

**INFLUENCE OF TEACHER PREPAREDNESS ON IMPLEMENTATION OF THE
COMPETENCY BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN
KIKUYU SUB - COUNTY, KIAMBU COUNTY**

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DECLARATION

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



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DEDICATION

I dedicate this research project to my husband and children for their invaluable support and encouragement in my pursuit for further Education.

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I would like to express my sincere gratitude to the Almighty God for enabling me write this project. I am also thankful to my supervisors Dr. Rosemary Imonje and Dr. Lucy Njagi for guiding me throughout this project work. I will be forever grateful to you.

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ABBREVIATIONS AND ACRONYMS

BECF	Basic Education Curriculum Framework.
CBC	Competency based Curriculum.
CSO	Curriculum Support Officer.
DFID	Department for International Development.
EYE	Early Years Education.
KICD	Kenya Institute of Curriculum Development.
TECF	Teacher Education Curriculum Framework.
TSC	Teachers Service Commission.
USAID	US Agency for International Development.

ABSTRACT

The transition from the 8-4-4 system of education to the Competency-Based Curriculum has put tremendous strain on Kenya's educational stakeholders. While government representatives like the Ministry of Education frequently claim that the country is prepared to execute the new curriculum, other stakeholders like teachers and parents don't seem to share this opinion. The degree to which instructors are prepared to successfully apply the new curriculum is one of the main problems that frequently dominates the discussion about curriculum implementation. Such discussions raise the topic of how much teacher preparation can affect how the curriculum is implemented effectively, as it did in the current study. The current study therefore set out to accomplish four specific goals, namely to determine how teachers' pedagogical content knowledge, their ability to integrate ICT during instruction, and their perceptions of the preparation affect the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County. The research was done among 132 teachers of grade 6 and head teachers from 28 public primary schools in Kiambu County using a descriptive survey design. The data was gathered using semi-structured questionnaires, interviews, and observation lists, and was then quantitatively evaluated using means, percentages, standard deviation, and Pearson Correlation. To examine the qualitative information from the interview sessions, content analysis was used. While it was determined that all facets of teachers' ability to comprehend and apply concepts from curriculum design have a positive and statistically significant impact on CBC implementation, teachers' skill at integrating various competencies into lessons had the greatest impact in terms of pedagogical content knowledge on the CBC's successful implementation. The two components of ICT integration that had a statistically significant impact on the efficient implementation of the CBC were instructors' integration of ICT learning across all learning domains and the availability of suitable infrastructure. According to the instructors, CBC is generally good, but more plans need to be done to guarantee that the teachers are well prepared and that the schools are better equipped with the necessary resources. Based on these findings, the study provided four suggestions to the key players in the education sector, including the requirement that the government provide an adequate quantity and quality of all pertinent resources to support efficient implementation.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The primary resource in the teaching and learning process is the teacher. Using the knowledge and abilities they have gained through education and experience, teachers support learning. A qualified educator can comprehend and carry out the curriculum in accordance with the recommendations made in the curricular framework of a particular nation. Learning institutions place a strong emphasis on the part performed by teachers, claiming that the caliber of a nation's educational system depends on the caliber of its educators.

Enhancing education is the best strategy to boost results (Barber & Mourshed, 2005). Every year on October 5th, World Teachers Day (WTD) is observed by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and its member nations to recognize the value of teachers and the influence that teaching has on society.

Therefore, it is required of instructors to carry out their duties with the utmost professionalism. The importance of teachers' responsibilities and surroundings cannot be overstated, though, as high motivation boosts production, which is obviously advantageous to all educational institutions (Nihuka & Peter, 2014). A teacher is more likely to be self-driven and productive in the classroom if they are well-equipped with the necessary knowledge and comprehension of the curriculum.

Healey (2010) argues that in order to accurately represent the dynamic real world, learning and teaching should be holistic. The goal of the competency-based curriculum (CBC) is to develop an independent student who is also a developer of knowledge. A curriculum that stresses the paradigm

change in pedagogical practices from teacher-centered to learner-centered methods is actually necessary (Fernandez, 2017). In order to implement competency-based curriculum (CBC) techniques like inquiry-based learning (IBL), problem-solving learning (PBL), and blended learning, among others, teachers must abandon the traditional method of instruction. As a result, CBC offers a useful overview of the basic competencies and values that improve the effectiveness of instruction and learning in the classroom.

Concerns about low student achievement and inadequate teacher preparation led to the introduction of the CBC in the United States of America (Ambei, 2018). According to Richards and Rodgers (2014), the program was created to support the idea that learning outcomes need to be structured so that teachers may articulate their teaching goals in terms of observable student actions. The purpose of bringing CBC to America was to increase the efficiency of classrooms, instructors, and teacher educators as well as to address the public's concern over subpar academic performance (Mbarushimana & Kuboja, 2016).

CBC programs are currently available in America at all learning levels and use online or hybrid learning strategies. According to Mitchell (2015), several institutions in the US are currently planning or putting competency-based education programs into place. Since 2005, developing nations have adopted CBC and tailored it to the local environment (Muraraneza, Mtshali, & Mukamana, 2017). According to Frenk et al. (2010), in this situation, educational reform is sluggish to develop and implement.

Either as a result of official instructions or with the assistance of western non-governmental groups, CBC has been forced on the nations. The gradual transition from content-based learning to problem-based learning at sub-Saharan African universities, according to Kiguli et al. (2011), further

emphasizes this issue. For example, South Africa was forced to abandon outcome-based education in 2010 (Sotco & Mwandanji, 2015).

Implementation has taken place in East Africa despite difficulties such a lack of knowledge about the nature of African classrooms, outdated physical facilities, and a dearth of curricular support materials. Undoubtedly, educational institutions in the West have suitable physical infrastructure that satisfies their governments' standards and is adequately furnished. While this is the case in industrialized nations, the situation in African nations is different. Generally speaking, the majority of study findings on the application of CBC point to flaws (Wongnaa & Boachie, 2018).

According to Hamman (2012), Rwanda has made significant progress toward implementing competency-based curricula, facilitating a seamless transition from knowledge and skill application to content acquisition. Tanzanians created and used CBC as a solution to a training system issue that had a detrimental impact on the employability of graduates. The competencies that students were expected to have gained by the end of the term of study were not specified by the then-current educational system (Sotco & Mwandanji, 2015).

The Basic Education curricular Framework (BECF) in Kenya was created with the intention of putting curricular reforms into practice (Jeng'ere, 2016). A competency-based curriculum, according to Ji (2017), is one that places more emphasis on what students are expected to perform than what they are required to know. Its goal is to support students in developing the skills necessary to come up with solutions to issues in practical settings. According to Makuna (2013), Kenya has previously tried numerous curricular revisions that either weren't fully implemented or took too long to be implemented. Data gathered after conducting situational analyses among stakeholders and in schools demonstrated substantial ineptitude among our graduates at various learning levels. The

study's conclusions point to a significant discrepancy between theory and practice. The information learned in school is not used in daily life. The adoption of the competency-based curriculum in Kenya has sparked concerns about the ability of the teaching staff to provide high-quality instruction and learning while also adhering to CBC criteria.

Numerous difficulties are being encountered during the first phase of the competency-based curriculum implementation. Kaviti (2018) claims that the competency-based curriculum was hurriedly created through a trial that was conducted in 2017. The monitoring procedure at this point showed that teachers required additional training in order to implement the CBC method of instruction.

Paulo (2014) notes that despite curriculum modifications that call for the use of authentic and performance-based assessment methods, the majority of teachers continue to use the old-fashioned paper-and-pencil approach to evaluation. According to Hakielimu (2012), despite the competence-based curriculum's inclusion of portfolios, project work, practical activities, and written reports as assessment techniques, the majority of instructors lack training in the CBC form of assessment, which calls on them to interpret the curriculum design.

In order to produce tasks and assessments that are trustworthy and authentic, CBA depends on the adoption of the revised Bloom's taxonomy (2001) and Norman Webb's (1997) Depth of Knowledge (DOK) (Taylor, 2021). Consequently, educators require a deeper comprehension of CBC. Nevertheless, training new teachers is a never-ending process.

According to Milkman (2017), CBE establishes a threshold for learners to graduate to more complex content: mastery of specific knowledge and abilities. CBC encourages the development of basic skills and values that enable every student to become an engaged, empowered, and ethically

oriented citizen, as opposed to traditional education, which was predicated on predetermined lengths of academic periods. The teacher implementing the new curriculum must be aware of the expansion of their duties, which are concentrated on the connections made between the curriculum and the students throughout the delivery of instruction (Mundia, 2017). A wise selection of a diversity of pedagogies is essential for optimal learning, particularly under the competency-based curriculum (Komba, 2016).

Since teachers are the ones who carry out the curriculum and are crucial to the teaching process, CBC demands that they be highly prepared. As a result, in order to effectively instruct students, teachers must possess a high level of skill (Kafyulilo, Rugambuka, & Moses, 2012).

The effectiveness of teachers is directly correlated with student performance. Therefore, educating instructors in CBC enhances their ability to apply their topic knowledge, their capacity for deep thought and understanding of novel teaching strategies, as well as their disposition toward the CBC environment. Given this, rigorous teacher preparation is essential for effectively giving each student individualized attention. Although the instructor continues to be at the core of the process, there has been a greater emphasis on the outcome rather than the teaching and learning process. "How is the teacher prepared for this?" is the central query. According to UNESCO (2005), there is a strong correlation between low student accomplishment and the skills and competencies of the teacher because of the teacher's essential role in the teaching-learning process.

All semiautonomous government agencies, including the MoE, have acknowledged the need to reevaluate the instructors' ability to apply the new curriculum. Handal and Herrington (2003) emphasize the importance of the teachers' role in carrying out the curriculum and urge policymakers to take into consideration the attitudes and opinions of teachers. As a result, the Kenyan government

has made significant investments in the curriculum reform agenda in an effort to align education with the 2010 Constitution, the Kenya Vision 2030, the 2016 KICD Needs Assessment, and the international standards. The government of Kenya created the sessional paper number. 2 of 2015 on restructuring education and training in response to a report on realigning the education system that was delivered in 2012 by a taskforce led by Professor Odhiambo. The fundamental objective was to create well-rounded people. The BECF, which would serve as a roadmap for the implementation of these curriculum reforms in education, was established by KICD after significant stakeholder consultation on the part of the MoE. In addition to other things, this framework described the theories, methodologies, competencies, values, and policies that would help the new curriculum be implemented. The implementer, the teacher, seemed to receive very little attention.

A tryout was held in 2017 in 470 schools from 47 counties that were chosen. Ten schools were assigned to each county. By assessing instructors' abilities in terms of the caliber of their instruction, monitoring activities were carried out in 2018 to gauge the level of implementation. According to the report, teachers were gradually embracing CBC, but it was clear that most of them were having trouble interpreting the CBC content, implementing cutting-edge pedagogical strategies, realigning teaching and learning resources to CBC, and conducting Competency Based Assessment (CBA). The report emphasized the necessity of teachers upgrading their training in order to adjust to CBC trends. According to Sudsomboon (2010), the instructors' ability to transition from their traditional position as knowledge transmitters to their new roles as "coaches" and instructional designers is crucial to the implementation of CBC. Through the Ministry of Education, the Government of Kenya (GoK) has formed a coordinated strategy to increase teacher capacity. Notably, the MoE established a new state department to oversee the rollout of CBC. The Casgate approach for teacher

orientation is currently being used by the government to train teachers. The instructor in the classroom receives training in a downhill cascade.

In 2017, twenty-four master trainers for primary schools and forty-seven for pre-primary schools were trained. Following this, three hundred and twenty-seven sub-county coordinators and one hundred and eighty trainers of trainers (TOT) for primary schools were trained. Three thousand three hundred sixty additional curriculum support officers and champions were trained by the Teachers of Trainers. The county level was where this was done. One hundred sixty eight thousand center managers and early childhood educators (grades 1-3) received training in January. The Kenya Institute of Curriculum Development, the Teachers Service Commission, the Kenya National Examination Council, and the Ministry of Education all monitored the training. Although the government's course of action is impressive, the aforementioned trainings are not routine. Continuous capacity building is necessary to eventually reach all Kenyan teachers. The holes can only be filled via extensive practice and training.

