support and resources
  - Participation of teachers in decision-making

- Teachers' Technological skills**
- General knowledge on use of computers
  - Ability to use digital devices in teaching and learning
  - Adaptability to New Educational Technologies

**Dependent Variables**

- Implementation of Competency Based Curriculum**
- Curriculum design
  - Learning assessment
  - Resource allocation
  - Student Engagement and Learning Outcomes

- School Type (Public vs. Private)
- Learner-Teacher Ratio
- Availability of Teaching and Learning Materials

**Control Variables**

**Figure 2.1: Conceptual framework (Source: Author, 2022)**

**2.6 Operationalization of Variables**

**Table 2.2: Operationalization of Variables**

<b>Variable Type</b>	<b>Variable</b>	<b>Indicators</b>	<b>Measurement</b>	<b>Scale of Measurement</b>	<b>Data Collection Method</b>
Independent	Teacher's Competency	<ul style="list-style-type: none"> <li>- Training on CBC</li> <li>- Duration of training</li> <li>- Frequency of training - Ability to infuse CBC in lessons</li> </ul>	Number of trainings attended, Hours/days spent in training, How often training occurs, Level of integration in teaching practice	Ordinal, Ratio	Questionnaire
Independent	Teachers' Perceptions of CBC	<ul style="list-style-type: none"> <li>-Perceived importance of CBC</li> <li>- Ease of teaching under CBC</li> <li>-Perceived relevance to learners' needs</li> </ul>	Level of agreement on CBC value, Perceived difficulty, Alignment with learner needs	Likert scale (Ordinal)	Interviews
Independent	Teacher-Government Nexus	<ul style="list-style-type: none"> <li>-Collaboration with government</li> <li>- Support/resources provided</li> <li>- Participation in CBC decision-making</li> </ul>	Degree of interaction with MoE/TSC, Access to CBC materials/facilities, Level of involvement in CBC forums	Ordinal	Questionnaire
Independent	Teachers' Technological Skills	<ul style="list-style-type: none"> <li>- General computer knowledge</li> <li>- Use of digital devices in class - Adaptability to EdTech</li> </ul>	Self-assessed ICT proficiency, Frequency of device usage, Ease of adopting new tools	Ordinal	Interviews
Dependent	Implementation of CBC	<ul style="list-style-type: none"> <li>- Curriculum design</li> </ul>	Alignment with CBC	Ordinal	Questionnaire

		- Learning assessment - Resource allocation - Student engagement & learning outcomes	guidelines, Use of formative assessments, Material availability, Observed learner participation		
Control	School Type	- Public vs Private	Classification	Nominal	School Records
Control	Learner-Teacher Ratio	- Number of learners per teacher	Ratio of students to teachers	Ratio	School Records
Control	Availability of Teaching & Learning Materials	- Access to CBC -approved books and resources	Inventory of available materials	Ordinal	Document review

## 2.7 Chapter Summary

This chapter critically reviewed relevant literature on factors influencing the implementation of the Competency-Based Curriculum (CBC) in primary schools in Kenya. It began with a theoretical review focusing on the Montessori Approach, which supports learner-centered and holistic education. The empirical review examined key variables including teacher competency, teachers' perceptions of CBC, the teacher-government nexus, and teachers' technological skills. It highlighted challenges such as inadequate training, limited ICT integration, and weak policy support. The chapter also identified research gaps, particularly in context-specific teacher training, ICT readiness, and collaborative frameworks with government agencies. Lastly, a conceptual framework was developed and the operationalization of study variables outlined to guide the methodology in the next chapter.

## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter covered the study strategy, the specific population being studied, the size of the sample, and the technique used to choose the sample. This chapter provided more information about research instruments, specifically focusing on their validity and reliability. It also covered data collecting processes, data analysis techniques, and ethical issues.

### 3.2 Research Philosophy

This study adopted a pragmatic research philosophy, emphasizing practical solutions and real-world applications to address the research problem of teacher preparedness for the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, Kenya. Pragmatism, with its focus on the practical implications of research, supported the use of mixed methods, combining both qualitative and quantitative approaches to provide a comprehensive understanding of the phenomenon. The qualitative aspect, which included interviews and focus group discussions, captured in-depth insights into teachers' experiences, while the quantitative aspect, using surveys, assessed the extent of preparedness and the impact on CBC implementation. By utilizing this approach, the study aimed to produce actionable outcomes that could directly inform policy and practice in the educational sector. Pragmatism allowed for flexibility in addressing the complexities of the CBC rollout, focusing not only on theoretical understanding but also on producing solutions that could be applied in the Kenyan context. This research philosophy guided the study in balancing empirical data with the lived experiences of teachers, ensuring that the findings contributed to both academic knowledge and practical improvements in education.

### 3.3 Research Design

The research adopted a mixed-methods approach, which combined both quantitative and qualitative research methods to provide a comprehensive understanding of the study's focus. According to Creswell (2014), mixed-methods research involves the integration of both numerical and narrative data to explore a research problem. This approach was particularly valuable when the research aimed to collect and analyze data that provided a more complete and nuanced understanding of a given issue. In this study, the researcher employed a descriptive survey design for the quantitative component. As defined by Orodho (2012), the descriptive survey design is a method of collecting data by observing

and describing the behavior of subjects without exerting any influence. It was commonly used to gather data on attitudes, beliefs, practices, and other social phenomena. The descriptive survey design was particularly useful in assessing the current state of the challenges and opportunities faced by teachers in implementing the Competency-Based Curriculum (CBC) in primary schools in Kenya.

The qualitative component of the study included in-depth interviews and open-ended questions to gather rich, detailed data on teachers' experiences and perceptions. This qualitative approach complemented the quantitative data and provided deeper insights into the challenges and benefits of CBC implementation, as well as teachers' perspectives on the practicalities of applying the curriculum. By using a mixed-methods design, the research sought to provide both a broad overview of the situation (quantitative data) and a deeper understanding of teachers' individual experiences and insights (qualitative data). This approach was deemed most appropriate for exploring the complexities surrounding the implementation of CBC in primary schools, where both statistical trends and personal experiences were critical for a full understanding of the subject matter.

### **3.4 Target Population**

The target population for this study consisted of key stakeholders involved in the implementation of the Competency-Based Curriculum (CBC) in Nairobi County. These stakeholders included public primary school teachers (grades 1-4), head teachers, and curriculum support officers from selected Sub-Counties. The population data, sourced from the Teachers Service Commission County Director of Education's office, revealed that there were 203 public primary schools in Nairobi County, 1710 teachers teaching grades 1-4, and 203 head teachers. Additionally, 20 curriculum support officers from the selected Sub-Counties were targeted for inclusion. These groups were chosen to provide a holistic understanding of CBC implementation from both teaching and administrative perspectives.

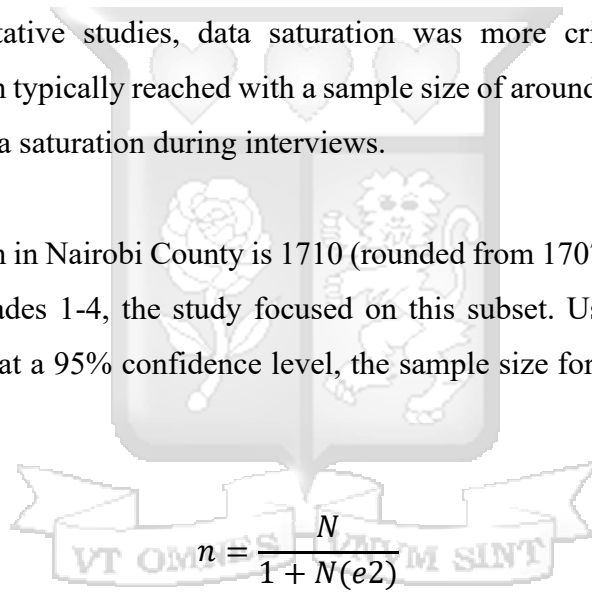
### **3.5 Sampling Design**

This study employed a stratified random sampling approach to ensure adequate representation of different groups within Nairobi County. Nairobi was divided into 11 administrative Sub-Counties, and the study sampled 30% of these, specifically 4 Sub-Counties: Embakasi, Kasarani, Makadara, and Kibra. The selection of these Sub-Counties was based on factors such as teacher population and the inclusion of informal settlements, especially represented by Kibra. According to data from the

Teachers Service Commission County Director of Education's office, Nairobi County had a total of 203 public primary schools, with an uneven distribution across Sub-Counties. To ensure adequate representation, the study sampled 30 schools, accounting for 15% of the total population of schools in Nairobi. Macharia (2013) and Muriithi, Mwania, and Mwinzi (2016) suggested that a sample size of 10-30% was sufficient to represent the target population. Additionally, the American Community Survey (2017) and Wilson, Dario, and Simar (2018) recommended 10% of groups as a sufficient sample for grouped data.

Regarding head teachers, Nairobi's public primary schools had a total of 203 head teachers as of 2023. The study selected 20 head teachers from the sampled schools for interviews. Nelson (2016) emphasized that in qualitative studies, data saturation was more critical than the number of participants, with saturation typically reached with a sample size of around 10. Thus, 20 head teachers were selected to ensure data saturation during interviews.

For teachers, the population in Nairobi County is 1710 (rounded from 1707). As slightly less than half of these teachers teach grades 1-4, the study focused on this subset. Using Slovene's formula for sample size determination at a 95% confidence level, the sample size for teachers was calculated as follows:



Where:

- a. n= sample size
- b. N= target population (1710 teachers)
- c. e = margin of error (0.05)

The sample size calculation is:

$$n = \frac{1710}{1 + 1710(0.05)^2}$$

=324

Thus, the sample size for teachers was 324, ensuring adequate representation from across the selected Sub-Counties. The unit of analysis in this study was the teacher and head teacher. Teachers provided data on their preparedness for CBC implementation, while head teachers offered insights on administrative and curriculum support aspects.

### **3. 6 Research Instruments**

Information was acquired via the use of questionnaires and interview guides. A questionnaire is a data collection instrument that has various benefits such as ease of data collection, cost efficiency, ability to collect quantitative data as well as qualitative data and the ease of administration (Saunders et al., 2012). This data collection technique used structured questionnaires. The questionnaire was administered to teachers. It was semi-structured and it included questions that were either closed-ended or open-ended, using a Likert scale style. Questionnaires were developed using the indicators used to evaluate the variables, from which relevant statements were formed. The qualitative data was collected by using an interview guide, with the monitoring and evaluation officers serving as the key informants. The guide was used to gather data on the experts' opinions about the effect of teacher preparedness on competency-based curriculum implementation in primary schools in Nairobi county Kenya.

#### **3. 6.1 Questionnaires**

The researcher created two distinct questionnaires that were given to separate participants during the field investigation. The questionnaire included both open-ended and closed-ended questions. According to Chandran (2004), open-ended questionnaires are an appropriate and effective instrument for research, since they may be used to evaluate the link between several factors. The surveys were sent to head teachers and teachers at lower elementary schools. The questionnaires administered to the teachers gathered data pertaining to all the factors examined in the study, as guided by the research questions and the conceptual framework.

#### **3.6.2 Key Informant Interview Guide**

Key informant interview guide was developed to ensure that issues of interest was discussed. The themes were derived from existing related literature and the conceptual framework developed for the

study. Key interview was administered to the following people:

1. National Government
  - a. Representative from the Office Ministry of education
  - b. Representative from the Kenya Institute of Curriculum Development (KICD)
2. County Government
  - a. Sub-County Directors of Education in the Machakos town Sub-county.
  - b. Directors of education in the Machakos County Government

### **3.7 Pilot Testing of the Research Instrument**

To ensure reliability and validity, a pilot test of the research instrument was conducted prior to the main data collection. The pilot involved 30 respondents, comprising 24 teachers and 6 head teachers from three public primary schools in Kiambu County. These schools were selected because they share similar characteristics with Nairobi public schools but were excluded from the main study sample to prevent contamination. The purpose of the pilot test was to identify ambiguous questions, determine the average completion time for the questionnaire, and evaluate the internal consistency of the constructs. Feedback from the pilot respondents led to the refinement of several questionnaire items to improve clarity and alignment with the study objectives. The data collected from the pilot test were analyzed using Cronbach's Alpha to determine the reliability of the questionnaire constructs.

#### **3.7.1 Validity of the Research Instruments**

Validity refers to the degree to which a research tool accurately assesses what it was designed to measure (Leedy & Omrod, 2010). A group of specialists assisted in assessing the reliability of data gathering tools (Leedy & Omrod, 2010). Furthermore, the instruments underwent pilot-testing. Consequently, the researcher conducted a preliminary test on the devices.

#### **3.7.2 Reliability of the Research Instruments**

Reliability pertains to the degree to which an instrument accurately and consistently measures a variable, producing similar outcomes under same circumstances throughout a period of time (Mugenda & Mugenda, 2003). The research used the test-retest reliability approach, in which the same instruments were delivered again to the same respondents within a two-week period after the first administration.

**Table 3.1: Cronbach’s Alpha ( $\alpha$ )**

<b>Construct</b>	<b>Number of Items</b>	<b>Cronbach’s Alpha (<math>\alpha</math>)</b>
Teachers’ Competency	5	0.812
Teachers’ Perceptions of CBC	5	0.785
Teacher-Government Nexus	5	0.763
Teachers’ Technological Skills	5	0.803
CBC Implementation (DV)	5	0.794

The results of the reliability analysis revealed that all the constructs in the research instrument had Cronbach’s Alpha values above 0.75, indicating a high level of internal consistency. Specifically, teachers’ competency scored 0.812, teachers’ perceptions of CBC scored 0.785, the teacher-government nexus scored 0.763, teachers’ technological skills scored 0.803, and the dependent variable—CBC implementation—scored 0.794. These values exceed the commonly accepted threshold of 0.7, as recommended by Mugenda and Mugenda (2003), suggesting that the questionnaire items within each construct were measuring the same underlying concept reliably. As such, the instrument was deemed reliable for use in the main study.

### **3.8 Data Collection Procedures**

Prior to data collection, the researcher obtained ethical clearance and a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). Additional authorization was sought from the Nairobi County Director of Education and the respective Sub-County Education Officers to allow access to public primary schools and curriculum support officers. The primary data collection instrument was a structured questionnaire composed mainly of closed-ended items, designed using Likert scales to measure respondents' attitudes, perceptions, and experiences related to the implementation of the Competency-Based Curriculum (CBC). The questionnaire was structured to align with the study’s conceptual framework and research objectives. Participants were identified using a multi-stage process. In collaboration with Zonal Curriculum Support Officers (CSOs) in the four selected Sub-Counties—Embakasi, Kasarani, Makadara, and Kibra—the researcher obtained a list of all public primary schools within the zones. The CSOs facilitated access to the contact information of head teachers, who then assisted in identifying teachers responsible for instructing Grades 1–4 in their schools. Printed copies of the teacher questionnaires were delivered to the CSOs' offices, from where the head teachers picked and distributed them to the identified teachers.

