

**INFLUENCE OF SCHOOL MANAGEMENT PREPAREDNESS ON  
IMPLEMENTATION OF COMPETENCY BASED CURRICULUM  
IN PUBLIC PRIMARY SCHOOLS IN IGEMBE CENTRAL  
SUB-COUNTY, MERU COUNTY, KENYA**

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**DECLARATION AND APPROVAL**

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This research thesis is my original work and has not been presented in any other university or for any other award.

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## DEDICATION

I wish to dedicate this thesis to my wife, Irene Miriti, son, Brian Miriti and daughter, Hope Miriti, for their moral support during my studies.



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## ABSTRACT

Effective CBC implementation is contingent on preparedness of school management. Nevertheless, CBC implementation in public primary schools is plagued by many challenges, which result in the lack of adequate syllabi coverage and improper classroom teaching pedagogy, thus producing unsatisfying learning achievements for the learners. The study aimed to critically look into the effect of school management preparedness on CBC implementation in public primary schools in Igembe Central Sub-county, Meru County, Kenya. The objectives were to determine the state of CBC implementation and establish how teacher training, provision of curriculum support materials, facilities and parent participation influences CBC implementation. Organizational readiness for change theory and curriculum implementation theory guided this research. The study employed mixed method approach and concurrent triangulation research design. Target population was 23,015 respondents which consisted of 76 headteachers, 1,187 teachers, 21,370 learners, 380 parent representatives and 2 sub-county directors of education (SCDE). A sample of 394 respondents was established using the Yamane formula. Stratified sampling was used to draw two strata based on the number of zones within Igembe Central Sub-county. This realized a sample of 26 headteachers, 78 parents' representatives, 156 teachers, 2 SCDE and 132 learners sampled within the simple random method. Nevertheless, all the 2 SCDE are sampled through the census method. The researcher adopted questionnaire, interview, observation checklist and document analysis guides. Piloting was among 40 respondents in public primary schools in Igembe North Sub-county to determine validity, reliability, credibility as well as dependability. A reliability index,  $r = 0.724$ , was obtained through the use of the method of Cronbach's Alpha to indicate the level of reliability, showing high reliability. Credibility was established through data triangulation and dependability through detailed reporting. Data analysis had involved the identification of common theme. Qualitative data were thematically analyzed and presented in the narrative form. Quantitative information were reported in descriptive and inferential statistics by the application of SPSS version 23. The study findings reflected the fact that CBC implementation proved to be the main issue in public primary schools in Igembe Central Sub-county. Studies indicate that the large number of teachers is unable to complete the syllabus within the required time, thus leading to compromised classroom teaching of low quality and unsatisfactory achievement in the core subjects of CBC. It is caused by the unpreparedness of the school management. From the findings, the Ministry of Education (MoE) should persist in the training and retraining of teachers. Additionally, the school managers are needed to amplify cooperation with other relevant parties to the effect of allowing public primary schools access to teaching and learning resources in full. The Ministry of Education and other relevant parties also should put emphasis on the provision of the adequate physical facilities. Parents also should be active in the activity of the schools and the meeting, therefore having the in-depth insight in the central role of the parent in the education of the child.

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**LIST OF ABBREVIATIONS AND ACRONYMS**

<b>CBC</b>	Competency-Based Curriculum
<b>CBL</b>	Competency-based Learning
<b>IEBC</b>	Independent Electoral and Boundaries Commission
<b>KICD</b>	Kenya Institute of Curriculum Development
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>KNUT</b>	Kenya National Union of Teachers
<b>NACOSTI</b>	National Commission for Science, Technology and Innovation
<b>NASMLA</b>	National Assessment System for Monitoring Learning Achievement
<b>NES</b>	National Education Standards
<b>NPS</b>	National Policy Statement
<b>OBE</b>	Outcomes-Based Education
<b>REB</b>	Rwanda Education Board
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

This chapter centers on the study background, the articulation of the research problem, the study's purpose, the objectives, research questions, rationale, significance, scope, limitations, delimitations as well as assumptions of the study. Additionally, it presents operational definitions for key terms.

#### **1.1 Background to the Study**

Education plays an indispensable role in shaping learners' character traits and physical abilities while also contributing significantly to the cognitive and holistic preparation of students for active participation in the socio-economic development of any nation. The United Nations Children's Fund (2017) highlights that, in the contemporary 21st century, the global educational landscape has shifted away from knowledge-based curriculums toward competency-based programs. This shift is largely influenced by strong political movements aimed at preparing a workforce that can thrive in a highly competitive global economy, with a focus on equipping individuals for future job markets. The report further suggests that, as societal values and needs evolve, the attitudes towards public education shift, necessitating adjustments to educational systems, including the curriculum and its implementation.

These insights underscore the importance of continuous reforms in the education systems of various countries worldwide. These reforms are driven by a desire to adopt learner-centered curricula that cater to the diverse needs, interests, and preferences of learners while also tapping into their innate talents and competencies. This transformation has led to widespread adoption of competency-based curricula, regarded as a solution to numerous educational challenges, and fostering a culture of equity and

inclusivity while simultaneously preparing learners for life beyond school. Bondi and Wiles (2014) argue that a competency-based curriculum represents the outcomes of the educational process, which includes knowledge, skills, and attitudes that learners will apply, as opposed to focusing solely on traditional subject content. In their view, competency-based curricula are often designed around essential competencies that may be subject-specific or cross-curricular in nature.

Kate (2014) observes that competency-based teaching and learning approaches were first implemented in teacher education programs in the United States during the 1970s. The approach, rooted in systems theory and the behavioral approach, emerged from the performance-based teacher training strategies of the 1960s and was developed in response to concerns regarding the quality of teacher training programs in the United States (Hodge & Harris, 2012). Since then, competency-based learning (CBL) approaches have been expanded to various professional fields and educational institutions globally (Sanchez, 2015). Numerous countries around the world have developed and implemented their competency-based learning frameworks, tailored to meet the needs of their local populations and aligned with the context of their respective competency classifications. These countries include, but are not limited to, New Zealand, Canada, Singapore, Germany, Finland, the Netherlands, South Africa, and Norway.

In Finland, for example, Edinger (2017) comments that the sheer burden of the programmes of study in most educational institutions globally led the policymakers to recommend the formation of refined educational objectives meant to enhance the educational structure. Consequently, the education system in Finland employed the use of competency-based approach to focus on proficiency as the key measure of determining what the learners can do in the context of the primary school settings

through the learning experiences of the past years. It is in the Bundy et al. (2016) study where the success of implementing the competency-based curricula is seen where they emphasize the fact that the use of competency-based education (CBE) depends on the acquirement of the knowledge, skills, and attitude of the learner to compete in society adequately. Clearly, the Bundy et al. (2016) contend further the process of the implementation in translating the course of study officially established into the palpable syllabi, schemes of work, and the deliverance of the teachers through the conduct of the lessons. Nevertheless, the successful implementation of CBC has encountered some setbacks on the way.

In Latin America, Hanushek and Luque (2018) report that the CBC had only been successfully adopted in 23.9% of the primary level, and only 20.8% of the students had attained gains in the fundamentals of numeracy, language, and creativity. For the low adoption of CBC, the researchers hold various factors responsible, of which the lack of preparedness of the management of the schools is one. In confirmation is the finding of Sturgis and Casey (2018), which is to the effect that the transition to CBC from the curricula traditionally adopted calls for the preparedness of the management of the schools, the officials responsible for the implementation and follow-up of the newly adopted curriculum.

Rasinski, Homan, and Biggs (2015) maintain that school management preparedness is the readiness of the learning centers to achieve the realization of the objectives of the curriculum. It involves the provision of the necessary school inputs, such as qualified teachers, support of the curriculum, appropriate physical facilities, parental participation, and attitude shifts of staff. In the case of Finland, the World Economic Forum's Global Competitiveness Report (2021) highlights the value of school management preparedness as the foundation for the achievement of an excellent

education system. According to the report of the Islamia University of Bahawalpur in Pakistan, the preparedness of the school is important in the achievement of the success of the implementation of the curriculum (Javed & Hamid, 2015). They point out that prior to the commencement of the implementation of the curriculum, the management of the school must be sure of the provision of the training of teachers, appropriate physical facilities, and support of the curriculum. It is also important to create the right attitude of the staff and to engage the stakeholders, especially the parents. In Indonesia, Nederstigt and Mulder (2011) indicate that CBC introduction results in changes in the role of the different stakeholders, especially the teachers.

The teachers moved away from the provision of the delivery of the knowledge traditionally to the provision of the education where the active participation of the parents is required. Parents are supposed to take the lead in the steering of the learners in the attainment of the objectives of the learning. Despite these advances, the implementation of CBC in Indonesia has also not been without hardships. An assessment conducted by Musiman, Sutopo, Muhammad, Madya, and Alivermana (2020) indicate that nearly 59.4% of the primary students still exhibit low communicative competency skills, are incapable of carrying out simple numeracy operations, lack creativity, and exhibit inadequate proficiency in the crucial environmental skills.

The same ills are observed in the majority of the sub-Saharan African countries, where the implementation of CBC is marred by numerous setbacks. For instance, despite the adoption of various educative reforms by the stakeholders such as the management of the educational facilities and the governments, the implementation of CBC in Nigeria has experienced massive setbacks. A study conducted by Ajibola (2018) reveals that, since the introduction of CBC in the country, only 39.5% of the targets of the

curriculum were achieved. Ajibola (2018) posits that the lion's share of the student body continues to struggle in the basics of language skills, numeracy skills, creativity, and environmental literacy. In the South Africa province of KwaZulu-Natal, CBC usage also had severe setbacks, just as Muraraneza and Ntombifikile (2018) have seen. But where the provision of the physical infrastructures, qualified teachers, attitude change of the staff, and the role of the parents have been made good in the affected schools, there have been some stunning successes in CBC usage. The findings emphasize the role of the teachers' training, beliefs support, provision of adequate resources, and the active role of the parents in the successful introduction of CBC. It is in agreement with the findings of Rutayuga (2012), Okoye and Isaac (2015), and Dadi (2014), where they argue that the school readiness is crucial in the successful introduction of CBC.

In Ghana, Malawi, Ethiopia, and Tanzania, there are common grievances of lack of preparedness of the stakeholders and inadequate competencies of teachers for the roll-out of the CBC. In Kenya, the roll-out of CBC had followed the perception of the CBC correcting the weaknesses of the then 8-4-4 system of education, which had been blamed for overloading the teaching of courses in the various subjects. According to Ondimu (2019), the new curriculum commenced in 2018 for the purposes of unleashing the talents and talents of the students. School leadership has been the cornerstone of the successful roll-out of CBC, where the Ministry of Education has been the force behind the strengthening of the competence of the teachers through the retraining of the teachers in models of CBC, provision of the curriculum support material, and the infrastructural upgrade.

A study in Meru County by Kinoti and Njeru (2020) had established the need for expanded consultative forums, training of teachers and principals, and adequate allocation of resources to minimize stress and maximize the success level of CBC

implementation. Despite the initiatives in place, however, CBC implementation in Kenya is still facing numerous setbacks. A Nairobi County study by Karimi (2020) determines that despite CBC having been proposed to address the weaknesses in the 8-4-4 system, CBC's implementation is also defective, and the majority of the learners are ill-competent in important skills such as numeracy, creativity, and life skills. Uwezo (2016) also ratifies these findings, verifying that the majority of the 4- to 8-year-old learners still lack proper skills in the basic language, numeracy, and life skills such as leadership and teamwork. Uwezo (2016) further states that only 22.3% of the learners in the age group of 4 to 8 have acquired proper life skills, and only 31.2% of the learners have acquired proficient language and literacy skills.

The situation of the Igembe Central Sub-county is illustrative of the same dilemma, in which most of the students continue to struggle in solving problems, doing homework, and communicating. According to the report of the National Assessment System for Monitoring Learning Achievement (NASMLA) (2020), despite the adoption of CBC in the primary schools, the implementation level is low and only negligible percentage of the students are observed to have improved literacy, numeracy, and life skills competences.

These have been of worry to some stakeholders, like the training colleges and the Kenya National Union of Teachers (KNUT), who have opposed the rushed pace of CBC rollout. The preparedness of school management and how it informs the successful implementation of CBC in the public primary schools is, however, absent in empirical research. There is thus the pressing need for research examining how the readiness of the management of the school dictates the implementation of competency-based curricula and how the factors hindering success are addressed.

## 1.2 Statement of the Problem

Competency based curriculum plays a significant role by leveraging learners' talents as well as competencies, with school management's role in its implementation being crucial. In essence, the preparedness of school management is vital, as it ensures the availability of necessary resources like teachers, curriculum support materials, and physical infrastructure for the successful implementation of the CBC. However, in Igembe Central Sub-county, the situation diverges, as the implementation of CBC in public primary schools has faced challenges in achieving the desired outcomes. Many learners in lower public primary schools continue to show insufficient learning outcomes and competencies in reading and numeracy education programs, as previously highlighted. According to a report by the KNUT (2019), the rushed implementation of the CBC has hindered many learners from fully grasping the concepts intended by the new curriculum.

Supporting this assertion, NASMLA (2020) also found that CBC implementation is still at an early stage, with only 19.4% of learners in lower public primary schools in Igembe Central Sub-county showing improved literacy and communication skills. Only 11.9% can handle basic numeracy and number work tasks, and 16.3% have acquired key life skills like team building and leadership. This supports findings from a Ministry of Education report (2023), which revealed that in the 2022 Kenya Primary School Education Assessment (KPSEA), only about 33.3% of learners scored above 50%. Despite these concerns, there is a lack of empirical research exploring how school management preparedness affects the implementation of the competency-based curriculum, making this study crucial.

### **1.3 Purpose of the Study**

This research sought to examine how school management preparedness influences CBC implementation in public primary schools in Igembe Central Sub-county, Meru County, Kenya.

### **1.4 Objectives of the Study**

The following objectives guided the study;

- i. To examine the status of CBC implementation in public primary schools in Igembe Central Sub-county;
- ii. To determine how training of teachers influences implementation of competency-based curriculum in public primary schools in Igembe Central Sub-county.
- iii. To assess ways in which provision of curriculum support materials influences CBC implementation in public primary schools in Igembe Central Sub-county.
- iv. To determine the extent to which availability of physical facilities influences implementation of competency-based curriculum in public primary schools in Igembe Central Sub-county.
- v. To find out the extent to which involvement of parents influences CBC implementation in public primary schools in Igembe Central Sub-county.

### **1.5 Research Questions**

This study was guided by the following research questions:

- i. What is the status of CBC implementation in public primary schools in Igembe Central Sub-county?
- ii. In which ways do training of teachers influence CBC implementation in public primary schools in Igembe Central Sub-county?

- iii. How does provision of curriculum support materials influence CBC implementation in public primary schools in Igembe Central Sub-county?
- iv. What is the influence of availability of physical facilities on CBC implementation in public primary schools in Igembe Central Sub-county?
- v. How does the involvement of parents influence CBC implementation in public primary schools in Igembe Central Sub-county?

### **1.6 Rationale of the Study**

As already shown in the foregoing, the introduction of the Competency-Based Curriculum (CBC) in the public primaries in Igembe Central Sub-county of Baringo county in Kenya had serious drawbacks. Despite efforts even after introducing the new curriculum, the overwhelming majority of the pupils in the low-level public primaries are still performing unsatisfactorily in literacy and numeracy. Underperformance in these skills is evidence of the nagging issue in the educational system of the country, hence the relevance and the urgency of the study.

The study may bridge several important gaps highlighted previously: the gap in the corpus of knowledge, the gap in policies, the gap in the discovery of the solution to the research predicament, and the identification of the relevant research method. Since CBC is also an upcoming education system, there is also the need to close the policy gap, specifically the preparedness of the management of the schools and the re-alignment of the areas of teachers training, learning infrastructures, monitoring mechanisms, and involvements of the stakeholders. It is all crucial to the successful and smooth operationalization of CBC.

This research was necessitated to establish how the management of the schools in Igembe Central Sub-county had reassessed and reorganized itself to effect successfully the implementation of CBC in public primary schools within the area.

The findings of the study are purposed to provide valuable contributions to the prevailing scholarly literature and discourse on the preparedness of the management of schools and the CBC implementation dilemma in the region's primary schools. The study is therefore important in the sense that it would possibly illuminate how the improvement of the preparedness of the management of the schools could positively impact the implementation of CBC in the area, possibly improving the sub-county's disappointing performance.

By focusing on readiness of the management, the research would have results to guide the recommendations for the better process of CBC implementation and the performance of the academicians in the region. The basic requirement of the study was to create awareness among the stakeholders of the importance of proper preparation and collaboration in the smooth implementation of CBC. Stakeholders such as the principals of the schools, the teachers, the policymakers, and the educational officers in the region are the key factors in the successful smooth transition to CBC. Through the research, the investigator aimed to bring out the importance of the stakeholders in the coordination of the efforts and the full participation in the process of preparation in the creation of the environment for better studies for the students.

To do so, the study adopted the use of mixed methods, specifically the concurrent model of triangulation in conjunction with descriptive survey designs. Through such research design, the researcher could collect detailed data both within different scope views and various sources of information, thus giving the whole situation a broad-based perspective. By incorporating qualitative and quantitative data, the researcher achieved an enriched and broader understanding of the achievements and disappointments in the context of the CBC implementation in Igembe Central Sub-county. Through such research approach, the researcher could address the issue through different dimensions

and glean some valuable insights of the various factors shaping the educational landscape of the area. The findings of the study are aimed at significantly contributing to the literature in educational management, leadership, and administration, particularly in the realm of public primary schooling. By finding the areas of strength and weakness in the management practices and readiness for the CBC implementation, the studies could provide practical guidance to the educational leaders, policymakers, and school managers. Such guidance could be employed in the design of improved CBC implementation strategies to prepare the schools better to handle the demands of the new curriculum and to prepare the students better to gain higher learning attainment.

The application of the mixed-methods approach and the concurrent triangulation research design in particular emerged as successful in gathering the reliable and valid findings. Through the inclusion of various data sources and views, the study managed to give a better-rounded insight into the problem experienced by public primary schools in Igembe Central Sub-county in CBC implementation. Additionally, the research design facilitated the in-depth analysis of the particular areas where the management of the schools might need further assistance or support to enhance the implementation process.

In summary, the study of CBC implementation in Igembe Central Sub-county is a crucial step toward solving the problems of the area in the field of education. It is geared toward the discovery of crucial policy gaps, an exploration of the preparedness of the management of the schools, and the provision of guidelines for improving the efficiency of CBC implementation. The results of the study could not only enhance the academic discourse on CBC but also guide practical attempts to address the issue of learning quality in Igembe Central Sub-county and elsewhere.

## **1.7 Significance of the Study**

Primary school pupils would benefit from the study in the sense of having access to good quality education offered through the well-developed curriculum. School and educational managers would benefit through the study in being made aware of the appropriate preparations for effective management to be in place for the successful implementation of the competency-based education system. This is in the aspect of the successful implementation of the education policies like the embracing of the competency-based curriculum system of education being crucial for the good benefits to accrue to the people and for the appropriate use of the vast funds invested in the same.

Institutions of learning could benefit through the study in the manner of being made aware of the appropriate problems to be realized in the CBC roll-out process and thus they could be well-prepared on how to remedy the same for the successful CBC implementation. By understanding where they stand in the CBC-based curriculum implementation, the teachers would benefit from the study. The education stakeholders, the parents, the social community, and the state could benefit by having better understanding of how crucial they are in the CBC implementation. Through the study, the children of the parents could be sure of the results they are supposed to acquire in CBC learning. The parents could put trust and confidence in the CBC implementation. It could reduce the panic and anxiety the parents feel over the duration of the course of the school term whenever they lack the assurance of the fate of the CBC.

The Ministry of Education, Kenya Institute of Curriculum Development (KICD), and the policy and the decision-makers could benefit by understanding the predicament which haunts the school heads in the CBC implementation. From the findings of the study, they could take good decisions which could result in the production of policies which could see the CBC implemented in the public primary schools successfully thus

reducing friction between the management of the school and the parents. The findings of the study could inspire them of the need of good comprehensive consultations and planning in order to establish changes in the structure of the education even in the future. The findings of the study could be extrapolated in order to give the relevant information to the educational department which could be returned to the education personnel for informed policies and practical intervention such as training for the teachers in the areas which were newly incorporated in the CBC. The study findings could be of benefit to the researchers themselves and the academicians to establish the basis for conducting further studies.

### **1.8 Scope of the Study**

Only public primary schools in Igembe Central Sub-county were included in this study. In order to determine how these factors affect the implementation of CBC in public primary schools, this study evaluated the levels of school management preparation as demonstrated by teacher training, the supply of curricular support materials, physical facilities and parental engagement. Given that the study used a combination of methods, it implemented a contemporaneous triangulation research model that made use of both descriptive qualitative and survey research methodologies.

This made it possible for the researcher to use both quantitative and qualitative methodologies concurrently and equally. In this examination, the heads of schools, parents' representatives, and the sub-county director of education (TSC and MoE) were interviewed using interview guidelines to elicit qualitative details rather than quantitative data from the instructors. Learners in primary schools were also involved in the study. The study was conducted between March and May 2023.

## 1.9 Limitations of the Study

The following constraints were faced in carrying out the study:

- i. Some of the respondents were unwilling to disclose all the information contained in the tools for they would be strangers to CBC being a new trend. To that effect, they were reassured of secrecy of the evidence presented to them and a study requirement orientation was done by the researcher. The researcher also reassured them of never having their names appearing anywhere in the findings.
- ii. Access to crucial documents like statements on the competences of the learners in order to establish the level of the CBC implementation may be difficult in most public primary schools for fear of being victimized.
- iii. The researcher made it clear to them that the data were for academic purposes only and the study would support their efforts to enhance implementation of CBC.
- iv. The study results may not apply to private primary schools because something else outside of the preparedness of the school management might be determining the manner in which competency-based curricula are being used. In this case, the examiner offered additional study of the competency-based implementation of the curriculum but on different factors than what is being investigated.
- v. The participant management was challenging owing to the vast geographic coverage of the study area in conjunction with the detailed data-collection instruments. To address the challenge, the researcher ensured they got proper appointments from the participants.

### **1.10 Delimitations of the Study**

The study depended on the following delimitations;

- i. The study focused on the interrelated areas of preparedness of the school management (provision of training for teachers, supplying supporting material for the curriculum, physical infrastructures and parental participation) and how they influence the CBC rollout in public primaries.
- ii. The data for the study were collected from the headteachers, teachers, parents' representatives, sub-county directors of education (TSC and MoE), and the learners in the primary schools.
- iii. The study was only limited to public primary schools in Igembe Central Sub-county

### **1.11 Assumptions of the Study**

The study assumed that;

- i. Implementation of CBC has been a challenge in many public primary schools.
- ii. There accurate secondary data on the status of implementation of CBC were available and accessible in public primary schools.
- iii. School management preparedness plays an important role in the implementation of CBC in public primary schools.
- iv. The participants were aware of how the school management preparedness has been aligned and their influence on CBC implementation since CBC is a new concept.
- v. Teacher training, physical facilities, provision of curriculum support materials as well as involvement of parents influence CBC implementation in public primary schools.
- vi. The respondents would be cooperative in providing credible information.

### 1.12 Operational Definitions of Key Terms

**Implementation of Competency based Curriculum:** is the putting of the competency-based curriculum's targets for learning into effect in pre-primary institutions.

**Involvement of Parents:** means engaging parents in schools' activities that aim at enhancing application of CBC. Volunteering in schools, attending academic clinics, learning material preparation, providing curriculum support material, mentoring learners in their homework work and participation in school feeding activities are among them.

**Provision of Curriculum Support Materials:** this entails making available a variety of activities undertaken by school managers in a bid to make learning and teaching resources available for purposes of CBC implementation in primary schools.

**Provision of Physical Facilities:** refers to the act of availing physical facilities to enhance the process of implementation of CBC in primary schools.

**School Management Preparedness:** it means how ready public primary schools are to deliver CBC through provision of appropriate resources including teachers' training, curriculum support materials, physical infrastructures and engagement of parents.

**Teacher Training:** is a process of equipping teachers with skills and knowledge on how to implement competency-based curriculum in primary schools.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This is a literature review of the preparedness of school management and its effect in the implementation of a competency-based curriculum. It discusses the meaning of school management preparedness and competency-based curriculum implementation and also the influence of teacher training, the provision of the curriculum support material, physical infrastructures, and parental participation in the implementation of the curriculum. Theoretical and conceptual frameworks also form part of the chapter, which ends with the literature summary where the discovered gaps in the course of the literature review are highlighted.

#### **2.1 Empirical Literature Review**

The literature based on the empirical studies has centered on the ideas of readiness of school management, the delivery of a competency-based curriculum, and the effect of teacher training programs, accessibility of support material for the curriculum, physical facilities, and parental participation in the implementation of a competency-based curriculum.

##### **2.1.1 The Concept of School Management Preparedness**

As previously mentioned, school management preparedness refers to the readiness of educational institutions to implement the curriculum. It involves ensuring that primary schools have the necessary resources in place to initiate curriculum implementation. Normore (2010) highlights that school management preparedness is a vital element of educational leadership, encompassing the institution's readiness to execute curriculum implementation effectively. This process requires thorough planning, organization, and allocation of resources to meet the educational goals of the school.

In today's era of rapid globalization and technological advancements, school management preparedness is increasingly critical as educational institutions face common global challenges. The global interconnectedness has led to the exchange of ideas, cultures, and educational practices, prompting school management to adopt adaptable and forward-looking strategies. With the profound effects of globalization, schools must respond proactively to the evolving educational environment. The dynamic nature of education necessitates that school leaders be prepared, not only for the present but also for future developments. In this context, school management preparedness goes beyond regional borders and becomes a universal concept.