In addition to the aforementioned trainings, the GoK launched the TUSOME Early Grade Reading activities program in collaboration with the UK Department for International Development (DFID) and the US Agency for International Development (USAID). This initiative, which was introduced in 2014, aims to give English and Kiswahili teachers in public primary schools the pedagogical skills necessary to improve learning outcomes for reading instruction and improve students' fluency in reading. A practical, evidence-based approach is used by the TUSOME program, which emphasizes key abilities including communication and teamwork, learning to learn, and self-efficacy, which are cornerstones of CBC. The TUSOME approaches to teaching have a greater emphasis on the BECF's core skills, guiding principles, values, and instructional strategies. TUSOME has been working with numerous schools in Kenya in a coordinated relationship with the

MoE, conducting workshops and trainings for teachers, educators, and curriculum support officers from all the counties, with the goal of retooling teachers so that they can close the literacy gap among students. Since the TUSOME program's implementation in Kenya in 2014, more than 98 000 grade 1-2 teachers and head teachers have received training through it.

Since its commencement in 2017, the Ministry of Education has run a countrywide training program for educators working in public primary schools in grades 1-3. In order to accommodate the large number of new teachers entering the workforce to replace those who have completed their training but are leaving the service due to attrition, illness, disciplinary action, or retirement, the government must continue to make these interventions. Most of the teachers that teach in the lower classes in our schools are in their later years. To prevent leaving voids when these teachers depart, school officials can modify the way they assign tasks based on age. All teachers, whether they are in lower or higher grades, must complete CBC training.

1.2 Statement of the Problem

Despite the advances the government has achieved in research, education, and training, there are still capacity issues among teachers in the country. The government was warned by the Kenya National Union of Teachers (KNUT) in 2017 that teachers had not been adequately prepared for the implementation of the new curriculum. In spite of the important role that teachers play, the large teachers organization has definitely declared that most teachers still lack confidence and that thorough teacher training is absent. Additionally, research results from committees and task forces on CBC implementation point to a weakness in teachers' abilities to comprehend and put into practice curriculum design principles.

The teacher's capacity to create observable learning outcomes, provide authentic learning challenges for students, and apply transformative teaching strategies is glaringly lacking. Therefore, the purpose of this study was to ascertain the effects of teachers' pedagogical content knowledge, perceptions, and ability to integrate ICT during instruction, as well as their capacity to interpret and apply curriculum design concepts, on the implementation of competency-based curricula in public primary schools in Kikuyu sub-county, Kiambu County.

1.3 Purpose of the study

The study's goal was to discover how teachers' levels of preparedness impacted the rollout of the competency-based curriculum in the public primary schools in Kikuyu Sub-County, Kiambu County.

1.4 Objectives of the study

The study was guided by the following objectives:

- i. To establish the influence of teachers' capacity to interpret and apply curriculum design concepts on implementation of CBC in public primary schools Kikuyu Sub-County, Kiambu County.
- ii. To determine the influence of teachers' pedagogical content knowledge on the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County.
- iii. To find out the influence of teachers' ability to integrate ICT during instruction on implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County.

- iv. To assess the extent to which teachers' perceptions on the preparation influences the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County;

1.5 Research questions

The study sought to answer the following research questions:

- (i) In what ways do teachers' capacity to interpret and apply curriculum design concepts influence the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County?
- (ii) How does teachers' pedagogical content knowledge influence the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County?
- (iii) How does teachers' ability to integrate ICT during instruction influence the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County?
- (iv) To what extent do teachers' perceptions on preparation influence the implementation of CBC in public primary schools in Kikuyu Sub-County, Kiambu County?

1.6 Significance of the study

The Kenya Ministry of Education (M.O.E), which is responsible for overseeing education in Kenya, the TSC, and the Kenya Institute of Curriculum Development (KICD) may find use in the study's findings. To ensure successful implementation of CBC, stakeholders will use the study's findings to guide a revision of regulations addressing the qualifications and working conditions for primary teachers. Teachers may also gain since they will receive training and relevant skills while students

obtain priceless experiences that will help them launch their careers in this cutthroat environment. The data presented here can be used by educational researchers and other academics to expand on their results and improve the implementation of CBC.

1.7 Limitations of the study

In Kikuyu Sub-County, the study was conducted in public primary schools. Only educators working in five zones were the subject of the investigation. The respondents were free to hide information that was important to the study out of concern that it would reveal how prepared they were to administer the competency-based program. To counteract this, the researcher assured the respondents that their names would stay private and that the data collected was only intended for academic purposes.

1.8 Delimitation of the study

Delimitations, in Kothari's (2012) opinion, define the limits of a study. This study was carried out in five zones of public primary schools in Kikuyu Sub County, Kiambu County. Since grade six is the penultimate year of primary school before students move on to junior secondary school, the study's primary focus was on instructors who are currently teaching in that grade. Teachers were expected to adhere to high standards of instruction in order to properly execute the new curriculum.

Aspects unrelated to teacher readiness and CBC implementation were left out.

1.9 Basic assumptions of the study

The study made the following assumptions;

- a) The respondents would be cooperative, honest, without bias.

- b) The findings of this study will be used to enhance and improve the stakeholders' Perspective on teachers' preparedness for better productivity.
- c) All teachers were sufficiently trained.

1.10 Definition of significant terms

Competency-based curriculum refers to a curriculum that encompasses the application of skills as opposed to subject content and note memorization.

Implementation refers to the process and practices used in the classroom by teachers to effectively execute the competency-based curriculum.

Perceptions of teachers refers to understanding, opinions, feelings, interpretations and views on their preparedness for the implementation of CBC.

Preparedness of teachers: Refers to individual and collective knowledge, skills, attitudes, perceptions, and ability of teachers to support the implementation of the CBC in public schools.

Readiness of teachers: Refers to the willingness of teachers to implement the competency-based curriculum

Subject content knowledge of teachers: Refers to teachers' mastery of subject knowledge on the Competency-based curriculum.

1.11 Organization of the study

There are five chapters in the study. The background of the study, the formulation of the problem, the purpose, the objectives, the research questions, the significance of the study, the limitations of the study, the delimitations of the study, the assumptions of the study, the definition of key terms, and the organization of the study are all covered in chapter one. The literature review is presented

in Chapter 2. Introduction, a synopsis of the literature review, the theoretical framework, and the conceptual framework are the subtopics discussed.

The research methodology is covered in Chapter 3, which is divided into subchapters on research design, target population, sample size and sampling methods, research instruments, data collection techniques, and data analysis techniques. The data analysis, interpretation, and discussion are covered in Chapter 4 while the summary findings, suggestions for additional research, and recommendations are covered in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of competency-based curriculum in Kenya, teachers' ability to interpret and apply curriculum design concepts, teachers' pedagogical skills, integration of ICT during instruction, and teachers' perceptions on competency-based curriculum implementation. It also summarizes the literature review and discusses the theoretical framework and conceptual framework. **2.2 Overview of Competency-Based Curriculum**

The direction the Kenyan government (GoK) is pursuing in redesigning its educational system is heavily influenced by the global desire for a shift from knowledge-based to competency-based curricula. Notably, the GoK is dedicated to making sure that its citizens receive high-quality education in accordance with the international agreements and conventions on education to which Kenya is a signatory. The new curriculum aims to connect CBC's competencies and values to 21st-century abilities. According to Jengere (2017), competency is the capacity to use knowledge, skills, ethics, and attitudes appropriately in a variety of real-life circumstances, including education, employment, and personal or professional development.

The Basic Education Curriculum Framework (BECF) serves as the foundation for competency-based curricula. The Kenya Vision 2030, the national educational goals, the recommendations of the taskforce chaired by Professor Odhiambo in 2012, the sessional paper No. 1 of 2019 on "Reforming Education, Training, and Research for Sustainable Development," and the 2016 KICD needs assessment survey serve as the foundation for the BECF. Learners should be given resources to interact with and create meaning with in the competency-based approach. In this sense,

individuals are seen as active producers of knowledge as well as knowledge consumers (Barman, 2011). To encourage individualized attention catered in a way that meets each learner's potential, learners are required to demonstrate the knowledge and competencies learned through critical thinking, problem-solving, and innovative initiatives.

According to Hallow (2011), CBC strives to transform students so they can learn how to know and do activities. The second sessional paper emphasizes the value of innovation, science, and technology. Good ideals and practical skills are instilled in students through competency-based education. According to Young (2009), the primary goal of CBC is knowledge growth, which represents a radical departure from previous educational systems.

2.3 Teachers capacity to interpret and apply curriculum designs concepts and Implementation of CBC

A document that outlines the elements of a curriculum to be taught at educational institutions is known as a curriculum design. It is the responsibility of the educator to interpret these elements as necessary. The curriculum should be developed by the teacher as they would be carrying it out, according to Hilda Tabas' curriculum creation model from 1962. Teachers work closely with students in the classroom; as a result, they must possess a thorough understanding of curriculum design principles in order to precisely and succinctly connect the identified components to particular learning outcomes while utilizing a variety of effective learner-centered teaching strategies.

Ondimu (2018) looked into how well-prepared teachers were to undertake competency-based education in private preschools. The results showed that the majority of the instructors had undergone substantial CBC training; nonetheless, it is crucial to emphasize that regular training on the interpretation and application of curriculum design components is required for successful curriculum delivery. The learning outcomes in CBC are significantly more distinct than the objectives, it should be highlighted. It is the responsibility of the instructor to design learning objectives that are specific and attainable through thoughtfully chosen learning experiences. Consequently, a CBC compliant teacher is one who can create a clear explanation of what the learner is expected to do, choose real-world projects or activities that will help students attain observable learning goals utilizing the necessary tools, Fernandez (2017) concurs that teachers' training and experience have a big impact on students' achievement.

Fernandez (2017) discovered that teacher competency and knowledge were essential in carrying out curriculum modifications after looking into teachers' perceptions of their preparedness and support for implementing the English language arts curriculum core state requirements. The ability of teachers to be reform-ready was seen as a requirement for integrating reforms, with instructors first gaining an understanding of the changes before starting to execute the curriculum changes. Because of this, instructors base their decisions on how to educate on their perceptions, experiences, and beliefs about the roles and responsibilities they have in the classroom.

According to a study by Komba and Mwandanji (2015) that examined reflections on the implementation of the CBC in Tanzania, the majority of the teachers interviewed—roughly 86%—were not knowledgeable about and conversant in the subject matter, and some had only a vague understanding of what the competency-based curriculum was. Even the competence-based curriculum's objectives were unknown to the teachers. There was a gap between the orientation and preparation of teachers for the competence-based curriculum and the actual teaching and implementation in schools. This causes the teachers to struggle, which is why the majority of teachers lack motivation. Ondimi (2018) shares Komba and Mwandanji's (2015) opinion that teacher readiness for CBC implementation is very important. The researchers that made these arguments highlight the importance of teachers having the necessary skills to uphold the required standards. Simom Priest (2014) defines competencies as a group of learnable skills, knowledge, and abilities as well as behaviors, attitudes, and aptitudes as well as levels of confidence, experience, talent, and proficiency. This, in my opinion, encapsulates the essence of competency-based curriculum.

2.4 Teachers' pedagogical content knowledge and implementation of CBC

One of the fundamental skills needed to become a professional teacher is pedagogical content understanding. This produces well-organized representations that are utilized to effectively transmit content to learners when combined with content mastery from the curriculum. As was already noted, teachers need to understand the enormous responsibility placed upon them. Teachers are required to transfer knowledge, abilities, and attitudes to students through mentorship, active learning, and the application of cutting-edge teaching strategies.

Thus, learning occurs when a teacher is able to precisely change and package knowledge so that a student can obtain the appropriate learning goals defined in the curriculum design. The teacher is expected to use CBC's heuristic approach to learning throughout the teaching and learning process. However, the majority of educators continue to use outdated teaching strategies that were designed to generate students who would perform well academically.

The results of a study by Paulo (2014) on the readiness of pre-service teachers to implement competency-based curricula in secondary schools in Tanzania showed that, despite being well informed about the assessment and teaching strategies to be used for the implementation of the competency-based curriculum, pre-service teachers were not employing the methods outlined for classroom instruction. In contrast to the demands of the recently approved CBC, which encouraged learner-centered teaching methods, Paulo's findings revealed that pre-service teachers continue to educate using traditional teacher-centered instruction methods in the classroom.

Problem-based learning, differentiated learning, project-based learning, and inquiry-based learning techniques are only a few examples of competency-based curriculum pedagogies. By using these techniques, students can develop specialized talents that help them solve challenges in real life. In his study on teacher-centered teaching approaches to increase learning, Emaliana (2017) found that 47% of respondents agreed with the teaching method and 53% disagreed. facilitating the application of learner-centered learning strategies.