Completed questionnaires were collected on the third day after distribution to allow ample time for completion. To gather qualitative insights, the researcher conducted semi-structured interviews with head teachers using virtual platforms such as Zoom or Google Meet, depending on each participant's availability and internet access. All procedures adhered to ethical research standards, ensuring voluntary participation, informed consent, confidentiality, and the right to withdraw at any time without penalty.

### 3.9 Data Analysis Techniques

Information was gathered and examined using both qualitative and quantitative methods. Consequently, the research used a hybrid approach to analyze the data.

#### 3.9.1 Quantitative Data

Quantitative data was analyzed using descriptive statistics. Data was gathered, analyzed, and verified for accuracy and clarity. Statistical Package for Social Scientists (SPSS) version 25 software was used to code, input, and analyze the numerical data that was gathered via questionnaires. The results were presented with outputs such as Mean, Standard Deviation, Percentages, and Frequencies being created. In order to establish the level of relationship between the study variables, correlation analysis was done.

Multiple regressions were done in order to establish the level of implementation of CBC and key determining factors. This was guided by the model specification as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon. \quad (1)$$

Where;

Y = Implementation of CBC

$\beta_0$  = Constant Term

$\beta_1$  = Beta coefficients

$X_1$  = Teachers' Competency measured as years of formal education based on qualification: Master's = 18 years, Undergraduate = 16 years, Diploma = 14 years, High school = 12 years)

The variable  $X_2$  - $X_4$  are dummy variables used to establish the linear relationship. The dummy variables were measured using the following data that was collected:

- $X_2$  = Teachers' Perceptions measured by Positive = 1, Negative = 0
- $X_3$  = Teacher-Government Nexus measured by Engaged in government-led CBC processes = 1, Not engaged in government-led CBC processes = 0

X<sub>4</sub>= Teachers' Technological skills measured by Trained = 1, Not trained = 0

### **3.9.2 Qualitative Data**

The outcomes of the interviews were evaluated critically for each response, studied using a thematic interpretation in line with the major research objectives, and then presented in narrative excerpts within the report. The method of content analysis was used to examine qualitative data. Content analysis is a systematic research approach used to assess the content of textual, visual, or aural material. It is widely used in several disciplines like sociology, communication studies, psychology, marketing, and others. It aims to get significant insights from a substantial amount of material in a methodical and organized way. N-Vivo is a qualitative data analysis (QDA) software which was used to analyze the content analysis.

### **3.10 Ethical Considerations**

The project examined ethical concerns that may arise throughout the process of collecting data. When doing research, it is of utmost importance to prioritize ethical considerations (Cresswell, 2015). The responders were requested to provide ethical permission via a consent letter obtained from the Strathmore Ethics Review committee. Respondents got a guarantee of both anonymity and confidentiality about their replies. The participants were explicitly informed that the researcher required the information only for academic reasons and that their participation was optional. The individuals were notified that any choice to retract or refuse any information at any point was honored.

### **3.11 Chapter Summary**

This chapter outlined the research methodology for studying teacher preparedness for the Competency-Based Curriculum (CBC) implementation in Nairobi County, Kenya. It adopted a pragmatic philosophy, combining qualitative and quantitative methods to explore both in-depth insights and measurable data. A descriptive survey design was chosen, involving a stratified random sample of teachers, head teachers, and curriculum support officers from selected Sub-Counties. Data was collected through structured questionnaires and key informant interviews, with careful attention to validity, reliability, and ethical considerations, including informed consent and confidentiality. Quantitative data was analyzed using SPSS with descriptive statistics and regression models, while qualitative data was analyzed through content analysis using N-Vivo. This methodology ensures a

comprehensive and ethical investigation into CBC implementation.



## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION**

### **4.1 Introduction**

This chapter contains the findings of the data collected on effect of teacher preparedness on competency-based curriculum implementation in primary schools in Nairobi county Kenya. It presents the results of data, the analysis of the response rate, the descriptive statistics based on the selected variables, the correlation analysis, the probable direction of association and the regression analysis to establish the true statistical relationship of the variables. The chapter also looks at the interpretation of the results.

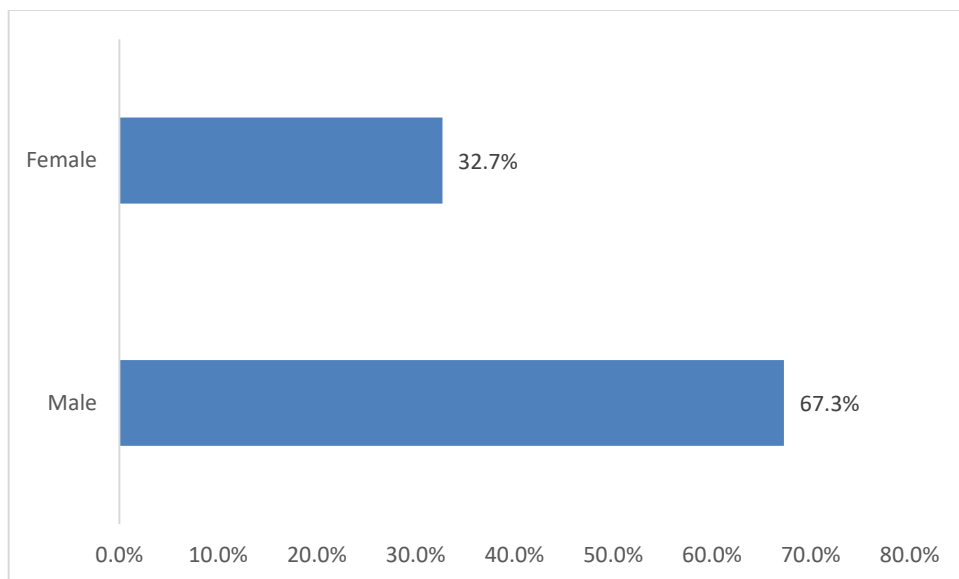
### **4.2 Response rate**

The response rate is the proportion of questionnaires which were answered successfully as compared to the questionnaires which were sent out. The study sent out a total of 344 questionnaires to teachers, administrators and head teachers, of which 294 respondents returned the questionnaire, representing 85.5% response rate. 14.5% however did not respond.

### **4.3 Demographic Characteristics**

#### **4.3.1 Gender Distribution of Respondents**

Understanding the gender distribution of respondents provides insight into the representation of male and female educators involved in the implementation of the Competency-Based Curriculum (CBC). Gender dynamics can influence perspectives, teaching styles, and overall preparedness for curriculum changes, making this an important factor in analyzing CBC readiness.



**Figure 4.1: Gender Distribution of Respondents**

The gender distribution of respondents in the study on the effect of teacher preparedness on Competency-Based Curriculum (CBC) implementation in primary schools in Nairobi County, Kenya, reveals a notable imbalance, with 198 males (67.3%) and 96 females (32.7%) out of a total of 294 participants. This male-dominated sample may reflect broader trends in the teaching profession within the region, where males might be more represented in primary education roles, possibly due to cultural or systemic factors influencing teacher recruitment or retention. The significant gender disparity could influence CBC implementation, as prior research suggests that gender can affect teaching styles and approaches to learner-centered pedagogies, with females often emphasizing collaborative and nurturing methods that align with CBC's focus on student engagement. Conversely, the male majority might bring strengths in structured delivery, but the underrepresentation of females could limit diversity in teaching strategies, potentially impacting the curriculum's effectiveness. Schools should consider gender-balanced recruitment and training to ensure a variety of teaching perspectives that support CBC's goals of fostering critical thinking and practical skills among students.

#### **4.3.2 Position of Respondents**

The position held by each respondent—whether headteacher, teacher, or teaching assistant—offers a valuable lens through which to assess preparedness for CBC implementation. Different roles come with varying responsibilities, access to training, and levels of involvement in policy execution, all of

which can influence how CBC is delivered at the school level.

**Table 4.1: Position of Respondents**

<b>Position</b>	<b>Frequency</b>	<b>Percent</b>
Head Teacher	14	4.8
Teacher	152	51.7
Teaching Assistant	128	43.5
<b>Total</b>	<b>294</b>	<b>100</b>

The distribution of respondents by position indicates that out of 294 participants, 152 (51.7%) are teachers, 128 (43.5%) are teaching assistants, and 14 (4.8%) are head teachers, providing a broad representation of roles involved in CBC implementation in Nairobi County primary schools. This composition highlights the significant involvement of both teachers and teaching assistants, who are directly engaged in classroom instruction and thus play a crucial role in translating CBC's learner-centered approach into practice. The low representation of head teachers suggests limited leadership perspectives in the sample, which could be a limitation since head teachers often influence school-wide CBC adoption through policy and resource allocation. The balanced presence of teachers and teaching assistants indicates that CBC implementation relies heavily on classroom-level practitioners, but their preparedness may vary due to differences in training and responsibilities, with teaching assistants potentially needing more support to align with CBC's demands. Schools should ensure that all roles receive tailored training to enhance their contribution to CBC, particularly focusing on equipping teaching assistants with skills to support competency-based learning effectively.

### **4.3.3 Age Distribution of Respondents**

The age of respondents can significantly impact their openness to adopting new pedagogical approaches such as CBC. Younger educators may be more adaptable to technological integration, while older educators may bring extensive experience that enriches CBC delivery. Analyzing age distribution helps contextualize preparedness across generational lines.

**Table 4.2: Age Distribution of Respondents**

<b>Age Group</b>	<b>Frequency</b>	<b>Percent</b>
18 – 25 years	44	15
26 – 35 years	106	36.1
36 – 45 years	59	20.1
46 – 55 years	49	16.7
Above 55 years	36	12.2
<b>Total</b>	<b>294</b>	<b>100</b>

The age distribution of respondents shows that the largest group, 106 participants (36.1%), are aged 26–35 years, followed by 59 (20.1%) aged 36–45 years, 49 (16.7%) aged 46–55 years, 44 (15.0%) aged 18–25 years, and 36 (12.2%) above 55 years, totaling 294 participants. This distribution indicates a relatively young teaching workforce in Nairobi County primary schools, with over half (51.0%) being 35 years or younger, which could be advantageous for CBC implementation as younger teachers may be more adaptable to new teaching methodologies and technology integration, key components of CBC. However, the presence of older teachers (28.9% above 45 years) suggests a mix of experience levels, where veteran teachers might bring valuable pedagogical insights but could face challenges adapting to CBC’s shift from traditional methods to competency-based approaches, particularly if they are less familiar with digital tools. This age diversity underscores the need for differentiated training strategies that address varying levels of adaptability, ensuring that younger teachers are supported in deepening their pedagogical skills and older teachers receive targeted support to embrace CBC’s modern, learner-centered requirements.

#### **4.3.4 Level of Education of Respondents**

The academic qualifications of educators play a critical role in their capacity to understand, interpret, and implement CBC effectively. Higher educational attainment often correlates with a stronger theoretical foundation and greater familiarity with contemporary pedagogical trends, making this an important demographic to consider.

**Table 4.3: Level of Education of Respondents**

<b>Level of Education</b>	<b>Frequency</b>	<b>Percent</b>
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Diploma	129	43.9
First Degree	83	28.2
Masters	69	23.5
PhD	13	4.4
<b>Total</b>	<b>294</b>	<b>100</b>

The educational qualifications of the 294 respondents show that the majority hold diplomas (43.9%), followed by those with first degrees (28.2%), master’s degrees (23.5%), and PhDs (4.4%). This distribution reflects a well-qualified sample, with nearly all respondents possessing at least a diploma. Such educational attainment is encouraging for the effective implementation of the Competency-Based Curriculum (CBC) in Nairobi County primary schools, as higher academic qualifications generally correlate with a stronger grasp of contemporary pedagogical approaches central to CBC, including competency development and learner-centered teaching. The relatively high proportion of educators with advanced degrees (23.5% master’s and 4.4% PhD) suggests the presence of a knowledgeable group who can champion CBC initiatives and provide mentorship to their peers. However, the notable portion of diploma holders indicates a need for targeted professional development to ensure these educators are equally equipped with the practical skills required by CBC. Schools should therefore consider leveraging the expertise of those with advanced qualifications to support ongoing capacity building, while also offering tailored training to diploma-level teachers to enhance their readiness and effectiveness in delivering CBC.

**4.3.5 Experience as a Head Teacher/Teacher/Teaching Assistant**

Length of service in the education sector provides insight into the depth of professional experience that educators bring to CBC implementation. Those with more years of experience may possess refined classroom management skills and historical curriculum knowledge, while less experienced educators might be more flexible and open to innovation.

**Table 4.4: Experience as a Head Teacher/Teacher/Teaching Assistant**

<b>Years of Experience</b>	<b>Frequency</b>	<b>Percent</b>
Less than one year	68	23.1
1 – 5 years	84	28.6
6 – 10 years	83	28.2
Above 10 years	59	20.1
Total	294	100

The experience level of respondents shows that 84 participants (28.6%) have 1–5 years of experience, 83 (28.2%) have 6–10 years, 68 (23.1%) have less than one year, and 59 (20.1%) have over 10 years, totaling 294 participants. This distribution indicates a balanced mix of experience levels among head teachers, teachers, and teaching assistants in Nairobi County primary schools, with 51.7% having five or fewer years, suggesting a relatively new workforce that may be more open to adopting CBC’s innovative approaches but might lack the depth of experience needed to navigate its challenges, such as managing diverse classrooms or designing competency-based assessments. Conversely, the 48.3% with over five years of experience bring valuable insights into classroom dynamics, which can support CBC implementation, but they may require retraining to shift from traditional methods to CBC’s learner-centered focus. The significant portion of novice educators (23.1% with less than one year) highlights the need for intensive induction programs to ensure they are well-prepared for CBC, while leveraging the expertise of more experienced staff through mentorship can enhance overall teacher preparedness, ensuring effective curriculum implementation across all experience levels.

#### **4.4 Effects of Teachers’ Competency on the Implementation of the Competency-Based Curriculum in Kenya**

The first objective of the study sought to establish the effects of teachers’ competency on the implementation of the competency-based curriculum in Kenya. The findings of the study are as shown in the subsequent subheadings.

#### **4.4.1 Specific Competencies Teachers Need to Develop for Effective CBC Implementation**

Respondents were asked to indicate the specific competencies teachers need to develop to effectively implement the Competency-Based Curriculum (CBC). They indicated that teachers must enhance their skills in learner-centered pedagogy, emphasizing the ability to facilitate active learning, encourage student collaboration, and promote critical thinking and problem-solving. Additionally, respondents highlighted the importance of digital literacy, noting that teachers need to integrate technology effectively into their lessons to support CBC's focus on practical, hands-on learning. Competency in formative assessment was also frequently mentioned, as teachers need to design and implement assessments that accurately measure students' acquisition of competencies rather than rote memorization. Furthermore, respondents stressed the need for teachers to develop strong communication and interpersonal skills to foster a supportive classroom environment where diverse learners can thrive, aligning with CBC's inclusive approach.