Educational institutions worldwide face similar challenges, such as ensuring access to quality education, bridging the digital divide, and addressing the diverse learning needs of students. Sharing best practices and innovative ideas across schools from different regions can encourage collaboration and mutual growth. However, while global perspectives are valuable, school management preparedness must also consider regional and local contexts (Normore, 2010). Different countries and regions have distinct educational systems, policies, and cultural factors that influence how schools operate and face challenges. School leaders must be attuned to these differences and adjust their approaches accordingly. For instance, in the United States, school management preparedness is shaped by federal, state, and local policies, as well as the cultural diversity within the student body (Supovitz & May, 2019).

When implementing the Competency-Based Curriculum (CBC), preparedness involves ensuring that primary schools have qualified teachers, curriculum support materials, suitable facilities, and the involvement of stakeholders such as parents. Huff (2011) suggests that school management preparedness focuses on managing educational organizations through processes like planning, organizing, and directing activities, as

well as utilizing available human and material resources to achieve school goals. Huff (2011) further argues that the underperformance of many educational systems globally is due to their failure to deliver expected outcomes, despite substantial resource allocation. Some researchers have attributed this issue to the socio-economic background of students. These points align with the findings of Fatos and Hasan (2009) in their study of school management preparedness in the USA and Turkey. The study aimed to examine the relationship between management systems, staff communication, teacher training, institutional infrastructure, and teaching/learning resources. The study found that in Turkey, where schools followed a Napoleonic managerial system, school management preparedness was less effective due to a centralized structure, limited in-service teacher training, and insufficient school funding. Suto (2020) supports these findings, emphasizing that the key factor in CBC implementation is the readiness of those responsible for delivering the curriculum.

Febriya and Nuryono (2014) also stress that the success of a curriculum depends on the preparedness of teachers to implement it. Teachers must be skilled in preparing teaching materials, employing effective learning strategies, and using tools and innovative methods to create an engaging and meaningful learning environment. For CBC to be successful, it must begin with adequate readiness and proper execution. In the United States, school management preparedness is influenced by a complex mix of federal, state, and local policies, which shape the design and implementation of preparation programs, certification requirements, and ongoing professional development for school leaders.

Traditionally, school management focused on administrative tasks, but as educational paradigms have shifted, the role of school leaders has expanded to include instructional leadership, data-driven decision-making, and driving change.

Headteachers, as key educational leaders, are responsible for creating a positive learning environment, promoting teacher development, and improving student outcomes. To perform these crucial tasks, headteachers need the necessary knowledge, skills, and self-assurance to handle the complex challenges of educational leadership. A headteacher's self-perceived preparedness significantly influences their leadership style, decision-making, and overall strategies for school improvement. A headteacher's sense of readiness affects how they address challenges, shape the school's culture, and influence the achievement of educational objectives.

Oplatka and Hemsley-Brown's (2019) research employs a mixed-methods approach to explore global headteachers' views on their readiness for school management. The study combines surveys and interviews to gather data from a wide array of headteachers across different countries and educational systems. By integrating both quantitative and qualitative data, the research offers a thorough understanding of the various factors influencing headteachers' self-assessed preparedness. Their study provides meaningful insights into the link between headteachers' perceptions of their preparedness, leadership approaches, and student outcomes. The results show notable differences in how headteachers across different regions and educational systems assess their preparedness. Variables such as access to professional development, previous leadership experience, and support from educational authorities contribute to these disparities.

Headteachers in well-resourced schools with strong professional development programs generally report feeling more prepared, which allows them to approach leadership challenges with greater assurance. Additionally, the study reveals that a headteacher's perception of their preparedness has a significant impact on their leadership style. Headteachers who feel well-prepared are more inclined to adopt proactive and innovative leadership strategies.

They are more confident in taking calculated risks, embracing change, and seeking opportunities for professional growth. In contrast, headteachers who perceive themselves as less prepared may adopt a more cautious leadership style, which could limit their ability to implement transformational initiatives (Oplatka & Hemsley-Brown, 2019). The research also emphasizes the influence of perceived preparedness on decision-making. Headteachers who feel adequately prepared are more decisive in making well-informed choices that positively impact the school community. Their readiness allows them to make decisions that contribute to the school's development. On the other hand, headteachers with lower self-assessed preparedness may hesitate when making decisions, which could hinder the school's progress and limit innovation. Furthermore, the study underlines the importance of headteachers' perceived preparedness in fostering teacher collaboration (Oplatka & Hemsley-Brown, 2019).

Headteachers who feel prepared are more likely to promote a collaborative culture among teachers, encouraging the creation of professional learning communities and enhancing communication within the school. This collaborative environment boosts teacher engagement and morale, leading to improved instructional practices and better student support. The research also points to the crucial role of headteachers' preparedness in influencing student outcomes. Headteachers who are confident in their leadership abilities are more adept at motivating both teachers and students to achieve academic success. Their proactive implementation of evidence-based strategies contributes to improved student learning and overall achievement.

Conversely, headteachers with lower self-perceived preparedness may struggle to inspire their staff and students, which can negatively affect student performance. In summary, Oplatka and Hemsley-Brown's (2019) study highlights the interconnectedness of headteachers' perceived preparedness, leadership practices, and student outcomes.

Headteachers with a strong sense of preparedness are more likely to exhibit proactive leadership, encourage teacher collaboration, and positively impact student success. Understanding the significance of preparedness and investing in headteachers' professional development can help them navigate challenges effectively and foster continuous improvement in schools, ultimately benefiting both teachers and students. In conclusion, the research by Oplatka and Hemsley-Brown (2019) demonstrates the many benefits that come with headteachers' perceived preparedness for school management. Prepared headteachers tend to be more effective in their leadership, decision-making, and fostering positive school climates. They focus on collaboration, improving student outcomes, and enhancing the overall effectiveness of the school. Furthermore, their ability to adapt to evolving educational trends, build strong relationships with stakeholders, and promote a healthy school culture significantly contributes to both their professional and personal satisfaction.

By recognizing the value of preparedness and investing in headteachers' professional development, educational institutions worldwide can cultivate capable and effective leaders who drive positive change, benefiting both the school community and the broader educational environment. Webber et al. (2014) conducted a study exploring headteacher preparation in Canada, Kenya, and South Africa, highlighting the challenges and implications for effective school management readiness. In Canada, the role of headteachers is multifaceted, involving instructional leadership, resource management, and cultivating a positive school culture.

Effective headteacher preparation programs are vital to ensure headteachers are well-equipped to tackle these challenges. The study found that Canadian headteacher preparation differs significantly from that of Kenya and South Africa, being more structured and university-based, with a clear distinction between teaching and

leadership knowledge. Preparation experiences in Canada focus on instructional leadership, ensuring headteachers acquire skills for managing school processes, curriculum development, and teacher development. Despite this, Canadian headteachers expressed concerns about their preparedness to handle daily responsibilities, emphasizing the need for ongoing professional development to bridge the gap between theory and practice. Collaborative partnerships between educational institutions and informal groups of headteachers can also enhance the preparation experience. Overall, the study provides valuable insights into headteacher preparation in Canada (Webber et al., 2014).

In the UK, the importance of effective school leadership is widely recognized. Leithwood et al. (2013) examine this in their work *Successful School Leadership: What It Is and How It Influences Pupil Learning*. The study highlights the multifaceted nature of successful school leadership in the UK, where leaders are expected to blend visionary decision-making with transformative leadership practices. In the UK, school leaders take on roles as instructional leaders, shaping teaching and learning while fostering a commitment to excellence. These leaders align curricula with diverse student needs and create opportunities for professional development, ensuring the highest teaching standards. Leithwood et al. (2013) emphasize that shared vision and collective efficacy are key to driving student learning within the UK educational system.

Effective school leaders in the UK establish a unified vision for the future of the school and inspire stakeholders to collaborate towards its achievement. By fostering a shared sense of purpose, these leaders cultivate commitment and belonging, which significantly enhances student learning outcomes. In the UK's educational context, successful leadership focuses on creating a positive school climate. Leithwood and colleagues (2013) highlight that strong leaders prioritize establishing a safe, inclusive, and

supportive learning environment. By encouraging positive relationships between teachers and students and addressing diversity and inclusion issues, UK school leaders promote a culture of respect and empathy, which boosts student engagement and academic success. The study also acknowledges the challenges that UK school leaders face, such as balancing instructional leadership with administrative duties, managing resources, and time constraints. To overcome these obstacles, Leithwood et al. (2013) recommend continuous professional development and mentorship for school leaders. By offering sustained support and learning opportunities, educational authorities can help leaders manage these complexities, ensure continuous improvement, and create the best possible learning experiences for students.

In the UK, effective school leadership greatly influences pupil outcomes and the overall educational experience. School leaders play a key role in fostering a positive school climate, advancing instructional quality, and motivating stakeholders to work together towards common objectives. By recognizing the impact of school leadership, educators and policymakers can develop strategies to support and strengthen leadership practices, thereby enhancing the educational experience and achievements of students across the diverse UK educational system. These insights highlight the crucial role of school leadership in influencing pupil outcomes within the UK. A shared vision, instructional leadership, and a positive school climate are critical elements that drive student success and create an environment that promotes optimal learning experiences.

Effective school leaders in the UK are essential in guiding students' educational journeys, encouraging academic success, and fostering well-rounded development. By acknowledging the significant influence of school leadership, educators and policymakers can continue to support and cultivate effective leadership practices, improving the educational experiences and outcomes for students throughout the UK's

diverse educational landscape. In Africa, the preparedness of school management encounters distinct challenges such as resource limitations, infrastructure deficiencies, and unequal access to education (UNESCO, 2020). With its diverse cultural and linguistic landscape, African school leaders must navigate these unique contexts and find innovative ways to improve the quality and inclusivity of education. Ghana's educational system consists of three levels: basic, secondary, and tertiary education. The Ministry of Education supervises the country's education sector, collaborating with stakeholders such as the Ghana Education Service (GES) and the National Council for Tertiary Education (NCTE).

The government's dedication to improving education is reflected in initiatives aimed at increasing access and quality in schools nationwide. However, Ghana still faces significant challenges in its education system, including inadequate infrastructure, teacher shortages, urban-rural disparities, and limited technological access (Amponsah-Tawiah & Dartey-Baah, 2011). Effective school management preparedness is essential to addressing these issues, optimizing available resources, and improving educational quality for Ghanaian students. School leaders, including headteachers, play a central role in enhancing education quality and student performance. They are responsible for creating a positive learning environment, providing instructional leadership, and managing resources effectively.

The success of education in Ghana largely depends on the ability of school leaders to drive positive student outcomes and promote a culture of continuous improvement. While there is limited research specifically on school management preparedness in Ghana, broader studies on educational leadership provide useful insights. Research by Amponsah-Tawiah and Dartey-Baah (2011) highlights challenges faced by headteachers in public junior high schools in Ghana's Central Region, including resource constraints,

insufficient training, and the need for better communication. Their study underscores the need for capacity-building programs to enhance leadership skills among headteachers, which is crucial for fostering a conducive learning environment. Effective school leaders act as visionaries, providing leadership and creating a positive school culture. Despite the challenges faced by Ghana's education system, there are opportunities to improve school management preparedness through focused strategies and collaboration among educational stakeholders (Amponsah-Tawiah & Dartey-Baah, 2011). By equipping school leaders with the right skills and resources, Ghana can strengthen its education system and ensure equitable access to quality education, thus laying the foundation for the nation's future prosperity.

Similarly, Kenya faces challenges in its education sector, such as limited resources, teacher shortages, inadequate infrastructure, and urban-rural disparities. Addressing these challenges requires effective school management preparedness to maximize resource use and promote academic excellence. In Kenya, school leaders, particularly headteachers, play a critical role in shaping the quality of education and learners' experiences. They are tasked with creating a supportive learning environment, providing instructional leadership, managing resources, and fostering a collaborative school community.

The success of education in Kenya depends heavily on school leaders' ability to navigate the complex challenges within the education sector. Overcoming challenges related to resource allocation, teacher retention, and parental involvement is essential for the success of schools. This study focuses on the implementation of a teacher training program based on the Competency-Based Curriculum (CBC) model, providing teachers and learners with handbooks, improving teacher competence, strengthening school management, promoting an educational culture rooted in local content, and

mentoring teachers in curriculum delivery. It also emphasizes the involvement of relevant stakeholders, such as parents.

### **2.1.2 The Concept of Implementation of Competency-based Curriculum**

Implementing a competency-based curriculum requires adherence to established study plans, curricula, and subjects. It is important to recognize that this implementation can only occur once learners have acquired the experiences, knowledge, skills, concepts, and attitudes designed to help them function effectively in society (Beane, 2010). This means that implementing a competency-based curriculum involves the process by which educators transform a formally designed course of study into syllabuses, schemes of work, and lessons that are delivered to students.

The implementation process begins when educators and school administrators carefully design and structure the curriculum to align with the competency-based approach. This necessitates a deep understanding of the specific learning outcomes and competencies to be achieved by students. Beane (2010) emphasizes the importance of educators being clear about the intended outcomes and how these can be integrated into the curriculum. One critical aspect of curriculum implementation is the creation of syllabuses, schemes of work, and lesson plans. These documents act as guides for teachers to organize their teaching and learning activities, outlining the sequence of topics, learning objectives, teaching methods, and assessment strategies to be used throughout the instructional period.

By having well-organized syllabuses and schemes of work, teachers can ensure that essential competencies are covered systematically and progressively. Furthermore, successful implementation of a competency-based curriculum requires skilled and motivated teachers who can effectively present the content to learners. Teachers are crucial in creating an environment conducive to learning and in facilitating meaningful

educational experiences (Beane, 2010). They must be adequately trained and supported to implement the curriculum and adopt learner-centered approaches that meet the diverse needs of students. In addition to teacher training, schools should provide ongoing professional development opportunities to keep educators updated on the latest pedagogical approaches and strategies that align with the competency-based framework. Collaborative learning communities and peer support can also boost teachers' ability to implement the curriculum effectively. Moreover, the school's physical resources and infrastructure must meet the demands of the competency-based curriculum.

Having sufficient learning materials, technological integration, and well-equipped classrooms is vital for creating a rich learning environment that fosters the development of key competencies in students (Beane, 2010). It is also crucial to involve various stakeholders, such as parents, community members, and education authorities, in the implementation process. Engaging parents and the community can provide valuable support and a deeper understanding of the curriculum's objectives, facilitating more effective implementation. Additionally, policymakers and education authorities must create a supportive policy environment that encourages the adoption of competency-based methods and allocates necessary resources for successful implementation.

The successful implementation of a competency-based curriculum requires a comprehensive approach, incorporating curriculum design, teacher training, resource availability, and collaboration among various stakeholders. By aligning these elements, schools can cultivate a learning environment that empowers students to gain the competencies needed to succeed in society (Beane, 2010). With dedicated efforts and a shared commitment to educational excellence, the implementation of a competency-based curriculum can lead to transformative outcomes, equipping students with the skills and attitudes required to face future challenges.

Jeng'ere (2017) defines competence to further the skills of the learners to use educational material, knowledge, attitude, and skills in the real world, in the fields of education, in the workplace, and personal development. From the Competency-Based Framework for Curriculum Development for Russia and Kazakhstan (2014), the purposes of the implementation of CBC are to attain lifelong learning and student mobility, to further the efficiency of learning attainment, to foster the spirit of equity and active citizenship, and to foster innovation and creativity, inclusive of entrepreneurship, in the whole range of educational and training sectors. Competency-Based Curriculum (CBC) attained worldwide fame as an innovative approach to teaching in order to further the students' competencies and skills alongside the subject matter knowledge.

In India, the adoption of CBC in primary schools has led to significant changes in traditional teaching and learning methods. The study by Singh and Rani (2016) explores crucial aspects of teacher preparedness and the challenges they face during CBC implementation in Indian primary schools. This essay summarizes the key findings and implications of their study. The research, conducted in Indian primary schools, aimed to assess teachers' readiness for CBC implementation and the obstacles they face in the process. The study used a mixed-method approach, combining surveys and interviews with teachers and school administrators, collecting data from a wide range of primary schools across various regions of India.

Singh and Rani (2016) found that while some teachers were well-prepared to implement CBC, many others felt unprepared for the task. Teachers who engaged in relevant professional development programs and training workshops were better prepared to implement the new approach, as they gained valuable knowledge of effective instructional strategies and assessment methods that align with CBC principles.

However, the study also revealed that many teachers lacked a thorough understanding of the CBC framework, limiting their ability to incorporate competency-based practices into their teaching. It stressed the importance of distributing clear and concise information regarding CBC guidelines to all relevant parties, including teachers, to ensure successful implementation. The transition from a teacher-centered to a student-centered approach presented challenges for some educators. Teachers struggled to shift from their traditional role of knowledge transmission to adopting facilitation techniques that fostered active learning, critical thinking, and problem-solving skills in students. Furthermore, implementing CBC posed difficulties in assessing student performance. Traditional summative assessments were found to be insufficient for measuring the diverse competencies that students develop under CBC. The study recommended the creation of authentic and continuous assessment methods that align with CBC learning objectives.

The findings of Singh and Rani's study offer important implications for educational policymakers and administrators in India, as well as other countries adopting CBC. The study emphasizes the need for comprehensive, ongoing teacher training to equip educators with the necessary skills and knowledge for CBC implementation. Professional development should focus on student-centered pedagogy, effective assessment strategies, and creating a positive learning environment. To better prepare teachers, schools and educational authorities should offer appropriate curriculum support materials and resources that align with CBC principles.

Access to well-designed teaching tools and learning materials will facilitate the transition to competency-based teaching. Engaging all stakeholders, including teachers, parents, and administrators, is critical for the successful implementation of CBC. Open communication and collaboration will help build a shared understanding of CBC goals

and address implementation challenges. In conclusion, Singh and Rani's study highlights the importance of teacher readiness and the obstacles encountered when implementing a competency-based curriculum in Indian primary schools. The findings stress the value of teacher training, awareness, and collaboration among all stakeholders to ensure successful CBC implementation. By overcoming these challenges and leveraging CBC's opportunities, Indian primary education can evolve into a transformative learning experience, equipping students with the competencies needed for personal and academic success.

Competency-based curriculum (CBC) is a progressive, student-centered approach that focuses on equipping learners with practical skills and knowledge applicable in real-world settings (Dauda & Yunusa, 2017). CBC is gaining traction globally, including in Nigerian polytechnics. Dauda and Yunusa's study (2017) explores the extent of CBC integration into the educational system at Kano State Polytechnic, focusing on the experiences and perceptions of key stakeholders involved in the implementation process. The study identifies challenges and opportunities encountered in adopting CBC.

The findings reveal that Kano State Polytechnic has made significant strides in implementing CBC, with faculty and administrators actively integrating competency-based practices into their teaching and assessment strategies. The adoption of CBC has prompted a shift from rote memorization to skill development and practical applications. Learners are now encouraged to engage actively in their education, participating in hands-on learning experiences that enhance their understanding of the subject matter. Additionally, the study highlights the positive impact of CBC on student engagement and motivation, with learners showing increased interest and ownership in their studies due to the emphasis on experiential learning and real-world applications.

However, the study also identifies challenges, including the need for continuous faculty development and training to align teaching practices with CBC goals. While some faculty members have embraced the learner-centered approach, others require additional support to fully adopt and implement CBC strategies. Another key challenge is the availability of adequate curriculum support materials and resources. For CBC to succeed, access to high-quality instructional materials is critical. The study underscores that well-designed curriculum resources are essential for enabling educators to effectively deliver CBC lessons and assessments. The study recommends ongoing faculty development programs that focus on student-centered pedagogy, outcome-based assessments, and innovative teaching methods.

Investing in faculty development is essential for equipping educators with the competencies needed to effectively implement CBC. Additionally, addressing the shortage of curriculum support materials is vital for the sustained success of CBC. Nigerian polytechnics, such as Kano State Polytechnic, should prioritize the development and distribution of high-quality instructional resources that support CBC principles. Collaboration between educators and curriculum developers can ensure that resources meet the diverse needs of students and improve the overall learning experience. Dauda and Yunusa's study offers valuable insights into CBC implementation in Nigerian polytechnics, particularly at Kano State Polytechnic.

The findings emphasize the positive effects of CBC on student engagement, skill development, and motivation, while also highlighting the need to address challenges such as faculty development and curriculum support. By embracing a student-centered approach, supporting faculty development, and providing high-quality curriculum materials, Nigerian polytechnics can enhance CBC's effectiveness, preparing students for the modern workforce.

As CBC continues to shape educational practices, it offers the potential to unlock learners' full potential and create a more dynamic, relevant educational experience in Nigerian polytechnics and beyond. Competency-based curriculum (CBC) is a contemporary educational model designed to enhance learners' ability to apply knowledge, skills, and attitudes effectively across various real-life contexts, including education, work, and personal development. One of CBC's primary objectives is to improve the quality and outcomes of education by shifting the focus from rote memorization and standardized testing to the mastery of competencies. This shift fosters a deeper understanding of concepts and promotes critical thinking and problem-solving skills. CBC also aims to promote equity and active citizenship, recognizing diverse talents and abilities and creating inclusive learning environments where all students can succeed (Russia & Kazakhstan, 2014).

Additionally, CBC encourages active citizenship, urging students to engage as responsible community members who contribute positively to society. Innovation and creativity are also central to CBC, as the approach encourages educators to adopt learner-centered methods and diverse teaching strategies. This cultivates creativity and curiosity in students, preparing them to be innovative thinkers and problem-solvers in the rapidly changing global landscape. CBC further integrates entrepreneurship throughout all levels of education, fostering the development of entrepreneurial skills.

By providing learners with entrepreneurial skills such as adaptability, initiative, and risk-taking, the competency-based curriculum (CBC) aims to equip them for the challenges and opportunities present in today's economy. These skills enable learners to be proactive, innovative, and resourceful, fostering a culture of self-reliance and forward-thinking. Successful implementation of CBC requires a collaborative effort from multiple stakeholders, including policymakers, educators, parents, and the broader

community. Policymakers have a key role in creating a supportive policy environment that encourages CBC adoption and allocates the necessary resources for its implementation (Russia & Kazakhstan, 2014). Educators play a vital role in crafting and delivering a CBC-aligned curriculum, utilizing learner-centered approaches, and creating an enriching learning environment. Parents and the community contribute by understanding and supporting CBC goals while actively engaging in their children's educational progress. By appreciating the value of CBC and its potential to prepare learners for a rapidly evolving world, parents and the community can help foster a positive learning atmosphere that complements the efforts of schools.

In summary, the goal of implementing CBC is to equip learners with practical abilities that go beyond theoretical knowledge. CBC focuses on promoting lifelong learning, improving educational quality, encouraging active citizenship, stimulating innovation and creativity, and developing entrepreneurial skills. As stakeholders come together in their commitment to this transformative educational approach, CBC can become a driving force in preparing learners to succeed in an interconnected and dynamic world, equipped with the competencies needed to navigate various aspects of life effectively. Competency-based curriculum has gained considerable attention globally due to its emphasis on student-centered learning, mastery of essential skills, and alignment with real-world applications.

In the United States, both educators and policymakers have explored the potential advantages of CBC to address the limitations of traditional education systems. This essay examines the implementation of CBC in the USA, drawing on three key studies: Darling-Hammond et al. (2014), Hager (2016), and Schneider and Glasson (2018). Through a comparative analysis, we investigate how the USA is managing the challenges and opportunities of adopting CBC to improve student outcomes and better

prepare learners for future success in college and careers. Darling-Hammond et al. (2014) address the need for a new accountability model that aligns with CBC in the USA. Traditional accountability systems, based mainly on standardized testing, have been criticized for their limited focus on content knowledge and their inability to measure complex skills and competencies. The authors advocate for a shift towards competency-based assessments that emphasize mastery of key competencies necessary for college and career readiness. Darling-Hammond et al. (2014) argue that a competency-based accountability system can facilitate meaningful learning experiences. By focusing on learners' mastery of competencies, educators can tailor instruction to individual needs and allow learners to progress at their own pace. This approach promotes a deeper understanding and application of knowledge, helping learners prepare for success beyond standardized tests.

Competency-based education is an innovative approach that places learners at the center of their educational experience. By focusing on mastering competencies, educators can adopt a personalized instructional approach that allows learners to progress at their own pace, ensuring mastery before advancing to new concepts. Unlike standardized tests, which often fail to assess the full range of a student's abilities, competency-based assessments offer a more comprehensive and authentic evaluation of skills. By shifting the focus from content coverage to competency mastery, learners engage with the material on a deeper level, developing critical thinking, problem-solving, and analytical skills—abilities essential for success beyond standardized tests.

A well-rounded education that prioritizes competency development helps learners thrive in college, build successful careers, and contribute to society. The adoption of competency-based education also offers many benefits in terms of personalized learning.

Traditional education often fails to address diverse learning needs, but CBC allows educators to design experiences that cater to individual students. This flexibility supports differentiated instruction, enabling learners to progress at their own pace, close knowledge gaps, and achieve mastery before moving on. Darling-Hammond et al. (2014) emphasize the need for a shift away from traditional accountability measures, advocating for competency-based education, which offers a more comprehensive, personalized approach to student assessment, fostering meaningful learning experiences. By embracing this shift, educators can better equip learners for success beyond standardized tests, ensuring they gain the necessary skills and knowledge to succeed in a complex, dynamic world. The move towards CBC represents a promising step toward a more student-centered and effective educational system in the United States.