Cheptoo (2019) analyzes the widespread adoption of CBC in several African nations, the paradigm shifts of CBC, and the reasons why CBC needs to be Africanized. The report recommended that Africa reconsider adapting the CBC to the African setting. According to the study, CBC implementation in African nations gives the next generation the necessary capability to succeed on the labor market through the establishment and acquisition of the necessary abilities. Therefore, in order to advance the curriculum's objectives, decision-makers should consider how to properly integrate CBC in the classroom. A more collaborative approach to teaching is produced through a learner-centered setting (Katie, 2014). These results demonstrate that an effective teacher is one who has a thorough knowledge of learner-centered instructional techniques.

2.5 Teachers integration of ICT during instruction and Implementation of CBC

According to the Ministry of Information Communication Technology (ICT) policy, "Integration of ICT into educational and training systems in order to prepare learners and policy makers to actively participate in technologically competitive economic environment" (Cha et al., 2020). Teachers must therefore be prepared with ICT knowledge and abilities because they will only be able to participate in collaborative learning communities for teacher education through ICT integration. The quick acceptance and customisation of technology important to the implementation of CBC will be facilitated by such teacher initiatives. The National Education Board, county governments, education specialists, school heads, teachers, and parents must provide strategic leadership for the competency-based curriculum. It requires extensive cooperation (Vahttiour_Hanninen et al., 2014).

According to a study by Higgins and Moseley (2011), ICT deployment is hampered when teachers don't know why they should utilize technology in the classroom. Instead of concentrating on how to use or implement ICT during classroom instruction, the majority of educational and training institutions focus more on what ICT is. As a result, in-service training for teachers currently working in the field should educate them the fundamentals of ICT and how to use it to teaching and learning (Higgins & Moseley, 2011).

The success of ICT integration will depend on our capacity to bridge the gap between the simple availability of technology and its integration within the curriculum. The goal of equipping students with 21st-century abilities is defeated by the reality of the large percentage of teachers who lack the fundamental ICT skills. According to a study by Hennessy, Harrison, and Wamakote (2010), inadequate teacher ICT knowledge and proficiency is the biggest barrier to ICT implementation.

ICT allows the student to display a wide range of competencies during instruction. ICT integration during instruction is about the learner actively interacting with curriculum information through various platforms as directed by the teacher. The teacher can provide students with feedback in real time thanks to technology. Only when the government assists the teacher will all of the aforementioned things materialize.

According to a study by Nihuka and Peter (2014) on the difficulties in implementing ICT curricula in primary schools, some instructors valued utilizing ICT in the classroom and thought it was important for the students' futures since it helped them get familiar with how technology is used on a daily basis. However, the research also showed that 53.6 percent of the teachers, or more than half, had unfavorable opinions regarding ICT integration. The educators confirmed that they only use and teach ICT since it is required of them. The many ICT platforms, such as Teams, Blackboard, Mentimeter, and Kahoot, which are more participatory and enjoyable for both the learner and the teacher, have not been embraced by teachers. This is a result of a lack of ICT expertise.

According to Chege (2014), only 13.75 percent of the teachers in his study on the factors influencing teachers' readiness to use ICT in teaching in public secondary schools were very confident in their ability to do so. This confirms that the majority of teachers lack the necessary technological skills to implement ICT in the classroom, which prevents students from accessing the seemingly limitless opportunities for learning.

Looking at the research by Nihuki & Peter (2014) and Chege (2014), they both describe how teachers lack the ICT skills necessary to conduct classes across a variety of platforms, demonstrating the truth of the gaps in teachers' ICT readiness. The misconception that teachers are educated about these technological advancements and can thus manage themselves is one that needs to be rectified through training.

2.6 Teachers' Perception and Implementation of CBC

Msuya (2016) conducted a study to find out how learners and facilitators in Tanzania's adult education programs felt about using Competence-Based Education and Training (CBET) methods. The study used a case study approach as part of its qualitative research methodology. Quantitative research methodologies were applied, and it was shown that 33.3% of the facilitators could not adequately articulate the teaching and learning methods and approaches used in competency-based education and training because they had not thoroughly grasped the notion of CBET. Although they underlined the importance of learners' active participation and involvement in the CBC implementation, they were unfamiliar with the words used in CBET curriculum methods. This had a detrimental effect on the adopted CBET curriculum because it slowed down the implementation process. An ineffective teaching force is the product of ineffective training.

Teachers with a development mindset, on the other hand, are positive and open to trying new things (Dweck 2015; Meierdirk 2016). Dweck (2015) goes on to say that in order to teach contemporary students in ways that are pertinent to their lives and in line with contemporary learning demands and technologies, transformation is essential.

Makunja (2016) discovered that teachers had not received any orientation through in-service programs or workshops to keep them up to date in preparedness for the competency-based curriculum (CBC) implementation. The study was conducted in Tanzania. The interviewees' perspectives indicated that since instructors had formed a negative opinion of this curriculum, insufficient teacher preparation was a barrier to the implementation of the CBC. The instructors, who play a crucial role, lacked the information, abilities, and attitudes necessary for a competency-based curriculum to be implemented successfully.

Chemagosi (2020) found that teacher preparedness has a substantial impact on competency-based curriculum implementation in his study on teacher preparedness and CBC implementation. Chemagosi's claim that there is no discernible difference between teachers' preparation and competency-based curriculum implementation was thus disproved.

2.7 Summary of literature review

The goal of the study was to determine how well-prepared teachers were for implementing a competency-based curriculum in public primary schools in the Kikuyu sub-county of Kiambu County.

The literature concentrated on the impact of teachers' aptitude for understanding and putting into practice concepts from curriculum design, accessibility to teaching resources, perceptions of teachers, and teachers' capacity to incorporate ICT into the classroom.

It is important to remember that past research has found a wide range of preparation deficits for teachers. Ondimi (2018) looked into how well teachers were prepared for CBC implementation in terms of their readiness, subject-matter expertise, technological aptitude, and teacher perspectives. His research showed that although the majority of teachers had training, they still needed to improve their technology skills.

This is only feasible if more money is allocated to the purchase of technology for classroom usage. Paulo (2014) conducted research on the readiness of future teachers. The results demonstrated that teachers had not dissed the new teaching methods. Since the learner is the focus of attention and hence determines the teachers' choice of the learning experiences, teachers felt that the aforementioned approaches were time-consuming.

Kombat and Mwandaji (2015) discovered that 86% of the teachers have understood the subject matter while examining reflections on the implementation of CBC in Tanzania. Despite this, teachers were still unfamiliar with the CBC's new terminologies, prompting the discovery of a gap in the theory-to-practice transition. In order to improve CBC implementation, Moshi (2012) noted the importance of learning resources and the necessity to create more high-quality learning resources.

2.8 Theoretical framework

This study is based on Gross's (1971) theory of curriculum implementation. According to Gross (1971), elements including teacher competency, clarity and understanding on the part of the implementer, management of the support facilities, and attitudes of the teachers, students, and other stakeholders must be taken into account for any educational program to be implemented successfully. According to Gross (1971), the instructor who is carrying out the implementation should be qualified and knowledgeable about the subject matter. He contends that if implementers are unaware of curriculum changes, they may not implement the program adequately and effectively.

The person who implements the new curriculum should also see the changes it contains favorably. According to Baumert, Kunter, Blum, Bruner, Voss, Jordan, and Tsai (2010), a teacher's subject-matter expertise affects how they present their material to students in the classroom and how well they learn. According to Ralph Tyler (1949), the ability of the teacher to choose learning experiences that allow the learner the chance to practice what is sought and also offer satisfaction to the learner has a significant bearing on the achievement of the established specific learning outcomes.

The parameters under investigation in this study are specifically mentioned in the hypothesis. According to this notion, instructors should receive the appropriate training in order to demonstrate a thorough comprehension of the subject. This hypothesis served as the foundation for the study that determined how well-prepared instructors were in terms of their ability to understand and apply concepts from curriculum design, the impact of the availability of instructional materials, preparation-related perceptions, and the use of ICT in the classroom. The BECF's competency-based curriculum places a strong emphasis on instructors' capacity to develop each student's potential in the classroom.

The curriculum should be implemented by teachers who are well-versed in its implementation. Additionally, Gross (1971) emphasizes the necessity of altering people's attitudes in order to apply curricula effectively. Although it is obvious that the teacher is one of the components in the implementation process, more often than not, attention is paid to the finished product rather than the variables found in this study. This theory is most appropriate for his study since it highlights how crucial it is to take the dependent variable in this study into consideration.

2.9 Conceptual framework

The input-process-output model was used to create the conceptual framework. The inputs—teacher competence to understand and implement curriculum design principles, accessibility to instructional materials, teacher perceptions during preparation, and integration of ICT during instruction—are all independent variables.

This conceptual framework has been developed as follows:

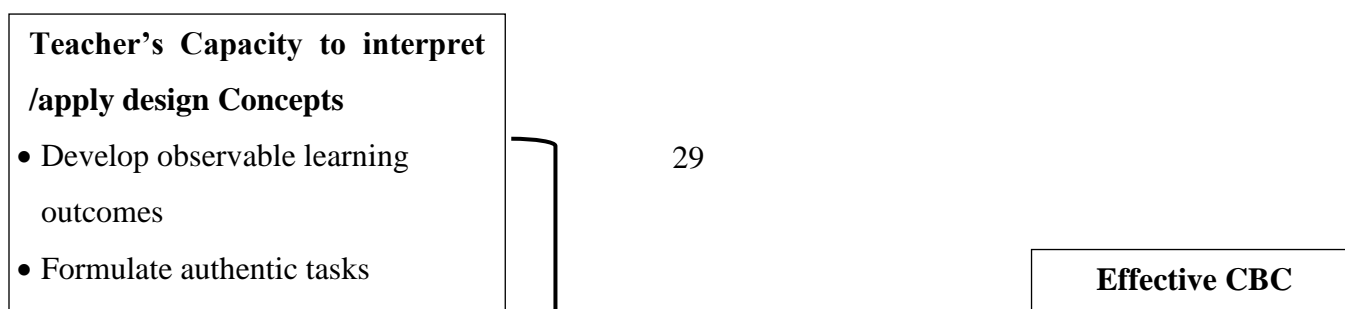


Figure 2.1 Conceptual Framework

Figure 2.1 makes it clear that the integration of ICT in the teaching and learning process, teachers' ability to interpret and apply curriculum design concepts, teachers' pedagogical content knowledge, and teachers' perceptions during preparation produce holistic learners with the necessary competencies. The ability of the instructor to create learning objectives and real-world assignments are markers of their ability to interpret and apply design concepts.

Teachers' perspectives comprised perceptions toward the application of transformative methods and perceptions toward new knowledge. Teachers' pedagogical content knowledge included mastery of content knowledge and pedagogical knowledge. Last but not least, the effectiveness of ICT integration was evaluated in terms of instructors' technological expertise and instructional skills.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The steps used to carry out the study are described in this chapter. Research design, target population, sample size and sampling techniques, research tools, data validity and reliability, data collection and data processing techniques, and ethical issues are the main topics of this section.

3.2 Research design

In this study, a descriptive survey design was used. To depict the current state of a novel phenomena or population, descriptive designs are used. With the help of this design, the researcher can explore a range of factors using a variety of research methodologies, leading to a correct analysis of the research topic and a thorough comprehension of it (citation). According to Ary (2010), a descriptive research design is a researcher's strategy for moving forward to comprehend a particular group or phenomenon in its environment.

The qualitative and quantitative tactics are the two main approaches taken while employing the descriptive design in research. While qualitative research methods allow a researcher to precisely define a study problem, quantitative research methods aim to acquire measurable information that is utilized to statistically assess a population sample.

Qualitative research techniques aid in illuminating the attitudes and driving forces of a target community. This study's chosen design allows for the utilization of numerous quick and economical data collection techniques. According to Nassaji (2015), descriptive design is the act of gathering data in a quantitative way and analyzing it quantitatively. Due to the fact that the research study factors were not in any way altered, the design allowed the researcher to examine the issue as it is. To gather the data, the researcher employed a semi-structured questionnaire, interview questions, a likert scale, and an observation checklist.

3.3 Target population

The twenty-eight public primary schools in Kikuyu Sub-County were among the twenty-four that made up the study's target population. Twenty-eight head teachers, 200 teachers with CBC training, and 1,400 students enrolled in CBC programs who are Grade 6 students make up this group. According to the Office of the Director, Ministry of Education Kiambu County, 2020, the target population is split among three zones: Thogoto Zone (nine schools), Muguga Zone (eight schools), and Karai Zone (eleven schools).