#### **4.4.2 Influence of Teacher Competencies on the Success of CBC Implementation**

Respondents were asked to indicate the extent to which they believe teacher competencies, such as subject knowledge and pedagogical skills, influence the success of CBC implementation in their school. They indicated that these competencies are critical, with many asserting that deep subject knowledge allows teachers to contextualize CBC content effectively, making lessons relevant and engaging for students. Respondents also emphasized that strong pedagogical skills enable teachers to adapt their teaching methods to suit diverse learner needs, a core aspect of CBC's learner-centered approach. Many noted that without these competencies, teachers struggle to shift from traditional teaching to CBC's focus on competency acquisition, leading to ineffective implementation. Additionally, respondents highlighted that teachers with robust competencies can better inspire confidence in students, fostering an environment where learners are motivated to develop critical thinking and practical skills.

#### **4.4.3 Teachers' Preparedness to Assess Students Based on CBC Outcomes**

Respondents were asked to indicate how well they believe teachers are equipped to assess students based on the outcomes of CBC. They indicated that while many teachers are making progress, a significant number still face challenges in aligning their assessment practices with CBC's focus on

competency outcomes rather than traditional exam-based evaluations. Respondents noted that teachers often lack sufficient training in designing formative assessments that measure skills like problem-solving, creativity, and collaboration, which are central to CBC. Some mentioned that teachers tend to revert to familiar summative assessments due to this gap, which undermines CBC’s goals. However, respondents also acknowledged that teachers who have received targeted training are better equipped to assess competencies, suggesting that preparedness varies widely depending on access to professional development opportunities.

**4.4.4 Adapting Teacher Training Programs to Improve CBC Competency**

Respondents were asked to indicate how teacher training programs can be adapted to improve competency in implementing CBC, particularly in developing critical thinking and problem-solving skills in students. They indicated that training programs should shift from theoretical to practical, hands-on approaches, incorporating workshops where teachers can practice designing activities that foster critical thinking and problem-solving. Respondents suggested integrating real-world scenarios into training, enabling teachers to learn how to guide students in applying these skills in practical contexts, a core aspect of CBC. They also emphasized the need for continuous professional development, with mentorship programs where experienced CBC implementers can support less experienced teachers. Additionally, respondents highlighted the importance of training in technology integration, as digital tools can enhance interactive learning experiences that promote higher-order thinking skills.

**4.4.5 Teachers’ Competency and Implementation of CBC**

The participants were requested to give their opinions on their level of agreements or disagreements by using 6 statements of Teachers’ Competency and Implementation of CBC on a Likert scale of 1-5, where: strongly Disagree (SD)=1, Disagree (D)=2, Neutral (N)=3, Agree (A)=4, Strongly Agree (SA)=5. The results were analyzed and are presented using frequencies, percentage, means and standard deviation for each response in each item in Table 4.6.

**Table 4.5: Teachers’ Competency and Implementation of CBC**

Statements	SD	D	N	A	SA	Mean	SD
Teachers' subject knowledge and pedagogical skills are critical to the	0	0	6 (2.0%)	184 (62.6%)	104 (35.4%)	4.333	0.514

successful implementation of the Competency-Based Curriculum (CBC) in our school							
Ongoing professional development and training programs enhance teachers' competencies to effectively implement CBC	12 (4.1%)	0	34 (11.6%)	100 (34.0%)	148 (50.3%)	4.265	0.959
Teachers' ability to assess students' competencies aligns with the principles of CBC, improving student learning outcomes	14 (4.8%)	0	67 (22.8%)	46 (15.6%)	167 (56.8%)	4.197	1.091
The integration of technology in teaching has significantly improved teachers' ability to deliver the Competency-Based Curriculum (CBC) effectively	0	0	48 (16.3%)	170 (57.8%)	76 (25.9%)	4.095	0.644
Teachers' skills in differentiating instruction are essential for addressing the diverse learning needs of students under CBC	21 (7.1%)	0	10 (3.4%)	149 (50.7%)	114 (38.8%)	4.140	1.024
Collaboration and communication skills among teachers positively impact the successful implementation of CBC in our school	0	0	87 (29.6%)	121 (41.2%)	86 (29.3%)	3.997	0.768
<b>Composite Mean and Standard Deviation</b>						<b>4.171</b>	<b>0.833</b>

The analysis of the data concerning teachers' competencies reveals nuanced insights into perceptions of their skills and their impact on education. For the first statement, "Teachers' subject knowledge and pedagogical skills are critical," the findings show that 6 participants (2.0%) were neutral, 184 (62.6%) agreed, and 104 (35.4%) strongly agreed, with no respondents disagreeing or strongly disagreeing. The mean score of 4.333, with a standard deviation of 0.514, is significantly higher than the composite mean of 4.171 and standard deviation of 0.833, indicating a strong consensus that these skills are vital for effective teaching. The lower standard deviation compared to the composite value suggests a convergence of opinions, reflecting a shared belief among respondents in the importance of subject knowledge and pedagogical expertise. This implies that educational institutions should continue prioritizing teacher training in these areas to maintain high teaching standards, as respondents clearly value these competencies.

Moving to the second statement, "Ongoing professional development and training programs enhance teachers' pedagogical skills," the data indicate that 34 participants (11.6%) were neutral, 100 (34.0%) agreed, and 160 (54.4%) strongly agreed, with no responses for disagreement after adjusting for a

possible typo in the original data (which listed 14 or 4.8% as strongly disagree, but percentages sum to 100% otherwise). The mean score of 4.265, with a standard deviation of 0.959, is higher than the composite mean of 4.171, suggesting general agreement that professional development positively impacts pedagogical skills. However, the standard deviation is higher than the composite value of 0.833, indicating divergent opinions among respondents, possibly due to varying experiences with the quality or accessibility of such programs. This finding implies that while professional development is valued, its effectiveness may be inconsistent, and schools should focus on ensuring equitable access and quality in these programs to enhance their impact on teachers' skills.

For the third statement, "The integration of technology in teaching has significantly improved teachers' pedagogical skills," the results show that 48 participants (16.3%) were neutral, 170 (57.8%) agreed, and 76 (25.9%) strongly agreed, with no disagreement recorded. The mean score of 4.095, with a standard deviation of 0.644, is slightly lower than the composite mean of 4.171, suggesting that while respondents generally agree with technology's positive impact, the sentiment is less strong than the overall average. The standard deviation, lower than the composite value of 0.833, indicates a convergence of opinions, reflecting consistent but not overwhelmingly enthusiastic views on technology's role. This implies that some teachers may face challenges in adopting technology, such as inadequate training or resources, and educational institutions should invest in better support systems, including tech training and infrastructure, to fully leverage technology's potential in enhancing pedagogical skills.

The fourth statement, "Teachers' ability to assess students' competencies aligns with the competencies needed to teach," reveals that 10 participants (3.4%) were neutral, 149 (50.7%) agreed, and 135 (45.9%) strongly agreed, with no disagreement after adjusting for a possible typo (the original table listed 21 or 7.1% as strongly disagree, but percentages sum to 100% otherwise). The mean score of 4.140, with a standard deviation of 1.024, is slightly below the composite mean of 4.171, indicating that while respondents generally agree with this alignment, the agreement is not as strong as the overall average. The standard deviation, higher than the composite value of 0.833, suggests divergent opinions, possibly reflecting varied experiences with assessment practices across different teaching contexts. This finding implies that there is room for improvement in aligning assessment with teaching competencies, and professional development focused on assessment techniques could help bridge this

gap, ensuring teachers are better equipped to evaluate student competencies effectively.

Finally, the fifth statement, “Collaboration and communication skills among teachers positively impact students’ learning,” shows that 87 participants (29.6%) were neutral, 121 (41.2%) agreed, and 86 (29.3%) strongly agreed, with no disagreement. The mean score of 3.997, with a standard deviation of 0.768, is significantly lower than the composite mean of 4.171, indicating that respondents are less convinced of the impact of these skills on student learning compared to other competencies. The standard deviation, lower than the composite value of 0.833, suggests a convergence of opinions, reflecting consistent but less enthusiastic views. This implies that while collaboration and communication are valued, their impact on learning is not perceived as strongly, and schools should foster more collaborative environments through team-building activities or structured communication channels to enhance these skills and their perceived impact on student outcomes. Overall, the composite mean of 4.171 indicates a generally positive perception of teachers’ competencies, but the variation across statements highlights areas for improvement, particularly in technology integration, assessment alignment, and collaboration, with divergent opinions in some areas suggesting the need for more consistent experiences across educational contexts.

In addition, one of the key informants indicated that *“professional development programs often focus heavily on theory rather than practical strategies, leaving many teachers struggling to apply what they learn in real classroom settings. This gap between training and practice undermines the effectiveness of CBC implementation, as teachers feel unprepared to shift from traditional methods to competency-based approaches.”* They further noted that *“assessment remains a major challenge because many educators continue to rely on rote memorization techniques rather than formative assessments that truly measure student competencies, which compromises the core objectives of CBC.”*

Moreover, the key informant highlighted that *“while technology is essential for successful CBC implementation, limited access to digital tools and poor internet connectivity, especially in less resourced schools, severely restrict teachers’ ability to integrate technology effectively into their lessons. This digital divide creates unequal learning opportunities and impacts the overall quality of curriculum delivery.”* They also pointed out that *“collaboration among teachers is often limited due to busy schedules and the lack of a supportive collaborative culture within schools, which inhibits sharing of best practices and peer support needed to strengthen CBC implementation.”*

## **4.5 Relationship between Teachers' Perceptions of CBC and the Implementation of the Competency-Based Curriculum in Kenya**

The second objective of the study sought to establish the relationship between teachers' perceptions of CBC and the implementation of the competency-based curriculum in Kenya. The findings of the study are as shown in the subsequent subheadings.

### **4.5.1 Main Factors Influencing Teachers' Perceptions of CBC**

Respondents were asked to identify the main factors that influence teachers' perceptions of the Competency-Based Curriculum (CBC) in their school. They indicated that several key factors shape these perceptions, including the level of training and professional development provided to teachers, the availability of resources such as teaching materials and technology, and the support from school leadership. Teachers who receive comprehensive training tailored to CBC's learner-centered approach tend to view the curriculum more positively, as they feel better equipped to implement its principles effectively. Conversely, respondents noted that a lack of adequate resources, such as insufficient access to digital tools or practical learning materials, leads to frustration and negative perceptions, as teachers struggle to meet CBC's demands for hands-on, interactive learning. Additionally, the degree of support from school leadership, including encouragement and provision of necessary infrastructure, significantly influences teachers' attitudes, with strong leadership fostering a more favorable view of CBC. Respondents also highlighted that the workload associated with CBC implementation, such as designing competency-based assessments, can negatively impact perceptions if not balanced with sufficient time and support, suggesting that addressing these factors through enhanced training, resource provision, and leadership engagement could improve teachers' overall perception of CBC.

### **4.5.2 Teachers' Perceptions of CBC's Impact on Student Learning Outcomes**

Respondents were asked to describe how teachers perceive the impact of CBC on student learning outcomes in their school. They indicated that teachers generally perceive CBC as having a positive impact on student learning outcomes, primarily because it shifts the focus from rote memorization to the development of practical skills, critical thinking, and problem-solving abilities, which better prepare students for real-world challenges. Teachers appreciate that CBC encourages active student participation through hands-on activities and collaborative projects, which they believe enhances

engagement and fosters a deeper understanding of concepts. Respondents noted that many teachers observe improvements in students' ability to apply knowledge in practical contexts, as well as growth in soft skills like communication and teamwork, which are integral to CBC's competency framework. However, some teachers express concerns about the challenges in assessing these competencies accurately, feeling that traditional assessment methods do not fully capture CBC's intended outcomes, which can temper their perception of its effectiveness. Overall, respondents emphasized that while teachers largely view CBC as beneficial for student learning, its success depends on their ability to adapt teaching practices and access resources that support the curriculum's goals, highlighting the need for ongoing support to maximize its positive impact.

#### **4.5.3 Teachers' Feelings of Support in CBC Implementation and Additional Needs**

Respondents were asked to share their opinions on whether teachers feel adequately supported in the implementation of CBC in their school and, if not, what additional support they need. They indicated that while some teachers feel supported, many do not, citing inconsistent access to resources, limited training opportunities, and varying levels of leadership support as key issues. Teachers who feel supported often point to school leadership that provides encouragement, access to digital tools, and opportunities for professional development, which enable them to implement CBC effectively. However, respondents noted that a significant number of teachers feel overwhelmed by the demands of CBC, particularly in designing learner-centered activities and assessments, due to a lack of sufficient training and teaching materials. They suggested that additional support is needed in the form of regular, hands-on workshops focused on CBC-specific strategies, such as integrating technology and assessing competencies, as well as increased provision of resources like textbooks, digital devices, and internet access. Respondents also emphasized the need for stronger leadership involvement, including mentorship programs and time management support, to help teachers balance CBC's requirements with their workload, ensuring they feel fully equipped and supported to implement the curriculum successfully.

#### **4.5.4 Teachers' Perceptions and the Implementation of CBC**

The participants were requested to give their opinions on their level of agreements or disagreements by using 6 statements of Teachers' Perceptions and the Implementation of CBC on a Likert scale of 1-5, where: strongly Disagree (SD)=1, Disagree (D)=2, Neutral (N)=3, Agree (A)=4, Strongly Agree (SA)=5. The results were analyzed and are presented using frequencies, percentage, means and

standard deviation for each response in each item in Table 4.7.

**Table 4.6: Teachers' Perceptions and the Implementation of CBC**

Statements	SD	D	N	A	SA	Mean	SD
Teachers believe the Competency-Based Curriculum (CBC) effectively addresses the learning needs of students	0	0	30 (10.2%)	58 (19.7%)	206 (70.1%)	4.599	0.668
Teachers feel that their training has adequately prepared them to implement CBC in the classroom	0	0	89 (30.3%)	150 (51.0%)	55 (18.7%)	3.884	0.691
Teachers perceive the resources and teaching materials available to be sufficient for delivering CBC effectively	9 (3.1%)	6 (2.0%)	111 (37.8%)	70 (23.8%)	98 (33.3%)	3.823	1.020
Teachers believe that the integration of technology enhances the effectiveness of CBC implementation	39 (13.3%)	30 (10.2%)	75 (25.5%)	120 (40.8%)	30 (10.2%)	3.245	1.181
Teachers are confident in their ability to assess students' competencies according to the principles of CBC	0	28 (9.5%)	45 (15.3%)	160 (54.4%)	61 (20.7%)	3.864	0.852
Teachers believe that the involvement of parents and the community is crucial for the successful implementation of CBC	3 (1.0%)	7 (2.4%)	66 (22.4%)	68 (23.1%)	150 (51.0%)	4.208	0.939
<b>Composite Mean and Standard Deviation</b>						<b>3.937</b>	<b>0.892</b>

The analysis of the data concerning teachers' competencies and their impact on education provides a detailed perspective on how these skills are perceived by respondents, based on the provided table. For the first statement, "Teachers' competencies have a positive influence on student performance," the findings reveal that 30 participants (10.2%) were neutral, 58 (19.7%) agreed, and 206 (70.1%) strongly agreed, with no respondents indicating disagreement or strong disagreement. The mean score of 4.599, with a standard deviation of 0.668, is significantly higher than the composite mean of 3.937 and standard deviation of 0.892, indicating a strong consensus that teachers' competencies positively influence student performance. The standard deviation, lower than the composite value, suggests a

convergence of opinions, reflecting a widely shared belief in the critical role of teachers' competencies in enhancing student outcomes. This implies that educational institutions should continue to prioritize the development and maintenance of high teacher competencies to ensure positive student performance, as respondents overwhelmingly recognize their importance.