Hager (2016) explores the challenges of assessment within the CBC framework. Traditional assessments often do not align with CBC principles, which emphasizes real-world applications, problem-solving, and critical thinking. Hager stresses the importance of ongoing formative assessments that provide timely feedback to both students and teachers. By regularly assessing student progress, educators can adjust their teaching strategies to meet individual needs and ensure learners are advancing toward competency milestones. This dynamic assessment process fosters a growth mindset, encourages learner ownership of their education, and enhances the ability to apply knowledge and skills in diverse contexts.

A major concern with traditional assessments in CBC is that they may not capture the full extent of students' skills and knowledge. Standardized tests often focus on rote memorization and fail to assess learners' ability to apply their learning to real-life situations. Hager (2016) highlights the importance of developing new assessment methods that emphasize the demonstration of practical competencies.

A core aspect of effective assessment in CBC is the use of ongoing formative assessments. These assessments, as emphasized by Hager, play a critical role in monitoring and guiding student progress, providing timely and constructive feedback to both learners and educators. By conducting regular formative assessments, teachers can pinpoint both the strengths and weaknesses of learners. This flexible approach to assessment enables educators to adjust their teaching strategies and interventions to cater to students' needs, helping ensure learners progress toward achieving key competency milestones.

The continuous use of formative assessments in Competency-Based Curriculum (CBC) also plays a vital role in fostering a growth mindset among students. Through constructive feedback and the ability to track their progress over time, learners are more inclined to view challenges as opportunities to improve, which cultivates resilience, perseverance, and a readiness to tackle difficult tasks. As a result, students become proactive in their learning, taking ownership of their educational journey and striving for ongoing development. Additionally, Hager (2016) emphasizes that effective assessments in CBC extend beyond simple knowledge recall, focusing instead on learners' capacity to apply their knowledge to various contexts. This ability to transfer learning is central to CBC, as it encourages learners to use their skills and knowledge in real-world scenarios.

Assessments designed to measure this transferability promote critical and creative thinking, helping learners solve complex problems and adapt their competencies across different situations. Hager (2016) highlights the need to reassess assessment practices within CBC, as traditional forms of assessment may not align with the curriculum's goals, which stress real-world applications, problem-solving, and critical thinking. By integrating ongoing formative assessments and prioritizing practical competencies,

educators can better prepare students for success in an ever-evolving, complex world. Effective assessment methods that promote a growth mindset and emphasize transferable skills are key to the success of CBC, empowering learners to become lifelong learners and adaptable problem-solvers. However, implementing a competency-based curriculum is not a simple task; it involves more than following predefined strategies. Gultig, Hoadley as well as Jansen (2012) assert that it is a dynamic process shaped by the interaction of multiple components, such as projects, goals, methods, and the broader institutional context. Successful implementation requires a flexible, adaptive approach that accounts for the complexities and specific needs of different educational institutions.

The dynamic nature of CBC implementation calls for continuous evaluation and revision of methods and strategies to ensure alignment with shifting goals and evolving educational contexts (Jansen, 2012). This also requires attention to the unique characteristics of individual schools and their communities, as strategies that work in one setting may not be directly applicable to another, necessitating a context-sensitive approach to curriculum implementation. Moreover, fostering effective collaboration among stakeholders, including teachers, school leaders, policymakers, and the broader community, is crucial for the successful roll-out of CBC. Ongoing communication and shared efforts enable the exchange of ideas and best practices, allowing schools to learn from one another and continually refine their teaching approaches.

The process of implementing CBC in South Africa underscores the importance of continuous improvement and adaptability in the educational system. The National Policy Statement, which followed the review of Policy 2005, exemplifies a commitment to refining educational policies based on field experiences and feedback. However, successful implementation is more than simply following preset guidelines; it is an

evolving, context-aware organizational process that hinges on the interaction of various components (Jansen, 2012). The adoption of the Competency-Based Curriculum (CBC) in Kenya represents a major shift in the country's education system, transitioning from traditional methods to a more learner-centered and skill-focused approach. Introduced in 2017 by the Ministry of Education as part of ongoing efforts to improve the quality and relevance of education, the CBC aims to equip learners with the essential knowledge, skills, and attitudes required to succeed in a rapidly evolving global environment and meet the needs of the 21st-century workforce (Kariuki et al., 2017).

This curriculum moves away from a content-heavy model and prioritizes the development of competencies, emphasizing the practical application of knowledge and skills in real-world scenarios rather than solely focusing on academic achievement and exam results. The CBC encourages the development of critical thinking, problem-solving, communication, collaboration, creativity, and adaptability in learners. One of its central goals is to promote a well-rounded education, nurturing not just academic but also social, emotional, and life skills, and preparing students to contribute meaningfully to society. The implementation of the CBC in primary schools within Nakuru Sub-County represents a significant undertaking for educators, administrators, and policymakers. It involves a complete overhaul of the teaching and learning process, including changes in curriculum design, instructional methods, assessment practices, and teacher professional development.

To support teachers in the effective implementation of CBC, the Ministry of Education and various educational institutions have organized training and capacity-building programs aimed at equipping educators with the necessary knowledge and skills to adopt the learner-centered approach. Specialized training sessions have been conducted to familiarize teachers with CBC's principles, objectives, and teaching methods.

Despite these preparations, the implementation of CBC has faced several challenges. One key issue is the availability and adequacy of teaching resources that align with the new curriculum. The lack of suitable textbooks, supplementary materials, and teaching aids has made it difficult for teachers to effectively deliver CBC-oriented lessons (Kariuki et al., 2017). Another challenge is the shift in assessment practices. Unlike traditional summative assessments, CBC emphasizes ongoing formative assessments to track learners' progress and provide timely feedback. This approach requires teachers to dedicate significant time and effort to assess students' competencies, which can be resource-intensive.

Despite these challenges, teachers in Nakuru Sub-County have shown resilience and commitment in embracing CBC. Many have recognized the potential of the new curriculum to enhance learners' overall development and future success. As a result, teachers have taken the opportunity to refine their instructional practices and adopt innovative teaching methodologies that align with the goals of CBC. In conclusion, Kariuki et al. (2017) examined the readiness of teachers in Nakuru Sub-County, Kenya, to implement the Competency-Based Curriculum (CBC). Their study found that while teacher training and orientation programs had a positive impact on teachers' preparedness, challenges such as limited teaching resources and difficulties with assessment practices created notable obstacles. However, the study also highlighted the teachers' determination to adapt their methods and improve their teaching to align with the learner-centered and competency-focused principles of the CBC.

Wambua, Mutua, and Mutindi (2018) explored the challenges and opportunities of implementing CBC in rural schools in Machakos County. The research provides valuable insights into the practical realities of adopting CBC in areas with limited resources, offering guidance for other regions with similar challenges.

Set in rural Kenya, where schools face issues like poor infrastructure, teacher shortages, and limited access to educational materials, the study looks at how these challenges affect the implementation of CBC and highlights potential opportunities. One of the key challenges identified is the resistance to change from various stakeholders, including teachers, parents, and communities, who are accustomed to traditional education models. Additionally, insufficient teacher training on CBC methods presents a significant barrier, as many teachers struggle to apply the new teaching strategies. The scarcity of learning resources, including technology and relevant materials, further complicates the successful integration of CBC. Despite these hurdles, the study also identifies several advantages of CBC implementation.

By focusing on personalized learning that caters to individual student needs, CBC promotes greater student engagement and motivation. Learners are encouraged to take responsibility for their learning, which leads to a deeper understanding and the practical application of knowledge. CBC's emphasis on real-world skills and problem-solving also prepares students for success outside the classroom. The study's findings are highly relevant for policymakers in Kenya and other regions facing similar issues. Recognizing the unique challenges faced by rural schools can help inform the creation of tailored policies and interventions that support the effective rollout of CBC.

Addressing challenges such as teacher training and resource availability is crucial to ensuring that rural students receive a high-quality education that prepares them for the demands of the 21st century. The study's insights can serve as a useful resource for other rural areas seeking to implement CBC. Drawing from the experiences of Machakos County, education systems can proactively address challenges and leverage opportunities to establish inclusive and effective learning environments. The study offers a thorough examination of CBC implementation in rural schools in Kenya,

providing valuable lessons for policymakers and educators working in resource-limited settings. By addressing the specific challenges faced by rural schools, policymakers can develop targeted strategies to ensure that CBC is effectively integrated, equipping students with the skills necessary to navigate an ever-changing world. Ondimu (2019) further discusses the implementation of CBC in Igembe Central Sub-county, Kenya, emphasizing the development of skills that enable learners to engage in academic activities with minimal teacher intervention. These skills include basic numeracy, language proficiency, creativity, and essential environmental awareness. A primary goal of CBC is to cultivate foundational skills that support students' intellectual and personal growth. Basic numeracy, for instance, allows students to process and apply numerical information, enhancing their critical thinking and problem-solving abilities.

Mastery of language is equally important, as it empowers students to communicate effectively, both orally and in writing, helping them express their ideas and engage in meaningful academic and social discourse. Creativity is another vital focus of CBC, encouraging students to think innovatively, solve problems, and approach challenges from new perspectives. This creative mindset is crucial for developing the next generation of leaders who can think outside the box and find novel solutions to complex issues. Additionally, CBC places significant emphasis on environmental awareness, encouraging students to understand and address environmental issues and contribute to sustainability efforts.

In Igembe Central Sub-county, the successful implementation of CBC depends on a learner-centered approach, which empowers students to take charge of their educational journey. This approach fosters a sense of responsibility and motivation, helping students become more engaged in their learning. Effective CBC implementation requires the collaboration of various stakeholders.

Teachers play a key role in guiding students and adjusting their teaching strategies to meet individual needs, while parents and the broader community provide support that reinforces the skills learned in school, encouraging students to apply them in real-world contexts. The shift toward CBC in Kenya, especially in areas like Igembe Central Sub-county, represents a significant transformation in the educational system, with a focus on equipping students with essential skills for both academic success and personal development. By prioritizing foundational skills such as numeracy and language, CBC ensures that students are well-prepared for both academic challenges and everyday life. The emphasis on creativity and environmental stewardship further nurtures well-rounded individuals who are capable of addressing global challenges with innovative solutions. The collaborative nature of CBC implementation ensures that teachers, parents, and communities work together to support students' growth, preparing them to thrive in a rapidly changing world and contribute positively to society.

### **2.1.3 Teacher Training and Implementation of Competency-based Curriculum**

For successful implementation of a competency-based curriculum (CBC) in schools, it is imperative that teacher training is given significant attention. Armstrong (2011) argues that professional development and the training of educators are essential in building the foundational skills necessary for teachers to understand and integrate the various components required for innovative classroom teaching methods. This perspective underscores that the professional development of teachers must be prioritized if genuine reforms in educational curricula are to take place. In other words, without adequate training, the shift towards a competency-based approach would lack the depth and structure needed to be truly effective. With the adoption of CBC, the nature of teaching and learning has undergone a significant transformation. Sturgis and Casey (2018) point out that the introduction of CBC has altered the role of the teacher

from a teacher-centered model, where the teacher is the sole authority in the classroom, to a more learner-centered model. In the latter approach, teachers serve as facilitators, guiding and supporting the learning process rather than dictating it. This shift in the teacher's role highlights the necessity of specialized teacher training that focuses on developing the expertise needed for such an approach. According to Inandi and Gilic (2016), such training is critical in empowering teachers to adopt new pedagogical techniques that emphasize the role of the student in the learning process. In light of the current demands of the 21st-century skills framework, teachers, as facilitators of learning, must adjust their approach to how they conceptualize their students. Instead of viewing students as passive recipients of knowledge, teachers should recognize that each child possesses innate abilities that can be nurtured and developed. This shift in perspective is crucial for fostering a learning environment that encourages personal growth and competency development.

Therefore, it is essential that educational reforms prioritize the development of teachers, ensuring that they have the knowledge, skills, and support required to adopt this new paradigm of teaching. Zeiger (2018) suggests that in order to effectively implement CBC, teachers must possess substantial knowledge and skills. Furthermore, they must have the ability to build strong, positive relationships with all their students, establish clear learning goals, and select instructional materials that are appropriate for learners at different stages of development. Zeiger's (2018) research, conducted in Germany, focused on enhancing teacher competence in the context of competency-based education.

The study aimed to identify the strategies and approaches that could best support teachers in adopting a learner-centered approach while implementing CBC effectively. The research findings emphasized the importance of teacher knowledge and expertise in

successfully applying competency-based education. In particular, Zeiger (2018) highlighted the significance of teachers having a deep understanding of the core principles and objectives behind CBC. This includes a comprehensive grasp of the instructional strategies and assessment methods that align with a competency-based approach. The study advocates for continuous professional development and training programs as essential mechanisms to equip teachers with the necessary tools and techniques for effective CBC implementation. These training programs are crucial in providing teachers with the support they need to refine their teaching practices, develop new skills, and keep pace with the evolving educational landscape.

A central theme in Zeiger's (2018) research is the importance of teacher-student interactions and relationships. Teachers are encouraged to adopt a student-centered approach that recognizes the unique needs, strengths, and interests of each learner. By nurturing positive relationships with students, teachers can foster a supportive learning environment that promotes active engagement and facilitates meaningful learning experiences. This emphasis on building strong teacher-student relationships is a key component of effective competency-based education, as it helps to create a safe and inclusive space where learners feel valued and empowered to take ownership of their educational journeys.

In addition, Zeiger's (2018) study emphasizes the role of instructional materials in supporting the competency-based approach. Teachers are advised to carefully select learning resources that align with the competencies and learning outcomes of the curriculum. Utilizing a diverse range of instructional materials, including technology-based tools, is seen as a way to cater to the diverse learning styles and preferences of students. By incorporating various resources into the learning process, teachers can better address the individual needs of their students, ensuring that each learner has

access to the tools and opportunities they need to succeed. The study further underscores the importance of setting clear and measurable learning goals. Teachers are encouraged to establish explicit learning objectives that clearly communicate to students what is expected of them. This clarity enables students to track their progress and take responsibility for their learning, promoting a sense of autonomy and ownership. The study argues that this focus on goal setting and self-assessment is crucial in helping students develop the skills necessary to evaluate their own learning and make adjustments as needed, ultimately fostering greater engagement and achievement. In conclusion, Zeiger's (2018) research provides valuable insights into how teacher competence can be enhanced to support the effective implementation of competency-based education.

By emphasizing the importance of teacher knowledge, student-centered interactions, appropriate instructional materials, and goal setting, the study offers practical guidance for educators and policymakers. These elements are vital for creating a learning environment that is focused on the needs and interests of students, enabling them to develop the competencies required for success in the 21st century. Similarly, the study by Inandi and Gilic (2016) explores the impact of teacher training on teacher roles in Turkish schools, particularly within the context of competency-based education. The researchers aimed to understand how teacher training programs could effectively help teachers adapt to new roles and responsibilities within the framework of CBC.

The findings of their study revealed that teacher training is fundamental in reshaping teacher roles and responsibilities. Through comprehensive and targeted training programs, teachers were able to transition from traditional, teacher-centered roles to more learner-centered, facilitative roles. The training programs highlighted the importance of adopting a student-focused approach.

This includes recognizing the individual needs, strengths, and challenges of each learner and offering personalized support to help them reach their full potential. By providing teachers with the necessary skills to recognize and address the diverse needs of their students, training programs can promote student growth and achievement within the competency-based model. Inandi and Gilic (2016) emphasize that teacher training is essential for equipping educators with the tools they need to successfully navigate the shift toward competency-based education and provide high-quality, individualized instruction to all learners. Ultimately, the success of CBC implementation depends on the effectiveness of teacher training programs.

The research conducted by Zeiger (2018) and Inandi and Gilic (2016) highlights the need for continuous professional development, specialized training in learner-centered teaching methods, and an emphasis on fostering strong teacher-student relationships. By investing in teacher training and development, educational systems can ensure that teachers are well-equipped to meet the demands of the competency-based curriculum and, in turn, create a more effective, inclusive, and student-centered learning environment. The research presented in the studies by Inandi and Gilic (2016) emphasized the crucial role that ongoing professional development plays for teachers, especially in the context of competency-based education. Continuous training and support are considered essential for helping educators refine their instructional practices, enhance their methods of assessment, and adopt innovative teaching strategies that are in alignment with the core principles of competency-based education.

These professional development opportunities are not merely supplementary but are viewed as integral to the successful integration of competency-based approaches within the educational framework (Inandi & Gilic, 2016). Without these continuous learning opportunities, teachers may struggle to keep pace with the evolving demands of

competency-based education, which places a premium on personalized learning and student-centric teaching methods. The study further examined the role of collaboration among teachers as a significant factor in enhancing the implementation of competency-based education. Teachers were encouraged to engage in collaborative practices, where they could share best practices, discuss challenges, and co-create instructional materials and learning experiences. This cooperative environment was found to foster a culture of continuous improvement and provided a supportive and empowering learning community for both educators and students. Collaboration allowed teachers to pool their expertise, ensuring that diverse teaching strategies and resources were available to meet the needs of all learners (Inandi & Gilic, 2016). In such a setting, educators not only learned from each other but also had the opportunity to implement collective strategies that enhanced student engagement and success.

As a result, teacher collaboration emerged as a key component in ensuring that competency-based education could be effectively and sustainably implemented. In addition, the research placed significant emphasis on the importance of positive teacher-student relationships in the context of competency-based education. Teachers were encouraged to cultivate strong, trusting relationships with their students, as these bonds were found to be essential in fostering student engagement, increasing motivation, and improving overall learning outcomes. The nature of these relationships was seen as crucial for creating a safe and supportive learning environment where students felt valued and understood.

Teachers who established such relationships were better positioned to guide students toward achieving their learning goals, as the trust and respect between them facilitated open communication and a collaborative learning experience. These personal connections were particularly beneficial in competency-based education, where the

focus is on the individual learner's progress rather than a one-size-fits-all approach to teaching (Inandi & Gilic, 2016). Teachers, in this framework, are not just instructors but act as mentors who help students navigate their personalized learning pathways, setting realistic and meaningful learning goals and supporting them through their educational journey. The study by Inandi and Gilic (2016) concluded by highlighting the impact of teacher training on the evolution of teacher roles within competency-based education. Through structured training programs, ongoing professional development, and the promotion of collaborative teaching, educators were able to transition effectively into roles as facilitators and mentors. This shift in teacher roles was essential to ensuring the success of competency-based education frameworks.

Teachers who received targeted training were better prepared to implement student-centered learning approaches, which involved offering personalized learning experiences, providing continuous feedback, and supporting students in taking ownership of their learning progress. The study's insights offer valuable guidance for educational policymakers and teacher training programs, emphasizing the need for tailored support for educators to help them embrace these new roles and contribute to a learning environment that places the student at the center of the educational experience. Sturgis and Casey (2018) conducted a case study in the United States that focused on the transformative effects of competency-based education on teaching and learning practices within schools.

The study explored how the shift from a traditional teacher-centered approach to a learner-centered model had significantly altered the roles and responsibilities of educators. The findings indicated that competency-based education had led to a fundamental transformation in the teacher's role, moving from a figure of authority to one of facilitator and guide.

In this new framework, teachers were empowered to design and implement personalized learning experiences tailored to meet the specific needs, strengths, and interests of each student. This approach not only fostered greater student agency but also encouraged learners to set and monitor their own learning goals, with continuous teacher feedback helping them develop essential skills. As a result, students were more motivated and actively engaged in their learning process, which enhanced their ability to direct their own educational journey (Sturgis & Casey, 2018). Moreover, the study emphasized the importance of professional development for teachers in successfully adopting and implementing competency-based education.

Teachers were provided with specialized training programs designed to equip them with the necessary tools, knowledge, and skills to create effective competency-based learning experiences. This professional development also included instruction on how to design assessments that aligned with competency-based frameworks and how to use technology effectively in the classroom to support personalized learning. In addition to training, the study highlighted the role of collaborative teaching as a means of enhancing the implementation of competency-based education. Teachers were encouraged to work together in teams to exchange ideas, resources, and best practices, which helped strengthen the overall execution of competency-based approaches.

This collaborative model of teaching not only benefited educators but also improved the learning experiences for students by providing them with a more diverse range of instructional strategies (Sturgis & Casey, 2018). The research also pointed out the positive impact of competency-based education on student outcomes. By focusing on a learner-centered approach, competency-based education was found to improve student engagement, performance, and overall achievement. Students who participated in competency-based programs were better prepared to demonstrate mastery of various

subject areas, which ultimately had positive implications for their readiness for college and careers. This was especially relevant in the context of preparing students for the demands of the 21st-century workforce, where adaptability, self-direction, and problem-solving skills are essential (Sturgis & Casey, 2018). Sturgis and Casey (2018) provided a comprehensive view of the transformative potential of competency-based education, demonstrating how it empowers teachers to adopt a learner-centered approach and create environments where students are encouraged to take ownership of their learning. The study also highlighted the importance of professional development, collaborative teaching, and the role of teacher-student relationships in supporting student success. These findings offer valuable insights for educators, school leaders, and policymakers who are looking to implement competency-based education models that promote student achievement and prepare learners for future challenges.

Competency-Based Education (CBE) has gained global recognition as a powerful tool to reshape teaching and learning. In countries like Australia, CBE has become a model for reform, and its adoption serves as a valuable case study for others looking to transform their education systems. The Australian model of Competency-Based Education and Training (CBET) highlights how collaboration between educational institutions and industry stakeholders, clear policies, and a commitment to professional development have been key to its successful implementation.

By aligning curriculum and assessment with competency-based frameworks, Australia has improved learners' workforce readiness and employability, ensuring that graduates possess the practical skills and competencies needed in today's rapidly changing job market (Bray, 2019). Australia's success in implementing CBET provides valuable lessons for other countries. The approach emphasizes the importance of adaptability, collaboration, and a focus on outcomes that meet the needs of both learners and

employers. Policymakers and educators worldwide can draw from Australia's experience to design and implement competency-based models that foster more agile and future-ready learners. As CBET continues to gain traction globally, research like Bray's (2019) helps build a clearer understanding of how competency-based systems can better prepare learners for the challenges and opportunities that lie ahead in the 21st-century economy. In Malaysia, a study by Karia and Ahmad (2010) demonstrated that educating teachers on curriculum implementation strategies significantly boosted their competency and efficiency. The level of training teachers received directly impacted their ability to effectively supervise and guide instruction in schools, underscoring the importance of professional development.

Similarly, research by Stoll, Bolam, and Collarbone (2011) in the Netherlands showed that strategic initiatives were essential for speeding up the implementation of curriculum reforms. This study found that teacher training programs of varying durations—ranging from one to two months—were implemented to address this need. Leithwood et al. (2013) further contributed to this conversation by emphasizing the importance of teacher preparation in Estonia. They found that becoming a teacher in Estonia required rigorous training, including at least five years of classroom experience and specialized instruction in various teaching strategies. These studies collectively reinforce the idea that comprehensive teacher training is a key factor in the successful implementation of any educational reform, including competency-based education.

In conclusion, competency-based education continues to gain recognition globally for its potential to transform teaching and learning. The studies discussed highlight the central role of teacher training, collaboration, and professional development in successfully implementing competency-based frameworks. By focusing on the needs of individual learners, competency-based education provides an effective pathway to

preparing students for future success in both academic and professional domains. Through ongoing professional development, collaboration, and a commitment to fostering strong teacher-student relationships, educators can create the conditions necessary for students to thrive in a rapidly changing world. To successfully implement a competency-based curriculum (CBC) in schools, teachers must possess the necessary skills to effectively carry out their instructional duties. This means that instructors need to enhance their understanding of education and share this knowledge with their peers. According to the Organization for Economic Co-operation and Development (OECD, 2020) in Bulgaria, CBC is viewed as a method for equipping learners with the essential knowledge, skills, attitudes, and behaviors required to succeed in specific professional roles or organizations.

This perspective underscores the need for training and education systems to develop new skills that align with emerging job markets and enhance the adaptability and employability of individuals already in the workforce. The urgency of these changes has become evident due to rapid shifts in the economy, industry, and social structures. In response, the idea of competence is being used to address these changes and evolving needs. In Bulgaria, as in many other countries, the urgency to act was evident, with a growing need to bridge the gap between the skills taught in educational settings and those required in new and emerging careers. Competency-based curriculum design has therefore emerged as a solution to align education with the evolving demands of various economic sectors.

In South Africa, authorities prioritize standardizing and improving academic qualifications, enhancing administrative expertise, and offering support to educators. This aligns with UNESCO's (2013) assertion that proper training equips teachers with the necessary skills to better implement the curriculum.

Without these competencies, many educators struggle to meet the demanding leadership requirements within schools. Similarly, South Africa introduced outcomes-based education (OBE) in 1997 as a means to implement a competency-based approach. However, OBE faced criticism for its use of complex, inaccessible language, which made it difficult for teachers to fully comprehend and implement its principles (Christie, 2011). The design of OBE learning programs was perceived as complicated, which hindered its effective implementation.

A major challenge in South Africa's adoption of CBC was the insufficient preparation of teachers for outcomes-based pedagogy and ongoing assessments. The rushed implementation of the new curriculum in primary schools left educators unprepared to adapt their teaching methods to fit the competency-based framework. Additionally, many schools and provinces lacked the resources and capacity to effectively implement the proposed changes. As a result, the government modified its plans, initially scaling back the competency-based curriculum to Grade 1 in order to address capacity issues and allow for a more gradual and structured rollout across the education system. The driving force behind the CBC's implementation was to equip learners with the knowledge, skills, attitudes, and behaviors necessary for success in the evolving workforce and society.