3.4 Sample size and sampling technique

The straightforward random sampling technique was used in this investigation. According to the 'inertia of big numbers' law, a sample drawn at random from a population is expected to share substantially all of its traits. To get accurate data on the population it represents, a number of teachers who utilize CBC were chosen for this study using a simple random sample procedure.

Using the formula table from Krejcie and Morgan (1970) (see Appendix V), the sample size was calculated. Because grade 6 signifies the end of primary education, it was especially chosen for this study. Given that students in grade 6 complete their first summative examination and then migrate entirely to junior secondary school, this is a class of interest. Because of this, the grade 6 instructors in charge of this pioneer class need to be very motivated and competent to guide students through this level of learning.

The researcher obtained a list of every instructor instructing grade 6 in the specified schools so that they could create a straightforward random sample. A sample was taken from each list, giving each teacher a chance to be chosen. The number of head teachers included in the sample was 28, along with 132 teachers and 300 students that were chosen for the study.

Zone	No. of Schools	Sampling Criteria	Sample Size
Thogoto Zone	9	$(9/28)*200$ teachers	42
Muguga Zone	8	$(8/28)*200$ teachers	38
Karai Zone	11	$(11/28)*200$ teachers	52

Total	28	132
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Table 3.1 indicates that the sample size was 132 CBC trained teachers and 28 head teachers adding up to one hundred and sixty respondents.

3.5 Research instruments

Participants freely expressed themselves throughout interviews and semi-structured questionnaire data collection (Kothari, 2012). Considering the goals of the study as well as the type of data being gathered, the questionnaire was chosen. The questionnaire gave the teacher the opportunity to describe their level of CBC implementation readiness. With the aid of interview guides, the researcher was able to conduct a thorough investigation and gather opinions on the role that head teachers play in helping teachers become ready to adopt CBC in their schools.

The questionnaire was divided into five sections: A, B, C, D, and E. Parts A and B dealt with the respondent's demographic data, Part C with teachers' pedagogical content knowledge, Part D with teachers' perceptions, and Part E with ICT integration during instruction and competency-based curriculum implementation. Part A represented the respondent's demographic information.

3.6 Validity of the instrument

The validity of an instrument, according to Robinson (2011), measures what it claims to measure. In qualitative research, validity and dependability promote transparency and reduce potential for researcher bias. Singh (2014). In other terms, the degree to which outcomes from data analysis accurately reflect the phenomena under research is referred to as validity.

The questionnaire's content validity is used to determine whether it responds to the research questions. It entails carefully reading the questionnaire to make sure the questions cover all the necessary components of the measurement. The instrument was produced by expert judgment and was created to include every component under consideration. As a result, the researcher asked her managers for help in order to increase the instrument's content validity.

3.7 Reliability of the instrument

According to McConville (2017), reliability is defined as "the consistency of a measure of a concept". When the same research procedure is used repeatedly and the results are reproducible within given confidence boundaries, reliability is attained. This has to do with a research finding's capacity to repeat itself if a parallel investigation is carried out. Therefore, the Cronbach's Alpha was employed to verify the validity of the research questions in order to assure the findings of this study are reliable.

The alpha value varies from 0 to 1, and as it rises, reliability rises as well. According to a widely used guideline, a coefficient of 0.6 to 0.7 denotes adequate reliability, and a coefficient of 0.8 or higher denotes good reliability (Coolican, 2018).

3.8 Data collection procedures

The researcher obtained a research authorization from the National Council for Sciences and Technology (NACOSTI) before starting the investigation. To discuss the research visits to the schools prior to the study's launch, the researcher next conducted a personal visit to the Director's Office of the Kiambu County Ministry of Education. To arrange contacts with the principals and teachers, the researcher first visited the schools.

The researcher personally administered the questionnaire and conducted interviews with the respondents in the selected schools on the set days. This study's main objective was to examine teachers' readiness. The effectiveness of the learner-centered teaching methods used, the proper and effective use of ICT during instruction, and the extent to which the teacher actively engaged the students in sufficient, varied, and relevant learning experiences were all evaluated using a checklist. The respondents were given guarantees that their identities would be handled in the strictest of confidence. Correctly completed surveys were gathered immediately after they were filled out.

3.9 Data analysis procedures

After receiving the questionnaires from the respondents, the researcher reviewed them for errors and incomplete information. The data was then coded and entered into the statistical package for social sciences (SPSS), which is used for correctness. The respondents' responses were used to gather both quantitative and qualitative data. Analyzing quantitative data involved measuring numerical values from which mean and standard deviation descriptors could be derived.

In order to present the findings of the data analysis, frequency tables, bar graphs, and pie charts are used. Content analysis was used to analyze qualitative data for open-ended questions. The structure or substance of written or spoken material is described through content analysis. Themes were created from the ideas. The frequency of various descriptions were determined by classifying, coding, and organizing the data into themes.

3.10 Ethical considerations

The study noted ethical considerations, particularly while gathering data. Individual respondents received guarantees about their anonymity and the confidentiality of their answers. They were made aware that the researcher was just interested in the data for academic purposes. The respondent's free involvement in the study was respected, as was any decision to withhold information at any point during the investigation.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

Results of the data analysis in accordance with the study's four objectives are presented in this chapter. The chapter also emphasizes the representativeness of the study's replies by presenting the response rate and diversity of the respondents in terms of their gender, degree of education, and age categories, particularly in the case of sampled teachers.

4.2 Response rate

According to table 4.1, the study's response rate was evaluated in terms of both the responses from each category of respondents and the combined responses from the entire sample of respondents.

Table 4.1: Response Rate

Respondents Category	Sample Size	Responses	Response Rate
Teachers of Grade 6	132	109	82.58%
Head teachers	28	21	75.00%
Total	160	130	81.25%

The study's response rates were remarkable both at the category level and for individual respondents. The researcher used structured interviews to gather data from head teachers, and the lowest response rate (75%) was noted among them. In contrast, the highest response rate (82.58%)

was noted among teachers of grade 6, among whom self-administered questionnaires were used to gather data for the study. There were 81.25% responses total.

4.3 Respondents Characteristics

Table 4.2 analyzes the distribution of respondents by gender, age range, and highest academic degree to help readers determine how representative the study's respondents were.

Table 4.2: Respondents' Characteristics

Characteristics		Count	Percentage (%)
Gender	Male	48	44.0
	Female	61	56.0
	Total	109	100.0
Age bracket	20 - 29 years	11	10.1
	30 - 39 years	47	43.1
	40 - 49 years	29	26.6
	50 years and above	22	20.2
	Total	109	100.0
Highest academic qualification	Certificate	54	49.5
	Diploma	26	23.9
	Degree	29	26.6
	Masters	0	0.0
	Any other	0	0.0
	Total	109	100.0

Table 4.2's analysis shows that female teachers participated in the survey at a somewhat higher rate (56%) than their male counterparts (44%) did. This depicts a gender representation of the teachers that is practically equal. Regarding their distribution throughout the age groups, the majority (43.1%) of them were between the ages of 30 and 39. The group of people between the ages of 40 and 49 came in second with 26.6% of the total. The lowest representation of teachers (10.1%) and students (20.2%) came from the age groups of 20 to 29 years and 50 years and older. This demonstrates a normal distribution of respondents and the relative youth of the majority of the sampled category of instructors (teachers of grade six curriculum).

The primary education certificate (P1) was found to be the highest degree held by the majority (49.5%) of the sampled instructors. They were followed by those with a Bachelor's degree as their highest level of education, who made up 26.6% of the population, and people with a Diploma, who made up 23.9%. None of them, however, held Master's degrees or any other credentials than the aforementioned four. The consequence is that while many of the instructors attempted to enhance their education above the minimum requirements, almost half of them only obtained the fundamental academic qualification (P1 certificate) to teach the primary education curriculum. This supports the finding by Karani et al. (2022) that the majority of the available instructors have completed primary education teacher training, with a small number having also completed university-level coursework.

4.4 Descriptive Analysis

4.4.1 Teachers' capacity to interpret and apply curriculum design concepts in the CBC implementation

The study's initial goal was to determine how instructors' abilities to understand and apply concepts of curriculum design affected the CBC's implementation. On a scale of 1 to 5, the respondents were asked to rate their agreement with six statements about their ability to understand and use CBC design principles. Where 1 indicates "Strongly Agree," 2 "Disagree," 3 "Undecided," 4 "Agree," and 5 "Strongly Agree." The responses were examined, and table 4.3 shows the results.

Table 4.3: Capacity to interpret and apply concepts of curriculum design

	SD	D	U	A	S A	Total		
								Std.
	%	%	%	%	%	Count	Mean	Dev.
I relate contents to core competencies etc.	6.4	10.1	11.9	56.0	15.6	109	3.64	1.07
I can integrate technology in the teaching and learning process	8.3	11.0	13.8	46.8	20.2	109	3.60	1.17
I understand the CBC concepts	5.5	13.8	17.4	50.5	12.8	109	3.51	1.06
I can collaborate with parents and local community	1.8	17.4	22.0	45.0	13.8	109	3.51	1.00
I can assess learners according to CBC	8.3	17.4	20.2	43.1	11.0	109	3.31	1.14
I can contextualize and give relevant tasks to learners' environment	9.2	20.2	20.2	37.6	12.8	109	3.25	1.19

Over 50% of the sampled instructors either strongly agreed with all six assertions concerning their ability to understand and apply the CBC design concepts or agreed with all six statements, as shown in table 4.3's results. This is demonstrated by the fact that 56% of teachers and 15.6% of teachers, respectively, "agreed" and "strongly agreed" that they could tie the CBC contents to core competencies. However, a small percentage of them ("Strongly disagreed") and ("agreed") with the same assertion, respectively, were 6.4% and (10.1%). The ability to connect the CBC materials to core competencies was also a point of contention for 11.9% of the teachers. As seen by a mean of =3.64 4.0 (Agreed), SD = 1.07, the sampled instructors generally appear to have agreed with the statement that they can relate CBC content with key competencies. The implication is that the fundamental abilities as envisioned by the curriculum's backers are agreeably relevant to the present CBC content (Jeng'ere, 2016).

This was further supported by the observation checklist, which revealed that 21 out of 28 schools have implemented the CBC core competencies and values. The principals agreed with CBC's support for a "learning process where the main concern is tapping the learners' competence and talents for future survival." Muchira (2023) made a similar observation about CBC by citing earlier studies like Levine and Patrick (2019), Koo (2020), and Lucey et al. (2018) and noting that effective implementation of the curriculum frequently leads to improvement of students' core competencies like lifelong learning, critical thinking, and problem-solving skills. They noticed that students typically displayed higher levels of conceptual knowledge, interpersonal competence, and self-efficacy.

46.8% of instructors said they "agreed" and 20.2% said they "strongly agreed" with the ability to incorporate technology into the teaching and learning process, respectively, while 8.3% and 11.0% said they "strongly disagreed" and "agreed." However, 13.8% of the teachers weren't sure if they could use technology to enhance the teaching and learning process. The sampled instructors generally agreed that they are competent of incorporating technology in the teaching and learning process, as shown by the mean agreement of $\bar{x}=3.60$ 4.0 (Agreed), $SD = 1.17$. This is consistent with Lugalla and Andema's (2022) emphasis on the significance of incorporating courses that give instructors the knowledge and skills they need to integrate technology into their pedagogy. As a result, experts in the field of teacher education have been interested in the topic of teachers' capacity to integrate technology in the teaching and learning process. However, it was noted that the majority of schools lacked digital gadgets to support digital literacy. The use of digital gadgets by teachers in the teaching and learning process was only seen in 9 out of 28 schools. Digital gadgets "are very few" in the sampled schools, according to interviews with the head teachers, who were also interviewed. This is consistent with a report by Muchira et al. (2023) that found that few schools provided adequate help.

The respondents' comprehension of CBC concepts and capacity for working with parents and the local community to implement CBC both followed the same pattern. Teachers responded to the previous statement in the following ways: 50.5% agreed, 12.8% strongly agreed, 5.5% agreed, 13.8% highly agreed, and 17.4% were neutral. This led to a mean agreement of 3.51 to 4.0 (Agreed), with a standard deviation of 1.06. The percentage of instructors who "agreed" and "strongly agreed" with the latter statement was 45.0% and 13.8%, respectively, whereas the percentage who "strongly agreed" and "agreed" was 1.8% and 17.4%.