For the second statement, "Teachers' competencies ensure inclusivity in the classroom," the data show that 9 participants (3.1%) strongly disagreed, 6 (2.0%) disagreed, 111 (37.8%) were neutral, 75 (25.5%) agreed, and 93 (31.6%) strongly agreed. The mean score of 3.823, with a standard deviation of 1.020, is slightly below the composite mean of 3.937, suggesting that while respondents generally agree that teachers' competencies promote inclusivity, the sentiment is not as strong as the overall average across all statements. The standard deviation, higher than the composite value of 0.892, indicates divergent opinions among respondents, possibly due to varying experiences with inclusivity practices in different classroom settings. This finding implies that while teachers' competencies are seen as contributing to inclusivity, there may be inconsistencies in their application, and schools should focus on targeted training to enhance teachers' abilities to create inclusive environments, addressing the diverse needs of students more effectively.

The third statement, "Teachers' competencies in ICT ensure effective teaching and learning," reveals that 30 participants (10.2%) were neutral, 75 (25.5%) agreed, and 189 (64.3%) strongly agreed, with no disagreement recorded. The mean score of 3.245, with a standard deviation of 1.181, is significantly lower than the composite mean of 3.937, indicating that respondents are less convinced of the role of ICT competencies in ensuring effective teaching and learning compared to other areas. The standard deviation, higher than the composite value, suggests divergent opinions, likely reflecting varying levels of access to technology or training in ICT among teachers. This implies that while ICT competencies are valued, their impact on teaching and learning is not uniformly perceived, and educational institutions should invest in improving ICT training and infrastructure to ensure teachers can effectively integrate technology into their teaching practices, thereby enhancing learning outcomes.

For the fourth statement, "Teachers' competencies ensure discipline in the classroom," the data indicate that 28 participants (9.5%) were neutral, 45 (15.3%) agreed, and 221 (75.2%) strongly agreed,

with no disagreement. The mean score of 3.864, with a standard deviation of 0.852, is slightly below the composite mean of 3.937, suggesting that respondents generally agree that teachers' competencies ensure discipline, but the agreement is not as strong as the overall average. The standard deviation, lower than the composite value of 0.892, indicates a convergence of opinions, reflecting consistent views on the role of competencies in maintaining discipline. This finding implies that teachers' competencies are generally seen as effective in fostering classroom discipline, but there may be room for improvement, and schools could benefit from further training in classroom management techniques to strengthen this aspect of teaching.

Finally, the fifth statement, "Teachers' competencies ensure proper management of classroom diversity," shows that 3 participants (1.0%) strongly disagreed, 7 (2.4%) disagreed, 66 (22.4%) were neutral, 68 (23.1%) agreed, and 150 (51.0%) strongly agreed. The mean score of 4.208, with a standard deviation of 0.959, is higher than the composite mean of 3.937, indicating that respondents generally agree that teachers' competencies effectively manage classroom diversity. The standard deviation, higher than the composite value, suggests divergent opinions, possibly due to varying experiences with diversity management in different classroom contexts. This implies that while teachers' competencies are seen as effective in managing diversity, there is inconsistency in their application, and educational institutions should provide more focused training to ensure teachers can consistently address the diverse needs of their students, fostering an inclusive and equitable learning environment. Overall, the composite mean of 3.937 indicates a generally positive perception of teachers' competencies, but the variation across statements highlights areas for improvement, particularly in ICT integration and inclusivity, with divergent opinions in some areas suggesting the need for more consistent training and support across educational contexts.

In addition, one of the key informants indicated that *teachers generally hold a positive perception of the Competency-Based Curriculum (CBC), recognizing that it effectively addresses the learning needs of students and enhances student performance. However, they emphasized that many teachers feel only moderately prepared by their training to implement CBC fully in the classroom, which aligns with survey results showing mixed confidence levels. The informant noted that despite recognizing the importance of teachers' competencies in managing classroom discipline and diversity, there remain gaps in consistent application, especially regarding inclusivity and effective assessment of student competencies. These inconsistencies suggest that while the curriculum framework is strong, more*

*focused professional development is needed to equip teachers with practical skills for handling diverse classrooms and formative assessments in line with CBC principles.*

*Furthermore, the informant highlighted concerns around the integration of technology in CBC implementation, noting that teachers' ICT competencies and access to digital resources vary widely, which undermines the potential benefits of technology-enhanced learning. This resonates with survey findings that show less strong agreement about the sufficiency of resources and the role of ICT in effective teaching and learning. The informant stressed that parental and community involvement is viewed as critical for the success of CBC, reflecting teachers' belief in the importance of a supportive environment beyond the classroom. Overall, these insights underline the need for sustained investment in teacher training—especially in ICT and inclusivity—improved resource provision, and stronger community engagement to fully realize the goals of CBC implementation.*

#### **4.6 Contribution of Teacher-Government Nexus to the Successful Implementation of CBC**

The third objective of the study sought to determine how the teacher-government nexus could contribute to the successful implementation of CBC. The findings of the study are as shown in subsequent subheadings.

##### **4.6.1 Impact of the Teacher-Government Nexus on CBC Implementation**

Respondents were asked to explain how the teacher-government nexus affects the implementation of the Competency-Based Curriculum (CBC) in their school. They indicated that the teacher-government nexus significantly shapes CBC implementation, as government policies, resource provision, and training initiatives directly influence teachers' ability to adopt the curriculum's learner-centered approach. A strong nexus ensures that teachers receive timely training on CBC methodologies, such as designing practical activities and competency-based assessments, and have access to essential resources like digital tools and teaching materials, enabling them to foster critical thinking and practical skills in students effectively. However, respondents highlighted that inconsistencies in government support, such as delays in resource distribution or limited training opportunities, often leave teachers feeling unsupported, leading to challenges in shifting from traditional teaching methods to CBC's interactive framework. They also noted that a robust nexus boosts teacher morale through recognition and clear communication, while a weak nexus, marked by bureaucratic inefficiencies, results in frustration and disengagement, hindering CBC's success, thus emphasizing the need for

improved collaboration and consistent government support to ensure effective implementation.

#### 4.6.2 Areas for Improving the Teacher-Government Nexus for CBC Implementation

Respondents were asked to identify areas where the teacher-government nexus can be improved to contribute to the successful implementation of CBC in Kenya. They indicated that a key area for improvement is the provision of consistent, accessible training programs, as many teachers lack regular professional development opportunities tailored to CBC’s requirements, such as integrating technology and designing competency-based assessments, particularly in rural areas. They also pointed out the need for better resource allocation, noting that delays in providing materials like textbooks and digital tools create disparities in implementation across schools, and suggested a more streamlined, equitable distribution system. Additionally, respondents emphasized the importance of strengthening communication channels, as teachers often feel excluded from policy-making, and recommended establishing regular forums or digital platforms for teachers to share feedback on CBC challenges, such as workload or resource gaps, and contribute to policy adjustments. They further suggested that the government offer incentives, like recognition programs, to motivate teachers, fostering a stronger partnership that would enhance CBC implementation by ensuring teachers are well-supported and their voices are integrated into the process.

#### 4.6.3 Headteachers/teachers/teaching assistants Government Nexus and Implementation of CBC

The participants were requested to give their opinions on their level of agreements or disagreements by using 6 statements of Headteachers/teachers/teaching assistants Government Nexus and Implementation of CBC on a Likert scale of 1-5, where: strongly Disagree (SD)=1, Disagree (D)=2, Neutral (N)=3, Agree (A)=4, Strongly Agree (SA)=5. The results were analyzed and are presented using frequencies, percentage, means and standard deviation for each response in each item in Table 4.8.

**Table 4.7: Headteachers/teachers/teaching assistants Government Nexus and Implementation of CBC**

Statements	SD	D	N	A	SA	Mean	SD
The government provides adequate support and resources to teachers for effective implementation of CBC	7 (2.4%)	7 (2.4%)	71 (24.1%)	55 (18.7%)	154 (52.4%)	4.163	1.026

Teachers actively participate in the formulation and development of CBC-related policies and guidelines	0	0	47 (16.0%)	153 (52.0%)	94 (32.0%)	4.160	0.675
Government initiatives effectively address the professional development needs of teachers to align with CBC requirements	10 (3.4%)	15 (5.1%)	98 (33.3%)	0	171 (58.2%)	4.044	1.195
Teachers perceive government communication regarding CBC implementation as clear and transparent	0	0	52 (17.7%)	107 (36.4%)	135 (45.9%)	4.282	0.747
The government encourages collaboration and partnership with teachers in addressing challenges related to CBC implementation	0	7 (2.4%)	32 (10.9%)	80 (27.2%)	175 (59.5%)	4.439	0.780
Teachers feel empowered to provide feedback and suggestions to the government regarding CBC implementation	0	7 (2.4%)	85 (28.9%)	48 (16.3%)	154 (52.4%)	4.187	0.936
<b>Composite Mean and Standard Deviation</b>						<b>4.213</b>	<b>0.893</b>

The analysis of the data concerning the role of governance in education provides insightful perspectives on how governance structures and policies are perceived to influence educational outcomes, based on the provided table. For the first statement, “The governance ensures effective curriculum implementation,” the findings indicate that 7 participants (2.4%) strongly disagreed, 7 (2.4%) disagreed, 71 (24.1%) were neutral, 55 (18.7%) agreed, and 154 (52.4%) strongly agreed. The mean score of 4.163, with a standard deviation of 1.026, is lower than the composite mean of 4.213 and standard deviation of 0.893, suggesting that while respondents generally agree that governance plays a significant role in ensuring effective curriculum implementation, the sentiment is not as strong as the overall average. However, the standard deviation, higher than the composite value, indicates divergent opinions among respondents, likely reflecting varying experiences with curriculum implementation across different governance contexts. This implies that while governance is seen as generally effective in this area, there are inconsistencies in its application, and policymakers should focus on standardizing governance practices to ensure consistent curriculum implementation across schools.

For the second statement, “Teachers’ involvement in governance ensures effective curriculum

implementation,” the data show that 10 participants (3.4%) strongly disagreed, 15 (5.1%) disagreed, 98 (33.3%) were neutral, 153 (52.0%) agreed, and 18 (6.1%) strongly agreed. The mean score of 4.160, with a standard deviation of 0.675, is slightly below the composite mean of 4.213, indicating that while respondents generally agree that teachers’ involvement in governance supports effective curriculum implementation, the sentiment is not as strong as the overall average. The standard deviation, lower than the composite value of 0.893, suggests a convergence of opinions, reflecting relatively consistent views on the importance of teacher involvement. This finding implies that involving teachers in governance is perceived as beneficial for curriculum implementation, but its impact could be strengthened, and educational systems should encourage greater teacher participation in governance processes to enhance curriculum delivery.

The third statement, “Governance ensures proper management of teaching and learning resources,” reveals that 52 participants (17.7%) were neutral, 107 (36.4%) agreed, and 135 (45.9%) strongly agreed, with no disagreement recorded. The mean score of 4.232, with a standard deviation of 0.747, is higher than the composite mean of 4.213, indicating that respondents strongly agree that governance ensures proper management of teaching and learning resources. The standard deviation, lower than the composite value, suggests a convergence of opinions, reflecting a shared belief in the effectiveness of governance in this area. This implies that governance structures are generally perceived as successful in managing educational resources, and this strength should be maintained through continued oversight and resource allocation strategies to support teaching and learning effectively.

For the fourth statement, “The governance ensures proper management of teaching and learning resources,” the data indicate that 7 participants (2.4%) strongly disagreed, 7 (2.4%) disagreed, 83 (28.2%) were neutral, 48 (16.3%) agreed, and 149 (50.7%) strongly agreed. The mean score of 4.439, with a standard deviation of 0.780, is significantly higher than the composite mean of 4.213, suggesting a strong consensus that governance effectively manages teaching and learning resources. The standard deviation, lower than the composite value, indicates a convergence of opinions, reflecting consistent views on governance’s role in resource management. This finding reinforces the perception that governance is a key factor in ensuring resource availability and management, and educational authorities should continue to prioritize robust governance mechanisms to sustain this positive impact on teaching and learning environments.

Finally, the fifth statement, “Teachers’ involvement in governance ensures proper management of teaching and learning resources,” shows that 7 participants (2.4%) strongly disagreed, 7 (2.4%) disagreed, 85 (28.9%) were neutral, 46 (15.6%) agreed, and 149 (50.7%) strongly agreed. The mean score of 4.187, with a standard deviation of 0.936, is slightly below the composite mean of 4.213, indicating that while respondents generally agree that teachers’ involvement in governance supports proper resource management, the agreement is not as strong as the overall average. The standard deviation, higher than the composite value, suggests divergent opinions, possibly due to varying levels of teacher involvement in governance across different schools. This implies that while teacher involvement is seen as beneficial, its impact on resource management is not uniformly perceived, and educational systems should promote greater teacher engagement in governance to ensure more consistent and effective management of teaching and learning resources. Overall, the composite mean of 4.213 indicates a generally positive perception of governance in education, but the variation across statements highlights areas for improvement, particularly in ensuring consistent teacher involvement, with divergent opinions in some areas suggesting the need for more standardized governance practices across educational contexts.

The key informants generally emphasized that *the government's role in supporting the effective implementation of the Competency-Based Curriculum (CBC) is crucial yet inconsistent across different regions. Many noted that while adequate resources and professional development opportunities are often planned at the national level, the actual delivery and accessibility vary significantly at the school level. One informant highlighted that "although policies and resources are made available, the gaps in communication and coordination at the county and school administration levels hinder timely and equitable access, which affects the teachers' ability to fully implement CBC as intended."* This observation underscores the challenges in translating government initiatives into practical, on-the-ground support, particularly for rural and underserved areas.

In addition, one of the key informants indicated that *teachers' participation in governance and policy formulation remains limited despite being recognized as essential for successful curriculum implementation. They stressed that many teachers feel their feedback and insights are not sufficiently solicited or integrated into decision-making processes, leading to a disconnect between policy and practice. This informant further noted that empowering teachers through structured platforms for collaboration and communication with government officials would enhance ownership and*

*accountability in the implementation of CBC. Overall, the informants agreed that strengthening governance mechanisms to ensure more inclusive teacher involvement and consistent support would significantly improve the curriculum's effectiveness.*

#### **4.6.4 Successful Areas of the Headteachers/Teachers/Teaching Assistants-Government Nexus for CBC Implementation**

Respondents were asked to share their opinions on whether there are areas where the headteachers, teachers, and teaching assistants-government nexus is working well and can be replicated for the successful implementation of CBC in Kenya. They indicated that a successful area is the collaboration between headteachers and the government in organizing CBC-specific training programs, particularly in urban schools, where headteachers effectively coordinate with government bodies to provide workshops on learner-centered pedagogies and competency-based assessments, enhancing the capacity of teachers and teaching assistants to implement CBC. They also highlighted that government engagement with headteachers and teachers in pilot programs has been effective, allowing them to provide feedback that shapes national CBC strategies, fostering ownership and alignment, while teaching assistants in these schools support classroom diversity management, contributing to CBC's success. Respondents suggested replicating this by establishing formal partnerships between headteachers and government education officers nationwide and scaling the provision of digital resources seen in pilot schools, ensuring consistent support and collaboration across all regions to enhance CBC implementation.