In Rwanda, the Rwanda Education Board (REB, 2018) reports that schools organize weekly training sessions to continually enhance the CBC and ensure its success. These sessions, which are facilitated by School Mentors and Trainers, are conducted by the REB, ensuring ongoing teacher development. REB (2018) also emphasizes the importance of sharing best practices, successes, and lessons learned among teachers and headteachers as a means to address challenges related to CBC implementation. In Kenya, Obuhatsa (2020) highlights that teacher training is a critical factor in the

successful implementation of CBC in schools. Under CBC, teachers must understand the shifting responsibilities and how the curriculum affects the relationship between the teacher and the student. Kariuki, Njogu, and Muraya (2017) conducted a study to assess teachers' readiness to implement CBC in public primary schools within Nakuru Sub-County, Kenya. The study found that most teachers had received some form of training and orientation, which positively impacted their preparedness. Teachers who underwent specialized CBC training were more prepared than those who had not. However, despite this training, challenges remained, including a lack of adequate teaching resources aligned with the new curriculum.

Insufficient teaching materials, such as textbooks and supplementary resources, hindered effective lesson delivery and made it difficult for teachers to fully embrace the learner-centered approach of CBC. Additionally, the workload associated with CBC's competency-based assessments posed challenges. The time required for continuous assessments and providing individualized feedback to students created time constraints that made it difficult to cover the entire curriculum. Despite these challenges, the study acknowledged the resilience and dedication of teachers, who demonstrated a commitment to adapting their practices to meet the requirements of the new curriculum and support their students' learning.

Similarly, Murungi (2017) conducted a study in Igembe Central Sub-County, which reinforced the importance of teacher training in understanding the philosophy behind any curriculum and how it might impact various stakeholders. The study found that teachers often encountered content they were unfamiliar with or presented in new ways, requiring them to adapt. For successful implementation, teachers need to understand the goals and content of the curriculum in detail.

However, Murungi (2017) and other studies point out that more needs to be done to explore how specific skills required by teachers influence the successful implementation of CBC in primary schools.

#### **2.1.4 Provision of Curriculum Support Materials and Implementation of Competency-based Curriculum**

Instructional resources are essential tools designed to enhance both learning and teaching processes. These resources can be classified as didactic items, intended to aid in the educational process by providing materials that assist in the delivery of content. According to Abdullahi (2011), these instructional materials can be categorized into two primary types: locally produced and commercially produced resources. Regardless of their origin, their primary purpose is to improve the learning experience for students and facilitate effective teaching. Isola (2013) highlights that, in Austria, there is a wide array of instructional tools available that contribute to diverse and engaging learning experiences. These resources include games, role-playing, experiments, real-life scenarios, actual objects, specimens, demonstrations, symbolic representations, and visual aids.

Isola (2013) expands on this concept by underscoring how different instructional resources in Austria help create dynamic and interactive learning environments. Activities such as games and role-playing, for instance, allow students to engage with content in simulated real-world scenarios, where they can apply their knowledge and skills. These activities promote not only cognitive development but also key competencies like problem-solving, critical thinking, and teamwork. Similarly, demonstrations and experiments offer students the opportunity to observe the practical application of theoretical concepts, thus connecting classroom learning to real-life experiences.

Real objects and specimens, such as tangible items, further enrich this hands-on approach by giving students concrete examples to explore and better understand complex topics. In addition to these tools, symbolic and pictorial representations, such as charts, diagrams, and infographics, are invaluable in visualizing abstract ideas. These representations help learners grasp complex concepts more easily and improve their retention of information. Visual aids also cater to learners with various learning preferences, particularly those who are visual learners, while simultaneously benefiting all learners by reinforcing key ideas and relationships between concepts. Isola (2013) asserts that these resources can enhance the comprehension of all learners, thereby fostering deeper engagement with the content.

However, despite the wide variety of instructional resources available, the availability and accessibility of these materials can vary greatly across different regions and educational settings. Some schools, particularly in underserved or resource-constrained areas, may face significant challenges in acquiring the necessary resources to support the learning process. This disparity can limit the effectiveness of teaching and the overall educational experience for students. For this reason, it is critical for educational policymakers and stakeholders to prioritize the allocation of resources to ensure that all students have access to the materials they need. Adequate resources are particularly important for the successful implementation of competency-based curriculum (CBC), as they support the diverse learning needs of students and contribute to improved learning outcomes.

In the Austrian context, Isola (2013) emphasizes the importance of integrating technology into the use of instructional resources. The role of digital tools and online platforms cannot be overstated in expanding the range of available resources. Digital technology enables access to interactive simulations, virtual experiments, and

multimedia presentations that enhance student engagement, comprehension, and application of knowledge. Additionally, integrating technology into CBC helps promote digital literacy, preparing students to meet the demands of an increasingly digital world and modern workforce. Embracing such technological advancements is crucial in ensuring that CBC implementation remains relevant and effective in preparing students for future challenges. To ensure equitable access to instructional resources, it is essential for there to be close collaboration between educational institutions and government agencies. Adequate funding and investment in educational infrastructure are key to providing schools with the resources they need.

Furthermore, professional development programs for teachers should focus on equipping educators with the knowledge and skills necessary to incorporate diverse instructional resources into their teaching practices. This, in turn, enhances their ability to create engaging and effective learning environments that cater to the varied needs of their students. Instructional resources play an indispensable role in the successful implementation of a competency-based curriculum (CBC). By providing a variety of resources, such as games, role-playing, real objects, demonstrations, and pictorial representations, teachers can create dynamic learning environments that cater to different learning styles and competencies. These resources allow students to engage in hands-on, experiential learning, which deepens their understanding and application of the material.

As a result, the use of diverse instructional materials promotes a deeper mastery of essential competencies. However, ensuring that instructional resources are available to all students requires a concerted effort between educational institutions, policymakers, and communities. This collaboration should focus on the provision of resources, the development of educational infrastructure, and the continuous professional development

of teachers to enhance the quality of teaching and learning. Moreover, Cramer and Castle (2014) argue that instructional materials encompass a variety of resources that support teaching and learning. These materials include textbooks, stationery, digital tools, reference materials, and lesson notes. Cramer and Castle emphasize that these basic resources are essential for effective teaching and learning to take place. Instructional resources serve as a bridge between teachers and students, assisting educators in explaining and contextualizing content while helping students to better understand and engage with the material. Curriculum support materials are integral in facilitating the achievement of educational objectives, and their availability significantly influences the quality of education delivered in the classroom.

In the context of CBC, curriculum support materials are especially crucial in helping educators achieve the desired learning outcomes. These materials enable teachers to create engaging and interactive learning experiences that foster the development of specific competencies. Additionally, the appropriate use of these resources can significantly enhance students' retention and understanding of the material. In order to effectively implement CBC, it is essential for schools to have access to a broad range of instructional resources, including both physical and digital materials, which can help in translating the curriculum's competencies into real-world applications. This is particularly important in helping students not only acquire knowledge but also apply their learning in practical contexts.

Riordan and Noyce (2013) reinforce the critical role that instructional materials play in effective curriculum implementation. They assert that the effective utilization of instructional materials is central to improving students' mastery of content. These resources include a wide array of tools such as textbooks, workbooks, multimedia presentations, educational software, and digital platforms.

Instructional materials provide learners with multiple opportunities to engage with content from various perspectives, thus making learning more comprehensive and accessible. They also help bridge the gap between abstract curriculum concepts and real-world applications, making difficult topics more approachable for students. In the CBC framework, the focus is on the development of specific skills, abilities, and competencies, rather than solely on the accumulation of content knowledge. To this end, instructional materials must be aligned with the competencies defined in the curriculum, fostering the development of critical thinking, problem-solving, creativity, and collaboration. Teachers must be adept at selecting and integrating instructional materials that best align with the competencies and needs of their students.

Professional development programs should equip teachers with the knowledge and tools necessary to effectively utilize instructional resources in their teaching practices (Riordan & Noyce, 2013). Additionally, the availability of instructional materials is critical in ensuring equitable access to quality education. Schools in resource-limited areas often face challenges in acquiring the necessary resources, which can result in disparities in learning opportunities. Addressing these resource gaps is vital for fostering inclusive and equitable education, ensuring that all students, regardless of their socioeconomic background, have access to high-quality instructional materials that can facilitate their learning and academic success.

In conclusion, the implementation of curriculum and mastery of content are profoundly influenced by the availability and effective use of instructional materials. These materials are foundational to teaching and learning, shaping the educational experiences of students and influencing their academic achievements. By investing in a broad array of instructional resources, educational systems can optimize the implementation of competency-based curricula, fostering student success and the attainment of educational

goals. In the context of competency-based curriculum (CBC), instructional materials are a cornerstone for fostering the development of the necessary competencies and skills that learners need to succeed. The strategic use of these materials not only supports the learners' academic progression but also ensures that they are well-prepared for future challenges. For the full potential of instructional resources to be realized, it is vital to provide teachers with sufficient support, professional development, and ongoing training to ensure that they can effectively integrate these resources into their teaching methods. Equally important is ensuring that all learners have equitable access to these materials.

Schools must prioritize the inclusion of diverse instructional tools to create dynamic and enriching learning environments where all learners have the opportunity to thrive. This holistic approach allows for the cultivation of learners who are both academically proficient and capable of navigating an ever-changing world (Riordan & Noyce, 2013). In the CBC framework, the integration of digital learning tools has become a critical component that enhances the educational experience and prepares students for the modern, technology-driven world. A case study of Chinese schools sheds light on the advantages and challenges of utilizing technology in CBC settings. Recent technological advancements have led to significant changes in how education is delivered, with the potential to expand the reach of learning opportunities far beyond traditional teaching methods (Wang & Chen, 2020).

According to Wang and Chen (2020), the growing importance of digital learning tools in Chinese schools highlights how such tools can support and enrich the CBC framework. These tools encompass a variety of digital resources, including interactive simulations, virtual experiments, multimedia presentations, educational apps, and online platforms.

These resources are designed not only to engage learners but also to support their academic growth in a more personalized and practical way. Digital learning tools can significantly enhance student engagement and understanding within the CBC approach (Wang & Chen, 2020). Interactive simulations and virtual experiments offer students the opportunity to explore real-world scenarios, actively engaging them in the learning process. These types of immersive experiences are invaluable in helping learners gain a deeper understanding of complex concepts. Furthermore, these experiences foster critical thinking and problem-solving skills, as learners are encouraged to apply their knowledge in real-world contexts. Multimedia presentations—incorporating elements like video, images, and interactive components—cater to various learning styles, making learning both enjoyable and more effective by catering to visual, auditory, and kinesthetic learners alike.

One of the key advantages of integrating digital learning tools into CBC is their ability to foster the development of essential digital literacy skills in learners (Wang & Chen, 2020). As the world continues to evolve into a technology-driven society, the ability to navigate digital platforms, critically analyze information, and use technology to solve problems is crucial. By engaging with digital learning tools, students develop these vital digital literacy skills, which are essential not only for academic success but also for future employment in a digital economy. In addition to enhancing digital literacy, these tools facilitate personalized learning, allowing students to engage with content that is tailored to their specific proficiency levels and individual learning preferences.

Adaptive learning technologies and online platforms can track a student's progress, ensuring that learners receive the support they need in areas where they may be struggling and reinforcing concepts where they show strength. Although digital learning tools offer many advantages, their integration into the CBC model is not without

challenges. Infrastructure and equitable access to technology remain significant barriers, particularly in less developed or rural areas. Ensuring that all learners have the necessary access to digital tools and resources is essential in preventing disparities and ensuring that the benefits of technology are distributed equally among all students. In addition, there is a need for teachers to receive professional development to effectively incorporate these digital tools into their teaching practices. As Wang and Chen (2020) point out, a lack of training can hinder the full potential of digital resources, making it difficult for educators to maximize their effectiveness. The case study of Chinese schools provides valuable insights into how digital tools can support the implementation of CBC by enhancing engagement, deepening understanding, and promoting digital literacy. However, successful integration requires addressing issues related to infrastructure, access, and teacher preparation.

To ensure the success of digital learning tools within CBC, school administrators and policymakers must be proactive in addressing challenges related to technology access and infrastructure. Significant investment in technological resources is necessary to provide schools with the equipment and software needed for effective teaching. Additionally, ensuring that all students have access to these tools is crucial in preventing educational inequality. Policymakers must focus on strategies that make technology accessible to all learners, particularly those in underfunded areas. Teachers also need continuous support and professional development to build the digital skills necessary to integrate technology seamlessly into their pedagogical practices.

Teachers are essential in guiding students' learning journeys, and their proficiency in using digital tools will directly impact the quality of learning experiences. As the educational landscape continues to evolve globally, collaboration between educators, policymakers, and technology developers becomes more important than ever.

Working together to find innovative ways to incorporate digital tools into the CBC framework is essential for building a future-ready educational system that prepares students for the challenges of tomorrow. In summary, digital learning tools offer vast potential for transforming education and significantly enhancing the implementation of competency-based curriculum. These tools not only help students build crucial digital literacy but also improve engagement and offer personalized learning opportunities. Educational systems around the world must prioritize the effective integration of these tools to ensure that learners are equipped with the competencies and skills they need to succeed in an increasingly digital world.

In addition, research conducted in Russia by Zamyatin (2012) emphasizes the importance of providing teachers and learners with adequate instructional resources in ensuring the successful implementation of CBC. Zamyatin's study highlights a positive correlation between the availability of instructional materials and the smooth integration of the CBC framework in schools. In schools where sufficient resources were available, learners demonstrated an impressive 79.1% proficiency in the competencies defined by the curriculum. This research underscores the critical role that instructional materials play in the effective delivery of education. Without access to a wide variety of high-quality resources, the delivery of CBC becomes a challenge. Schools with comprehensive and well-stocked instructional resources are able to create learning environments that support and enhance the educational experience for students.

The availability of instructional resources such as textbooks, multimedia tools, and interactive software enables teachers to adopt more engaging and learner-centered approaches. These materials make learning more interactive and relevant, helping students connect theoretical knowledge with practical applications in the real world. Furthermore, instructional resources are essential for fostering the development of

critical thinking and problem-solving abilities, which are fundamental to the success of CBC. Zamyatin's study highlights the importance of aligning instructional materials with the specific competencies laid out in the CBC model, ensuring that these resources directly support the development of the skills that the curriculum is designed to cultivate. In conclusion, the research conducted by Zamyatin (2012) demonstrates that schools that invest in instructional materials and provide teachers with the necessary resources for effective curriculum delivery see better outcomes in competency development. As such, schools and educational authorities must prioritize the acquisition and development of instructional materials that align with the goals of CBC.

This investment not only guarantees the availability of quality learning tools but also ensures that learners develop the skills necessary to succeed in the modern world, particularly in the areas of digital literacy and critical thinking. Therefore, adequate funding and support for educational resources are key factors in ensuring that the CBC framework is successfully implemented and that students are well-equipped for future challenges. Zamyatin's (2012) research highlights the crucial role of instructional resources in the successful implementation of competency-based curriculum (CBC), which resonates not only with the experiences of educators in Russia but also those in many other countries, including Kenya.

In both Russia and Kenya, ensuring that schools have access to essential instructional resources has proven to be a key factor in facilitating a smooth transition to the CBC framework. In Kenya, equipping both teachers and learners with the appropriate tools and materials has led to improvements in student outcomes, higher levels of engagement, and a positive impact on learners' overall competencies. Zamyatin's (2012) study emphasizes the importance of instructional resources in enabling effective teaching and learning processes.

By providing teachers with the necessary tools and students with relevant learning materials, schools can significantly enhance the quality of education. This approach ensures that learners are better equipped to master the competencies outlined in the curriculum. As educators and policymakers continue to embrace competency-based education models worldwide, it becomes clear that prioritizing investment in educational infrastructure and resources is vital. Ensuring equitable access to high-quality instructional materials for all learners is an essential step in creating an inclusive and dynamic learning environment. These investments empower learners to thrive and succeed within a competency-driven educational system. In this context, schools can foster an atmosphere where learners are actively engaged, motivated, and able to meet the challenges of an evolving curriculum designed to develop specific skills and competencies.

Likewise, the application of teaching aids is also endorsed by the Florida Department of Education (2013). Appropriate organization and proper utilization of teaching aids in the lessons are capable of gaining the attention of the learners, complementing the already used textbooks, eliminating boredom, and increasing creativity through practical directions. Such findings validate the statement which asserts that teaching/learning resources are important in enhancing the teaching methodology in the classrooms. Therefore, to properly utilize CBC, there is the requirement to have relevant and appropriate teaching and learning resources.

In instances where teaching resources do not exist, the schools should be inspired to innovate and create learning resources to meet the needs of the curriculum and related courses. Through such avenues, the students would continue to have access to the resources they need to succeed even in instances of scarce resources. In the same line of argument, Bušljeta (2013) also conducted studies in the Czech Republic where she

highlighted the importance of teaching and learning resources supplemented by appealing visual resources. Bušljeta proved that such resources like television, computer games, and the internet could carry 40 to 50% of the content to the students. When the schools had sufficient teaching resources, the students could master the concepts within shorter times compared to the students in the inadequately endowed schools. Such proof also further highlights the importance of the provision and proper utilization of learning resources in the successful implementation of CBC. In Africa, the situation is also the same where the access to the material of the curriculum support is also the key to the success of CBC. Baker et al. (2012) argue that poor learner performance is mostly due to the lack of teaching aids and the improper usage of teaching and learning resources.

According to the research they undertook, effective teaching is dependent on adequate provision to address the planning, design, production, choosing, and use of the right teaching resources. Provision of the adequate curriculum support material is needed to create an interesting and effective learning environment. It allows the teachers to deliver interesting, relevant, and responsive teaching to facilitate the attainment of key competencies. For the African context, further research, like the study conducted by Baker et al. (2012), could further examine the relationship between the provision of the curriculum support material and the educational performance of the students.

Such studies could explore how the availability of adequate instructional resources influences learners' understanding, retention, and application of the competencies outlined in the CBC framework. Additionally, these studies could examine the challenges schools face in accessing and using instructional materials effectively. Identifying these challenges is critical for developing solutions to improve the availability and utilization of curriculum support materials. In regions where resource constraints are common, such as many African countries, policymakers and educational

authorities must acknowledge the central role that instructional materials play in the delivery of quality education. Adequate investment in educational infrastructure, technology, and teacher training is essential to overcoming the challenges posed by resource shortages. This investment will ensure that schools can access the necessary tools and materials to support effective teaching and learning, thereby enhancing educational outcomes for all students. Moreover, the research by Baker et al. (2012) may highlight the importance of providing professional development opportunities for teachers to help them effectively use curriculum support materials.

Teachers who are adequately trained can design and implement engaging lessons that align with the principles of CBC, addressing the diverse needs of their learners. By providing teachers with the necessary training and support, schools can ensure that they are well-equipped to maximize the impact of available instructional resources, improving the overall quality of education. To tackle the issue of insufficient instructional aids and the inadequate use of teaching and learning resources, schools and educational authorities must make the provision of modern and relevant curriculum support materials a top priority. Collaboration between governments, non-governmental organizations, and international agencies can help ensure that resources are sustainably procured and distributed across schools in need. This collaborative approach can help overcome the challenges of resource scarcity and ensure that all learners have access to the materials they require to succeed in the CBC system.

In conclusion, the study by Baker et al. (2012) underscores the vital role that curriculum support materials play in the successful implementation of CBC in African schools. Addressing the challenges related to the availability and effective use of instructional resources is essential for improving teaching and learning outcomes. By investing in educational infrastructure and providing teachers with the necessary training and

support, African countries can create a conducive learning environment that empowers learners to thrive and reach their full potential. Additionally, understanding the localized impact of instructional resources, as seen in studies like Moronfola's (2010) research in Kwara State, Nigeria, can provide valuable insights into how specific regions are impacted by the availability of teaching materials. This research highlights the significant influence that curriculum support materials have on the academic achievements of students across different subjects. As schools in Africa strive to implement CBC effectively, ensuring the provision of sufficient, relevant, and accessible instructional resources will be key to fostering positive educational outcomes.

Moronfola (2010) conducted a study in the Local Government Area of Kwara State, Ilorin, Nigeria, which revealed a strong connection between the availability of curriculum support materials and learners' academic performance in various subjects. The research found that adequate provision of instructional resources directly impacted the academic achievements of learners in specific topics. By examining the outcomes of students across a range of subjects, Moronfola provided insights into how the presence of instructional materials can positively influence students' overall academic success. This study emphasized the importance of ensuring that schools are equipped with the necessary resources to support students in their learning journey.

When schools have access to high-quality textbooks, reference materials, and digital tools, teachers can engage students in meaningful learning experiences that deepen their understanding and improve knowledge retention. The research also pointed to the role of instructional materials in addressing challenges specific to individual subjects, underlining the importance of tailoring resources to meet the unique needs of various learning areas.

By evaluating the successes of students across various subjects, Moronfolá (2010) underscores the significance of adapting teaching materials to cater to the distinct requirements of each subject area. Specifically, in subjects like Mathematics, Science, and Languages, the use of well-crafted and pertinent instructional materials can greatly enhance both students' academic performance and engagement. The essential role of curriculum support materials in shaping students' academic outcomes highlights the necessity of making strategic investments in educational infrastructure. To improve educational standards, policymakers and educational leaders in Nigeria must prioritize the distribution of high-quality and current instructional resources to schools across the Kwara State region, as well as other areas in the country.

Additionally, enabling teachers to effectively incorporate these resources into their teaching practices can result in significant improvements in learning outcomes and overall educational quality. Moronfolá's (2010) research presents compelling evidence of the fundamental role that curriculum support materials play in shaping students' academic success across different subject areas. The adequate provision of instructional resources not only fosters a positive and conducive learning environment but also enriches subject-specific learning experiences, empowering students to excel academically.

Drawing from these findings, Nigerian education stakeholders can take action to optimize the learning experiences of students, ensuring that the education system is more effective, equitable, and responsive to the needs of diverse learners. In South Africa, a study by Clotfelter, Ladd, and Vigdor (2014) highlights that ineffective implementation of Mathematics education and poor performance among elementary school students is closely linked to the insufficient provision and poor use of instructional materials.

This research is particularly important because Mathematics is often considered a foundational subject that equips students with critical academic and practical skills. The findings shed light on the difficulties educators face in teaching Mathematics effectively, as well as the significant negative consequences that this has on students' academic achievements. The research emphasizes that the availability of high-quality instructional materials is crucial for delivering effective Mathematics lessons. When teachers have access to well-designed textbooks, manipulatives, visual aids, and other resources that support the development of conceptual understanding and problem-solving skills, they can offer more engaging and comprehensive lessons. Such materials allow teachers to create dynamic learning environments that cater to the diverse learning needs of students, thereby fostering active participation and deeper understanding of the subject.

Conversely, the study reveals the detrimental effects of inadequate or inefficiently utilized instructional materials. In schools where resources are limited or not optimally used, teachers may struggle to keep students engaged, making it harder for learners to grasp complex Mathematical concepts. As a result, students may become disengaged, leading to poor performance and a lack of motivation to succeed in the subject. The research by Clotfelter, Ladd, and Vigdor (2014) stresses the need for targeted interventions to address the shortcomings in Mathematics instruction in South African elementary schools.

Policymakers and educational authorities should prioritize the provision of sufficient, relevant, and high-quality instructional materials to enhance Mathematics teaching and learning. Additionally, investing in professional development opportunities for teachers that focus on effective material utilization will provide educators with the tools they need to improve student learning experiences.

By addressing the challenges related to instructional materials in Mathematics education, South Africa can work towards improving students' performance and building a future generation of learners who are confident and proficient in Mathematics. The study highlights the transformative potential of well-designed and properly used instructional materials in fostering students' academic success and offers a roadmap for making informed decisions aimed at enhancing Mathematics education in elementary schools nationwide. Clotfelter, Ladd, and Vigdor's (2014) research serves as an important call to action to rectify the shortcomings in Mathematics teaching caused by the lack of sufficient and effectively utilized instructional resources.

Recognizing the central role of instructional materials in Mathematics education and taking proactive steps to improve their availability and use can empower both teachers and students, enabling them to excel in Mathematics and lay a solid foundation for future academic and professional success. Similarly, in Kenya, the integration of instructional technology into the curriculum has had a significant impact on the educational process. A study by Ochieng and Omondi (2017) explored how technology can support the implementation of competency-based education (CBE) in different educational settings, including both primary and secondary schools. Their research captured a broad range of perspectives and experiences, demonstrating that technology plays a critical role in enhancing teaching and learning practices within CBE.

One of the primary findings of the study was the potential of technology to promote personalized learning experiences for students. Digital tools and online platforms offer adaptive learning opportunities, enabling students to progress at their own pace and receive additional support in areas where they need it most (Ochieng & Omondi, 2017). The use of technology in CBE allows learners to take greater control of their learning journey, encouraging a deeper understanding of concepts and nurturing a growth

mindset. By offering personalized learning pathways, technology enables students to maximize their potential and achieve mastery of specific competencies. Additionally, technology allows educators to create and deliver engaging, interactive learning materials that align with the principles of CBE. Using multimedia presentations, simulations, and interactive exercises, teachers can design dynamic learning experiences that cater to the varied learning styles and preferences of their students (Ochieng & Omondi, 2017). The study found that learners were more motivated and actively engaged when using technology-based resources, which enhanced both the accessibility and quality of instructional content, resulting in more meaningful learning experiences.

Moreover, the study highlighted the role of technology in improving communication and collaboration among teachers, students, and parents (Ochieng & Omondi, 2017). Learning management systems and communication platforms offer seamless ways to share information, track progress, and provide feedback. This enhanced communication strengthens the home-school connection, ensuring that all parties are actively involved in the students' educational experiences. By leveraging technology to engage parents as partners in their children's learning, schools can improve academic outcomes and provide better support to students. The research also emphasized the importance of digital literacy, an essential skill for success in the 21st-century workforce.