However, when it came to working with parents and the local community to implement the CBC, 22.0% of them were unsure or undecided. According to the mean agreement of $\bar{x}=3.51$ 4.0 (Agreed), $SD = 1.00$, teachers generally concur that they can work together with the parents and the community to implement the CBC. This result is consistent with Akala's (2021) observation that one method to guarantee the success of CBC is to include parents more actively in its implementation.

Notably, the teachers expressed serious doubts regarding their capacity to evaluate students in accordance with the CBC and to contextualize and provide assignments that were appropriate to the students' environment. While 43.1% and 11.0% of respondents indicated that they "agreed" and "strongly agreed" with the first statement, 8.3% and 17.4% indicated that they "strongly disagreed" and "disagreed" with the same statement, respectively. Additionally, 20.2% of them were unsure regarding the same claim. According to the mean agreement of $\bar{x}= 3.31$ 3.0 (Undecided), $SD = 1.14$, the significant reservation was seen. This shows that a typical instructor from the examined population is uncertain about his or her ability to evaluate the students in accordance with the CBC requirements.

In actuality, no school was found to have assessment rubrics that were properly organized. Out of the 28 schools, only two were employing CBC assessment methods. The majority of the head teachers who were interviewed said that their "teachers were not able to design" evaluation rubrics. The lack of trust among teachers in their capacity to evaluate students is supported by a related study by Muchira et al. (2023), which found that teachers receive little exposure to real-world teaching and assessing strategies for CBC during pre-service training. This highlights the continuing activities the Ministry of Education runs to train teachers as they carry out the curriculum.

In that order, 37.6% and 12.8% of respondents "agreed" and "strongly agreed" when asked about their capacity to contextualize and assign pertinent tasks to learners' environments. On the other hand, 9.2% and 20.2% of the teachers "strongly disagreed" and "disagreed" respectively, while another 20.2% were unsure. This led to a mean agreement of 3.25 to 3.0 (Undecided), with a standard deviation of 1.19. As a result, when implementing the curriculum, teachers were generally unsure about their capacity to contextualize CBC topics and assign pertinent assignments to learners' environments.

The findings were further supported by the observation that teachers only created and chose real activities used in the teaching-learning process in 14 out of the examined schools, or 50% of the schools. This supports Muchira et al.'s assertion that instructors were not well prepared to handle CBC holistically in their study from 2023. According to a prior study by Koo (2020), the majority of teachers lacked confidence in their CBC handling strategies. Choi (2018) stressed the importance of giving instructors clear guidance on how to execute the curriculum holistically.

4.4.2 Teachers' pedagogical content knowledge

The respondents were asked to rate their agreement with three statements regarding their understanding of the CBC pedagogical material in order to complete the second objective. A scale of 1 to 5 was asked of them. Where 1 indicates "Strongly Agree," 2 "Disagree," 3 "Undecided," 4 "Agree," and 5 "Strongly Agree." The responses were examined, and table 4.4 shows the results.

Table 4.4: Teachers' pedagogical content knowledge

SD	D	U	A	S A	Total
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	%	%	%	%	%	Count	Mean	Std. Dev.
You are able to link learning experiences to acquisition of pertinent and contemporary issues and community service learning	4.6	15.6	12.8	58.7	8.3	109	3.50	1.01
You can effectively infuse different competencies during instruction	6.4	14.7	16.5	54.1	8.3	109	3.43	1.05
You were effectively trained on formulation of specific learning outcomes from the curriculum design	8.3	27.5	22.9	33.0	8.3	109	3.06	1.13

The findings in table 4.4 demonstrate that the sampled teachers' knowledge of the CBC pedagogical content in terms of training to infuse different competencies and formulation of specific learning outcomes from the curriculum design was largely ambiguous or uncertain. 58.7% of the teachers "agreed" and "strongly agreed" on the ability to connect learning experiences to acquisition of relevant and contemporary topics and community service learning, respectively, while 4.6% and 15.6% "strongly disagreed" and "disagreed" in that order. 12.8% were unsure, though. The teachers generally agreed that they are capable of connecting learning experiences to the acquisition of relevant and contemporary concerns and community service learning, as evidenced by the mean agreement of = 3.50 4.0 (Agreed), SD =1.01. The same was confirmed in 16 of the 28 schools where there were clearly stated learning outcomes indicating the information, abilities, and values that students were expected to gain. The results are in line with those of Zee and Koomen (2016), who noted that teachers frequently make connections between what happens in the classroom and real-world circumstances. As a result, teachers act as pedagogical change agents by making the curriculum content more relevant for the students.

As for efficiently integrating several competencies during instruction, 54.1% and 8.3% of the teachers respectively "agreed" and "strongly agreed." The observation checklist also showed that

teachers were able to incorporate the CBC core competencies and values in 21 of the 28 schools. 16.5% of them remained uncertain about the same assertion after this. However, the assertion was "disagreed" and "strongly disagreed" with by 14.7% and 6.4% of the sampled instructors, respectively. The final mean agreement was 3.43 3.0 (Undecided), with a standard deviation of 1.05. The implication is that a randomly chosen teacher from the community sampled is likely to have concerns about their capacity to successfully integrate various competences during CBC instruction. This result is consistent with earlier findings from Koo (2020) and Muchira et al. (2023). The two studies showed that teachers were not sufficiently prepared for effective CBC implementation. Insufficient teacher preparation was another issue brought up in a report by the Kenya National Union of Teachers (KNUT) that was sent to the Presidential Working Party on Education Reform (PWPER) in 2022 (KNUT, 2022).

Finally, 33.0% and 8.3% respectively "agreed" and "strongly agreed" that they had received effective training on how to formulate certain learning outcomes based on the curriculum design. This was followed by instructors who "disagreed" with and were "undecided" about the same statement, respectively, by 27.5% and 22.9% of the teachers. 8.3% more of the educators disagreed vehemently with the assertion.

According to the mean agreement of = 3.06 3.0 (Undecided), $SD = 1.13$, the teachers had an average amount of skepticism regarding the training's ability to help them formulate particular learning outcomes from the design of their curriculum. The majority of the head teachers who were interviewed added, "The trainings were not very effective due to time restrictions and inadequate resources." This supports the KNUT (2022) report's assertion that instructors nationwide lacked enough training, which could jeopardize their capacity to fully understand the principles necessary for the curriculum's effective implementation.

4.4.3 Teachers' ability to integrate ICT during instruction in the implementation of CBC

The study's second goal was to determine how instructors' proficiency with ICT during education impacts the application of the CBC. To do this, the study first determined how well the current teachers were able to incorporate ICT into their lessons for the students. This was accomplished by having them rate their level of agreement with the statements in table 4.5. A scale of 1 to 5 was asked of them. Where 1 indicates "Strongly Agree," 2 "Disagree," 3 "Undecided," 4 "Agree," and 5 "Strongly Agree." The responses were examined, and table 4.5 shows the results.

Table 4.5: Teachers' ability to integrate ICT during instruction

	SD	D	U	A	S A	Total	Std.	
	%	%	%	%	%	Count	Mean	Dev.
There is connectivity to electricity in all classrooms	24.8	12.8	11.0	42.2	9.2	109	2.98	1.39
Teachers use different ICT platforms effectively in the teaching and learning process	22.0	26.6	22.9	18.3	10.1	109	2.68	1.28
Teachers integrate ICT learning in all learning areas	33.0	35.8	15.6	11.9	3.7	109	2.17	1.13

Regarding their capacity to include ICT when instructing the students, the teachers appear to have substantially disagreed with two of the three propositions. When it came to the claim that all classrooms have access to power, 42.2% and 9.2% of the instructors "agreed" and "strongly agreed," whereas 24.8% and 12.8% "strongly disagreed" and "disagreed" with the same statement. 11.0% of them were unsure, though. This led to a mean agreement of 2.98 to 3.0 (Undecided), with a standard deviation of 1.39.

As a result, a randomly chosen teacher from the population studied is likely to have concerns about whether electricity is available in every classroom in Kiambu County. This suggests that some County classrooms may not have the electrical infrastructure required for the teachers to incorporate ICT into their lessons. Only 9 out of the sampled 28 schools' teachers were seen to be utilizing digital gadgets in the teaching and learning process. All of the head teachers who were questioned concurred that there weren't enough digital gadgets in their institutions.

The same pattern can be seen in the teachers' attitudes toward using various ICT platforms effectively for teaching and learning, where 26,6% and 22,0% of them, respectively, "disagreed" and "strongly disagreed," while 22,9% were indecisive. As a result, just 18.3% and 10.1% of the teachers, respectively, "agreed" and "strongly agreed." This resulted in a mean agreement of = 2.68 3.0 (Undecided), with SD = 1.28. The consequence is that most of the teachers had some skepticism about their capacity to use different ICT platforms in the teaching and learning process. The interview with the head teachers provided additional confirmation of the instructors' poor proficiency in ICT-related subjects. They noted that the learning content areas "touching on digital learning" are the ones that present the greatest difficulties for the instructors.

Similar to this, 15.6% of the instructors were unsure whether they integrated ICT learning across all subject areas, whereas 35.8% and 33.0% of the teachers, respectively, "disagreed" and "strongly disagreed" with this assertion. Positively, on the same statement, 11.9% and 3.7% of respondents indicated "agreement" and "strong agreement," respectively. However, the average teacher in Kikuyu Sub-County, Kiambu County, does not appear to integrate ICT learning across all subject areas, as shown by a mean agreement of = 2.17 2.0 (Disagree), SD =1.13.

The results support those of an earlier study by Masika (2020), which found that fewer than 14% of preschool instructors in Kiambu County were able to integrate technology in their classes.

Following initiatives like the laptop project for lower primary schools, these findings present a contradictory picture of the government's commitment to the digital transformation of the education sector (Barasa, 2021).

4.4.4 Teachers' perceptions on preparation for the CBC implementation

Finding out how teachers felt about the preparation for the CBC implementation was the study's final goal. In the study's context, perception covered instructors' views on the CBC, the results of CBC implementation, and the difficulties that came with it. Figures 4.1, 4.2, and 4.3 show the results of the analysis of the aforementioned factors;

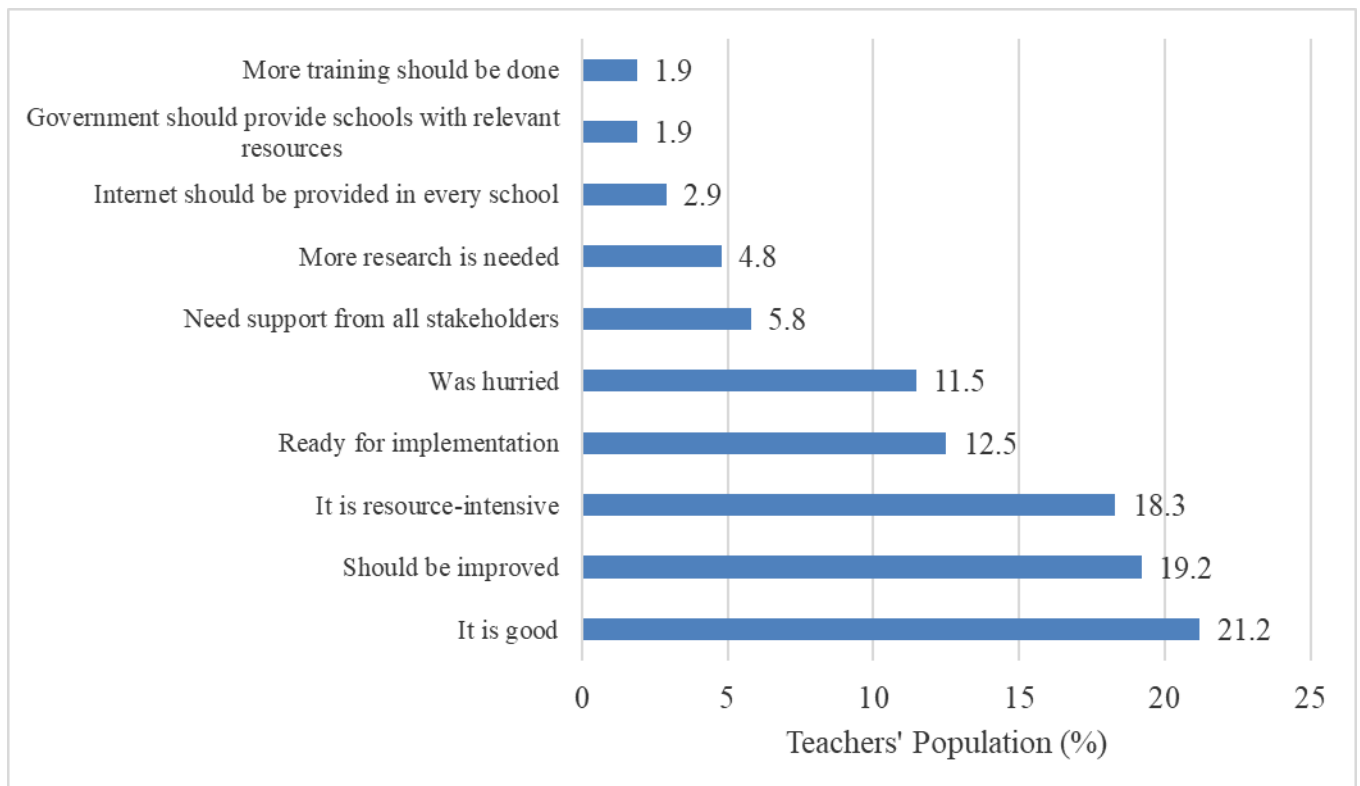


Figure 4.2: Teachers' Opinion on CBC

According to the aforementioned findings, 19.2% and 18.3% of instructors believe that the curriculum needs to be improved and that it is resource-intensive, respectively, whereas 21.2% of teachers think that CBC is an excellent program. 4.8% of the teachers said that more research on CBC should be done, and 1.9% said that more training is required, supporting the idea that the curriculum needs to be enhanced. This result supports that of KNUT (2022), in which the majority of respondents recognized CBC as a well-intentioned curriculum but lamented the haste with which it was implemented. 12.5% of the teachers in the study felt that the CBC was prepared for implementation, likely supporting the notion that the program is effective. However, 11.5% of them thought the CBC's introduction was rushed. Other views were that the government should give schools with pertinent resources (1.9%), that every school should have internet access (2.9%), and that all stakeholders should support CBC (5.8%).