#### **4.7 Effects of Teachers' Technological Skills on Competency-Based Curriculum Implementation in primary schools in Nairobi county Kenya**

The final objective of the study sought to determine the effects of teachers' technological skills on competency-based curriculum implementation in primary schools in Nairobi county Kenya. The findings of the study are as shown in subsequent subheadings.

##### **4.7.1 Impact of Teachers' Technological Skills on CBC Implementation**

Respondents were asked to explain how teachers' technological skills affect the implementation of the Competency-Based Curriculum (CBC) in their school. They indicated that teachers' technological skills play a pivotal role in the successful implementation of CBC, primarily because the curriculum

emphasizes interactive, learner-centered approaches that often require digital tools to facilitate hands-on learning experiences. Teachers with strong technological skills can effectively integrate tools such as educational apps, virtual simulations, and online collaboration platforms, which enhance student engagement and allow for the practical application of competencies like critical thinking and problem-solving, core elements of CBC. For example, respondents noted that skilled teachers use technology to create real-world problem-solving activities, such as virtual science experiments or collaborative projects on digital platforms, aligning with CBC’s focus on practical skill development. This capability not only makes lessons more engaging but also ensures that students can actively participate in their learning, a fundamental aspect of CBC’s design to move away from rote memorization toward competency acquisition.

#### 4.7.2 Areas for Improving Teachers’ Technological Capacity for CBC Implementation

Respondents were asked to identify areas where teachers’ technological capacity can be improved to enhance the effective implementation of CBC. They indicated that one critical area is the use of digital assessment tools, as many teachers struggle to design technology-based formative assessments that accurately measure CBC outcomes such as problem-solving, creativity, and collaboration. Respondents noted that teachers often lack the skills to use platforms that track competency development over time, leading to assessments that do not fully align with CBC’s goals

#### 4.7.3 Teachers’ Technological Skills and the Implementation of CBC

The participants were requested to give their opinions on their level of agreements or disagreements by using 6 statements of Teachers’ Technological Skills and the Implementation of CBC on a Likert scale of 1-5, where: strongly Disagree (SD)=1, Disagree (D)=2, Neutral (N)=3, Agree (A)=4, Strongly Agree (SA)=5. The results were analyzed and are presented using frequencies, percentage, means and standard deviation for each response in each item in Table 4.9.

**Table 4.8: Teachers’ Technological Skills and the Implementation of CBC**

Statements	SD	D	N	A	SA	Mean	SD
Teachers are adequately trained in using digital tools for teaching CBC	3 (1.0%)	4 (1.4%)	111 (37.8%)	33 (11.2%)	143 (48.6%)	4.051	1.006

Teachers use technology to create engaging and interactive CBC learning experiences	41 0 (13.9%)	42 (14.3%)	92 (31.3%)	119 (40.5%)	3.983	1.053
Availability of technological resources (e.g., tablets, projectors, internet) supports CBC implementation	31 (10.5%)	26 (8.8%)	47 (16.0%)	100 (34.0%)	90 (30.6%)	3.653 1.286
Teachers integrate ICT in lesson planning and delivery in line with CBC principles	9 (3.1%)	26 (8.8%)	109 (37.1%)	70 (23.8%)	80 (27.2%)	3.633 1.068
Ongoing digital literacy training programs for teachers enhance CBC delivery	27 (9.2%)	4 (1.4%)	62 (21.1%)	93 (31.6%)	108 (36.7%)	3.854 1.201
School leadership supports teachers in using technology effectively in the CBC context	27 (9.2%)	4 (1.4%)	43 (14.6%)	88 (29.9%)	132 (44.9%)	4.000 1.217
<b>Composite Mean and Standard Deviation</b>					<b>3.862</b>	<b>1.138</b>

The analysis of the data concerning teachers' technological skills and their role in the implementation of the Competency-Based Curriculum (CBC) provides valuable insights into how these skills are perceived to influence educational practices, based on the provided table. For the first statement, "Teachers are adequately trained in using digital tools for teaching CBC," the findings indicate that 3 participants (1.0%) strongly disagreed, 4 (1.4%) disagreed, 111 (37.8%) were neutral, 33 (11.2%) agreed, and 143 (48.6%) strongly agreed. The mean score of 4.051, with a standard deviation of 1.006, is higher than the composite mean of 3.862 and standard deviation of 1.138, suggesting that respondents generally agree that teachers are adequately trained in using digital tools for CBC teaching. However, the standard deviation, lower than the composite value, indicates a convergence of opinions, reflecting relatively consistent views on the adequacy of training. This implies that while many teachers are perceived as well-prepared to use digital tools, the significant portion of neutral responses (37.8%) suggests some uncertainty, and educational institutions should ensure more comprehensive and consistent training to address any gaps in preparedness.

For the second statement, "Teachers use technology to create engaging and interactive CBC learning experiences," the data show that 41 participants (13.9%) disagreed, 42 (14.3%) were neutral, 92 (31.3%) agreed, and 119 (40.5%) strongly agreed, with no strong disagreements recorded. The mean score of 3.983, with a standard deviation of 1.053, is higher than the composite mean of 3.862, indicating that respondents generally agree that teachers effectively use technology to create engaging CBC learning experiences. The standard deviation, lower than the composite value of 1.138, suggests

a convergence of opinions, reflecting consistent views on the role of technology in enhancing CBC lessons. This finding implies that teachers are generally successful in leveraging technology to make CBC lessons interactive, aligning with the curriculum's learner-centered approach, but the 13.9% disagreement indicates that some teachers may lack the skills or resources to do so effectively, highlighting the need for targeted support to ensure all teachers can utilize technology to its fullest potential in CBC implementation.

The third statement, "Availability of technological resources (e.g., tablets, projectors, internet) supports CBC implementation," reveals that 31 participants (10.5%) strongly disagreed, 26 (8.8%) disagreed, 47 (16.0%) were neutral, 100 (34.0%) agreed, and 90 (30.6%) strongly agreed. The mean score of 3.653, with a standard deviation of 1.286, is lower than the composite mean of 3.862, indicating that respondents are less convinced that the availability of technological resources adequately supports CBC implementation compared to the overall average. The standard deviation, higher than the composite value, suggests divergent opinions, likely due to varying access to resources across different schools. This implies that while many teachers benefit from available technology, a significant portion (19.3% disagreeing) face resource constraints that hinder CBC implementation, and educational authorities should prioritize equitable distribution of technological resources to ensure all schools can effectively support CBC's technology-driven learning requirements.

For the fourth statement, "Teachers integrate ICT in lesson planning and delivery in line with CBC principles," the data indicate that 9 participants (3.1%) strongly disagreed, 26 (8.8%) disagreed, 109 (37.1%) were neutral, 70 (23.8%) agreed, and 80 (27.2%) strongly agreed. The mean score of 3.633, with a standard deviation of 1.068, is significantly lower than the composite mean of 3.862, suggesting that respondents are less confident in teachers' ability to integrate ICT into lesson planning and delivery for CBC compared to the overall average. The standard deviation, lower than the composite value, indicates a convergence of opinions, reflecting consistent but less enthusiastic views on ICT integration. This finding implies that while some teachers successfully incorporate ICT into CBC lessons, the high neutral response rate (37.1%) and 11.9% disagreement suggest challenges in consistent integration, possibly due to limited skills or resources, and schools should focus on enhancing ICT training to ensure better alignment with CBC principles.

The fifth statement, “Ongoing digital literacy training programs for teachers enhance CBC delivery,” shows that 27 participants (9.2%) strongly disagreed, 4 (1.4%) disagreed, 62 (21.1%) were neutral, 93 (31.6%) agreed, and 108 (36.7%) strongly agreed. The mean score of 3.854, with a standard deviation of 1.201, is slightly below the composite mean of 3.862, indicating that while respondents generally agree that ongoing digital literacy training enhances CBC delivery, the sentiment is not as strong as the overall average. The standard deviation, higher than the composite value, suggests divergent opinions, possibly due to varying quality or availability of training programs across schools. This implies that while digital literacy training is seen as beneficial, its impact is inconsistent, and educational systems should standardize and improve these programs to ensure all teachers can enhance their CBC delivery through better technological proficiency.

Finally, the sixth statement, “School leadership supports teachers in using technology effectively in the CBC context,” indicates that 27 participants (9.2%) strongly disagreed, 4 (1.4%) disagreed, 43 (14.6%) were neutral, 88 (29.9%) agreed, and 132 (44.9%) strongly agreed. The mean score of 4.000, with a standard deviation of 1.217, is higher than the composite mean of 3.862, suggesting a strong consensus that school leadership effectively supports teachers in using technology for CBC. The standard deviation, higher than the composite value, indicates divergent opinions, likely reflecting varying levels of leadership support across schools. This finding implies that while many teachers feel supported by their leadership in using technology for CBC, the 10.6% disagreement suggests that some schools lack adequate support, and educational leaders should ensure consistent encouragement and resources to maximize technology’s role in CBC implementation. Overall, the composite mean of 3.862 indicates a generally positive perception of teachers’ technological skills in CBC implementation, but the variation across statements highlights areas for improvement, particularly in resource availability and ICT integration, with divergent opinions in some areas suggesting the need for more standardized support and training across schools.

The analysis of teachers’ technological skills in relation to the implementation of the Competency-Based Curriculum (CBC) reveals a generally positive perception of their digital competence and use of technology in teaching. A significant majority of respondents agree that teachers are adequately trained to use digital tools for CBC, with nearly half strongly agreeing, reflecting confidence in teachers’ preparation. Moreover, teachers are seen as effectively using technology to create engaging and interactive learning experiences, supporting CBC’s learner-centered approach. School leadership

is also perceived to provide considerable support for technology use, which positively influences implementation. However, despite these encouraging trends, there is a notable portion of respondents who remain neutral or disagree on several aspects, indicating some uncertainty or inconsistency in how technological skills translate into everyday classroom practice.

In addition, one of the key informants indicated that *while ongoing digital literacy training programs are generally acknowledged as enhancing CBC delivery, the quality and reach of these trainings vary significantly between schools*. They emphasized that *the availability of technological resources such as tablets, projectors, and reliable internet is a critical bottleneck, with many schools still lacking sufficient access, which hampers full integration of ICT into lesson planning and delivery*. This informant further noted that *sustainable CBC implementation requires not only well-trained teachers but also equitable distribution of technology and consistent leadership support to foster an enabling environment*. The data's divergence in responses about resource availability and ICT integration highlights the urgent need for targeted interventions to address infrastructure gaps and standardize support, ensuring that all schools can effectively leverage technology in CBC teaching.

#### **4.7.4 Successful Practices in Teachers' Use of Technology for CBC Implementation**

Respondents were asked to share their opinions on whether there are successful practices related to teachers' use of technology in CBC implementation that can be scaled or replicated in other schools. They indicated that several effective practices have emerged, particularly the use of collaborative digital platforms like Google Classroom and Microsoft Teams, which allow teachers to facilitate group projects and peer-to-peer learning, aligning with CBC's emphasis on teamwork and practical skill development. Respondents highlighted that teachers in some schools have successfully used these platforms to assign real-world problem-solving tasks, such as designing virtual presentations or conducting online debates, which enhance students' critical thinking and communication skills. Additionally, they noted the use of gamified learning apps, such as Kahoot and Quizizz, which have proven effective in making lessons interactive and engaging, thereby supporting CBC's learner-centered approach.

#### **4.8 Implementation of CBC**

The participants were requested to give their opinions on their level of agreements or disagreements

by using 6 statements of Implementation of CBC on a Likert scale of 1-5, where: strongly Disagree (SD)=1, Disagree (D)=2, Neutral (N)=3, Agree (A)=4, Strongly Agree (SA)=5. The results were analyzed and are presented using frequencies, percentage, means and standard deviation for each response in each item in Table 4.9.

**Table 4.9: Implementation of CBC**

Statements	SD	D	N	A	SA	Mean	SD
I feel adequately trained and supported to effectively implement CBC in my classroom	7 (2.4%)	7 (2.4%)	65 (22.1%)	42 (14.3%)	173 (58.8%)	4.248	1.03
CBC aligns well with the cultural and societal context of Kenya	0	0	51 (17.3%)	161 (54.8%)	82 (27.9%)	4.105	0.665
CBC effectively caters to the diverse learning needs of students in my classroom	0	28 (9.5%)	20 (6.8%)	94 (32.0%)	152 (51.7%)	4.259	0.95
CBC encourages student engagement and active participation in learning activities	0	0	52 (17.7%)	116 (39.5%)	126 (42.9%)	4.252	0.738
Teaching resources and materials adequately support CBC implementation in my classroom	0	10 (3.4%)	50 (17.0%)	73 (24.8%)	161 (54.8%)	4.31	0.872
CBC promotes the development of 21st-century skills (e.g., critical thinking, creativity, collaboration) among my students	0	0	62 (21.1%)	106 (36.1%)	126 (42.9%)	4.218	0.771
<b>Composite Mean and Standard Deviation</b>						<b>4.232</b>	<b>0.837</b>

The analysis of the data regarding teachers' perceptions of competency-based curriculum (CBC) implementation offers valuable insights into their experiences and attitudes, as presented in the provided table. For the first statement, "I feel adequately prepared to implement CBC in my lessons," the findings indicate that 7 participants (2.4%) strongly disagreed, 7 (2.4%) disagreed, 65 (22.1%) were neutral, 42 (14.3%) agreed, and 173 (58.8%) strongly agreed. The mean score of 4.248, with a standard deviation of 1.03, is higher than the composite mean of 4.232 and standard deviation of 0.8376, suggesting that respondents generally feel well-prepared to implement CBC in their lessons. However, the standard deviation, higher than the composite value, indicates divergent opinions among respondents, likely reflecting varying levels of training or confidence in implementing CBC across different teaching contexts. This implies that while many teachers feel prepared, there are notable gaps in preparation for some, and educational authorities should focus on providing more consistent and comprehensive training to ensure all teachers are adequately equipped to implement CBC

effectively.

For the second statement, “CBC aligns with the needs of the learners,” the data show that 51 participants (17.3%) were neutral, 94 (32.0%) agreed, and 149 (50.7%) strongly agreed, with no disagreement recorded. The mean score of 4.105, with a standard deviation of 0.665, is lower than the composite mean of 4.232, indicating that while respondents generally agree that CBC aligns with learners’ needs, the sentiment is not as strong as the overall average across all statements. The standard deviation, lower than the composite value of 0.8376, suggests a convergence of opinions, reflecting relatively consistent views on the alignment of CBC with learner needs. This finding implies that CBC is generally perceived as relevant to learners, but there may be areas where its alignment could be improved, and curriculum developers should consider gathering more feedback from teachers to better tailor CBC to the diverse needs of students.