Integrating technology into CBE not only supports academic learning but also prepares students with the necessary digital skills required in today's digital world (Ochieng & Omondi, 2017). By familiarizing students with technology from an early age, schools are equipping them to succeed in an increasingly interconnected and technology-driven society. In conclusion, the studies conducted in Nigeria, South Africa, and Kenya demonstrate that the effective provision and use of instructional materials—whether traditional or digital—are pivotal in enhancing the learning experience.

These materials not only support educators in delivering high-quality lessons but also empower students to achieve their academic potential. As education systems continue to evolve, it is essential for policymakers, educators, and stakeholders to prioritize the allocation of resources and the integration of technology to create more engaging, effective, and inclusive learning environments. Digital literacy plays a crucial role not only in ensuring academic success but also in enhancing future employability and fostering a culture of lifelong learning. This highlights the growing importance of technology in education, as it provides educators with the tools needed to create personalized learning experiences, engage students through interactive methods, and promote effective communication among all members of the educational community.

By adopting technology, schools in Kenya and around the world can transform traditional educational systems, equipping learners with the necessary skills and competencies to succeed in an increasingly interconnected and rapidly changing global environment. As the concept of competency-based education (CBE) continues to gain momentum, the integration of technology will be a critical factor in realizing its full potential and shaping the future of education. In Igembe Central Sub-county, to improve the implementation of competency-based curriculum (CBC), the government has made significant strides by producing and supplying curriculum support materials to primary schools.

According to a report by the National Assessment System for Monitoring Learning Achievement (NASMLA) in 2020, the Ministry of Education has played a central role in providing schools with essential educational resources. These materials include textbooks, reference materials, and stationery, all of which are critical in supporting the teachers' efforts to effectively implement CBC. The government's approach is designed to ensure that educators have the necessary resources to teach more dynamically and

engage students in deeper learning experiences. Textbooks are among the primary resources provided, as they are instrumental in enhancing the learning process and aligning with the competencies defined by the CBC. These textbooks serve not only as structured guides for students but also help them develop a strong foundation in various subjects. With textbooks, students can gain a more thorough understanding of the material, thus promoting better academic performance and skill acquisition. In addition to textbooks, reference materials are provided, which offer students additional reading and resources to explore subjects beyond the scope of the standard curriculum. These materials are invaluable for students who wish to delve deeper into specific topics or need further clarification to solidify their understanding.

Furthermore, the provision of stationery supplies ensures that practical learning components of CBC are fully supported. Items such as pens, pencils, rulers, and drawing tools are essential for students to engage in hands-on activities, experiments, and projects. Such activities are central to the competency-based approach, which emphasizes practical, experience-based learning over rote memorization. By using these materials, students are encouraged to think critically, solve problems, and express their creativity, which are key aspects of competency development. The distribution of curriculum support materials also takes into account the diverse needs of students, recognizing that learners come with varying learning styles and preferences.

The government's goal is to ensure that all students, regardless of their individual learning requirements, have access to the resources they need to succeed. By providing a broad range of instructional materials, the Ministry of Education aims to create a more inclusive learning environment that accommodates the differences in learning abilities and encourages every student to excel within the CBC framework. Moreover, the availability of these materials not only benefits students but also significantly empowers

teachers. With the right resources at their disposal, educators are better equipped to plan lessons that are aligned with the competencies and objectives of CBC. These materials are invaluable tools for preparing lessons, designing effective teaching strategies, and conducting formative assessments. Teachers can customize their instruction to suit the unique needs of their students, ensuring that each learner's strengths and challenges are addressed. This adaptability fosters a more inclusive and supportive classroom environment, promoting student engagement and success. However, despite these positive initiatives, the preparedness of public primary schools regarding curriculum support materials remains a concern for many stakeholders.

A report by the Kenya National Union of Teachers (KNUT) in 2019 raised concerns about the adequacy and distribution of teaching and learning materials in schools. One of the key challenges identified is the unequal distribution of curriculum support materials, which has led to disparities in educational resources available across different schools. Some schools, particularly those in remote or underserved areas, struggle to receive the same level of support as others, hindering the successful implementation of CBC in these regions. The ongoing efforts by the government to address these issues are crucial, but more work is needed to ensure that all schools, regardless of their location, are equally equipped with the necessary materials.

This will help ensure that the benefits of CBC can be fully realized, providing students with the skills and knowledge needed to thrive in a competitive global economy. The continued investment in educational resources and technology integration will be key to improving educational outcomes and preparing students for future success in both their careers and their lifelong learning journeys. Although the government has made progress in providing these materials, there are still discrepancies in their availability across various regions and schools.

Schools in more remote or underprivileged areas may encounter challenges in obtaining the necessary resources. This unequal distribution could impede the fair implementation of the Competency-Based Curriculum (CBC) and potentially disadvantage some students. Additionally, the report by KNUT highlights concerns regarding the quality and relevance of the curriculum support materials being provided. These materials need to align with the competency-based framework of the CBC and address the specific needs of both teachers and learners. In certain instances, schools may receive materials that are outdated, irrelevant, or not sufficiently aligned with the CBC's learning goals (KNUT, 2019). Such issues can obstruct effective teaching and learning, thereby undermining the objectives of CBC.

The report also raises concerns about the sustainability of the curriculum support materials supply chain. Ensuring a steady and continuous supply of these resources is critical for the long-term success of CBC. If the supply chain is disrupted or lacks a clear sustainability strategy, schools may find it difficult to maintain a consistent flow of materials, which could affect the implementation of CBC and the overall learning experience. Moreover, the efficient use of curriculum support materials in the classroom is crucial to CBC's success. Teachers require proper training and ongoing support to use these materials effectively and facilitate student-centered, competency-based learning. Without adequate guidance and training on how to integrate these materials into their teaching, the full potential of CBC may not be realized (KNUT, 2019).

To address these challenges, it is essential for the government and relevant stakeholders to conduct regular assessments of schools' preparedness regarding curriculum support materials. This evaluation should focus not just on the availability of materials but also on their quality, relevance, and how well they are being utilized in teaching and learning. Identifying gaps and challenges will allow for targeted interventions and

improvements, ensuring that all schools have the resources necessary for effective CBC implementation. While the government's efforts to supply curriculum support materials to Kenyan schools, particularly in Igembe Central Sub-county, are commendable, concerns remain about the preparedness of public primary schools in terms of accessing and utilizing these materials (KNUT, 2019). Challenges such as disparities in distribution, material quality, and effective usage are still prevalent. Addressing these issues calls for a collaborative effort between the government, education stakeholders, and the community to guarantee that all students benefit from the CBC approach. Regular assessments and focused interventions are necessary to ensure that curriculum support materials enhance the teaching and learning experience for learners under CBC. The provision of these materials is essential to the success of CBC implementation. These materials are vital tools for effective teaching and learning, allowing educators to design dynamic lessons that align with the competency-based approach.

Textbooks, in particular, play a key role in helping students develop a deeper understanding of the subject matter and acquire necessary competencies. These findings underscore the importance of having sufficient, accessible, and properly utilized curriculum support materials in schools for the successful implementation of CBC. When schools are adequately supplied with textbooks, reference materials, and other essential resources, teachers can implement the curriculum effectively, tailor instruction to student needs, and create a more engaging, interactive learning environment.

Additionally, instructional materials support continuous assessment and formative feedback, which are integral to the CBC approach. Furthermore, investing in teacher training programs focused on the effective use of these materials can help teachers acquire the skills needed to enhance student learning. Professional development workshops and seminars can introduce teachers to innovative teaching strategies and

best practices for integrating these resources into lessons. However, there is a lack of empirical research on how the adequacy and quality of curriculum support materials influence CBC implementation, which is the focus of this study.

### **2.1.5 Provision of Physical Facilities and Implementation of Competency-based Curriculum**

Physical infrastructure is a key factor in the successful implementation of curricula. Beynon (2012) identifies various school facilities such as offices, staffrooms, classrooms, laboratories, workshops, equipment, libraries, hostels, and playgrounds. For competency-based curricula, these physical spaces include classrooms, playgrounds for outdoor activities, resource centers like libraries, and furniture, among others. These facilities significantly impact how effectively the competency-based curriculum (CBC) is carried out in schools. Recognizing this, Rivkin, Hanushek, and Kain (2011) studied the link between school facilities and CBC implementation in the United States. Their research indicated that a lack of adequate facilities and resources in primary schools often leads to poor academic performance.

This finding aligns with a study by Amilia, Fauziah, Yusoff, Maziah, and Vitasari (2011) in Indonesia, which revealed that educational infrastructure, aligned with National Education Standards (NES), is crucial to achieving educational objectives. These findings emphasize the importance of physical infrastructure in CBC implementation. In well-equipped institutions with functional resource centers, classrooms, hygienic facilities, and outdoor spaces, the implementation of CBC is smoother, and students show improved proficiency in basic skills such as numeracy, language, creativity, and environmental awareness. Competency-Based Education (CBE) has grown in popularity as a student-centered approach that prioritizes mastery of specific skills over traditional grading systems.

For effective CBE implementation, the availability and quality of school facilities are essential in creating an enabling learning environment. Tan and Lim (2017) conducted a study in Malaysia exploring the connection between school facilities and CBE implementation in both urban and rural areas. Their research focused on the availability and quality of facilities in these areas and their effect on the success of CBE. Urban schools, typically located in densely populated areas, generally have better resources such as classrooms, libraries, laboratories, and recreational spaces compared to rural schools.

The abundance of resources in urban schools fosters a more conducive environment for CBE, facilitating active, self-directed learning and collaborative problem-solving among students. However, rural schools, which often face infrastructure limitations, have also found innovative ways to use limited resources. The resourcefulness and creativity of teachers in these schools have helped overcome some of these challenges, allowing for the successful implementation of CBE despite the lack of modern facilities (Tan & Lim, 2017). The availability of facilities has a direct effect on the success of CBE. Urban schools with well-equipped facilities provide a more conducive learning environment, encouraging active engagement, teamwork, and communication among students, which are key competencies under CBE. Conversely, rural schools often struggle with limited resources, impacting students' access to technology and educational tools. This can restrict students' exposure to real-world applications of their competencies, affecting the overall CBE experience (Tan & Lim, 2017).

Policymakers and educational leaders can take insights from these findings to invest in and improve school facilities to enhance CBE implementation across diverse educational contexts. In a similar study conducted in rural China, Li and Chen (2019) highlighted the critical role of school infrastructure in CBE implementation.

Their case study in rural China examined how school infrastructure impacted learners' participation and success within the CBE framework. Despite challenges due to geographic remoteness and limited resources, the study found that well-maintained, modern infrastructure significantly contributed to higher levels of student engagement and competency development. Schools with adequate facilities created a positive learning environment, supporting interactive learning and collaboration, essential for CBE. Furthermore, schools equipped with resources such as digital tools, libraries, and laboratories provided students with opportunities to develop competencies targeted by CBE.

Access to up-to-date technology enabled self-directed learning, enhancing students' ownership of their educational experiences. The study also noted that schools with quality infrastructure saw higher student achievement, greater motivation, improved attendance, and reduced dropout rates (Li & Chen, 2019). These findings underscore the importance of infrastructure in fostering a successful CBE implementation, particularly in rural settings. In conclusion, the availability of adequate and well-maintained infrastructure plays a pivotal role in implementing Competency-Based Education, providing students with the resources needed to develop the required competencies. Improving school facilities is essential to ensure a positive learning environment that supports the successful execution of CBE across different educational contexts.

Policymakers and education stakeholders can gain valuable insights from this study to guide investments in and prioritize infrastructure development for rural schools. By ensuring fair access to quality facilities, rural schools in China can strengthen the effectiveness of competency-based education (CBE), helping learners develop key skills and achieve better academic outcomes, which ultimately supports their personal and educational growth.

Competency-based curriculum (CBC) is an innovative approach to education that focuses on providing learners with essential skills for success in an ever-evolving world. Unlike traditional content-based learning, CBC emphasizes mastery in skills, knowledge, and attitudes. As schools adopt CBC, the availability of physical facilities becomes a critical factor in fostering an effective learning environment. The physical setting of a school greatly influences students' learning experiences and outcomes (Anderson & Boykin, 2016). Well-maintained and adequate facilities, such as classrooms, libraries, labs, and recreational spaces, contribute to a positive and encouraging learning atmosphere.

Learners' engagement and motivation are heightened when they are in an environment that is safe, comfortable, and supportive of exploration and discovery (Moss & Petrie, 2017). A well-equipped library is particularly important for CBC, as it gives students access to a variety of resources and materials that align with their personal interests and learning needs. In a CBC system, students are encouraged to follow their passions and engage in self-directed learning, with the library serving as a key hub for independent research and exploration (Anderson & Boykin, 2016). Similarly, laboratories and specialized spaces are essential for CBC, especially in STEM subjects. These spaces offer students the opportunity for hands-on experiences, enabling them to apply their knowledge in practical settings, deepening their understanding of concepts, and boosting their confidence (Moss & Petrie, 2017).

Additionally, recreational spaces are important for promoting students' overall well-being and supporting their social and emotional development. CBC recognizes the importance of a comprehensive learning approach, and recreational areas can provide a setting for relaxation, physical activity, and social interaction (Anderson & Boykin, 2016).

For the successful implementation of CBC, schools must prioritize maintaining and enhancing their physical infrastructure. Regular maintenance and updates to facilities help create an environment that motivates students to learn and grow (Moss & Petrie, 2017). Adequate, well-maintained physical spaces are essential for implementing CBC effectively. The learning environment has a significant impact on students' experiences and outcomes, so schools must ensure that their facilities support the principles of CBC. By fostering a positive and engaging physical environment, schools can empower students to take responsibility for their own learning and reach their full potential. Equipped classrooms, libraries, labs, and recreational spaces all contribute to an atmosphere conducive to personalized and active learning.

Ongoing investments in physical infrastructure are crucial for promoting student success and creating a thriving educational community (Anderson & Boykin, 2016; Moss & Petrie, 2017). Furthermore, modern facilities support the integration of technology, an essential element of competency-based education. Technology offers personalized learning experiences, providing students with easy access to vast information, opportunities for peer collaboration, and immersive real-world experiences (Hwang et al., 2019). Schools with the latest technology help develop digital literacy and prepare students for future professional challenges. Although the importance of physical facilities in implementing Competency-Based Curriculum (CBC) is clear, challenges may arise in maintaining and providing these necessary resources.

Insufficient funding and limited resources often prevent schools from creating ideal learning environments (Stern, 2018). Schools in economically disadvantaged areas might struggle even more with securing adequate funding, leading to substandard physical infrastructure. A further challenge is aligning physical spaces with the needs of CBC.

This educational approach encourages active, hands-on learning, demanding adaptable spaces for group work, project-based tasks, and experiential activities (Anderson & Boykin, 2016). Conventional classroom setups may not fully facilitate these innovative pedagogical methods. The availability of appropriate facilities is crucial for both teachers and students. For educators, well-equipped classrooms and resource centers allow them to create engaging lessons that cater to the diverse needs of learners (Kroth et al., 2018). Technology enables teachers to develop personalized learning experiences, track students' progress, and provide timely feedback. In CBC, instructors are encouraged to adopt a student-centered approach, tailoring lessons to meet the specific needs and interests of individual learners (Kroth et al., 2018). Technology, along with multimedia resources, helps teachers design dynamic and interactive lessons that appeal to various learning styles.

For example, digital tools and educational software can be used to develop virtual simulations, interactive quizzes, and multimedia presentations that allow students to engage with complex concepts. Resource centers like libraries and media labs offer teachers access to a wealth of educational materials, enhancing their lessons. These spaces allow educators to incorporate a variety of resources such as textbooks, online articles, e-books, educational videos, and journals. By providing diverse perspectives on a topic, teachers can promote critical thinking and inspire independent research in students.

Furthermore, physical resources directly influence students' learning experiences and outcomes (Kroth et al., 2018). In classrooms equipped with modern tools, students are more likely to feel motivated and engaged. For instance, access to the latest technology and interactive learning tools can ignite students' curiosity, encouraging them to explore and discover knowledge on their own.

A school's physical environment also affects students' attitudes toward learning. A clean, safe, and welcoming atmosphere can promote a sense of belonging and positively impact students' engagement. Factors like adequate seating arrangements, proper lighting, and comfortable furniture create an environment that encourages focus and active participation in class discussions (Kroth et al., 2018). In addition to classrooms, libraries play an essential role in supporting students' academic journeys. A well-stocked library provides students with access to numerous books, reference materials, and digital resources, allowing them to conduct independent research and explore topics beyond the curriculum. Quiet study areas and collaborative spaces within libraries cater to different learning preferences, fostering both individual study and group collaboration.

Having appropriate physical facilities is crucial for successfully implementing a competency-based curriculum. Well-equipped classrooms and resource centers give teachers the tools to design interactive, personalized lessons. For students, a well-designed learning environment improves motivation, engagement, and overall learning outcomes. High-quality facilities create a supportive, student-centered environment that fosters positive educational experiences (Kroth et al., 2018). A study by Smith et al. (2017) indicated that students in schools with modern facilities and well-organized spaces demonstrated higher academic achievement and greater satisfaction with their educational experiences.

Modern facilities, equipped with cutting-edge technology, enhance students' learning opportunities. Advanced technological tools such as interactive whiteboards, multimedia projectors, and computer labs allow teachers to present engaging lessons tailored to different learning styles. These resources promote active participation and help learners gain a deeper understanding of subject material.

Moreover, well-designed school spaces contribute to a positive, inviting atmosphere that encourages students to feel comfortable and motivated. Bright, well-lit classrooms with colorful displays and appealing learning corners can stimulate students' curiosity and enthusiasm. When students are in environments that are aesthetically pleasing and functional, they are more likely to be inspired and actively engaged in their studies. The significance of the learning environment on students' emotional well-being cannot be underestimated. Smith et al. (2017) found that students in schools with modern facilities and well-maintained spaces reported higher levels of satisfaction with their learning experiences. Positive, supportive environments also nurture students' emotional health and foster a sense of belonging.

When students feel valued and supported, they are more likely to develop a positive attitude toward learning and engage actively in classroom activities. A well-maintained learning environment can also influence student behavior and discipline. Organized classrooms and well-kept facilities encourage a sense of order and discipline, leading to a more focused and harmonious atmosphere. Students are more likely to follow school rules and regulations in a well-structured setting, resulting in a more conducive environment for learning. The learning environment's impact goes beyond the classroom setting. School facilities such as libraries, laboratories, and recreational areas provide additional opportunities for students to explore and discover.

Access to well-stocked libraries gives students the resources they need to pursue their personal academic interests and research independently. Modern laboratories equipped with up-to-date tools allow students to engage in hands-on experiments, enhancing their understanding of scientific concepts. Recreational spaces, including playgrounds and sports fields, encourage physical activity, promote social interaction, and support students' overall health and well-being.

The learning environment has a profound effect on students' academic performance and overall well-being. Schools with modern facilities and thoughtful design create a positive, supportive environment that enhances students' learning experiences. An inviting atmosphere encourages motivation, engagement, and satisfaction, contributing to students' success. Additionally, a well-organized learning environment promotes discipline and focus, further enhancing the learning experience. In summary, the physical facilities of a school play an essential role in both the teaching process and student learning outcomes. Well-equipped classrooms, libraries, and recreational spaces, supported by the latest technology, provide the necessary tools for implementing a competency-based curriculum.

These resources create an environment that fosters student-centered learning, active engagement, and critical thinking. For teachers, modern facilities allow for innovative, dynamic lessons that cater to a range of learning styles and needs. For students, a supportive learning environment positively impacts motivation, engagement, academic achievement, and overall well-being. Ultimately, the design and quality of school facilities are integral to creating a successful educational experience that prepares students for future challenges. Investing in modern, well-designed school facilities is a fundamental step toward creating an optimal learning environment that empowers students to thrive both academically and emotionally.

According to Smith et al. (2017), providing quality physical facilities is a critical aspect of the successful implementation of competency-based education (CBE). Schools must allocate resources to ensure their infrastructure is both modern and well-maintained, supporting active learning, technology integration, and high levels of student engagement. This investment, coupled with effective planning and adequate funding, is necessary to ensure that the physical infrastructure supports the core principles of CBE.

By addressing existing challenges and prioritizing the development of suitable learning spaces, schools can foster enriched environments conducive to the success and growth of students following a competency-based curriculum. The success of implementing a competency-based curriculum (CBC) depends on several factors, one of which is the quality of school facilities. In countries like Indonesia, the integration of CBC has prompted educational researchers to investigate how school facilities impact curriculum implementation.

A relevant study conducted by Darmawan and Suherman (2016) in Java, Indonesia, examines the relationship between school facilities and CBC implementation. Their research offers valuable insights into the critical role school facilities play in providing a conducive environment for learning, thereby enhancing students' overall educational experiences. The study aimed to evaluate how the availability and condition of school facilities affect the implementation and effectiveness of CBC in local schools. Java, Indonesia's most populous island, has been a key area for applying CBC in efforts to improve educational quality. A successful transition to CBC requires an environment where the physical learning spaces are equipped to support competency development.

Darmawan and Suherman (2016) found that the state of school facilities significantly influences the implementation of CBC in Java, Indonesia. Well-maintained classrooms, libraries, laboratories, and recreational spaces all contribute to creating a positive learning atmosphere. These facilities allow teachers to design lessons that are interactive and tailored to students' individual learning needs, fostering a student-centered approach. Furthermore, the inclusion of modern technology in classrooms promotes the integration of digital tools that enhance students' access to interactive learning resources and cultivate digital literacy. As a result, students can develop key competencies such as critical thinking, problem-solving, and creativity, all of which align with the CBC

framework. The study also revealed that the availability of school facilities directly impacts student engagement and motivation. Schools that maintain appealing and functional facilities create an environment that encourages active participation in classroom activities. These well-maintained facilities also help students take greater ownership of their learning experiences. Schools with these kinds of facilities consistently reported better student outcomes, as the resources provided facilitate students' academic development. For example, libraries and laboratories with up-to-date equipment offer students opportunities for self-directed learning and research, boosting their academic performance and mastery of CBC-related competencies.

Additionally, the study highlighted the importance of recreational spaces in enhancing students' overall well-being. Schools that offer well-equipped spaces for physical activity and extracurricular engagement contribute to the emotional and social development of students, helping them develop better social skills and experience emotional growth. In this context, the availability of adequate school facilities plays a crucial role in not only supporting academic achievement but also promoting students' holistic development. Darmawan and Suherman (2016) emphasize that well-maintained, adequately equipped facilities are essential for creating an environment conducive to CBC implementation.

By prioritizing investments in school infrastructure, educational policymakers and stakeholders in Java, Indonesia, can improve the effectiveness of CBC and enhance student learning outcomes. This research also underscores the importance of incorporating modern technology and maintaining recreational spaces, both of which are integral to ensuring that CBC implementation addresses the academic, social, and emotional growth of students. Similarly, Lunenburg's (2011) study in Chicago highlights the challenges that arise from neglecting the condition of school

infrastructure. More than 55% of the total 597 schools in the city were rendered unusable due to deteriorating buildings that no longer supported effective learning environments. This case underlines the significance of school facilities in the educational system. The quality and condition of school infrastructure are directly linked to students' educational experiences and outcomes. The Chicago study reveals the dire consequences of underfunding school maintenance, leading to schools that are no longer suitable for contemporary teaching and learning needs. The study shows that dilapidated school buildings hinder the successful implementation of CBC by negatively impacting the overall learning experience.

Crumbling infrastructure, poor ventilation, and insufficient lighting can disrupt students' concentration and motivation, leading to decreased engagement and subpar academic performance. Moreover, the lack of suitable facilities limits the ability to offer the hands-on, experiential learning opportunities that are central to CBC. Competency-based education emphasizes the practical application of knowledge and skill development, requiring classrooms that are equipped with necessary tools such as laboratories, workshops, and technology-enabled spaces. Without these resources, educators face challenges in delivering engaging lessons that align with the core principles of CBC.

Furthermore, the deterioration of school infrastructure also exacerbates issues of educational equity. Students from low-income backgrounds, who often attend schools with insufficient resources, face greater challenges in accessing quality education. The physical infrastructure disparities contribute to perpetuating educational inequalities, particularly among marginalized communities. Without modern and functional facilities, the vision of CBC—focused on addressing individual student needs and providing personalized learning experiences—becomes unattainable.

The findings from the Chicago study stress the urgency of addressing the infrastructural deficits in education. Effective and proactive measures, such as securing adequate funding and undertaking strategic planning, are essential for the renovation and upgrade of school facilities. It is crucial for government bodies, education authorities, and community stakeholders to collaborate in tackling these challenges to ensure that schools provide an optimal learning environment. Renovating outdated and dilapidated buildings will ensure that schools are capable of delivering education that meets contemporary standards and effectively supports CBC.

In conclusion, the implementation of CBC in schools worldwide is significantly impacted by the quality and condition of school facilities. Whether in Java, Indonesia, or Chicago, the availability of modern, well-maintained facilities is crucial for creating a learning environment conducive to competency-based education. The provision of adequate resources—such as updated classrooms, laboratories, libraries, and recreational spaces—helps students engage actively in their learning, fosters academic success, and supports their emotional and social development. Educational stakeholders must prioritize investments in school infrastructure to ensure that learning environments are equipped to meet the needs of the modern education system, enhancing student outcomes and contributing to the successful implementation of CBC.