The majority of the head teachers who were surveyed agreed that, if properly implemented, the CBC is "a good curriculum that will allow the learners to gain the right skills, knowledge, and attitude." Therefore, the primary concerns of teachers and head teachers are the necessity for good execution, the provision of enough and necessary resources, and proper training.

Second, the teachers were asked to list some of the outcomes of the CBC implementation that they had noticed. The effects mentioned by the respondents are depicted in Figure 4.2;

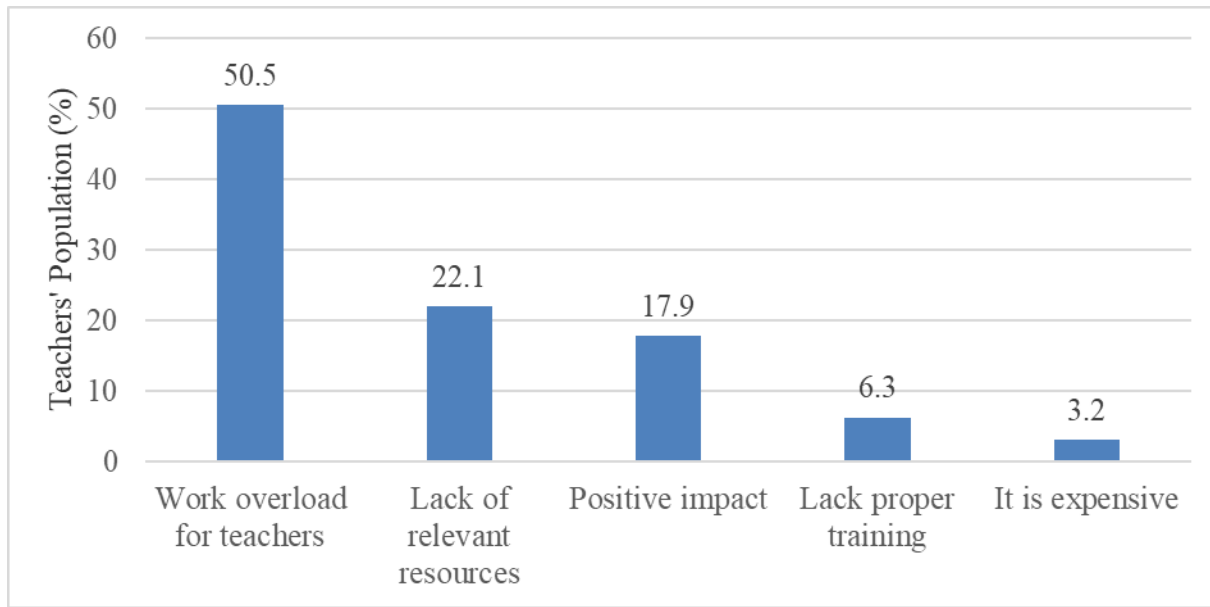


Figure 4.3: Effects of CBC implementation

It is clear that the majority of instructors (50.5%) have dealt with work overload as a result of the implementation of CBC. Lack of pertinent resources was indicated by 22.1% of the teachers as the next issue. Nyaboke et al. (2021) made a similar discovery, concluding that the lack of necessary resources, such as qualified teachers and classrooms, is impeding the curriculum's effective implementation. However, 17.9% of the teachers said that they have been positively impacted by CBC implementation. The advantages were not mentioned. Lack of appropriate training and higher costs were the final two effects mentioned by 6.3% and 3.2% of the teachers, respectively.

According to 35% of the teachers, the lack of adequate pertinent resources was the most significant problem faced throughout the implementation of CBC, as seen in Figure 4.3 below. According to 18% and 16% of the teachers in the studied group, respectively, it was followed by a lack of parental or guardian support and a lack of time to cover all the subject areas.

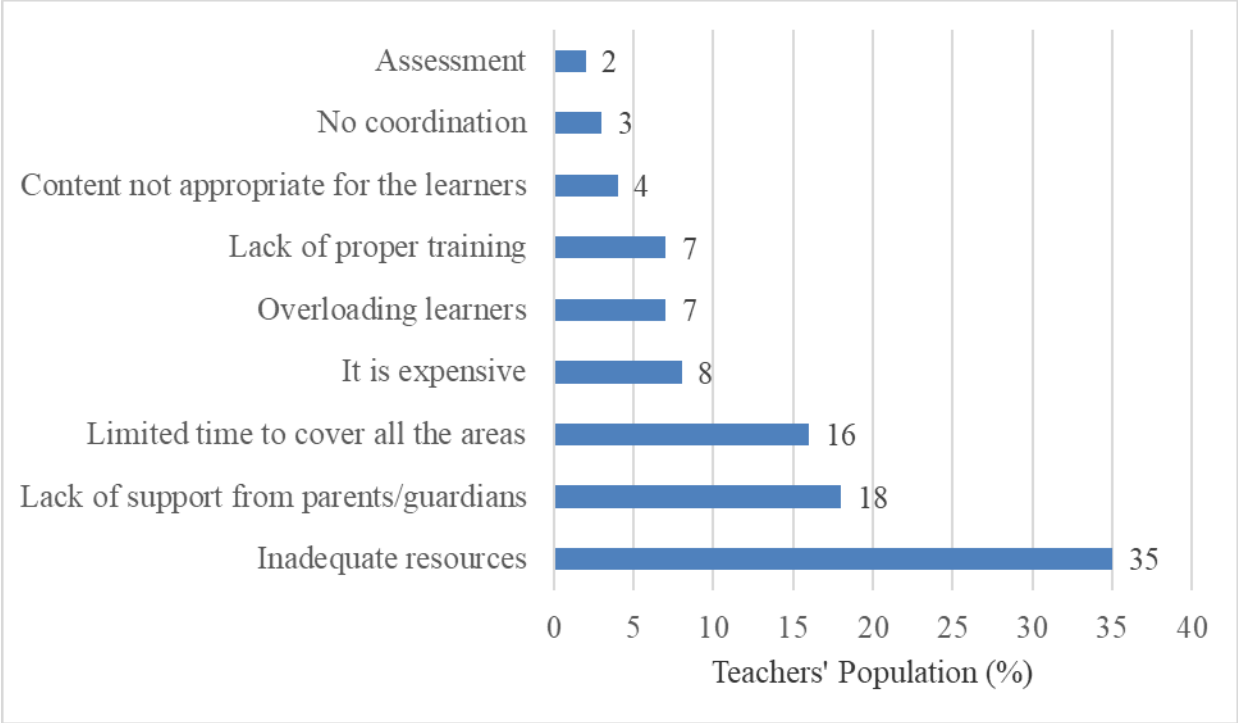


Figure 4.4: Challenges in CBC implementation

Additionally, 8% of the teachers said that the cost of CBC implementation is high, 7% said that CBC implementation has overloaded the students, and another 7% said that there is a lack of adequate training. 4% of the teachers thought the material was unsuitable for the students, while 3% said that a problem with the curriculum's implementation was the lack of collaboration.

Last but not least, 2% of the sampled teachers found it difficult to assess the students in accordance with CBC rules. The KNUT (2022) report reiterated nearly all of the aforementioned issues when it highlighted poor infrastructure, a lack of teaching and learning resources, a lack of teacher preparation, and a lack of ICT tools as barriers to effective CBC implementation.

The sampled teachers were asked to rate their degree of agreement with various statements on a Likert scale from 1 to 5, which was the last step in establishing how the instructors felt about the

implementation of CBC. Where 1 indicates "Strongly Agree," 2 "Disagree," 3 "Undecided," 4 "Agree," and 5 "Strongly Agree." The responses were examined, and table 4.6 was created;

Table 4.6: Teachers’ perceptions on preparation for the CBC implementation

	SD	D	U	A	S A	Total Count	Total	
	%	%	%	%	%		Mean	Std. Dev
You have fully embraced the learner-centered approaches of teaching in all learning areas	1.8	12.8	18.3	48.6	18.3	109	3.69	0.98
You are fully equipped with subject content to implement CBC	11.0	41.3	10.1	29.4	8.3	109	3.00	1.00
CBC implementation has greatly changed your belief that the curriculum is burdensome	7.3	26.6	19.3	37.6	9.2	109	3.00	1.00
The training has adequately equipped you with the required competencies	16.5	26.6	19.3	31.2	6.4	109	2.84	1.22
You were adequately sensitized about CBC before it was rolled out	21.1	39.4	3.7	30.3	5.5	109	2.6	1.27

Results in Table 4.6 above reveal that teachers' levels of agreement with the five claims varied, with an average of just one statement being agreed with. That is, 48.6% and 18.3% of the instructors, respectively, "agreed" and "strongly agreed" that they had fully embraced learner-centered teaching methodologies across all subject areas. However, the same statement was "strongly disagreed" with by 1.8% of the teachers and "disagreed" with by 12.8% of the teachers, respectively. 18.3% more of the educators were unsure. A mean agreement of = 3.69 4.0 (Agree), SD = 0.98, was the outcome. The implication is that, on the whole, instructors concurred that they have fully embraced learner-centered teaching methodologies across all subject areas. This conclusion was supported by the

observation that, in 21 out of the 28 schools, there was evidence of important inquiry questions that pique learners' curiosity about what comes next. Teachers in 19 schools were also seen to let students work in pairs to solve challenges as a group. The results are consistent with those of Masika (2018), who found that competency-based curricula place a higher importance on students' needs and interests than other issues in the field of education.

In that order, 41.3% and 11.0% of the teachers "disagreed" and "strongly disagreed" on the topic of having all the necessary subject knowledge to implement CBC. 29.4% and 8.3% of the teachers respectively reported agreement and strong agreement on the same statement, while 10.1% were unsure. The resulting mean agreement was = 3.0 (Undecided), with a standard deviation of 1.00, indicating that the teachers were generally unsure of their ability to apply CBC. We absorb the CBC subject content as we teach, as the head teachers who were interviewed stated, which further supported this deficiency. This discovery is consistent with Nyaboke et al.'s (2021) recommendation that all teachers implementing the curriculum receive appropriate training in order to better understand and manage it.

Similar to this, 37.6% and 9.2% of the teachers, respectively, indicated agreement and strong agreement with the claim that the adoption of the CBC has significantly altered their perceptions of how difficult the curriculum is. However, when it came to the identical statement, 26.6% and 7.3% of them "disagreed" and "strongly disagreed." 19.3% of the educators were unsure. This translates to an average teacher from the sampled population having a mean agreement of = 3.0 (Undecided), $SD = 1.00$, which suggests that they are unsure of whether the CBC's adoption has significantly altered their perception of how difficult it is. Nyaboke et al. (2021) noted that the CBC has been a significant hardship, particularly for the parents. In addition to having financial responsibility to

purchase the required resources for the students, parents have a significant role in helping students with their practical assignments (KNUT, 2022).