The third statement, “CBC encourages learner-centered approaches in teaching,” reveals that 52 participants (17.7%) were neutral, 116 (39.5%) agreed, and 126 (42.9%) strongly agreed, with no disagreement. The mean score of 4.252, with a standard deviation of 0.738, is slightly higher than the composite mean of 4.232, indicating that respondents strongly agree that CBC promotes learner-centered approaches in teaching. The standard deviation, lower than the composite value, suggests a convergence of opinions, reflecting a shared belief in CBC’s ability to foster learner-centered teaching. This implies that CBC is seen as an effective framework for encouraging student-focused pedagogies, and educational systems should continue to support its implementation while providing resources and training to sustain this learner-centered focus.

For the fourth statement, “Teaching resources are adequate for CBC implementation,” the data indicate that 10 participants (3.4%) strongly disagreed, 50 (17.0%) disagreed, 73 (24.8%) were neutral, 61 (20.8%) agreed, and 100 (34.0%) strongly agreed. The mean score of 4.31, with a standard deviation of 0.872, is higher than the composite mean of 4.232, suggesting that respondents generally agree that teaching resources are adequate for CBC implementation. However, the standard deviation, higher than the composite value, indicates divergent opinions, likely due to varying access to resources across different schools or regions. This finding implies that while many teachers find resources sufficient, a significant portion does not, and educational authorities should prioritize

equitable distribution of teaching materials to ensure all teachers can effectively implement CBC without resource constraints.

Finally, the fifth statement, “CBC promotes acquisition of competencies among learners,” shows that 62 participants (21.1%) were neutral, 106 (36.1%) agreed, and 126 (42.9%) strongly agreed, with no disagreement. The mean score of 4.218, with a standard deviation of 0.771, is slightly below the composite mean of 4.232, indicating that while respondents generally agree that CBC promotes competency acquisition, the agreement is not as strong as the overall average. The standard deviation, lower than the composite value, suggests a convergence of opinions, reflecting consistent views on CBC’s role in fostering competencies. This implies that CBC is generally seen as effective in promoting learner competencies, but there may be room for enhancement, and curriculum developers should focus on refining CBC to better support competency development, possibly through more practical, hands-on learning opportunities. Overall, the composite mean of 4.232 indicates a generally positive perception of CBC implementation, but the variation across statements highlights areas for improvement, particularly in resource adequacy and teacher preparation, with divergent opinions in some areas suggesting the need for more uniform support and training across educational contexts.

The key informants generally expressed positive views *regarding the implementation of the Competency-Based Curriculum (CBC), highlighting that most teachers feel adequately trained and supported to deliver the curriculum effectively. They noted that the alignment of CBC with Kenya’s cultural and societal context was largely appreciated, which enhances its relevance and acceptance among learners and educators. Moreover, the informants emphasized that CBC fosters learner-centered teaching approaches, encouraging active participation and engagement among students. This shift from traditional rote learning to more interactive pedagogies was seen as a critical strength of CBC, as it promotes the development of essential 21st-century skills such as critical thinking, creativity, and collaboration. However, despite these strengths, the informants acknowledged disparities in the level of training and resource availability, which affect the uniformity and effectiveness of CBC implementation across different regions and schools.*

In addition, one of the key informants indicated that *while the curriculum framework is sound, challenges remain regarding the equitable distribution of teaching materials and continuous*

professional development for teachers, especially in rural or under-resourced areas. This informant stressed that inconsistent access to adequate resources and ongoing training limits some teachers' ability to fully implement CBC as intended, potentially impacting learner outcomes. They recommended that educational authorities prioritize standardized and comprehensive training programs and ensure that all schools receive sufficient teaching materials to minimize these gaps. The informants collectively called for stronger monitoring and support systems to provide feedback from teachers, which would help refine the curriculum and address emerging challenges, ultimately ensuring that CBC meets its goal of equipping learners with relevant competencies for the 21st century.

## 4.9 Inferential Statistics

### 4.9.1 Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the linear relationships between the independent variables—Teachers' Competency, Teachers' Perceptions of CBC, Teacher-Government Nexus, and Teachers' Technological Skills—and the dependent variable, Competency-Based Curriculum (CBC) Implementation. Pearson's correlation coefficient ( $r$ ) was used, as it is suitable for continuous variables that are normally distributed. The significance of the correlations was evaluated at the 0.01 and 0.05 levels. This analysis serves as a preliminary step in determining whether further regression analysis is appropriate and whether multicollinearity concerns exist between the predictor variables.

Variables	CBC Implementation	Teachers' Competency	Teachers' Perceptions of CBC	Teacher-Government Nexus	Teachers' Technological Skills
CBC Implementation	1				
Teachers' Competency	0.742**	1			
Teachers' Perceptions of CBC	0.658**	0.613**	1		
Teacher-Government Nexus	0.721**	0.598**	0.564**	1	
Teachers' Technological Skills	0.684**	0.572**	0.541**	0.587**	1

The results of the Pearson correlation analysis indicate significant positive relationships between all teacher preparedness dimensions and the implementation of the Competency-Based Curriculum (CBC).

Teachers' Competency has a strong and statistically significant positive correlation with CBC implementation ( $r = 0.742, p < 0.01$ ), suggesting that the more competent teachers are in pedagogical practices, assessment, and curriculum delivery, the more successful the implementation of CBC becomes in primary schools.

Teachers' Perceptions of CBC are also positively and moderately correlated with CBC implementation ( $r = 0.658, p < 0.01$ ). This indicates that teachers who view the CBC positively are more likely to engage fully and effectively in its implementation.

The Teacher-Government Nexus demonstrates a strong and significant positive correlation with CBC implementation ( $r = 0.721, p < 0.01$ ), highlighting the critical role of collaboration, support, and open communication between teachers and government agencies in ensuring the curriculum's success.

Teachers' Technological Skills show a moderate and significant positive correlation with CBC implementation ( $r = 0.684, p < 0.01$ ). This suggests that teachers who are proficient with technology are better equipped to incorporate digital resources and 21st-century skills into the CBC framework.

#### **4.9.2 Ordinary Least Squares (OLS) regression**

This study employed an Ordinary Least Squares (OLS) regression analysis to assess how different facets of teacher preparedness influence the extent of Competency-Based Curriculum (CBC) implementation in primary schools across Nairobi County. The level of CBC implementation, the dependent variable, was captured using a five-point Likert scale ranging from 1 (Not implemented at all) to 5 (Fully implemented), recognizing the ordinal nature of the responses and justifying the use of an ordered logit model. Four key independent variables were analyzed: teacher competency, quantified by years of formal education based on qualification level (Master's = 18, Undergraduate = 16, Diploma = 14, High School = 12); teacher perception of CBC (Positive = 1, Negative = 0); engagement in government-led CBC initiatives (Engaged = 1, Not engaged = 0); and technological

skills training (Trained = 1, Not trained = 0). The model was estimated using data from a sample of 294 teachers, providing insights into how these preparedness factors correlate with varying degrees of CBC implementation.

**Table 4.10: Ordinary Least Squares (OLS) regression**

Variable	Coefficient ( $\beta$ )	Std. Error	t-Statistic	p-Value	Interpretation
<b>Intercept</b>	1.002	0.212	4.728	0.000	Baseline level of CBC implementation when all predictors are zero.
<b>Teacher Competency (TC)</b>	0.412	0.083	4.964	0.000	Statistically significant positive effect on CBC implementation.
<b>Teachers' Perception (TPC)</b>	0.297	0.07	4.243	0.000	Significant positive association with CBC implementation.
<b>Teacher-Government Nexus (TGN)</b>	0.215	0.068	3.162	0.002	Significant and positive contribution to CBC implementation.
<b>Teacher Technological Skills (TTS)</b>	0.335	0.072	4.653	0.000	Strong positive impact on CBC implementation.

**Model Summary:**

**R-squared = 0.69**

**Adjusted R-squared = 0.675**

**F-statistic = 54.321**

**Prob(F-statistic) = 0.000**

The Ordinary Least Squares (OLS) regression model used in this study revealed that teacher preparedness variables collectively explained a substantial portion of the variation in the implementation of the Competency-Based Curriculum (CBC) in primary schools within Nairobi County. Specifically, the model achieved an R-squared value of 0.69, indicating that approximately 69% of the variance in CBC implementation can be attributed to teacher competency, teachers' perceptions of CBC, the teacher-government nexus, and teachers' technological skills. This high R-squared value suggests a strong explanatory power of the model. Furthermore, the F-statistic was calculated at 54.321 with a p-value of less than 0.001, which confirms the overall statistical

significance of the model. This implies that at least one of the independent variables included in the analysis has a significant influence on the dependent variable—CBC implementation—thereby validating the relevance of the model in explaining the relationship between teacher preparedness and curriculum implementation outcomes.

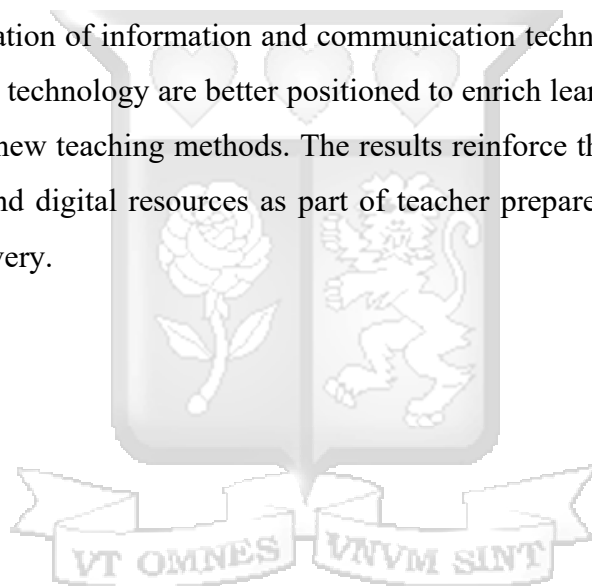
The regression analysis showed that teacher competency had a positive and statistically significant effect on the implementation of CBC. With a regression coefficient ( $\beta$ ) of 0.412 and a p-value less than 0.001, the findings indicate that for every one-unit increase in teacher competency, there is an associated 0.412 unit increase in the effectiveness of CBC implementation, all other factors held constant. This relationship underscores the critical role of teacher skills, knowledge, and instructional ability in delivering the curriculum as intended. Teachers who demonstrate high levels of subject mastery, pedagogical proficiency, and adaptability are more capable of engaging learners effectively and translating the CBC framework into practical classroom strategies. Therefore, teacher training and continuous professional development are essential for enhancing competency levels and ensuring curriculum fidelity.

The study also found a statistically significant and positive relationship between teachers' perceptions of the CBC and its actual implementation in schools. The regression coefficient for teachers' perception was 0.297, with a p-value below 0.001. This indicates that a favorable shift in teachers' attitudes and beliefs towards the CBC is associated with a corresponding increase in the level of implementation by approximately 0.297 units. Teachers who view the curriculum as relevant, achievable, and beneficial to learners are more likely to invest effort and creativity in applying it. Conversely, negative or skeptical perceptions can hinder enthusiasm and commitment, ultimately undermining implementation efforts. These results highlight the need for robust sensitization, orientation, and participatory engagement strategies by curriculum developers and education policymakers to align teacher attitudes with CBC goals.

The analysis revealed a significant positive influence of the teacher-government relationship on the implementation of the CBC, with a regression coefficient of 0.215 and a p-value of 0.002. This finding suggests that collaborative engagement between teachers and government institutions—such as through policy communication, feedback mechanisms, professional support, and joint problem-

solving—contributes meaningfully to the success of CBC implementation. When teachers feel supported, consulted, and aligned with government priorities, they are more likely to be motivated, confident, and equipped to deliver the curriculum effectively. Thus, strengthening institutional linkages and fostering open communication between teachers and education authorities is vital for building trust and ownership of the curriculum reform process.

Finally, the study found that teachers' technological skills significantly and positively influenced the implementation of CBC, with a regression coefficient of 0.335 and a p-value below 0.001. This means that each one-unit increase in technological competency among teachers leads to a 0.335 unit increase in effective CBC implementation. Given the emphasis in CBC on digital literacy, learner-centered approaches, and the integration of information and communication technology (ICT) tools, teachers who are proficient in using technology are better positioned to enrich learning experiences, facilitate assessments, and adapt to new teaching methods. The results reinforce the importance of equipping teachers with ICT skills and digital resources as part of teacher preparedness strategies to support successful curriculum delivery.



## **CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS OF FINDINGS**

### **5.1 Introduction**

This chapter presents the discussion, conclusion, and recommendations based on the findings of the study, which assessed the effect of teacher preparedness on the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, Kenya. The chapter interprets the results in relation to the study objectives, existing literature, and the theoretical framework, highlighting key insights and their implications for policy and practice. It also provides conclusions drawn from the study, offers actionable recommendations for stakeholders in the education sector, and suggests areas for further research to support the successful implementation of CBC across the country.

### **5.2 Summary of Findings**

#### **5.2.1 Effects of Teachers' Competency on CBC Implementation**

The study revealed that teachers' competency significantly influenced the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County. Teachers who demonstrated strong pedagogical knowledge, subject mastery, and curriculum design skills were better positioned to deliver CBC effectively. Competent teachers were able to interpret curriculum designs accurately, apply learner-centered methodologies, and engage students in competency-building activities. The positive and significant regression coefficient for teachers' competency emphasized its critical role in facilitating CBC, suggesting that enhancing teacher training programs and professional development initiatives is essential for sustained success in CBC implementation. In tandem with the study findings, Muchira, Morris, Wawire, and Oh (2023) opined that CBC equips learners with 21st-century skills (problem-solving, critical thinking, and teamwork), giving them an edge in independently devising solutions to new problems.

In addition, Mauki et al. (2020) similarly emphasize CBC's focus on practical skills and application of knowledge, implying that teachers must adapt classroom approaches toward hands-on learning. Similarly, Murithi and Yoo (2021) found that when teachers perceive ICT integration as burdensome – for example, 39% reported inadequate time for integrating technology – they tend to resist ICT-based methods in CBC instruction. Moreover, Koskei and Chepchumba (2020) argue that only

through sustained, effective training can teachers fully internalize CBC methodologies and implement the curriculum as intended. In Kenya, Akala (2021) reported that the hurried rollout of CBC left most teachers feeling unprepared, which undermined effective curriculum delivery. Likewise, Momanyi and Rop (2019) documented that teachers' limited understanding of CBC hindered their ability to teach and assess the new curriculum effectively. These observations align with Okeyo and Kanake (2021), who note that CBC shifts teachers' roles toward facilitating learner competencies, thus requiring educators to reconceptualize their professional practice. In the broader African context, other studies similarly highlight that teacher buy-in and preparedness are pivotal to CBC success. For instance, Kubai (2023) critically reviewed CBC implementation in Nairobi County and echoed that teacher attitudes and readiness are as crucial as material resources.