In conclusion, the study conducted by Lunenburg (2011) in Chicago underscores the significant challenges that inadequate and deteriorating school facilities pose during the implementation of competency-based curricula (CBC). The state of school infrastructure plays a critical role in influencing learners' educational experiences and academic outcomes. When school facilities are in poor condition, the core principles of CBC cannot be effectively realized. This situation highlights the urgent need for addressing infrastructure issues to ensure that education is both equitable and inclusive.

By improving and modernizing school facilities, it is possible to create an environment that supports learner success and prepares them to meet the challenges of the 21st century. When school buildings, classrooms, and other facilities are renovated, they provide a conducive learning space where students are empowered to excel in competency-based education. In India, Singh and Mallik (2016) also emphasize the significant impact of school facilities on the learning process. According to their study, as students' abilities and attitudes evolve, the importance of providing proper facilities such as sports fields, workshops, and laboratories becomes paramount. For CBC to be implemented successfully and yield the desired educational outcomes, adequate infrastructure is a fundamental requirement.

Singh and Mallik argue that without the provision of appropriate facilities, such as sports fields, schools cannot offer the holistic education necessary for the development of students' physical, cognitive, and emotional well-being. Sports education is integral to CBC, as it fosters teamwork, discipline, and perseverance—qualities essential for success in both academic and personal life. Sports fields, thus, are an essential part of the infrastructure needed to implement CBC, as they contribute to students' physical development and overall well-being. In addition to sports facilities, Singh and Mallik (2016) highlight the need for specialized infrastructure such as workshops and laboratories. CBC emphasizes experiential learning, where students engage in hands-on activities that allow them to apply theoretical knowledge to real-life situations.

Workshops, equipped with the necessary tools and resources, enable students to gain practical experience in various fields, fostering critical thinking and creativity. Similarly, laboratories are essential for scientific experimentation, where students can engage in activities that deepen their understanding of subjects like biology, chemistry, and physics.

These learning environments support the development of practical skills, which are fundamental to CBC's goal of producing well-rounded individuals with diverse competencies. Singh and Mallik's study underscores that for the smooth implementation of CBC and the achievement of desired educational outcomes, governments and other stakeholders must prioritize the development of appropriate, relevant, and sufficient infrastructure in all schools. The presence of suitable facilities not only facilitates the effective delivery of CBC but also ensures that the learning environment is inclusive and equitable. Students should have access to the resources necessary to reach their full potential. To achieve this, a coordinated effort is needed from all sectors involved in the education system, including government agencies, school administrators, and the community.

Governments must allocate the necessary funds to construct, renovate, and maintain school facilities, ensuring that resources are available to support the effective implementation of CBC. Schools need adequate classrooms, science labs, sports facilities, and libraries, as well as modern technologies that can enhance the teaching and learning process. Education authorities, together with school administrators, should develop comprehensive plans to address infrastructure needs in a way that aligns with the goals of CBC. These plans should consider not only the physical infrastructure required but also the pedagogical approaches and methods that CBC entails.

Furthermore, involving the community and parents in the decision-making process is essential to ensure that school facilities cater to the diverse needs of students. Stakeholder engagement helps to create a sense of ownership and accountability, which can lead to greater community support and collaboration. When families and local communities are involved in shaping the learning environment, they contribute to the creation of a positive and supportive educational atmosphere that benefits both students

and educators. Collaboration among all stakeholders ensures that infrastructure improvements meet the specific needs of the learners and promote an inclusive, equitable educational experience. In conclusion, the study by Singh and Mallik (2016) stresses the crucial role that school facilities play in the successful implementation of CBC in India. As the learning process evolves to meet the needs of 21st-century learners, it becomes increasingly important to provide facilities such as sports fields, workshops, and laboratories. These facilities support the development of a well-rounded education that integrates both academic and physical development. The government's commitment to providing appropriate infrastructure is vital for ensuring that CBC is implemented successfully and yields the desired outcomes. When the necessary facilities are in place, schools can offer a high-quality education that equips learners with the skills and competencies they need to succeed in life.

In Sub-Saharan Africa, the importance of school infrastructure is similarly recognized in the context of CBC implementation. A study conducted in Ghana by Avery (2012) highlights that the availability and condition of physical facilities are critical for the successful implementation of CBC. The study found that schools with well-maintained classrooms, playgrounds, and resource centers such as libraries had significantly better learning outcomes than schools without these facilities.

The presence of suitable infrastructure enables students to engage more effectively with the learning process, leading to improved academic results. This further supports the idea that infrastructure plays a central role in fostering an environment conducive to learning, where students can thrive and achieve their full potential. By prioritizing the improvement of school facilities, countries like India and those in Sub-Saharan Africa can ensure that CBC is implemented effectively. Providing adequate infrastructure helps create learning environments where students are motivated, engaged, and empowered to

excel. In turn, this prepares them for the future, equipping them with the necessary skills to navigate a rapidly changing world. The importance of physical facilities in the successful implementation of the Competence-Based Curriculum (CBC) is widely acknowledged, with numerous studies emphasizing their significant role. Beynon (2012) highlights that stakeholders, including governments, educational authorities, and school administrators, are increasingly allocating more resources for constructing new classrooms, acquiring appropriate furniture, and ensuring the maintenance, repair, remodeling, and replacement of existing facilities. The findings of a study conducted in Ghana further support Beynon's assertion, showing that the quality and availability of physical infrastructure are key to the effective implementation of CBC. This is particularly relevant as such investments are crucial in creating an optimal learning environment that fosters student engagement, creativity, and holistic development.

Classrooms are among the fundamental physical facilities required for the implementation of CBC. Well-designed and adequately spaced classrooms provide an environment that supports interaction and engagement, both of which are essential for a learner-centered curriculum. Proper seating arrangements and classroom layouts encourage collaboration among students, allowing them to actively participate in learning activities. In addition, a well-ventilated and well-lit classroom enhances student focus and concentration, which is critical for effective teaching and learning.

As students learn best in environments that meet their sensory and comfort needs, the physical condition of the classroom plays a significant role in boosting their motivation and engagement. The importance of playgrounds and outdoor spaces also cannot be overstated in CBC implementation. Beynon (2012) argues that physical education and outdoor play are integral to a well-rounded education system, promoting both physical health and emotional well-being.

Playgrounds offer learners opportunities to engage in physical activities, develop social skills, and participate in team-building exercises, all of which contribute to their overall development. These spaces foster a sense of community and help children develop essential interpersonal skills that are critical for their personal growth. The opportunity to engage in physical play also alleviates stress and improves mental health, further enriching the educational experience. Resource centers, including libraries, are indispensable to the implementation of CBC, as they offer students access to a wide variety of learning materials. A library with a diverse collection of books and resources supports independent learning, enabling students to conduct research, develop critical thinking skills, and engage in self-directed study.

By promoting a culture of inquiry and reading, libraries also contribute to the development of lifelong learning habits. These resource centers provide opportunities for learners to explore subjects beyond the confines of the traditional curriculum, thereby broadening their knowledge base and intellectual curiosity. Given the significant role of physical facilities in the successful delivery of CBC, ongoing investment in the construction, maintenance, and improvement of these infrastructures is essential. It is not enough to merely build new classrooms or upgrade existing facilities; the quality of these resources must be maintained over time. Regular repairs and maintenance ensure that facilities remain functional and safe, thus preventing disruptions to the learning process.

Additionally, stakeholders must be proactive in responding to the changing needs of the educational environment. As technological advancements continue to shape education, it is important for schools to integrate technology into classrooms and resource centers. This can be done by equipping learning spaces with digital tools, such as computers, projectors, and interactive whiteboards, to enrich the learning experience.

The situation in Ghana highlights how critical the role of physical infrastructure is in the successful implementation of CBC. Well-equipped classrooms, functional playgrounds, and resource-rich libraries contribute significantly to a student's learning experience and academic achievement. The Ghanaian experience underscores the need for substantial resources to be allocated for the construction, maintenance, and upgrading of physical facilities. This commitment ensures that the learning environment remains conducive to effective teaching and learning, allowing students to reach their full potential. In Kenya, a similar situation is observed, particularly in the context of the Free Primary Education policy, which has led to increased student enrollment.

As a result, many schools in Kenya face overcrowding, placing strain on available resources and making the effective implementation of CBC challenging. The government has responded to this by investing in the construction of new classrooms and providing furniture. The Republic of Kenya (2015) emphasizes that learning environments play a critical role in determining the success of educational outcomes. According to this perspective, educational facilities must be of high quality to foster effective learning, making infrastructure a key component of CBC implementation. Nzioka and Kimani (2018) conducted a study in Kenyan secondary schools to explore the relationship between infrastructure improvement and CBC implementation.

The research revealed that infrastructure development is crucial to the success of CBC in Kenya, as it provides the necessary environment for teachers to design and deliver competency-based lessons effectively. The study found that well-maintained classrooms, libraries, laboratories, and other learning spaces significantly improved student engagement and participation in classroom activities. The integration of technology in these spaces further enhanced the learning experience, as it allowed students to access a broader range of resources and engage with interactive digital tools.

Modern classrooms equipped with technological tools are essential for facilitating the development of digital literacy skills, which are increasingly important in the contemporary workforce. The study found that learners in schools with improved infrastructure displayed higher levels of motivation, engagement, and academic performance. The availability of resources such as libraries and laboratories also facilitated independent research and practical experimentation, enhancing students' understanding of various competencies. The importance of extracurricular activities was also highlighted in the research, as improved facilities for sports, arts, and other activities outside the classroom provided learners with opportunities to explore their interests and talents.

This holistic approach to education encourages the development of skills that extend beyond academic achievements, contributing to well-rounded personal growth. Thus, infrastructure improvement plays a crucial role not only in supporting academic learning but also in fostering students' overall development, including their social, emotional, and physical well-being. The research conducted by Nzioka and Kimani (2018) emphasizes the need for continuous investment in infrastructure to ensure the successful implementation of CBC. By upgrading classrooms, libraries, and other facilities, policymakers and educational stakeholders can provide students with an environment that encourages active learning, personal growth, and the development of key competencies. These improvements also contribute to better academic performance, as students are provided with the necessary tools and resources to succeed.

The study underscores the importance of infrastructure in fostering a learning environment that is adaptable to the evolving demands of education. In conclusion, physical facilities play a pivotal role in the implementation of CBC, both in Ghana and Kenya.

The condition and availability of classrooms, playgrounds, libraries, and other learning spaces are critical factors that influence student engagement, motivation, and academic performance. Therefore, it is essential for educational stakeholders to allocate sufficient resources for the construction, maintenance, and improvement of these facilities. By doing so, they can create an environment that promotes learning and supports students' overall development. School managers must ensure that classrooms, playgrounds, and resource centers are adequately equipped to cater to the needs of all learners, preventing overcrowding and providing an effective learning environment. Further research is necessary to explore the extent to which the adequacy of various physical facilities influences the implementation of CBC in public primary schools, as highlighted by Nturibi (2015). Such studies will provide valuable insights into the specific factors that contribute to the success of CBC and guide future infrastructure development efforts.

#### **2.1.6 Involvement of Parents and Implementation of Competency-based Curriculum**

Parental and school collaboration plays a vital role in enhancing communication, improving parenting techniques, supporting decision-making, facilitating at-home studying, and working with the local community. This partnership has existed since the inception of formal education, with families and schools collaborating to provide learners with the highest quality education (Epstein, 2009). In the early stages of schooling, families were responsible for equipping their children with necessary skills, while schools took on a more dominant role later, with minimal parental involvement. However, with the introduction of competency-based curricula, there has been an increase in parental expectations regarding their children's academic performance, along with an emphasis on accountability. Consequently, schools and parents have formed more structured partnerships, each taking on well-defined responsibilities in the

educational process. Research has shown a positive correlation between parental involvement and improvements in students' academic performance. Davis (2013) highlights that parents play a crucial role in the development of learning materials, providing instructional resources, and offering direct assistance with their children's assignments and homework. The more involved parents are in their children's education, the better their children perform in mastering concepts and skills in line with the competency-based curriculum (CBC). Recognizing the importance of these claims, Domitrovich et al. (2012) conducted a study in the Netherlands, finding that school readiness involves parents in supporting their children's education through activities such as attending academic clinics, volunteering, participating in parent days, and helping with school feeding programs.

Parents can increase their engagement in their children's academic success by offering encouragement, setting aside dedicated study time and space, modeling positive behaviors like reading for pleasure, monitoring homework, tutoring at home, and explaining how improvements in grades can be achieved. Similarly, a study by Hartley et al. (2010) in Austria demonstrated that parental involvement can extend to volunteering at school events, assisting in the classroom, and actively participating in administrative tasks and decision-making related to CBC planning. Hartley et al. (2010) argue that parental participation is more influential than family background in determining whether students successfully grasp concepts under CBC.

In schools where CBC has been implemented effectively, parents are deeply involved in encouraging their children, helping with homework, and contributing to the development of learning materials. This collaboration has been shown to improve academic performance, as children tend to perform better when parents maintain regular communication and cooperation with the school to support learning.

In the United States, the federal government recognized the importance of family involvement in education with the passage of a law in 1994. The 2000 Goals: Educate America Act emphasized the need for schools to promote collaboration between parents and schools, in order to enhance parental involvement in children's intellectual, emotional, and psychological development (Weiss, Caspe, & Lopez, 2012). This legislation supports the Utah Schooling Association's (2008) assertion that children achieve better academically when their parents are actively involved in homeschooling. This further underscores the importance of parental involvement in school management activities.

Conenzio and French (2016) conducted a study in Mozambique, showing that parents are crucial in implementing CBC as they provide educational materials, serve as role models, and assist their children with homework. Their research also revealed that in schools with regular parent involvement in management activities, children achieve higher learning outcomes, enhanced cognitive abilities, improved problem-solving skills, greater school enjoyment, better attendance, and fewer behavioral problems. These results underline the importance of fostering strong parent-school collaboration, which not only enhances information-sharing but also positively impacts parent satisfaction, contributing to a child's overall development and adjustment to new curriculum demands.

The Rwanda Education Board (2018) echoes this sentiment, stating that parents are critical to the success of CBC in Rwanda by providing resources, monitoring behavior, and volunteering in activities like school feeding programs, material development, and accompanying students on fieldwork. This highlights the increasing view that parent-teacher relationships are integral to improving CBC implementation and student outcomes.

Similarly, in Kenya, parent involvement is viewed as essential to ensure the successful implementation of CBC, providing opportunities for parents to express their views and contribute to the system's sustainability. Research by Ngaruiya (2017) in Nairobi County further emphasizes the importance of parents in the planning, implementation, and administration of CBC, particularly in developing and providing curricular support materials. Njenga and Kabiru (2018) also found that parental participation is a key predictor of primary school students' academic achievements, as measured by their test results.

Koech (2021), in a study conducted in Uasin Gishu, discovered that communication between teachers and families helps to boost students' performance. The research concluded that active parent-teacher involvement in primary students' educational and learning experiences is crucial to their success in both academic performance and the development of social-emotional skills. Koech's (2021) study further revealed that the partnership between parents and teachers benefits primary students in various areas such as language development, self-help skills, social interactions, motor skills, adaptive behaviors, and fundamental school skills—all of which are essential for academic success. This implies that when parents maintain regular and direct communication with teachers, children engage more positively with their peers, adults, and the learning process, ultimately facing fewer challenges in school.

In Igembe Central Sub-county, Thuba, Kathuri and Mariene (2017) conducted research that showed that increased parental involvement in school administration activities leads to improvements in students' school attendance, homework completion, educational behaviors, and discipline. These findings suggest that parents' involvement in education outside of the classroom is a significant factor in enhancing the quality of education. Thuba et al. (2017) argue that parental actions at home and at work have both direct and

indirect effects on their children's education. Therefore, parents must understand how to effectively allocate their time and resources to improve education at their children's schools. However, the study does not fully explore the specific activities that parents should engage in and how these activities influence curriculum implementation, particularly CBC in schools.

## **2.2 Theoretical Literature Review**

This study was driven by two key theoretical frameworks. The first is the theory of organizational readiness for change, which emphasizes the preparedness of school management, and the second is the curriculum implementation theory, which focuses on the aspects of curriculum implementation.

### **2.2.1 The Theory of Organizational Readiness for Change**

The theory of organizational readiness for change, first introduced by Coch and French in 1948 and further supported by Schein and Bennis in 1965, provides a foundational lens for this study. The core premise of this theory is that, in order to minimize resistance to change within an organization, it is essential to prepare its members for the forthcoming change. In other words, for any change to gain acceptance, the individuals within the organization must first recognize and understand the change itself. According to Schein and Bennis (1965), when people or groups are actively involved in the change process from the outset, they are more likely to embrace and support initiatives aimed at achieving that change.

The concept of "change efficacy" refers to the institution's ability to successfully implement changes that are intended to enhance its operations. This efficacy is largely dependent on the staff's skills and their adaptability to emerging or evolving needs. For the change process to succeed, key participants need to be equipped to not only absorb new information but also to communicate any necessary modifications within the

institution. Coch and French (1948) assert that one of the primary reasons workers resist change is because they were excluded from the decision-making process regarding the change. In the context of this study, this theory suggests that for the Competency-Based Curriculum (CBC) to be effectively implemented in schools, school managers must exhibit a readiness to embrace changes in the curriculum. They should be prepared to provide the support and resources necessary for its successful execution. This readiness includes ensuring that teachers are adequately trained, that curriculum support materials are readily available, and that the physical infrastructure is in place. Furthermore, involving parents as key stakeholders is essential to the process. Thus, school management's preparedness—through training, resource allocation, and community involvement—is critical for the successful implementation of CBC in public primary schools.

### **2.2.2 The Curriculum Implementation Theory**

In addition to the theory of organizational readiness for change, this study is also guided by the curriculum implementation theory proposed by Bobbitt in 1918. This theory asserts that any curriculum that is worth implementing should be designed to prepare learners for their roles in a rapidly changing industrial society. Bobbitt's theory advocates for a shift in educational focus—away from traditional subjects and towards skills that meet the needs of the modern world. He believed that curriculum should be aligned with the demands of the new industrial society, ensuring that students are taught only the knowledge and skills that are directly relevant to their future roles.

The curriculum should not include topics or skills that students are unlikely to use in their future careers. In his approach, Bobbitt emphasized the need for curriculum to be tailored to the specific needs of individuals while also aligning with societal demands. This led to the early differentiation in education for boys and girls, ensuring that each

gender received instruction that prepared them for their respective roles in society. Bobbitt developed five key steps. The first step involves categorizing human experience into major fields of study. The second step is to break each field down into specific activities or tasks. The third step focuses on defining objectives based on the skills necessary to complete the activities. The fourth step involves selecting the most appropriate objectives that will guide the planning of student activities. Finally, the fifth step is to design the activities and opportunities required to achieve the objectives. Bobbitt (1918) argued that traditional school subjects and examinations should be replaced with a curriculum that is driven by the needs of society, as determined through scientific analysis. He believed that schools should adapt to meet the demands of the modern industrial society, and this meant eliminating outdated subjects and focusing on practical, useful knowledge.

In the context of this study, the curriculum implementation theory is relevant to the successful execution of CBC, as it emphasizes the need to adapt the curriculum to the unique strengths, weaknesses, needs, and preferences of learners. Bobbitt's theory highlights the importance of moving away from traditional, examination-focused education, which is a key element of the CBC approach. The CBC framework emphasizes competencies and mastery of subjects rather than rote memorization or exam-based success. This shift aligns with Bobbitt's call for a more dynamic and relevant approach to education, one that is responsive to both individual and societal needs.

Bobbitt's (1918) perspective on curriculum design underscores the importance of systematic planning and organization in educational content. These principles are highly relevant to the study of school management preparedness for CBC implementation, as they offer a structured approach to ensuring that the necessary resources, teacher

training, and infrastructure are aligned with the goals of the new curriculum. For CBC to be successfully implemented, school management must ensure that all aspects of the curriculum are carefully planned and executed, with clear objectives, organized content, and structured processes to achieve the desired learning outcomes. Bobbitt's theory also advocates for continuous evaluation and adaptation, which is crucial in the context of CBC. In order to meet the goals of competency-based education, it is essential for school management to provide ongoing training for teachers, organize resources effectively, and continually assess both the curriculum and the students' progress. By utilizing Bobbitt's approach, school leaders can create a robust framework for managing the transition to CBC, ensuring that the curriculum is well-designed and that both students and teachers are adequately supported in the process.

In summary, Bobbitt's curriculum implementation theory provides a solid foundation for the successful implementation of CBC. It emphasizes the need for clear objectives, organized content, and careful planning, all of which are necessary for the effective execution of CBC. School management plays a critical role in ensuring that the curriculum is well-aligned with the needs of learners and the demands of the modern educational system.

### **2.3 Theoretical Framework**

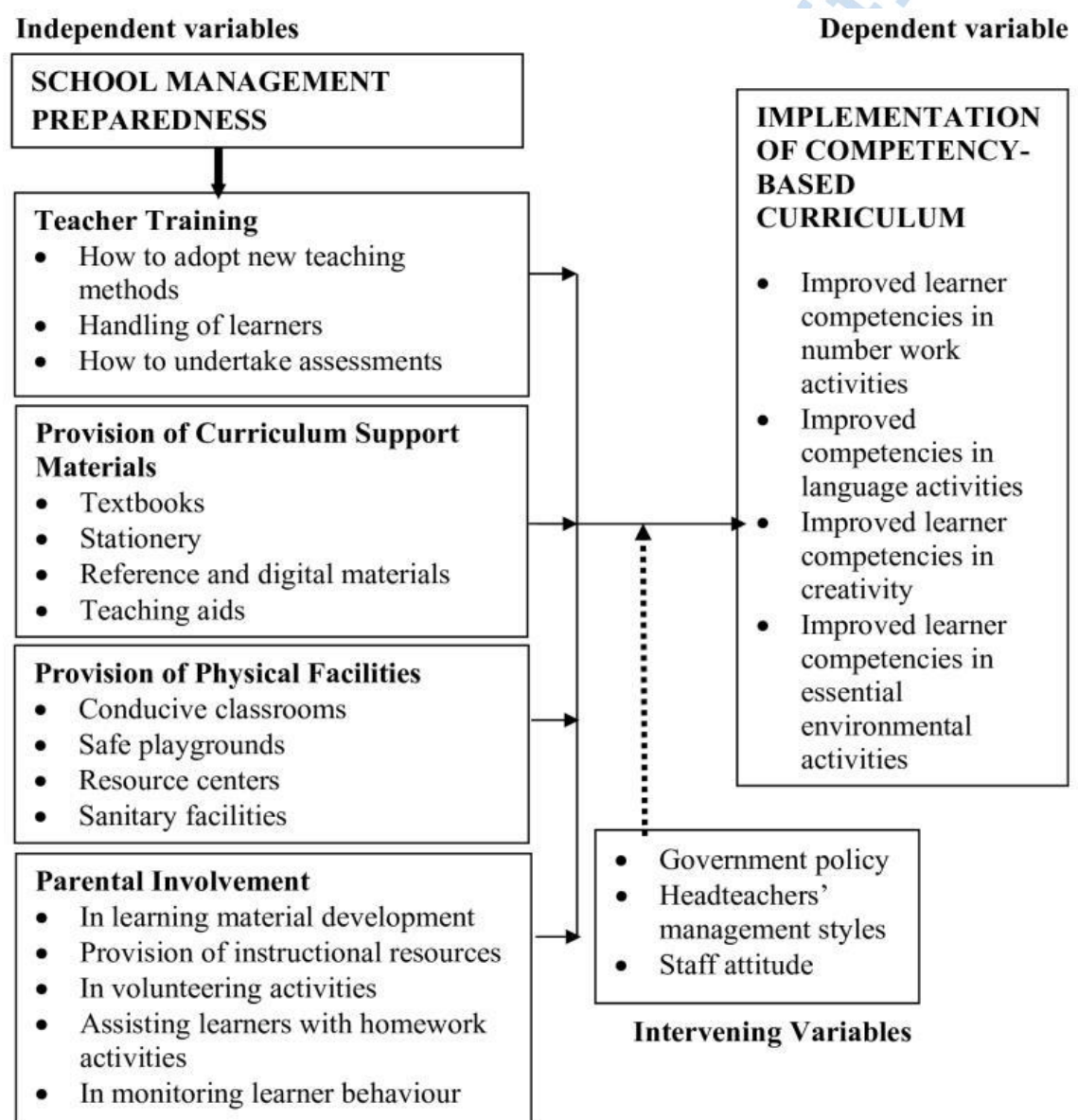
The combination of these two theories offers a comprehensive theoretical framework for this study. The theory of organizational readiness for change highlights the importance of school management's preparedness to implement CBC. It stresses the need for effective teacher training, the availability of curriculum support materials, and the involvement of parents and other key stakeholders. On the other hand, the curriculum implementation theory underscores the need to design a curriculum that is focused on competencies and practical skills rather than traditional subjects or

examinations. Together, these theories provide a well-rounded approach to understanding the key factors that contribute to the successful implementation of CBC in schools. For CBC to be successfully implemented, schools must ensure they are ready to embrace the changes required, and this readiness must be supported by a curriculum that is both relevant and adaptable to the needs of learners. This study, therefore, uses these two theories to explore the preparedness of school management and the process of curriculum implementation in the context of CBC.