31.2% and 6.4% of the participants "agreed" and "strongly agreed" to the assertion that the training has provided teachers with the necessary competencies, respectively. A total of 26.6% of the teachers disagreed, followed by 16.5% who strongly disagreed. 19.3%, however, were unsure about the same claim.

A mean agreement of = 2.84 3.0 (Undecided), $SD = 1.22$, was obtained as a result. A randomly chosen teacher from the sampled population is therefore likely to be unsure of whether the training has given them the necessary competencies. The instructors' ambiguity can be linked to related findings showing that educators nationwide have not gotten sufficient training on the CBC (Muchira et al., 2023; KNUT, 2022; Nyaboke et al., 2021). As a result, they are unable to assess how well the trainings worked.

In addition, the instructors who "disagreed" and "strongly disagreed" with the claim that they were sufficiently made aware of CBC before it was implemented were 39.4% and 21.1% of them, respectively. Following this, 30.3% and 5.5% of them said that they "agreed" and "strongly agreed" with the same statement, respectively. It's noteworthy that 3.7% of the teachers weren't sure. The instructors' average level of agreement on whether they had been sufficiently sensitized about CBC before it was implemented was = 2.6 3.0 (Undecided), $SD = 1.27$.

The results highlight the potential for a lack of public input during the early stages of curriculum preparation, which was also highlighted by Akala (2021). The author of the report concluded by urging more involvement of all parties involved in education in the formulation and execution of a big project like the CBC.

4.5 Correlational Analysis

It was crucial to ascertain the impact of teachers' readiness for CBC implementation on its successful execution after determining their current level of readiness. This was accomplished through correlational analysis of the four independent variables (teachers' capacity to interpret and apply CBC concepts, pedagogical content knowledge, ability to integrate ICT in the teaching and learning process, and teachers' perception) and the dependent variable (effective CBC implementation).

4.5.1 Teachers' capacity to interpret and apply curriculum design concepts on Effective CBC implementation

By conducting a correlational analysis of the teachers' responses to the six statements describing their capacities against their perceived effectiveness at implementing CBC, it was possible to determine the influence of teachers' capacity to interpret and apply CBC design concepts on effective implementation of CBC. Results of the analysis are shown in Table 4.7;

Table 4.7: Influence of Teachers' capacity on effective CBC implementation

Statements on Teachers' Capacity	I can effectively implement CBC		
	Pearson Correlation	Sig.	N
I understand the CBC concepts	.560	.000	109
I relate contents to core competencies etc.	.456	.000	109
I can integrate technology in the teaching and learning process	.468	.000	109
I can collaborate with parents and local community	.626	.000	109
I can assess learners according to CBC	.524	.000	109
I can contextualize and give relevant tasks to learners' environment	.785	.000	109

According to the findings in the above table, teachers' ability to implement the curriculum successfully is positively and statistically significantly impacted by all facets of their ability to interpret and apply CBC design elements. However, a Pearson Correlation of $r = 0.785$, $p = 0.000$ revealed that the teachers' capacity to contextualize and assign pertinent activities to the learners' surroundings was the factor that had the greatest influence. This suggests that a unit improvement in the teacher's contextualization ability is likely to result in a rise of 0.785 units, or 78.5%, in the effectiveness of adopting CBC, and the opposite is also true. Because it directly results in the execution of the curriculum, teachers' abilities to contextualize CBC topics and assign pertinent assignments to the learners' environment have a higher impact (Ondimu, 2018). The next factor was the instructors' capacity for working with the local community and parents, as indicated by $r = 0.626$, $p = 0.000$. This result appears to validate Cheptoo's (2019) claim that CBC is a collaborative program that needs the participation of all educational stakeholders, including parents and local residents. The ability to link content to key competencies, with a r of 0.456 and a p -value of 0.000, was the least significant factor in this category of teachers' abilities.

4.5.2 Teachers' pedagogical content knowledge on the implementation of CBC

A correlational analysis was conducted on the three factors and the teachers' capacity to execute the curriculum effectively in order to assess the degree to which teachers' pedagogical content knowledge is influencing implementation of the CBC. Table 4.8 below presents the findings;

Table 4.8: Teachers' pedagogical content knowledge on the implementation of CBC

Statements on Teachers' pedagogical content knowledge	I can effectively implement CBC		
	Pearson Correlation	Sig. (2-tailed)	N
You are effectively trained on formulation of specific learning outcomes from the curriculum design	.137	.156	109
You are able to link learning experiences to acquisition of pertinent and contemporary issues and community service learning	.204	.033	109
You can effectively infuse different competencies during instruction	.244	.010	109

The findings in the table above show that the instructors' capacity to successfully administer the CBC was significantly influenced by two of the three pedagogical subject knowledge factors. According to Pearson Correlation of $r = 0.244$, $p = 0.010$, the teachers' capacity to integrate various competences into instruction had the greatest and statistically significant impact on the successful implementation of CBC. The conclusion is that, depending on whether the initial shift is positive or negative, a unit change in a teacher's ability to integrate various competencies into instruction is likely to increase or decrease that teacher's ability to implement CBC by 0.244 units, or 24.4%.

The teachers' capacity to connect lessons to knowledge of current, relevant issues and community service learning came next ($r = 0.204$, $p = 0.033$). However, because its p-value (0.156) is larger than

the 0.05 cutoff, the impact of effective training on the creation of specified learning objectives from the curriculum design could not be statistically demonstrated. The Ministry of Education and TSC's aggressive introduction of Teachers Professional Development (TPD) programs for all teachers can be used to draw conclusions about the major influence of teachers' pedagogical subject knowledge on their efficient execution of the CBC. The TPD program aims to retool the teachers for better curriculum implementation (Muchira et al., 2023).

4.5.3 Teachers' ability to integrate ICT during instruction on implementation of CBC

In order to achieve the study's third goal, which was to ascertain the impact of teachers' ability to incorporate ICT during instruction on CBC implementation, a Pearson Correlation analysis was conducted on four ICT integration-related factors in comparison to the teachers' reported efficacy in carrying out the curriculum. Table 4.9 presents the analysis' findings;

Table 4.9: Teachers' ability to integrate ICT during instruction on implementation of CBC

Statements on Teachers' ability to integrate ICT during instruction	I can effectively implement CBC		
	Pearson Correlation	Sig.	N
Availability of adequate infrastructure	.284	.003	109
Teachers integrate ICT learning in all learning areas	.326	.001	109
There is connectivity to electricity in all classrooms	.075	.438	109
Teachers use different ICT platforms effectively in the teaching and learning process	.156	.105	109

The effectiveness of teachers in implementing the CBC was found to be positively and statistically significantly influenced by two of the four ICT integration factors. With a Pearson Correlation of $r = 0.326$, $p = 0.001$, the ability of teachers to include ICT in all areas of learning came out as the factor that had the greatest influence. Therefore, a unit increase or decrease in the teachers' capacity

to incorporate ICT learning into all learning areas is likely to result in an increase or decrease of 32.6%, or 0.326 units, in the teachers' ability to implement the curriculum.

The fact that CBC tends to emphasize technology more and that technology use is receiving more attention in the current educational system, as was previously reported by Katam (2020), may be responsible for this highly influential aspect of ICT integration.

Similar to this, it was determined that the presence of a sufficient infrastructure was the second most important factor in the successful use of CBC. A Pearson Correlation of $r = 0.284$ and $p = 0.003$ were obtained. However, because they produced p-values higher than 0.05, the influence of the other two factors—access to power in all classrooms and effective use of various ICT platforms in the teaching and learning process—was not statistically confirmed. This supports a research by Githinji et al. (2022), which discovered that some schools have various energy sources, such as solar power, and that teachers frequently use classrooms that are wired for electricity to conduct classes.

4.5.4 Teachers’ perceptions during preparation for the CBC implementation

A correlational study was conducted between five categories of teachers' perceptions and their reported success in implementing the curriculum to determine the role of teachers' perspectives on CBC implementation. The analyses' findings are presented in Table 4.10;

Table 4.10: Teachers’ perceptions and effective implementation of the CBC

Statements on the Teachers’ Perception	I can effectively implement CBC
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	Pearson		
	Correlation	Sig.	N
You were adequately sensitized about CBC before it was rolled out	.475	.000	109
You are fully equipped with subject content to implement CBC	.339	.000	109
You have fully embraced the learner-centered approaches of teaching in all learning areas	.092	.342	109
CBC implementation has greatly changed your belief that the curriculum is burdensome	.342	.000	109
The training has adequately equipped you with the required competencies	.321	.001	109

The findings show that four of the five instructors' perceptions of the CBC have a favorable and statistically significant impact on its implementation. The most significant factor, however, is the perception of having been sufficiently informed about the curriculum prior to its implementation, which produced a Pearson Correlation of $r = 0.475$, $p = 0.000$. According to the interpretation, a shift in instructors' opinions about whether their students have received an acceptable level of sensitization is likely to boost or reduce their efficiency by 47.5% or 0.475 units, depending on whether the perception shift is favorable or unfavorable. The instructors' impression that the adoption of the CBC has significantly impacted their beliefs about how burdensome the curriculum is followed, as evidenced by $r = 0.342$, $p = 0.000$. According to the Pearson Correlation of $r = 0.339$, $p = 0.000$, teachers' view of having all the necessary subject knowledge to apply CBC was found to influence their successful implementation of CBC by 33.9%. The last factor of teachers' view that has a favorable impact on the efficient implementation of CBC is that they believe they have received the necessary training to sufficiently equip them with the necessary competencies. The Pearson Correlation for this factor was $r = 0.321$, $p = 0.001$. The study, however, was unable to statistically prove how instructors' perceptions of having fully embraced learner-centered methods

to teaching in all learning domains affect their effective implementation. The perception was correlated by Pearson with $r = 0.092$ and $p = 0.342$. Since the p-value is above the 0.05 cutoff, it cannot be said with certainty that any changes in teachers' effective implementation are due to their adoption of learner-centered approaches to teaching across all subject areas. These results are consistent with those of Kwak (2019), who found that when teachers are upbeat and pleased about the curriculum, they are more likely to boost their dedication and performance. As a result, their success percentage is strongly related to how they view the program.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study's final chapter is this one. It aims to summarize the findings from the preceding chapter and draw conclusions and recommendations from them.

5.2 Summary of the Main Findings

Regarding the impact of teacher preparation on the implementation of the Competency Based Curriculum in public primary schools in Kikuyu Sub-County, Kiambu County, significant insights have been established. According to the goals of the study, these perceptions and conclusions are summed up as follows;

5.2.1 Teachers' capacity to interpret and apply curriculum design concepts on CBC implementation

All facets of teachers' ability to perceive and apply curriculum design concepts were found to have a favorable and statistically significant impact on CBC implementation, according to the study's primary aim. These factors include how well teachers comprehend CBC concepts, their capacity to connect CBC concepts to core competencies, their use of technology in the teaching and learning process, their interaction with parents and the community, their assessment of students in accordance with CBC standards, and their capacity to contextualize tasks and assign tasks that are pertinent to students' environments. The ability of the teachers to contextualize and assign pertinent tasks to the learners' environment stood out as the most influential of the six factors, whereas their capacity to connect CBC content to core competencies, PCIs, values, and CSL produced the least but statistically significant impact on efficient CBC implementation.

5.2.2 Teachers' pedagogical content knowledge on the implementation of CBC

The study's second goal was to determine how much teachers' pedagogical topic expertise affected how well they implemented the CBC. The effectiveness of the teachers' training in formulating specific learning objectives, their capacity to connect learning experiences to learners' acquisition of relevant and contemporary issues as well as community service learning, and their ability to infuse various competencies during instruction were all used to assess the teachers' pedagogical ability. The effectiveness of the teachers in integrating various competencies into their lessons had the greatest impact on how well the CBC was implemented, while the impact of the teachers' training on the development of particular learning outcomes was not statistically significant.

5.2.3 Teachers' ability to integrate ICT during instruction in the implementation of CBC

Thirdly, the study sought to determine the extent to which instructors' capacity to use ICT in their instruction or delivery to students influences the successful implementation of the CBC. The goal was conceived with the knowledge that effective integration of ICT in the teaching and learning process requires some supporting infrastructure, such as digital devices and connectivity to electrical power. The teachers' capacity to integrate ICT in this process was therefore evaluated in four different ways. The instructors' efficient use of various ICT platforms in the teaching and learning process, as well as the availability of suitable infrastructure in the sampled schools, were among them. They also included connecting all classrooms to electricity and integrating ICT learning into all learning areas. Only two of the four ICT integration factors, according to the study, had a statistically significant impact on how well the CBC was implemented. The two factors were the availability of suitable infrastructure in the sampled schools and teachers' incorporation of ICT learning across all subject areas.