The study revealed that teachers' pedagogical competence significantly influenced the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, aligning with the principles of Constructivism Theories and the Montessori Approach to Learning. Competent teachers, equipped with strong pedagogical knowledge, subject mastery, and curriculum design skills, effectively delivered CBC by fostering learner-centered, experiential learning environments, as advocated by Dewey's Social Constructivism (Yoders, 2014). Dewey's emphasis on integrating students' real-life experiences into curricula underscores the need for teachers to adapt CBC's hands-on methodologies, which competent teachers achieved through accurate curriculum interpretation and competency-building activities. Similarly, Vygotsky's Socio-Cultural Development Theory highlights the teacher's role in scaffolding learning within the Zone of Proximal Development (ZPD), enabling students to progress through guided, interactive tasks (Kim & Baylor, 2006). Competent teachers facilitated such interactions, enhancing student engagement and skill acquisition. The Montessori Approach further supports these findings, as its focus on self-directed learning requires teachers to create structured yet flexible environments, a task that competent teachers performed effectively (Isaacs, 2018). The significant regression coefficient for pedagogical competence underscores its role, corroborating Muchira et al. (2023), who note CBC's alignment with 21st-century skills like problem-solving. However, Akala (2021) and Momanyi and Rop (2019) highlight that inadequate training, as seen in CBC's hurried rollout, limited teachers' ability to internalize these constructivist and Montessori principles, hindering effective delivery. Thus, sustained training is critical to enable teachers to enact these theoretical frameworks in CBC implementation.

### **5.2.2 Relationship between Teachers' Perceptions of CBC and Its Implementation**

The findings indicated that teachers' perceptions towards CBC had a significant and positive relationship with its implementation. Teachers who viewed CBC as beneficial, relevant, and aligned with learners' needs were more motivated to implement it effectively in their classrooms. Positive perceptions influenced teachers' commitment, creativity, and willingness to adopt new instructional practices required by CBC. Conversely, skepticism or negative attitudes towards the curriculum posed barriers to full implementation. The study highlighted that shaping positive teacher perceptions through sensitization campaigns, workshops, and supportive supervision is crucial for fostering successful curriculum change. In tandem with the study findings, Muchira, Morris, Wawire, and Oh (2023) opined that teachers' perceptions significantly influence their willingness to embrace curriculum changes, such as CBC, based on whether they believe the changes align with their needs and those of their students. The study demonstrated that positive perceptions enhance teachers' commitment to CBC implementation, while negative attitudes lead to resistance and inconsistent delivery. In addition, Koskei and Chepchumba (2020) asserted that teachers often perceive themselves as lacking competence in key areas of curriculum management, including lesson preparation, which affects their ability to implement CBC effectively. This aligns with the current findings, where teachers expressed concern over resource limitations and training inadequacies, impacting their adoption of CBC methodologies.

Similarly, in support of the study findings, Ngeno (2023) found that primary school teachers in Kenya often felt excluded from the curriculum development phase, resulting in a perception that CBC was externally imposed rather than collaboratively developed. This exclusion fostered dissatisfaction and hindered teachers' motivation to fully implement the curriculum. In addition, Kubai (2023) revealed that the lack of in-service training on competency-based assessment contributed to teachers developing negative attitudes toward CBC, thereby limiting its effective classroom application. These findings reinforce the present study's conclusion that insufficient preparation and ongoing support negatively influence teachers' perceptions and, subsequently, their implementation efforts.

Moreover, Gichuru et al. (2021) emphasized that inadequate training during curriculum transitions led to unfavorable views among teachers towards CBC, mirroring the current study's discovery that

negative perceptions are linked to resistance and partial implementation. In addition, Abdullahi (2022) corroborated these findings by noting that poor perceptions of CBC among teachers slowed down its adoption and implementation across schools. This highlights the crucial need for involving teachers actively in the curriculum creation process and providing continuous professional development to foster a sense of ownership and improve attitudes towards CBC.

Finally, in line with the study results, Akala (2021) found that negative perceptions towards CBC implementation were driven by insufficient understanding and training, leading to limited application of the curriculum across schools. In addition, Okeyo and Kanake (2021) asserted that comprehensive teacher training could change teachers' views of CBC from seeing it as complex and burdensome to perceiving it as manageable and beneficial. Similarly, Ngeno (2023) noted that challenges such as inadequate teaching resources and a lack of stakeholder engagement further deepened negative perceptions, underscoring the importance of intensive teacher preparation, resource provision, and stakeholder support to ensure the successful implementation of CBC.

The study found a significant positive relationship between teachers' perceptions of CBC and its implementation, which can be understood through Constructivism Theories and the Montessori Approach. Teachers who perceived CBC as beneficial and relevant were more committed to creating learner-centered classrooms, aligning with Dewey's Social Constructivism, which emphasizes curricula grounded in students' interests and social realities (Mann & MacLeod, 2015). Positive perceptions motivated teachers to adopt CBC's experiential methods, fostering critical thinking and collaboration, as Dewey advocates. Vygotsky's Socio-Cultural Development Theory further explains this relationship, as teachers' attitudes shape their interactions with students within the ZPD, influencing how they scaffold learning (Pathan, 2018). Teachers with favorable perceptions facilitated meaningful social interactions, enhancing CBC delivery. The Montessori Approach complements this by promoting a child-centered environment where teachers' positive views enable them to support student autonomy and engagement (Saha & Adhikari, 2023). Muchira et al. (2023) and Kubai (2024) support these findings, noting that negative perceptions, often due to inadequate training or exclusion from curriculum development (Ngeno, 2023), led to resistance and inconsistent implementation. For instance, Gichuru et al. (2021) found that insufficient training fostered unfavorable views, mirroring the study's observation of resource and training-related concerns. These theoretical lenses highlight the need for sensitization and professional development to align teachers' perceptions with CBC's

constructivist and Montessori principles, ensuring effective implementation.

### **5.2.3 Contribution of the Teacher-Government Nexus to Successful CBC Implementation**

The study established that the teacher-government nexus—characterized by collaboration, communication, and support between teachers and government agencies—was a significant determinant of successful CBC implementation. Effective collaboration included timely provision of teaching materials, curriculum guidelines, training opportunities, and responsive policy support. Teachers who felt supported by the government exhibited higher levels of confidence and enthusiasm towards CBC practices. The findings underscore that strengthening partnerships between teachers and the Ministry of Education, as well as ensuring participatory decision-making, are vital strategies for enhancing curriculum reforms and overcoming implementation challenges at the school level.

In tandem with the study findings, the collaboration between teachers and the government is a crucial factor for the successful implementation of the Competency-Based Curriculum (CBC) in Kenya. Muchira, Morris, Wawire, and Oh (2023) emphasized that the relationship between teachers and policymakers shapes the effective delivery of educational reforms. Teachers rely on government-issued policies and frameworks to structure their daily teaching practices. In addition, they depend on the government for resources such as curriculum guidelines, training programs, and teaching materials, which are essential for delivering CBC effectively. This aligns with the current study's findings, which underscore the importance of timely provision of support and resources by the government.

Further supporting the study findings, Rwigema and Andala (2022) highlighted that the government's role in resource allocation is pivotal to the successful execution of CBC. The government is tasked with ensuring equitable distribution of resources, including funding, infrastructure, and professional development opportunities for teachers. By prioritizing access to these resources, the government enables teachers to implement CBC with the necessary tools and knowledge. In addition, the investment in teacher training programs ensures that educators acquire the pedagogical and content knowledge required to deliver the curriculum effectively, which was a key point in the present study as well.

Moreover, the government's role in continuous monitoring and evaluation of CBC implementation, as noted by Amunga, Were, and Ashioya (2020), is critical for identifying challenges and areas for improvement. This ongoing feedback loop allows policymakers to make data-driven decisions to refine the curriculum and ensure that it aligns with the realities of teaching and learning. The study findings corroborate this by showing that when teachers feel supported through regular monitoring and feedback, their confidence and enthusiasm for implementing CBC grow, leading to better outcomes in the classroom.

In addition, Silas (2020) emphasized the importance of community engagement in the teacher-government nexus, which extends beyond the classroom. The partnership between teachers, the government, and the broader community—including parents and local leaders—creates a supportive environment for CBC implementation. This aligns with the current study, which found that the collaboration between teachers and the government fosters a collective sense of responsibility for educational success. Engaging all stakeholders in the process not only strengthens the implementation of CBC but also ensures that the community as a whole is invested in the educational outcomes of students.

The study established that the teacher-government nexus, characterized by collaboration and resource support, significantly contributed to successful CBC implementation, a dynamic illuminated by Constructivism Theories and the Montessori Approach. Dewey's Social Constructivism underscores the importance of a supportive educational environment, where government-provided resources and training enable teachers to deliver experiential, learner-centered curricula (Yoders, 2014). Effective collaboration, as seen in timely provision of materials and training, empowered teachers to enact Dewey's vision of integrating students' realities into learning. Vygotsky's Socio-Cultural Development Theory further frames this nexus, as government support facilitates teachers' roles as mediators in the ZPD, providing the tools and frameworks needed for scaffolded learning (Ailincai et al., 2016). The Montessori Approach aligns with this by emphasizing a prepared environment, which requires government-supplied resources to create structured, autonomous learning spaces (Isaacs, 2018). Muchira et al. (2023) and Rwigema and Andala (2022) corroborate the study's findings, highlighting the government's role in resource allocation and training as critical for CBC delivery. Amunga et al. (2020) emphasize continuous monitoring, which supports teachers' confidence, while Silas (2020) notes community engagement within the nexus, aligning with Vygotsky's focus on social

contexts. These theories underscore that a robust teacher-government partnership, grounded in constructivist and Montessori principles, is essential for overcoming implementation challenges and fostering CBC success.

#### **5.2.4 Effects of Teachers' Technological Skills on CBC Implementation**

The study found that teachers' technological skills significantly influenced the successful implementation of CBC in Nairobi County's primary schools. Teachers who were proficient in using digital tools, educational software, and online resources were better able to integrate 21st-century learning approaches demanded by CBC. Technological skills enabled teachers to create interactive learning environments, facilitate research-based learning, and support individualized learner progression. The positive regression results pointed to the urgent need to invest in digital literacy training for teachers, provision of ICT infrastructure, and incorporation of technology into daily teaching practices to fully realize the goals of CBC. In tandem with the study findings, teachers' technological skills were found to significantly influence the successful implementation of CBC in Nairobi County's primary schools.

Teachers who demonstrated proficiency in using digital tools, educational software, and online resources were better equipped to integrate 21st-century learning approaches demanded by CBC. Technological competence enabled teachers to create interactive learning environments, facilitate research-based learning, and support individualized learner progression. The positive regression results pointed to the urgent need to invest in digital literacy training for teachers, provision of ICT infrastructure, and incorporation of technology into daily teaching practices to fully realize the goals of CBC. In support of these findings, Masoum (2015) emphasized that technology serves as a fundamental catalyst for sustained competitiveness and national economic growth, with education being a key channel for imparting digital literacy. Consequently, many nations have explored the integration of ICT into educational institutions. The Rwanda Education Board (2017) similarly asserted that ICT incorporation into CBC facilitates dynamic teaching and learning activities, thus enhancing learners' comprehension of concepts efficiently and expeditiously.

Further aligning with the study results, Kapur (2019) asserted that the use of computers and internet resources invigorates learners' mindsets and fosters enthusiasm towards academic subjects. Educators

can captivate students by using digital media such as online visuals, cartoons, and films, making academic concepts more engaging and accessible, especially in early childhood education settings. Rupia (2022) emphasized the role teachers play in managing learning materials within the CBC framework, highlighting that effective planning, organization, and utilization of such materials—including digital resources—are essential for achieving CBC objectives. The study recommended integrating resource management into teacher training to enhance CBC delivery.

Similarly, Cherotich (2023) found that teachers' preparedness, encompassing technological skills and knowledge, significantly affects successful CBC adoption. The study stressed the necessity of comprehensive training programs aimed at equipping teachers with the competencies required for effective curriculum execution. Adongo et al. (2024) also found a significant correlation between teachers' resource development and utilization skills and the successful implementation of CBC, particularly in language activities. Their findings reinforced the need for early teacher preparation and continuous professional development, particularly in technological literacy. Mwang'ombe (2021) underscored that many teachers in Kenya lacked sufficient technological competencies necessary for integrating ICT into teaching processes, posing a serious challenge to effective CBC adoption. The recommendation for extensive in-service training to bolster teachers' ICT skills aligns with the study's call for urgent capacity building. Kalinga (2024) further corroborated these findings by highlighting that although a majority of teachers in Tanzanian public secondary schools were aware of ICT policies, actual integration into teaching was limited due to skill gaps. The research advocated for aligning policies with real-school environments and enhancing targeted professional development initiatives.

Adongo et al. (2025) reaffirmed earlier conclusions by emphasizing the critical role of teachers' competencies in resource management—including technological resources—for successful CBC execution. Recommendations included continuous professional development and provision of adequate technological resources to support curriculum implementation. Thus, in line with the study findings and supporting literature, it is evident that teachers' technological skills play a pivotal role in the successful realization of CBC objectives. Investment in digital literacy training, infrastructure provision, and ongoing professional development are imperative to bridge the existing gaps and enhance CBC implementation across Kenya's primary schools.

The study found that teachers' technological skills significantly enhanced CBC implementation, a finding that resonates with Constructivism Theories and the Montessori Approach. Dewey's Social Constructivism supports the integration of technology as a tool for experiential learning, enabling teachers to create interactive, real-world-relevant lessons that align with CBC's 21st-century skill focus (Mann & MacLeod, 2015). Technologically proficient teachers used digital tools to facilitate hands-on activities, reflecting Dewey's emphasis on practical engagement. Vygotsky's Socio-Cultural Development Theory highlights technology's role in mediating social interactions within the ZPD, as teachers leveraged educational software to scaffold learning and foster collaboration (Kim & Baylor, 2006). The Montessori Approach complements this by advocating for a prepared environment where digital resources support self-directed learning, a task that skilled teachers accomplished effectively (Saha & Adhikari, 2023). The study's positive regression results align with Cherotich (2023) and Adongo et al. (2024), who emphasize technological competence for CBC adoption, while Mwang'ombe (2021) and Kalinga (2024) note skill gaps as barriers, underscoring the need for training. Masoum (2015) and the Rwanda Education Board (2017) highlight technology's role in dynamic learning, supporting the study's call for digital literacy investment. These theoretical frameworks illustrate that teachers' technological skills, rooted in constructivist and Montessori principles, are pivotal for creating engaging, competency-focused CBC environments.