## 2.4 The Conceptual Framework

This study's conceptual framework centered on the readiness for school management, which was indicated by factors such as teacher preparation, availability of curriculum support materials, physical facilities, and parental involvement—these were considered independent variables. The dependent variable was implementation of a competency-based curriculum in primary schools. Intervening variables included government policies, headteachers' management styles, and staff attitudes, as illustrated in Figure 1;



**Figure 1: The Conceptual Framework**  
Source: Researcher (2025)

Figure 1 is the conceptual model of readiness in the study of school administration which determines the nexus between various independent factors, teacher preparedness, provision of the support material of the curriculum, physical facilities, and parental participation and the dependent factor, the adoption of CBC in the public primary schools. Teacher preparedness in which the teachers are well equipped in skills and knowledge is the central theme in the implementation of CBC effectively. Availability of the support material of the curriculum and adequate physical facilities complements the teaching and learning environment, enabling the teachers to deliver the curriculum effectively. Parental involvement fosters a collaborative approach to education, reinforcing the curriculum's objectives and supporting students' learning.

The study also identifies intervening variables that influence this relationship. Government policy shapes the framework within which the CBC is adopted, ensuring that schools align with national educational standards. The headteachers' management styles affect how well these resources and supports are utilized in the classroom, as their leadership determines the overall school climate and operational efficiency. Additionally, staff attitudes towards the CBC, whether positive or resistant, can significantly impact its adoption. Thus, while teacher preparation, curriculum materials, physical infrastructure, and parental engagement are crucial independent variables, their impact on CBC adoption is moderated by governmental policies, leadership practices, and the staff's mindset.

## **2.5 Research Gaps**

The literature review highlights the central role of school management readiness in the effective use of competency-based curriculum (CBC). School management is responsible for numerous key factors crucial in the effective use of CBC. These encompass re-training teachers, supplying curriculum support material, availing

physical facilities, and incorporating parent participation in the management of the school. Nevertheless, the review of previously done research revealed some areas of gap to date for the comprehensive understanding of the implementation of CBC. One of the areas of gap is related to teacher training and effect of the same towards CBC implementation. Murungi (2017) in Igembe Central Sub-county established through study that teachers are required to be well-trained since they would be in a better position to understand the philosophy of the subject and the effect the program would have on the learner, parent, administrator, and the various stakeholders. Nevertheless, Murungi (2017) and other studies reviewed in the course of this study did not examine the specific skills required by teachers to implement CBC successfully and the effect the skills would have on the adoption of CBC in the primary schools.

In the follow-up of the provision of teaching and learning support material, the National Assessment System for Monitoring Learning Achievement (NASMLA) study (2020) demonstrates the Ministry of Education had supplied textbooks, reference books, and stationery to facilitate the teachers to implement CBC. Even though the support is significant, neither NASMLA (2020) nor the following studies examined in detail the effect of provision of proper material and material quality on the implementation of CBC in the public primary schools. The lack of comprehensive studies in the field of provision of proper material and material quality left a crucial aspect of the teaching and learning process inadequately researched.

Another area of focus is physical facilities provision and how it contributes to CBC implementation. Nturibi's (2015) study in Meru County revealed that the physical facilities' condition determines the manner in which learning occurs and the condition which directly determines the pupils' academic performance in various fields of study. However, like in the initial two gaps, Nturibi's (2015) study, like in other reviewed

studies, could not determine the specific contribution of the sufficiency of physical facilities to CBC implementation. The exclusion serves to limit the comprehensive understanding of the contribution of infrastructural facilities to the success of CBC in public primary schools. Parental involvement in the management of the school is also another important area of focus in the literature. However, studies, including the study of Thuba et al. (2017), could not specifically detail the specific activity to be undertaken by the parents and the manner the specific activity specifically contributes to the CBC implementation in the school. The exclusion serves to limit the effective use of findings in the elevation of parental participation in the process of implementing the curriculum. Such research gaps thus instilled the value to conduct further studies in order to address the specific factors contributing to the successful CBC implementation in public primary schools.

## **2.6 Summary of Literature Review**

The literature highlights the significance of school management and its preparedness in successfully implementing a competency-based curriculum (CBC). Effective school management ensures that curriculum implementers possess the necessary skills, have access to support materials, and benefit from adequate physical facilities. It also emphasizes the importance of involving parents at every stage of the CBC implementation process. Despite these efforts, numerous challenges still hinder the effective implementation of CBC in public primary schools. Therefore, more research is needed to evaluate the extent to which the preparedness of school management influences the implementation process. This underscores the need for further investigation, which is the focus of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter describes the research methodology that was used to carry out the study. It focuses on the research methodology and design, location of the study, target population, sampling and sampling procedures and research instruments. It also outlines the piloting of research instruments, validity, reliability, credibility, dependability and research tools. Furthermore, it highlights data collection procedures, data analysis procedures and ethical considerations.

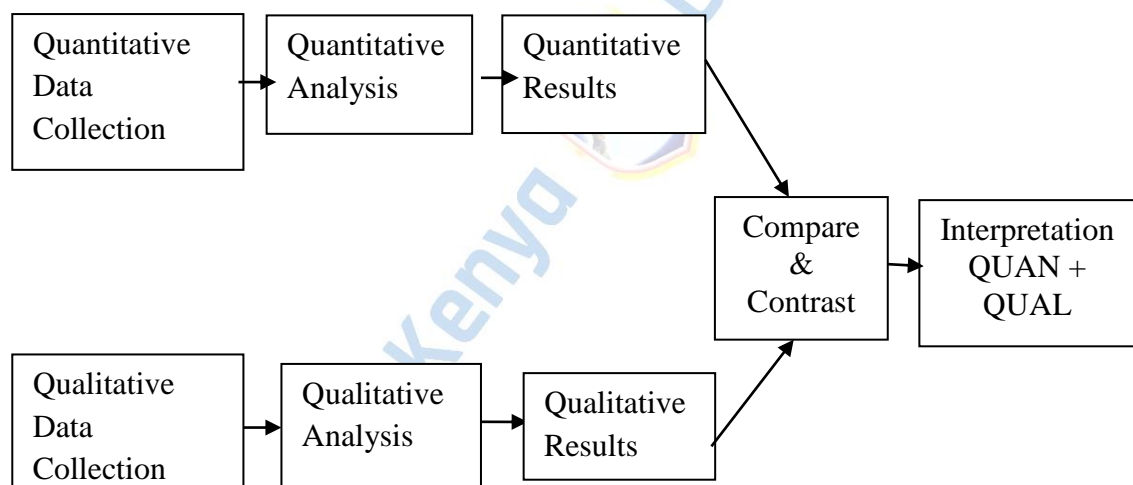
#### **3.1 Research Methodology**

The study's adopted mixed methodology, which included both qualitative and quantitative approaches, aimed to give a deeper knowledge of the research subject. This strategy was appropriate since this study included the gathering and analysis of quantitative and qualitative data. The researcher in the aforementioned investigation made use of the strengths of both the quantitative and qualitative methodologies to support one another. In the quantitative approach, a large sample of people are surveyed and measurable data are gathered, according to Creswell (2014). Questionnaires were used to gather the data in this instance. At the same time, qualitative data were gathered by relying on participant opinions and gathering information that was primarily verbal in nature. In this instance, data were gathered through observation logs and questionnaires.

#### **3.2 Research Design**

Since the study was conducted in a single phase and used a concurrent triangulation design, the quantitative and qualitative approaches were employed concurrently and with equal weight.

For the scholar to fully comprehend the study topic, this approach often entails the concurrent but independent gathering and analysis of data that is both qualitative and quantitative (Creswell, 2014). By combining the various outcomes in the interpretation, the researcher combined the two data sets. This study's design was appropriate since it allowed for the collection and analysis of qualitative as well as quantitative data. It involved groups of quantitative data that could be numerically tallied along a continuum. With the help of this architecture, data that defined occurrences could be gathered, categorized, tabulated, visualized, and discussed. In order to give sufficient interpretations of the variables under inquiry, the results of the quantitative and qualitative approaches were then combined and triangulated concurrently. The method is depicted in Figure 2:



**Figure 2: Concurrent Triangulation Research Design**  
 Source: Creswell (2018)

### 3.3 Location of Study

The Eastern region of the Republic, in Meru County's Igembe Central Sub-county, is where the inquiry was conducted, with a population of around 221, 412 people and a total area of 604.1 km<sup>2</sup>, the sub-county has a population density of 366 people per km<sup>2</sup> (KNBS, 2019). Igembe Central Sub-county's primary economic activities include miraa growing, subsistence agriculture, and trading.

However, as was already said, CBC's implementation in public primary schools has not been seamless enough to achieve the stated goals. Many learners in lower-level public primary schools continue to exhibit poor learning outcomes and abilities in programs that teach reading and numeracy. A report compiled by the KNUT (2019) categorically stated that, owing to the hurried implementation of CBC, many learners are yet to fully master concepts as envisioned in the new curriculum.

To corroborate this claim, NASMLA (2020) also found that the implementation of CBC is still at lower levels since only 19.4% of learners in lower public primary schools in Igembe Central Sub-county manifest improved literacy and communicative competency, only a paltry 11.9% can undertake basic numeracy and number work activities while 16.3% have mastered essential life skills such as team building and leadership competencies. This is further supported by low performance in KPSEA (2022) results for grade VI where only a third (33.3%) of the learners scored over 50.0% (MoE, 2023). Thus, the focus on Igembe Central Sub-county as the location of the study.

### **3.4 Target Population**

Igembe Central Sub-county has 76 public primary schools from which participants were drawn. Thus, the target population was 23,015 participants, which included 76 headteachers, 1187 teachers, 21,370 pupils, 2 Sub-county Directors of education (TSC & MoE) as well as 380 parents' representatives as shown in Table 1:

**Table 1: Target Population**

<b>Respondents</b>	<b>Target Population</b>
Headteachers	76
Teachers	1187
Parents' Representatives	380
Sub-county Directors of Education (TSC & MoE)	2
Primary School Pupils	21, 370
<b>Total</b>	<b>23, 015</b>

**Source: Igembe Central Sub-county Office (2025)**

### 3.5 Sampling Procedures and Sample Size

The researcher applied Yamane's Formula to determine a sample size with an appropriate size in relation to the objectives of the investigation. This was suitable since it yielded a precise and finite sample size which was highly representative since it is a formula based on the target population at a high confidence level. This was applied as follows:

$$N_0 = \frac{N}{1 + N (e^2)}$$

$N_0$  = 95% confidence interval ideal sample size

$N$  = Target Population

$e$  = 5% level of confidence (0.05 in decimal form)

The required sample was thus:

$$N_0 = \frac{23015}{1 + 23015(0.05)^2}$$

$$N_0 = 394 \text{ respondents}$$

Stratified sampling was used to divide the sub-county into two strata depending on the number of zones, that is, Kangeta with 45 schools and Kiengu with 31 schools, in Central Igembe Sub-county. With the use of this sampling technique, it was possible to get samples that were uniform, homogenous, and very proportionally representative of each zone.

Using simple random sampling to prevent bias, 13 headteachers, 39 parent representatives, 78 teachers (six teachers per school), and 66 primary school learners (at least five per school) were chosen from each zone. The census approach was utilized to sample every one of the Sub-counties Directors of Education, despite the fact that there were only a few of them (TSC & MoE) (2). Table 4 shows the sample size that the researcher was able to collect, which included 132 primary school learners, 156 teachers, 78 parent representatives, 26 headteachers, and sub-county directors of education;

**Table 2: Sample Grid**

<b>Participants</b>	<b>Target Population</b>	<b>Sampling Techniques</b>	<b>Sample Size</b>
Headteachers	76	Simple random sampling	26
Teachers	1187	Simple random sampling	156
Parents' Representatives	380	Simple random sampling	78
Sub-county Directors of Education (TSC & MoE)	2	Census sampling (Take the whole target as a sample)	2
Pupils	21, 370	Simple random sampling	132
<b>Total</b>	<b>23, 015</b>		<b>394</b>

**Source: Researcher (2025)**

### **3.6 Research Instruments**

These are the instruments that were utilized to collect data about the particular set themes of the study objectives. These contained test materials for educators as well as interview questions for headteachers, parents' representatives, and sub-county directors of education (TSC & MoE). There was also an observation checklist for primary school learners and a document analysis guide for the researcher.

#### **3.6.1 Questionnaire for Teachers**

In order to gather quantitative information from teachers, the study used a questionnaire of its own construction containing closed test items.

This is due to the fact that a questionnaire, as stipulated by Morse (2010), is a research instrument consisting of some enquiries and other requests for information to be collected from the respondents and is usually created for statistical analysis of the reply. The three sections of the questionnaire were created in order to collect information on the various research variables. The demographic details of the respondents' sex and educational level were obtained in the questionnaire's Section A. For the application of CBC in public primary education, information in Section B comprised the state of the implementation (Dependent Variable), information in Section C comprised information on teachers' preparation, information in Section D comprised information on the support of the curriculum, information in Section E comprised information on physical facilities, and information in Section F comprised information on parental participation. As stipulated by Creswell (2014), the Likert scale represents a scale of theoretically equivalent spaces between the responses, and therefore the test items of 5-point Likert type questions based on the study objectives were appropriate.

### **3.6.2 Interview Schedule for Headteachers, Parents' Representatives and Sub-county Directors of Education (TSC & MoE)**

They are either directive or non-directional, structured or unstructured. Head teachers, parent representatives, and sub-county directors of education (TSC & MoE) were targeted as respondents in the study. Structured interview schedules and open test items were employed to collect qualitative data. Face-to-face data is appropriate, in Schreiber and Asner-Self's (2011) opinion, since it is used to cross-validate information distilled out of the questionnaire-surveys and also to enable the researcher to observe verbal and non-verbal communications of the participants. Interviews were very important in the study since they would enable the researcher to ask probing and follow-up questions.

### **3.6.3 Observation Checklist for Learners**

The checklist of observations had been prepared by the researcher. Observations of the students' ability to do simple work had been made to reflect the level of ability in simple numeracy, language and creativity and demonstration of the fundamental environmental competencies.

### **3.6.4 Document Analysis Guide**

In this research, the checklist of document analysis gave the secondary data for the verification of views presented through different participants on the study objectives. On this, the researcher made the study of the school registers in order to establish the extent to which the pupils of the primary school display different degrees of competence and state of preparedness of school management in the number of teachers who have undergone CBC training, access to and adequacy in the curricular support material, physical infrastructures and the level of parent participation in the use of CBC.

### **3.7 Piloting of Research Instruments**

A pilot study had also been conducted among 40 respondents in a sample of public primaries within Igembe Central Sub-county. It had conformed to the suggestion by Kothari (2005) for the pilot sample to be 10% of the study sample (10.0% of 394). The pilot study had primarily been to establish the sufficiency and readability of the research tools developed, the relevance of the information being solicited for, and the appropriateness of the language. The result of the pilot study also served to test the research tools for the purpose of validating and finding how good they were. The pilot study also served to predict potential pitfalls or difficulties facing the respondents, such as the meaning while filling in the questionnaire and time allocation for the conduct of the data collection. Interview schedules were also subjected to test in order to establish if the queries were well framed and elicited the proper range of answers, which assisted

the researcher in identifying areas of refinement. Worth mentioning here is the fact that the respondents in the pilot study were never used in the conduct of the data collection in order to avoid causing bias.

### **3.7.1 Validity**

In the study, the researcher also consulted University Supervisors and educational administration, leadership, and management specialists to validate the test items and corresponding responses. The purpose of the validation was to determine if the test items had produced the required information. Test items in the test which had failed to meet the test of producing the required information were struck off the study, while relevant ones were suggested and used in the study. The suggestions were made to determine the validity of the study's conclusions. According to Creswell (2018), researchers measure the content validity through expert panel advice to determine the reliability of the questions. Validity, to Creswell (2018), measures the meaningfulness and intelligibility of an individual's test score, enabling the researcher to effectively conclude the study population being observed from the sample.

### **3.7.2 Reliability**

The researcher, by the guidance of the university supervisors, critically reviewed the consistency of the answers on the test items in order to establish a judgment on the reliability of the tools. The reliability of the test items of the scale was determined by the application of the split-half method. In this scenario, the test items were given to the responders once, and the answers were split into two equal sections, or "halves." The reliability index between the two 'halves' is calculated by the application of the Cronbach Alpha Method and is  $r = 0.724$ . The test items of the scale have higher internal consistency where the value of the Cronbach Alpha Coefficient is close to 1. The Cronbach Alpha Coefficient for this study was  $r = 0.75$ , which was considered

satisfactory and suggested strong internal reliability. This is due to Kothari's (2005) assertion that any Cronbach Alpha number between 0 and 1 denotes strong internal consistency.

### **3.7.3 Credibility**

With the concurrent triangulation of data analysis approach, several data sources, studies, methods and/or literature crossed the data meaning within individuals and settings. Both qualitative and quantitative data were also analyzed simultaneously and results were integrated for further study. Such data triangulation enhances the credibility substantially (Creswell, 2014). It is with such data triangulation of the sort that the researcher attained the credibility. A series of tactics provided the means of formulating and broadening the trustworthiness of findings. Incorporation of both numerical and non-numerical study approaches, gathering of data from various sources, various tools of data collection and comparison of the qualitative and quantitative results established credibility.

Confirmation of the results of the data analysis through participants by asking for specific participants to confirm the transcripts also established the same. Conduct of peer debriefing sessions which afforded the chance for peers and supervisors to read and authenticate the evidence also established the same. Summarizing and rephrasing of the responses then re-presenting the data to the participants and asking for further clarification of unclear statements in the data collection activity ensured accuracy and proper interpretation of the meaning intended by the participants.

### **3.7.4 Dependability**

The level of dependability of the interview schedules used in the study was achieved by the researcher by overlapping approaches in the mixed methodology and devising an in-depth methodological description in order to enable the study to be repeated in the

future. It helped in the documentation of a high level of dependability in the qualitative data tools. A variety of interview schedules elicited new information from the respondents and the tools were received as dependable using such an approach. According to Guetterman, Fetters and Creswell (2015), such systematic documenting of information gained and analysis procedures form an audit trail and mechanisms for the determination of findings which enhance dependability. There was proficient evaluation, through proper study procedures and design. In the current research study, the researcher used various sampling techniques and literature review of vast scope from credible sources to achieve dependability.

### **3.8 Data Collection Procedures**

The research had ethical clearance and approval to carry out the study from the Ethics and Review Board and the School of Postgraduate Studies of the Mount Kenya University in the form of issuance of the Ethics Clearance Certificate and Introductory Letter respectively. The researcher then moved to obtain a research permit from the National Commission for Science and Innovation. (NACOSTI). Permission had also been granted by the County Director of Education, the County Commissioner and the County Government of Meru. There also had to be a self-introduction letter to all the headteachers of the study- participant schools.

Participants signed the consent form before participation in the data collection activity to show voluntary participation in the study. For purposes of having good response rate, the researcher made in every school a representative for carrying out a constant reminder. Appointments for interview and observation were made in the first visit by the researcher. There were personal interviews of the headmasters, the parent's representatives and the sub-county directors of education (TSC & MoE). Field notes were made while carrying out the interviews.

A note in line with the thematic arrangement of the interview schedule was made after each interview. The procedures were the following presented in Table 3;

**Table 3: Data Collection Procedures**

<b>Research Questions</b>	<b>Questionnaire Questions</b>	<b>Interview Guides</b>	<b>Observation Checklist</b>	<b>Document Analysis Guide</b>
What is the status of implementation of competency-based curriculum?	Teachers	<ul style="list-style-type: none"> <li>• Headteachers</li> <li>• Parents' Representatives</li> <li>• SCDE (TSC &amp; MoE)</li> </ul>	<ul style="list-style-type: none"> <li>• Pupils</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher</li> </ul>
How does training of teachers influence implementation of competency-based curriculum?	Teachers	<ul style="list-style-type: none"> <li>• Headteachers</li> <li>• Parents' Representatives</li> <li>• SCDE (TSC &amp; MoE)</li> </ul>	<ul style="list-style-type: none"> <li>• Pupils</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher</li> </ul>
To what extent does provision of curriculum support materials influence implementation of competency-based curriculum?	Teachers	<ul style="list-style-type: none"> <li>• Headteachers</li> <li>• Parents' Representatives</li> <li>• SCDE (TSC &amp; MoE)</li> </ul>	<ul style="list-style-type: none"> <li>• Pupils</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher</li> </ul>
How does the involvement of parents influence implementation of CBC in public primary schools?	Teachers	<ul style="list-style-type: none"> <li>• Headteachers</li> <li>• Parents' Representatives</li> <li>• SCDE (TSC &amp; MoE)</li> </ul>	<ul style="list-style-type: none"> <li>• Pupils</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher</li> </ul>
What is the influence of availability of physical facilities on implementation of CBC?	Teachers	<ul style="list-style-type: none"> <li>• Headteachers</li> <li>• Parents' Representatives</li> <li>• SCDE (TSC &amp; MoE)</li> </ul>	<ul style="list-style-type: none"> <li>• Pupils</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher</li> </ul>

### 3.9 Data Analysis Procedures

Analysis of data began by finding recurring themes in the narrative of the respondents' experience. After the data collection process, cleaning of the data then ensued which included the finding of incomplete or erroneous responses to enrich them.

The relevant information was segregated into words or statements, which denote a single, specific idea. The responses for the close-ended measures were given codes and tags. Frequency distributions of the responses were prepared to generate information concerning the respondents. Qualitative information obtained through the interviews and observation schedules were analyzed and presented thematically in accordance with the study objectives. Analysis involved grouping hundreds of responses into themes structured by the research objectives. This information was presented in prose form and verbatim presentations. The qualitative data were used in supporting the discovery of the qualitative study and to detail the acquired concepts.

Quantitative data were analyzed descriptively in the application of the use of frequency and percentages. Inferential analysis was also made in the application of the use of the linear regression analysis in Statistical Packages for Social Science (SPSS Version 23) to establish the relationship between different dimensions of preparedness of school management in the implementation of competency-based curriculum in public primary schools. Presentation of the quantitative results of the study employed the use of tables and charts. The procedures were the same as in Table 4;

**Table 4: Data Analysis Procedures**

<b>Research Questions</b>	<b>Independent Variable</b>	<b>Dependent Variable</b>	<b>Quantitative Data Analysis</b>	<b>Qualitative Analysis</b>
What is the status of implementation of CBC in public primary schools?		<ul style="list-style-type: none"> <li>• Implementation of CBC</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis</li> </ul>
How does training of teachers influence implementation of CBC?	<ul style="list-style-type: none"> <li>• Training of teachers</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of CBC</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Linear regression analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis</li> </ul>
To what extent does provision of curriculum support materials influence implementation of CBC in public primary schools?	<ul style="list-style-type: none"> <li>• Provision of curriculum support materials</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of CBC</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Linear regression analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis</li> </ul>
What is the influence of availability of physical facilities on implementation of CBC in public primary schools?	<ul style="list-style-type: none"> <li>• Physical facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of CBC</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Linear regression analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis</li> </ul>
How does the involvement of parents influence implementation of CBC in public primary schools?	<ul style="list-style-type: none"> <li>• Involvement of parents</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of CBC</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Linear regression analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Thematic analysis</li> </ul>

### 3.10 Ethical Considerations

Outlining the study's objectives, participant requirements, informed consent processes, and confidentiality protections are all ethical issues in research.

#### 3.10.1 Access to Sites

In order to access the public primary schools, the researcher made a formal introduction of themselves to the sampled schools' management after which they produced letters of permissions from the County Director of Education and the Meru County

Commissioner. The researcher also produced an official permit to study and authority to study from the NACOSTI.

### **3.10.2 Informed Consent**

The researcher did not force the participants in circumstances where they felt uncomfortable in order to allow fair and free interaction. The researcher allowed them to give information voluntarily and respected the way they felt if they refused to give some of the confidential information. Thus, the researcher notified the participants of the procedures to be used while gathering information through having them give information voluntarily and without coercion. Hence, the participants read, understood and signed the form of consent before participating in the research process. For the minors (pupils), the informed consent was obtained through the parents or guardians where they were to fill in the informed consent form (Appendix III) to allow the children to participate in the study.

### **3.10.3 Privacy and Confidentiality**

The participants were reassured by the researcher of confidentiality of the information. The study's stated objective was the only use of the data, and the data were otherwise in no way used by unintended individuals. It therefore enabled the participants to give factual information and for that matter the participants' names and the participants' schools were nowhere included in the data collection tools save for the fact that a cipher system was developed and which only the researcher alone knew.

### **3.10.4 Anonymity**

The researcher requested participants to provide information without disclosing their identities in the data-collecting tools. Participants were made anonymous to the researcher by the current investigator by assigning confidential codes. No participant information was disclosed in black and white nor through any medium of verbal

communication of the activity between the participants and the researcher. It enabled the researcher to attempt to prevent prejudiced participant feedback.

### **3.10.5 Mien and Decorum**

Before, during, and while carrying out the interview process to the participants in the schools where the study was being undertaken, and while in the process of carrying out the study process, the researcher portrayed in the appropriate and acceptable way and to the required manners. To the Meru County Ameru community standards where the study had been undertaken, the researcher had the best level of good conduct.

### **3.10.6 Storage of Data**

The information thus gathered from the participants were carefully handled and retained in the greatest secrecy to avoid passing to unauthorized persons. It was retained in hard and soft form. The researcher never passed out information gathered to anyone for whatever reason. Questionnaires, interview schedules, observation notes and document analysis guide notes were retained after and even in the course of data analysis in lock and key.

### **3.10.7 Plagiarism**

The researcher then uploaded the thesis to the Turnitin program to have original, clean work. They did this before each defense. The percentage index never went higher than 15%. The references were included in this. The thesis was made clean and restored to the computer for plagiarism detection if the percentage was higher. When the presentation had been completed, the plagiarism index of the document was included in the final attachment. Confirmations were always made by the Mount Kenya University School of Post Graduate Studies. The researcher's work had been made certain to be original and clean through this exercise.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.0 Introduction

This chapter contains the results of the study. For the sake of clarity and chronology, the results are in relation to the four research questions to which the study attempted to answer. In the first segment of the results, demographic details of the respondents are given, since they may be relevant in the interpretation of the information they had given.