5.2.4 Teachers' perceptions during preparation for the CBC implementation

The study also intended to determine how teachers' perceptions of their preparation for CBC affected how well the curriculum was implemented. The perception included the teachers' opinions on the following topics: the curriculum's burdensomeness; the adequacy of training in terms of acquiring the necessary competencies; the adequacy of equipment with the subject content; and the embrace of learner-centered approaches in teaching of all learning areas. The study also aimed to determine how generally instructors felt about CBC and some of the difficulties they saw with its implementation. According to the instructors, CBC is generally good, but more plans need to be done to guarantee that the teachers are well prepared and that the schools are better equipped with the necessary resources.

However, four of the five instructors' view factors have a favorable and statistically significant impact on CBC implementation. The teachers' assessment of having been sufficiently sensitized to CBC prior to its roll out was determined to have the biggest influence. At a 95% confidence level, the instructors' perception that they have fully adopted learner-centered teaching methodologies across all subject areas did not produce a statistically significant impact on the successful application of CBC.

5.3: Conclusion of the study

Following review of the study's goals and findings, the following is the study's conclusion:

The efficacy of the instructors in implementing the curriculum is anticipated to increase as their ability to perceive and apply the CBC design elements grows, particularly as they become better at contextualizing and assigning tasks that are pertinent to the learners' surroundings. This is significant since students come from varied geographical, socioeconomic, cultural, and even geographic regions of the nation. Therefore, adapting the curriculum to the learning environment logically leads to its efficient application. A viable way to develop this capacity among teachers is through appropriate training and regular consultations among those involved in the school system.

The effectiveness of instructors in implementing the CBC is significantly influenced by their mastery of pedagogical content. By improving their capacity to integrate various abilities during lessons, for instance, instructors will likely be better able to apply the curriculum. This impact may be explained by the fact that CBC places a strong emphasis on developing the unique competencies of all students for their overall output.

The effectiveness of the teachers' implementation of the CBC is positively influenced by their capacity to include ICT during instruction. Additionally, this capability is reliant on the availability and sufficiency of pertinent resources and infrastructure, including digital devices and an electrical power source. In order to apply the curriculum effectively, it is necessary to provide these materials in addition to improving teachers' digital literacy.

The perception of instructors has a big impact on how well they can administer the competence-based curriculum. More specifically, instructors are more successful in applying the curriculum when they feel they have received sufficient information and training before doing so.

5.4: Recommendations

Based on the facts mentioned above, the study recommends the following;

5.4.1 Recommendations for Policy Makers

- (i) The government, through the Ministry of Education, should increase the quality of CBC training to all teachers, with greater focus on contextual interpretation of the curriculum. This will allow the teachers to identify and nurture the learners' competencies by the use of locally available resources and scenarios.
- (ii) The government as well as other education stakeholders should provide adequate quantity and quality of all relevant resources to facilitate effective implementation of the curriculum.
- (iii) All teachers should be encouraged to enhance their digital literacy skills through frequent ICT training workshops in the context of CBC implementation.
- (iv) The Ministry of Education should continuously update teachers on the educational programs such as CBC. This will increase awareness among the teachers and allow them to own such programs.

5.4.2 Recommendations for future studies

Given that most teachers are yet to integrate ICT in their teaching and learning process, the study recommends a follow up study to be done on effective ways of increasing integration of ICT in the teaching and learning of the competence-based curriculum in Kenya.

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APPENDICES

Appendix I: Letter of Introduction

University of Nairobi,

Department of Educational Management and Curriculum studies

P.O BOX 30197, Nairobi, Kenya.

The Head teacher.

Dear Sir/Madam,

REF: INVITATION TO PARTICIPATE IN RESEARCH

I am a post-graduate student in the school of Education, Department of Educational Administration and Planning of the University of Nairobi.

As part of my Master of Education course, I am required to collect data and write a project. My project will be on influence of teachers' preparedness on implementation of Competency based Curriculum in public primary schools in Kikuyu sub-county, Kiambu county, Kenya. In this regard, I request your cooperation to enable me collect the requisite data by giving honest responses to the items.

I wish to assure you that the information obtained in this exercise is purely for research purposes and your identity will be treated with utmost confidentiality.

Yours sincerely,

Naomi Carol Ojung'a

Appendix II: Questionnaire for Grade 6 Teachers

This questionnaire is for purposes of collecting information on teachers' preparedness for the implementation of the competency-based curriculum in public primary schools. All the information provided will be used for the purpose of the study only. Kindly respond to all questions as honestly as possible. Do not indicate your name.

School.....

INSTRUCTIONS:

Please tick (✓) or fill information as appropriate

SECTION A: DEMOGRAPHIC INFORMATION

1. Kindly indicate your gender (a) Male (b) female
2. What is your age bracket? (a) 20-29 (b) 30- 39 (c) 40-49 (d) 50and above
3. What is your highest academic qualification?
(a) Certificate (b) Diploma (c) Degree (d) Master
(e) Any other specify.....

SECTION B: TEACHERS CAPACITY TO INTERPRET AND APPLY CURRICULUM DESIGN CONCEPTS

Please tick only one, where (1) Strongly Disagree (2) Disagree (3) undecided (4) Agree (5) strongly Agree

Questions	1	2	3	4	5
a) Your understanding of the concepts of competency-based curriculum; <ul style="list-style-type: none"> • Formulation of learning outcomes • Choice of learning experiences (tasks) • Development of standards 					
b) Your ability to relate content to; <ul style="list-style-type: none"> • PCIs • core competencies • values and • CSL 					
c) Your ability to integrate technology in the teaching/learning process					
d) Your ability to collaborate with parents and the local community in pupils learning activities					
e) Your ability to assess learners using the competency based assessment (ability to design rubrics)					
f) Level of effectiveness of implementation of CBC					
g) Ability to contextualize and give relevant tasks to learners' environment.					

6. How well are you prepared in the implementation of competency-based curriculum? Please tick only one:

i Very well []

ii Well []

iii Neutral []

iv Developing []

v Needs support []

7. a) What is your opinion on implementation of the competency-based Curriculum?

.....

b) Comment on your ability to apply competency-based curriculum.

.....

8. In what ways has the implementation of CBC affected you as a teacher?

.....

9. What challenges are you facing in implementing the competency-based curriculum?

.....

SECTION C: TEACHER PEDAGOGICAL CONTENT KNOWLEDGE

11. You are effectively trained on how to formulate specific learning outcomes from the curriculum design. (Tick appropriately)

i. Strongly Disagree []

ii. Disagree []

iii. Undecided []

iv. Agree []

v. Strongly Agree []

12. You are able to link learning experiences to acquisition to pertinent and contemporary issues and community service learning. (Tick appropriately)

i. Strongly Disagree []

ii. Disagree []

iii. Undecided []

iv. Agree []

v. Strongly Agree []

13. You can effectively infuse different competencies during instruction. (Tick appropriately)

i. Strongly Disagree []

ii. Disagree []

iii. Undecided []

iv. Agree []

v. Strongly Agree []

SECTION D: TEACHERS PERCEPTIONS

13. You were adequately sensitized about Competency based Curriculum before it was rolled out. (Tick appropriately)

(1) Strongly Disagree []

(2) Disagree []

(3) Undecided []

(4) Agree []

(5) Strongly Agree []

14. You are fully equipped with subject content to implement the competency- based curriculum. (Tick appropriately)

i. Strongly Disagree []

ii. Disagree []

iii. Undecided []

iv. Agree []

v. Strongly Agree []

15) You have fully embraced the learner-centered approaches of teaching in all learning areas. (Tick appropriately)

i.Strongly Disagree []

ii.Disagree []

iii.Undecided []

iv.Agree []

v.Strongly Agree []

16. The implementation of Competency based Curriculum has greatly changed your belief that the curriculum is burdensome. (Tick appropriately)

i.Strongly Disagree []

ii.Disagree []

iii.Undecided []

iv.Agree []

v.Strongly Agree []

17. The training you have received has adequately equipped you with the required Competencies. (Tick appropriately)

i.Strongly Disagree []

ii.Disagree []

iii.Undecided []

iv.Agree []

v.Strongly Agree []

SECTION E: ICT INTEGRATION DURING INSTRUCTION

Please, indicate by the use of a tick in the related columns the availability of ICT materials and the extent to which teachers integrate ICT during instruction where (1) Strongly Disagree (2) Disagree (3) Undecided (4) Agree (5) Strongly Agree

Teachers have sufficient ICT knowledge and skills	1	2	3	4	5
Availability of adequate infrastructure; enough classrooms equipped with ICT tools for use during teaching					
Teachers integrate ICT learning in all learning areas					
Head teachers are actively involved in organizing CBC learning activities. 5. There is connectivity to electricity in all classrooms					
Teachers use different ICT platforms effectively in the teaching and learning process					

Thanks for your cooperation

Appendix III: Head teachers Interview Guide

1. What do you understand by the term competency-based curriculum?
2. Please explain.....
3. Have you received any in-service training in preparation for the implementation of the
Competency-based curriculum?.....
4. Since the inception of the competency-based curriculum in your school, have you conducted
training (seminars or workshop) about the CBC?
5. Explain the effectiveness of the training and the challenges encountered.....
6. Are the teachers ready to implement the competency-based curriculum?
7. Are you competent in all the specific learning areas you teach?
8. What learning areas pose challenges when teaching in the classroom?
9. Are digital devices sufficient in your school?
10. To what extent are teachers able to design assessment rubrics?
11. In what ways do teachers indulge the learners in CSL?
12. What suggestions would you give to enhance teachers' performance in the CBC program in
public primary schools?
13. What is your view of the competency based curriculum in Kenya?

Appendix IV: Observation Checklist

Name of school Date:

CBC Indicator	Implemented	Not implemented	Remarks
i. Learners working in pairs, getting solutions to problems as a group (communication and collaboration)			
ii. Learners working through word questions (critical thinking and problem and solving)			
iii. New tools and displays of learners work (creativity and imagination)			
iv. Key inquiry questions that prompt learners interest in knowing what next (learning to learn)			
v. Use of digital devices to learn (digital literacy)			
vi. Digital devices used by the teacher			
vii. Clearly stated learning outcomes showing; knowledge, skills and values to be acquired by learners.			
viii. Formulation and selection of authentic tasks performed during the teaching-learning process.			
ix. Choice of pedagogies relevant to the teaching of competency based Curriculum.			
x. Lesson presentation correct procedure followed.			
xi. Use of CBC assessment tools.			
xii. Correctly structured assessment rubrics.			
xiii. Infusion of the CBC core competencies and values.			

Appendix V: Sample Size Determination Table

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Appendix VI: Research Permit



REPUBLIC OF KENYA


Ref No: **131680**



**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **21/November/2022**

RESEARCH LICENSE




This is to Certify that Miss. Naomi Carol O Ojunga of University of Nairobi, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: INFLUENCE OF TEACHER PREPAREDNESS ON IMPLEMENTATION OF THE COMPETENCY BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN KIKUYU SUBCOUNTY, KIAMBU COUNTY for the period ending : 21/November/2023.

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Applicant Identification Number: **131680**

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Appendix VII: Research Authorization Letter



UNIVERSITY OF NAIROBI
FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL MANAGEMENT POLICY & CURRICULUM STUDIES

dept-edpcs@uonbi.ac.ke

P.O. BOX 30197
OR P.O. BOX 92 -00902
KIKUYU

11/11/ 2022

OUR REF: UON/FED/EMPCS/1/3

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: NAOMI CAROL OJUNG'A – REG NO. E55/8/2015

This is to confirm that Naomi Carol Ojung'a is a Master of Education student in the Department of Educational Management Policy and Curriculum Studies of the University of Nairobi. She is currently working on her research proposal entitled "**Influence of Teacher Preparedness on Implementation of the Competency based Curriculum Public Primary Schools in Kikuyu Sub County Kiambu County**". Her area of specialization is Curriculum Studies

Any assistance accorded to her will be highly appreciated


SUSAN CHEPKONGA, PHD
CHAIRMAN
DEPARTMENT OF EDUCATIONAL MANAGEMENT POLICY AND CURRICULUM STUDIES