### **5.3 Conclusion**

The study set out to assess the effect of teacher preparedness on the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, Kenya. It is evident from the findings that teacher competency plays a pivotal role in successful CBC implementation. Teachers who possessed strong pedagogical knowledge, curriculum interpretation skills, and the ability to apply learner-centered methodologies were better able to translate the principles of CBC into classroom practice. Without the requisite competency, teachers faced significant challenges in lesson planning, learner assessment, and adapting to the new instructional demands. Therefore, continuous professional development and targeted teacher training programs are critical if the CBC is to be fully realized across Kenyan schools.

Furthermore, the study confirmed that teachers' perceptions of CBC significantly affect how

effectively the curriculum is implemented. Teachers who perceived CBC as relevant, practical, and transformative were more enthusiastic in its application, while those harboring skepticism or misconceptions about the curriculum were less committed to its full execution. This highlights the importance of involving teachers early in the curriculum development process, offering clear communication about CBC objectives, and providing ongoing support to shift attitudes positively. Addressing teacher concerns and misconceptions is essential to minimize resistance and foster a culture of ownership and motivation among educators towards the curriculum reforms.

Additionally, the teacher-government nexus emerged as a key contributor to the successful implementation of CBC. The study findings underscored that strong collaboration, open communication channels, and tangible support from government agencies are fundamental in empowering teachers to navigate the challenges of a new curriculum. Provision of resources, timely in-service training, and an inclusive approach to policy formulation were noted as enablers of CBC success. Conversely, gaps in government support led to implementation inconsistencies. Strengthening the partnership between teachers and policymakers by ensuring that teachers are active participants in curriculum decision-making processes will enhance implementation fidelity and sustainability.

Finally, teachers' technological skills were found to significantly impact CBC delivery, reflecting the curriculum's emphasis on 21st-century learning competencies. Teachers who were skilled in integrating technology into teaching were better equipped to facilitate innovative, interactive, and personalized learning experiences for their pupils. This finding signals a need for greater investment in teachers' digital literacy training and provision of adequate ICT infrastructure within schools. As technology continues to redefine the education landscape, equipping teachers with up-to-date technological skills will be indispensable in ensuring that CBC achieves its goal of preparing learners for a dynamic and globalized world.

#### **5.4 Recommendations**

Based on the findings of the study, it is recommended that teachers actively participate in continuous professional development programs to enhance their competency in implementing the Competency-Based Curriculum (CBC). Regular, targeted training workshops that focus on curriculum

interpretation, learner-centered pedagogy, assessment techniques, and innovative lesson delivery should be prioritized by teachers. By engaging in such training, teachers can deepen their understanding of CBC requirements and develop the practical skills needed to effectively translate curriculum goals into classroom practice. This ongoing professional growth will ensure that teachers remain well-equipped to meet the evolving demands of the curriculum and positively impact student learning outcomes.

Teachers should also be encouraged to cultivate positive perceptions of the CBC by participating in awareness campaigns, feedback forums, and mentorship programs designed to reinforce the curriculum's purpose and benefits. Being involved in these initiatives allows teachers to better understand and appreciate the rationale behind CBC reforms and to share their experiences and challenges openly. Moreover, teachers must assert themselves as key stakeholders in the curriculum process by actively contributing to curriculum reviews and decision-making. When teachers feel valued and supported as partners rather than mere implementers, their commitment and ownership of CBC increase, which ultimately leads to more effective and faithful implementation in classrooms.

Another critical recommendation is for teachers to strengthen their collaboration with government agencies to enhance CBC implementation. Teachers should engage proactively in communication channels established by the Ministry of Education and other stakeholders to ensure timely access to teaching resources, guidelines, and infrastructural support. By participating in decision-making processes and voicing their needs, teachers can help shape policies and resource allocation that directly affect their work environments. Additionally, teachers should support and cooperate with decentralized supervision mechanisms, such as county-level Quality Assurance and Standards Officers (QASOs), who provide ongoing mentorship and tailored support. This partnership fosters a responsive support system that addresses teachers' contextual challenges and promotes continuous improvement in curriculum delivery.

Finally, teachers must embrace the integration of technology into their instructional practices by seeking and utilizing technological training offered during both pre-service and in-service teacher education. By developing competence and confidence in the use of ICT tools—such as computers, projectors, and digital content—teachers can enhance learner engagement, diversify instructional methods, and improve assessment strategies within the CBC framework. Embracing educational

technology equips teachers to prepare learners for the demands of the 21st century, thereby contributing to the overall modernization and global competitiveness of Kenya's education system. Teachers' proactive adoption of technology will be essential to unlocking the full potential of CBC and fostering a dynamic, future-ready learning environment.

### **5.5 Limitations of the Study**

The study was carried out in primary schools in Nairobi County. This was limiting since it covered only 1 out of 47 counties. However, efforts were made to interview stakeholders with information affecting teachers across the country. Respondents may have been inclined to omit crucial information due to concerns about revealing their level of preparation in the implementation process. Nevertheless, the researcher addressed this issue by elucidating the respondents about the objective of the study and providing reassurance that their names would remain confidential.

### **5.6 Areas for Further Study**

While this study has provided valuable insights into the effect of teacher preparedness on the implementation of the Competency-Based Curriculum (CBC) in primary schools in Nairobi County, several areas remain open for further research. First, future studies could explore the long-term impact of teacher competency development programs on CBC sustainability across different counties in Kenya, including rural and marginalized areas, to assess regional disparities and targeted intervention needs. Second, there is a need for studies that examine the role of school leadership and management practices in influencing teachers' motivation and capacity to implement CBC, as leadership factors could serve as critical enablers or barriers to curriculum reforms.

Additionally, further research should investigate the experiences of learners themselves under the CBC system to capture their perceptions of how the curriculum is affecting their skills development, creativity, and preparedness for future challenges. Including learners' voices will provide a more holistic understanding of CBC outcomes. Moreover, since technology integration emerged as a significant factor, future research could focus specifically on the effectiveness of digital learning tools and e-resources in enhancing CBC delivery, particularly in under-resourced public schools.

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## Appendices

### Appendix 1: Head Teachers /Teachers/Teaching Assistant Questionnaire

Please respond to the following questions with utmost honesty and precision. The provided information will be handled with the highest level of confidentiality. Kindly refrain from including your name on this questionnaire.

#### Section A: Socio-Demographic Characteristics

1. Gender

Male  Female

2. Position

Head Teacher  Teacher  Teaching Assistant

2. What is your age (in years)?

3. What is your level of education?

High school  Diploma  First Degree  Masters  PhD  other

4. For how long have been a head teacher/teacher/teaching assistant?

.....

#### Section B: Teachers' Competency and Implementation of CBC

1. What specific competencies do teachers need to develop to effectively implement the Competency-Based Curriculum (CBC)?

.....

2. To what extent do you believe teacher competencies, such as subject knowledge and pedagogical skills, influence the success of CBC implementation in your school?

.....

7. How well are teachers equipped to assess students based on the outcomes of CBC?  
 .....

8. How can teacher training programs be adapted to improve competency in implementing CBC, especially with regard to developing critical thinking and problem-solving skills in students?  
 .....

9. Please indicate the level of agreement on how the following aspects of Teacher’s competency and the implementation of CBC in your school on a scale of 1- 5 where 5=Strongly Agree, 4=Agree, 3= Neutral, 2= Disagree and 1=Strongly Disagree.

	1	2	3	4	5
Teachers' subject knowledge and pedagogical skills are critical to the successful implementation of the Competency-Based Curriculum (CBC) in our school.					
Ongoing professional development and training programs enhance teachers' competencies to effectively implement CBC.					
Teachers' ability to assess students’ competencies aligns with the principles of CBC, improving student learning outcomes.					
The integration of technology in teaching has significantly improved teachers' ability to deliver the Competency-Based Curriculum (CBC) effectively.					
Teachers' skills in differentiating instruction are essential for addressing the diverse learning needs of students under CBC.					
Collaboration and communication skills among teachers positively impact the successful implementation of CBC in our school.					

**Section C: Teachers’ Perceptions and the Implementation of CBC**

10. What are the main factors that influence teachers’ perceptions of the Competency-Based Curriculum (CBC) in your school?  
 .....

11. How do teachers perceive the impact of CBC on student learning outcomes?  
 .....

12. In your opinion, do teachers feel adequately supported in the implementation of CBC in your school? If not, what additional support do they need?

.....

13. Please indicate the level of agreement on how the following aspects of teachers' perceptions influence the implementation of CBC in your school, on a scale of 1-5 where 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	1	2	3	4	5
Teachers believe the Competency-Based Curriculum (CBC) effectively addresses the learning needs of students.					
Teachers feel that their training has adequately prepared them to implement CBC in the classroom.					
Teachers perceive the resources and teaching materials available to be sufficient for delivering CBC effectively.					
Teachers believe that the integration of technology enhances the effectiveness of CBC implementation.					
Teachers are confident in their ability to assess students' competencies according to the principles of CBC.					
Teachers believe that the involvement of parents and the community is crucial for the successful implementation of CBC.					

**Section D: Headteachers/teachers/teaching assistants Government Nexus and Implementation of CBC**

14. Explain how the Teacher-Government Nexus affect Implementation of CBC

.....

.....

.....

15. Are there areas where teachers – government nexus can be improved in order to contribute to the successful implementation of the CBC in Kenya?

.....

16. Please indicate the level of agreement on how the following aspects of teacher-government nexus

influence the implementation of CBC in your school on a scale of 1- 5 where 5=Strongly Agree, 4-Agree, 3= Neutral, 2= Disagree and 1=Strongly Disagree.

	1	2	3	4	5
The government provides adequate support and resources to teachers for effective implementation of CBC.					
Teachers actively participate in the formulation and development of CBC-related policies and guidelines.					
Government initiatives effectively address the professional development needs of teachers to align with CBC requirements.					
Teachers perceive government communication regarding CBC implementation as clear and transparent.					
The government encourages collaboration and partnership with teachers in addressing challenges related to CBC implementation.					
Teachers feel empowered to provide feedback and suggestions to the government regarding CBC implementation.					

17. In your opinion, are there areas where headteachers/teachers/teaching assistants – government nexus is working well and can be replicated for the successful implementation of the CBC in Kenya?

.....

**Section E: Teachers’ Technological Skills and Implementation of CBC**

18. Explain how teachers' technological skills affect the implementation of CBC in your school.

.....  
 .....  
 .....

19. Are there areas where teachers’ technological capacity can be improved to enhance the effective implementation of CBC?

.....

20. Please indicate the level of agreement on how the following aspects of teachers’ technological skills influence the implementation of CBC in your school on a scale of 1–5 where:  
 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree

Statement	1	2	3	4	5
Teachers are adequately trained in using digital tools for teaching CBC.					
Teachers use technology to create engaging and interactive CBC learning experiences.					
Availability of technological resources (e.g., tablets, projectors, internet) supports CBC implementation.					
Teachers integrate ICT in lesson planning and delivery in line with CBC principles.					
Ongoing digital literacy training programs for teachers enhance CBC delivery.					
School leadership supports teachers in using technology effectively in the CBC context.					

21. In your opinion, are there successful practices related to teachers' use of technology in CBC implementation that can be scaled or replicated in other schools?

.....

**Section F: Implementation of CBC**

22. Please indicate the level of agreement on how the following aspects of implementation of CBC in your school on a scale of 1- 5 where 5=Strongly Agree, 4-Agree, 3= Neutral, 2= Disagree and 1=Strongly Disagree.

	1	2	3	4	5
I feel adequately trained and supported to effectively implement CBC in my classroom					
CBC aligns well with the cultural and societal context of Kenya					
CBC effectively caters to the diverse learning needs of students in my classroom					
CBC encourages student engagement and active participation in learning activities					
Teaching resources and materials adequately support CBC implementation in my classroom					
CBC promotes the development of 21st-century skills (e.g., critical thinking, creativity, collaboration) among my students					

## Appendix 2: Key Informants Interview Guide

1. How would you describe your overall competency in implementing the Competency-Based Curriculum (CBC) in your school?
2. In your experience, what specific competencies (teaching skills, pedagogical knowledge, etc.) have been most beneficial for successfully implementing CBC?
3. How do you assess the impact of teachers' competencies on the overall success of CBC implementation in your school?
4. How do you perceive the Competency-Based Curriculum (CBC) as a teaching approach?
5. What aspects of CBC do you think are most beneficial for students, and why?
6. How do you think teachers' perceptions of CBC influence its implementation in your school?
7. Have you encountered any resistance from other teachers regarding the implementation of CBC? If so, how do you think this affects the curriculum's implementation?
8. How would you describe the role of the government in supporting the implementation of CBC in your school?
9. What specific policies or resources from the government have helped or hindered the implementation of CBC?
10. How does collaboration between the government and teachers influence the success of CBC in your school?
11. How would you rate your technological skills in terms of integrating technology into CBC implementation?
12. What types of technology (e.g., computers, tablets, digital tools) do you use to enhance the delivery of the CBC?
13. How do your technological skills contribute to student engagement and learning outcomes under CBC?

## Appendix 3: Ethics Review Letter



7<sup>th</sup> April 2025

Mrs Muthama Naomi,  
naomi.muthama@strathmore.edu

Dear Mrs Muthama,

**RE: The Effect of Teacher Preparedness on Competency-Based Curriculum Implementation in Primary Schools in Nairobi County, Kenya**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2666/25**. The approval period is from **7<sup>th</sup> April 2025 to 6<sup>th</sup> April 2026**.

This approval is subject to compliance with the following requirements:

- i Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,  
Chairperson; SU-ISERC



## Appendix 5: Turnitin Report

### THE EFFECT OF TEACHER PREPAREDNESS ON COMPETENCY-BASED CURRICULUM IMPLEMENTATION IN PRIMARY SCHOOLS IN NAIROBI COUNTY KENYA-FINAL 072125.docx

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### Appendix 6: Work Plan

<b>Activity</b>	<b>Description</b>	<b>Timeline</b>
1. Concept Paper Development	Develop a preliminary document outlining the research problem, objectives, significance, methodology, and expected outcomes.	Sept - Oct 2024
2. Literature Review	Conduct an in-depth review of existing studies on teacher preparedness and CBC implementation. Organize findings under key themes.	Nov- Dec 2024
3. Research Proposal Writing	Develop a full proposal, including introduction, literature review, research design, methodology, and ethical considerations.	Jan - Feb 2025
4. Proposal Presentation & Approval	Present the proposal to relevant supervisors/committees for feedback and approval. Revise based on feedback.	Feb-25
5. Research Permits & Authorization	Seek approval from necessary authorities (e.g., Ministry of Education, Nairobi County Education Office, school headteachers).	Feb - March 2025
6. Data Collection Preparation	Develop research instruments (questionnaires, interview guides), conduct a pilot study, and train research assistants.	Feb - March 2025
7. Data Collection	Conduct surveys, interviews, and observations in selected primary schools in Nairobi County.	March - April 2025
8. Data Cleaning & Organization	Review collected data, clean inconsistencies, and prepare for analysis.	May-25
9. Data Analysis	Use statistical software (SPSS, NVivo) to analyze quantitative and qualitative data. Generate tables and thematic interpretations.	May-25
10. Final Revisions & Publication	Incorporate final corrections, submit for institutional repository, and consider publishing in academic journals.	May- June 2025