#### 4.1 Response Rate

In this research, 156 questionnaires were administered to teachers and 139 were returned duly filled out. 61 of the parents' representatives and 21 of the headteachers were also separately interviewed. There is also observation checklist for 126 pupils.

Response rates are listed in Table 5;

**Table 5: Response Rates**

<b>Respondents</b>	<b>Sampled Respondents</b>	<b>Those Who Participated</b>	<b>Achieved Return Rate (%)</b>
Headteachers	26	21	80.8
Teachers	156	139	89.1
Parents' representatives	78	61	78.2
Sub-county Directors of Education (TSC & MoE)	2	2	100.0
Primary School Pupils	132	126	95.5
<b>Total</b>	<b>394</b>	<b>349</b>	<b>88.6</b>

**Source: Field Data (2023)**

Table 5 also disclosed that the headteachers had 80.8% response rate, teachers had 89.1%, parents' representatives had 78.2% while the primary pupils had 95.5% response rate. But the entire (100.0%) of the Sub-county Directors of Education (TSC & MoE) responded in the study This presented the overall mean response rate to be 88.6%, which is concurring to the assertions of Creswell (2018) where 75.0% of the response rate is

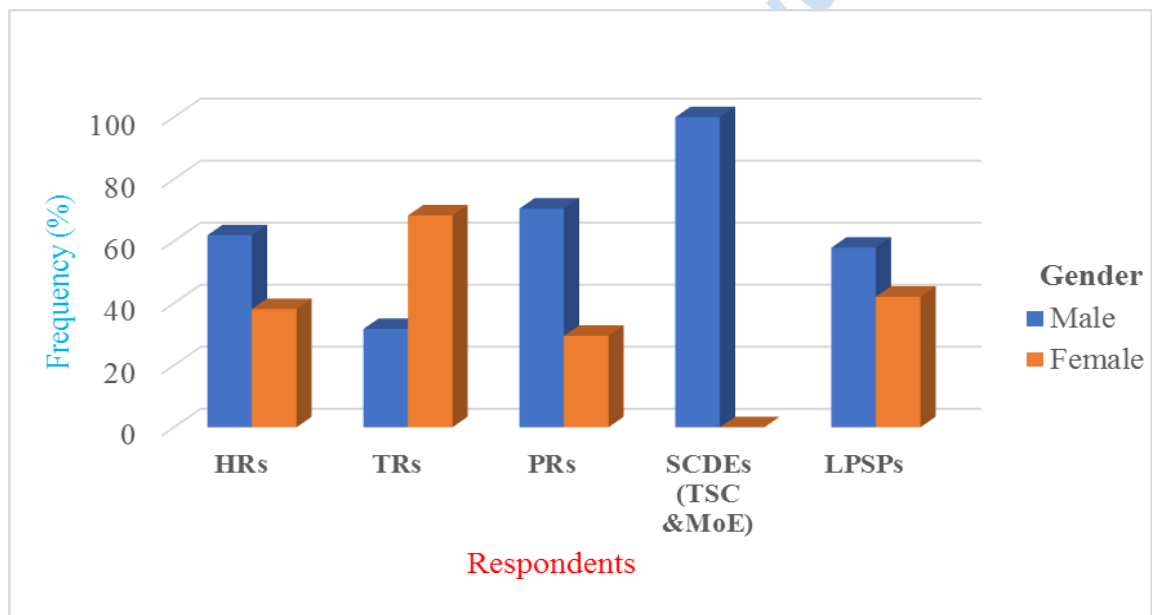
acceptable. This data proved important in the respect that the researcher could generalize the study findings to the target population.

## 4.2 Respondents' Demographic Information

The questionnaire asked for demographic details of the respondents. These were educational level and gender. It had to be done because the variable would determine the potential to articulate credible information regarding the objectives of the study.

### 4.2.1 Gender of the Respondents

The result of the data collection of the respondents' distribution by sex is presented in Figure 3;



**Figure 3: Distribution of the Respondents by Gender**

**Key:** HRs-Headteachers; TRs-Teachers; PRs-Parents' Representatives; SCDEs (TSC & MoE)-Sub-county Directors of Education; LPSPs-Primary School Pupils

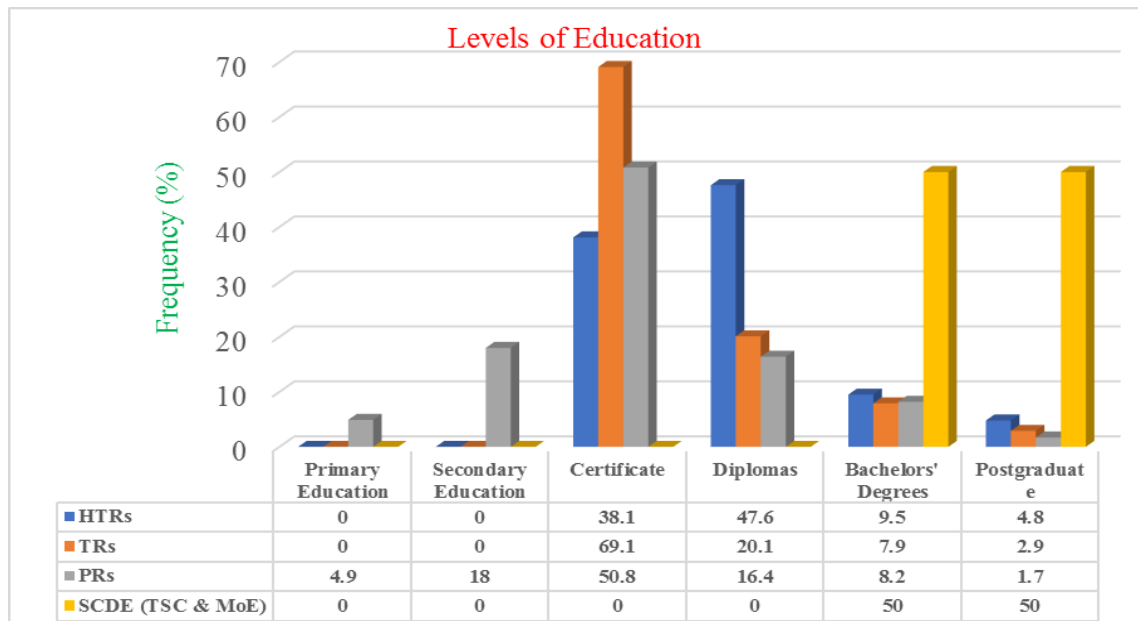
Figure 3 shows that slightly less than two-thirds, 13(61.9%), of the headteachers were male whereas 8(38.1%) were female. However, 95 (68.3%) of the primary school teachers were female, compared to 44 (31.7%) of their male colleagues. Most of the parents' representatives, 43(70.5%), were male while female parents' representatives were 18(29.5%). All the Sub-county Directors of Education (TSC & MoE) were male. Primary school pupils were fairly distributed with male pupils constituting 73(57.9%) of

the sample and their female counterparts being 53(42.1%). These findings show that there was sufficient gender parity at all study levels and that both male and female stakeholders are very concerned about how much school management readiness affects the adoption of competency-based curricula in primary schools. These results further indicates that gender plays a significant role in shaping experiences and perspectives in educational environments. Men and women, or boys and girls, often face different challenges and opportunities in the schooling system due to cultural, societal, and institutional factors. Understanding these differences can provide more nuanced insights into how school management's preparedness might impact the effectiveness of CBC implementation.

In the same token, gender data allows for a more accurate representation of the entire population. By ensuring that both male and female respondents are included, researchers can avoid gender bias, which might skew the results. Differences in leadership styles, administrative practices, and resource allocation between genders can influence how well CBC is implemented, so capturing this data ensures comprehensive analysis. By examining how school management preparedness impacts both genders equally, the study can inform policies and practices that support gender equity in educational settings, contributing to more effective and inclusive CBC implementation in primary schools.

#### **4.2.2 Level of Education of Respondents**

The research tools also elicited information on the level of education of headteachers, teachers and parents' representatives. The results are shown in Figure 4;



**Figure 4: Respondents' Level of Education**

Figure 4 confirms that the majority, 10(47.6)%, of the headteachers possessed Diplomas, 8(38.1)% possessed certificate qualifications (P1), 2(9.5)% possessed Bachelors' Degrees while 1(4.8)% possessed postgraduate qualifications. Most of the teachers, 96(69.1)% possessed certificate qualifications, 28(20.1)% possessed Diplomas, 11(7.9)% possessed Bachelors' degrees while minimal 4(2.9)% possessed postgraduate qualifications. Just over half, 31(50.8)% of the parents' representatives possessed certificate qualifications, 11(18.0)% possessed secondary education, 10(16.4)% possessed Diplomas, 5(8.2)% possessed Bachelors' Degrees, 3(4.9)% possessed primary education while 1(1.7)% possessed postgraduate qualifications.

From the information, the respondents possessed basic education which met the expectations they were qualified to respond to queries on the level to which the management preparedness. This implies that the level of education directly impacts the understanding and ability of school management to effectively implement CBC. Educational qualifications determine the depth of knowledge and skills that administrators possess, influencing their decision-making and leadership strategies.

Respondents with higher levels of education are likely to approach CBC implementation with a more informed perspective, while those with lower qualifications may face challenges in grasping and applying CBC principles. Besides, the educational background of school leaders can shape their professional development and training opportunities, which are critical for effective curriculum implementation. Understanding this demographic detail allows researchers to identify whether there is a correlation between the education level of respondents and their preparedness to handle the complexities of CBC. Additionally, including education levels helps account for potential disparities in preparedness, highlighting areas where further training or support may be needed. It also aids in analyzing whether education level influences the adaptation and responsiveness of school management to the demands of CBC. Therefore, gathering this data is essential for accurate and insightful study findings.

#### **4.3 Status of the Implementation of Competency-based Curriculum in Public Primary Schools**

The research had the aim of finding out the level of implementation of Competency-based curriculum in the public primaries in Igembe Central Sub-county. It was conducted by assessing the display of the competencies of the learners in the relevant areas of learning in relation to the CBC rubrics such as the basic numeracy, language, creativity skills and the foundational life and environmental skills. Descriptive data were produced through the teachers and the findings are in Table 6;

**Table 6: Status of Implementation of Competency-based Curriculum in Public Primary Schools**

Learning Outcomes of Primary School Learners	Exceeding Expectations	Approaching Expectations	Below Expectations
	%	%	%
Learner competencies in number work skills	31.7	18.0	50.3
Learners can undertake language tasks such as reading, writing and oral activities	30.2	20.9	48.9
Competencies in creativity among learners	45.1	25.6	29.3
Learners can undertake tasks in essential environmental or life activities	33.8	27.3	38.9

**Source: Field Data (2023)**

Table 6 reveals that close to less than a third, 44(31.7%, respectively), of the primary school teachers indicated the basic numeracy skills of the learners they teach are above expectations; 25(18.0%, respectively), reported they are close to expectations; and just over half, 70(50.3%, respectively), reported they are below expectations. In addition, Table 6 reveals 68 (48.9%, respectively), of the primary school teachers reported the language skills of the learners they teach are below expectations while 42 (30.2%, respectively), reported they approach. For language skills of the type like reading, writing, and speaking, 29 (20.9%, respectively), reported they surpass them.

Table 6 also reveals 63 of the primary school teachers (45.3%, respectively), reported the creativity talents of the learners they teach like drawing, coloring, etching, painting, and pattern development surpass and outdo what is required of them in the classroom, 36(25.9%, respectively), reported they approach expectations while 40(28.8%, respectively), reported below expectations. On the fundamental environmental or life skills, 47(33.8%) of the primary school teachers reported there is the potential of the

learners to carry out crucial environmental or life skills, 38(27.3%) reported they meet the expectations while 54(38.9%) reported below expectations. These findings were also reflected in low learning achievements which were seen in internal and national tests. For example, in the 2022 Kenya Primary School Education Assessment (KPSEA), 66.7% of the candidates (those currently in Junior Secondary Schools) scored between 20 to 50% while only a third (33.3%) scored higher than 50.0% in the test.

These results are in alignment with a report developed by NASMLA (2020) which concluded that the implementation of CBC is still at an insignificant level due to the fact that only 19.4% of the pupils in the public primary schools in Igembe Central Sub-county exhibit improved literacy and communicative competence, only negligible 11.9% are capable of performing simple arithmetic operations, and only 16.3% are capable of acquiring crucial life skills like teamwork and leadership skills. It thus means that, in the ongoing efforts of various stakeholders to see the public primary pupils achieve better, many of the primary school pupils continue to bring low grades in crucial areas of learning in CBC, specifically, in the areas of basic numeracy, language, creativity and crucial environmental/life skill activities.

#### **4.3.1 Thematic Analysis**

In the interviews, the headmasters and the parents' representatives also echoed in support of the argument that numerous teachers hardly catch up on the syllabus in time with many students having low learning achievements in the key areas of learning under CBC. Headteacher, H1 observed:

*In our primary school, the teachers hardly finish the syllabi within the stipulated time. At times, the students are rushed through the material in order to finish the syllabus. This has affected the learning achievement of the students in public primary schools*

The representatives of the parents also admitted the fact that children of theirs are still performing poorly in number work activity and in language. Parents' representative, PR1, noted;

*In our school, the majority of our children are unable to perform the simplest number work operations, still lack the competence in communications, lack inventiveness. However, they show little mastery of the simple environmental skills such as the ability to name objects in their environment.*

The researcher also observed that the majority of the primary school students are struggling to handle simple number work exercises such as number recognition, number counting and simple operations such as addition and subtraction. The researcher observed;

*Most of the primary school pupils recognize the number in slabs, are unable to add and take away operations like without difficulty and are also unable to read the values of the number.*

The researcher further witnessed how the fluency in communicating by the primary school learners is a true issue. That is the case where most of the elementary school learners could neither read, nor write, nor say the word if properly pronounced, nor mention the meaning of the word. But most of the primary school pupils show great amounts of creativity, according to the primary school teachers and the heads of the schools. They never struggled in coloring shapes, pattern creation, schematic drawing, and even conducting crayon etchings. Such perceptions also reiterate the fact that the dynamics of the school are significant in enhancing coverage of the coursebook and achievement of the primary school pupils, which is evidenced in the quantitative data. Such perceptions also indicate that pupils in the elementary school continue to underachieve in the basic language, numeracy, and creative skills but maintain higher degrees of innovation and creativity.

#### 4.4 Teacher Training and the Competency-based Curriculum Implementation in the Public Primary Schools

The research further sought to understand how teacher training shapes the adoption of the competency-based curriculum in public primary schools. To achieve the objective, descriptive, inferential and thematic analyses were thus done as follows;

##### 4.4.1 Descriptive Analysis

The descriptive statistics were collected from all the teachers of the sampled public primary schools, organized and summed up into specific thoughts. Table 7 shows the findings;

**Table 7: Teachers' Views on the Influence of Teacher Training on Implementation of Competency-based Curriculum in Public Primary Schools**

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Teachers have been trained on teaching methods to be used in the implementation of CBC in public primary schools	51.8	11.5	5.8	5.8	25.1
Teachers have been trained on how to handle learners as a way of implementing CBC in public primary schools	54.0	14.4	5.8	11.5	14.4
Teachers have not fully mastered different skills on how to effectively implement CBC in public primary schools	57.6	9.4	7.2	9.4	16.4
Through CBC training, teachers have acquired new skills on how to use instructional resources while teaching	48.2	8.6	5.8	20.9	16.4
To improve learner competencies as envisioned under CBC, teachers have undergone training on how to assess learners	66.5	11.3	3.3	5.4	13.5

**Source: Field Data (2023)**

Table 7 indicates 72(51.8%) of the teachers who strongly agreed, 16 (11.5%) agreed, 8(5.8%) were undecided, 8(5.8%) disagreed, and 35(25.1%) strongly disagreed that teachers had been taught in the teaching methods to use in the application of CBC in public primary schools. These results are in agreement with Estonian study's findings made by Leithwood et al. (2013), which established that, for the achievement of the educational curriculum objectives, teachers have to be endowed with teaching techniques and methodologies in accordance to the requirements of the taught curriculum.

These results are in line with the fact that, despite nearly half of the teachers having reported they were never taught how to acquire new teaching techniques, teachers have to be adequately endowed with the required skills to carry out the teaching activity in better order to enable smooth competency-based curriculum implementation to take place in schools. It means teachers have to acquire new teaching approaches and techniques significantly different from the conventional approaches of teaching which were significantly instructor-centered in comparison to competency-based curriculum. The survey also established the fact of 75(54.0%) of the teachers-75(54.0%) strongly agreeing in the idea of the CBC in public primary schools having been implemented through the conducting of training to the teachers on how to interact in the classroom in comparison to 20(14.4%) which agreed. However, 20(14.4%) strongly disagreed, 16(11.5%) disagreed, and 8(5.8%) were undecided.

These results are in agreement with Obuhatsa's (2020) comments which were to the effect that the training of the teachers bestows the teachers the power to recognize the strength, the requirement and the preference of the lecture in addition to the consideration in mind of the duty shift of the duty centered on the relation framed between the pupil and the curriculum in the teaching activity.

The study found that 80(57.6%) of the teachers strongly agreed with the view that teachers have not fully mastered different skills on how to effectively implement CBC in public primary schools while 13(9.4%) agreed. However, 10(7.2%) were undecided, 13(9.4%) disagreed whereas 23(16.4%) strongly disagreed. These findings, however, are inconsistent with the findings of a study carried out in Igembe Central Sub-county in which Murungi (2017) established that teacher training is crucial since it enables teachers to understand both the philosophy behind any curriculum and how the new programme may impact learners, parents, administrators and other stakeholders.

According to Murungi (2017), teachers may find the curriculum assumes material they are unfamiliar with, something they have infrequently taught or something they are familiar but framed in an unconventional way. Despite these inaccuracies, these results thus suggest teachers should be adequately prepared to be able to familiarize themselves well with the objectives and the content of a document of the curriculum or even the syllabus in order to effectively implement the same. The study also revealed the fact that 67(48.2%) of the teachers firmly agreed the perception teachers under CBC training have acquired new skills in the use of instructional resources while teaching while 12(8.6%) agreed. Conversely, 8(5.8%) were undecided, 29(20.9%) disagreed while 23(16.4%) firmly disagreed.

That is contradictory to the findings of Leithwood et al. (2013) which were of the view training is an activity which invests teachers teaching competence such as how to design and use instructional resources and other forms of support of the material of the curriculum. Even though not in agreement with most of the teachers, such findings propose CBC training considers the use of instructional resources to be an educational component to be central to its implementation. Effective exploitation of such resources makes easier the mastery of the concepts for the learner while embedding the act of

learning to be fun and permanently embedded in the learner's memory. The majority, 92(66.2%), of the teachers firmly agreed that, in order to cater to learner competencies espoused under CBC, teachers have undergone training in assessing the learners while 16(11.5%) agreed. 18(12.9%) strongly disagreed, 5(5.8%) disagreed, and 5(3.6%) were indecisive. It is in agreement with the assertions made by UNESCO (2013) that training empowers teachers with the skills they need to optimize the delivery of the curriculum since, in the absence of the same, many teachers end up being overwhelmed by the tight expectations of leadership in schools.

The findings in effect show that training teachers is an extremely indispensable activity if the CBC is to deliver positive achievements in the schools. With in-service training and continuing professional studies, teachers acquire pre-requisite skills to augment their acquaintance of different areas which are needed for new directions for classroom pedagogy. On the basis of these studies, there is an immediate requirement for training teachers to implement reforms in the educational curriculum.

#### **4.4.2 Inferential Analysis**

Data for the mean performance of the students in grade VI of the 2022 Kenya Primary School Education Assessment (KPSEA) were collected from the 21 sampled public primary schools to determine the influence of preparedness of teachers on the implementation of competency-based curriculum in public primary schools. Table 8 displays the results:

**Table 8: Number of Times Teachers have been Trained and Implementation of CBC Public Primary Schools**

<b>Number of Times Teachers have Undergone CBC Training</b>	<b>Average Learning Outcomes among Grade VI Learners in 2022 KPSEA (%)</b>
1	40.30
10	39.20
12	53.90
13	37.90
11	35.50
7	58.70
8	30.10
3	23.04
5	50.91
12	44.88
4	36.87
17	68.93
10	42.95
13	54.89
12	49.01
8	45.89
6	32.98
6	42.99
7	34.93
7	58.10
16	54.80

**Source: Field Data (2023)**

Table 8 shows further that the number of times teachers themselves had been trained for CBC is also accountable for the performance of the pupils in the national assessments. That is, teachers who had been trained for multiple times have the pupils of such teachers record satisfactory grades in Kenya Primary School Education Assessment. These results point to the fact that the quality of teachers' training in the Competency-Based Curriculum (CBC) is directly linked to the performance of pupils in national tests. The success of any educational system hinges on the competency and preparedness of its educators. In the case of the CBC, teachers are required to adopt a more learner-centered approach that emphasizes skills acquisition, critical thinking, and practical application of knowledge. The frequency and depth of training teachers receive on CBC principles are crucial in equipping them with the necessary tools and strategies to effectively deliver the curriculum.

Teachers who undergo comprehensive and continuous training are more likely to implement CBC effectively in the classroom, thereby enhancing pupils' learning experiences. When teachers are not adequately trained, they may struggle to apply CBC methods properly, leading to gaps in the pupils' learning. This ultimately affects their ability to perform well in national tests, which assess competencies rather than rote memorization. Additionally, teachers' confidence in implementing CBC teaching strategies contributes to improved student outcomes. Therefore, the performance of students in national tests can serve as an indirect reflection of how well teachers have been trained and how they apply CBC methods in fostering the growth and development of their students. Without sufficient training, even the best curriculum can fail to achieve its full potential. Data in Table 8 were subjected to Linear Regression Analysis ( $Y = bX + a$ ), the outcome of which is reported in Table 9:

**Table 9: Relationship between Teacher Training and Implementation of Competency-based Curriculum in Public Primary Schools**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	32.075	5.094		6.296	.000
Number of Times Teachers Have undergone CBC training	1.400	.518	.527	2.705	.014

a. Dependent Variable: Implementation of CBC (KPSEA) in Public Primary Schools

Table 9 displays the linear regression analysis which produced a linear model of the form; Implementation of CBC (KPSEA Results) in public primary schools = 32.075 + 0.527Number of times teachers have been trained on CBC. The slope for CBC implementation revealed by KPSEA results in public primary schools and corresponding to the number of times instructor CBC training is conducted is 0.527,

based on these findings of the linear regression equation. It thus means the performance of the learners in national tests based on CBC rubrics is predicted to rise by 0.527 times (positive slope) for every rise in the number of times trainers are given CBC training. The outcome constant measure 32.075 indicates that there are various other innate factors not being explored like teachers' traditional method of teaching, students' attitude, level of poverty, among others, which are influencing the use of CBC in public primary schools. That is, the way CBC is used in public primary schools is being decided by various factors which are not being explored. Likewise, Table 9 displays p-value 0.014 which is less than 0.05 ( $0.014 < 0.05$ ). It denotes there is a significant effect of teachers' training on the use of competency-based curriculum in public primary schools in the form of low performance in national CBC tests.

This further indicates that implementation of the Competency-Based Curriculum (CBC) in public primary schools has introduced a new approach to education in many countries, focusing on developing students' practical skills rather than rote memorization. However, the low performance of students in national CBC tests highlights a significant issue: the inadequate teacher training that is critical for the successful application of this curriculum. Teachers, being at the heart of CBC delivery, must be well-equipped with the necessary skills and knowledge to foster competency development in students.

Unfortunately, many teachers in public primary schools have not received sufficient training to effectively implement the CBC, leading to a misalignment between the curriculum's intended goals and its practical execution in classrooms. Teacher training plays a crucial role in enabling educators to understand the principles of the CBC, create engaging and interactive lessons, and accurately assess students' competencies. The lack of adequate professional development programs has led to ineffective teaching

practices, poorly structured lesson plans, and a lack of proper student assessments. Consequently, this contributes to the low performance in national CBC tests, as pupils are not provided with the quality education that the curriculum aims to deliver. Thus, addressing teacher training gaps is crucial for improving CBC implementation and enhancing learner outcomes.

#### **4.4.3 Thematic Analysis**

During the interview, the sub-county directors of education, the parents' representatives, and the headteachers argued in favor of the proposition that teachers were trained in important areas which form the focus of CBC in public primary schools. Headteacher, H2, observed;

*In my school, I have suggested a good number of teachers to be involved in CBC and how to do so. Most emphasis has been on the new teaching techniques to be used, how to manage the students and the learning difficulties they pose. Training on how to prepare learning resources and use teaching resources is also inculcated in them.*

On their part, parents' representatives echoed similar views by stating that many teachers have been inducted into CBC through constant re-training as a way of improving their mastery of the requirements of the programmes. Parents' representative, PR2, noted;

*The teachers in our school have undergone training in how to educate the students in line with CBC. I have also witnessed the variation in the method they use in teaching, modes of testing and how they use teaching material.*

The sentiments were also shared by the Sub-county Director of Education (TSC & MoE) who also extended his expression saying the success, though fraught with new human resource issues, implementation of CBC is dependent on the teachers in the ensuing training to be equipped with the needed new teaching competencies. Sub-county Director of Education (MoE), SCDETSC1, noted;

*Prior to the implementation of the competency-based curriculum in the primary schools, the initial activity the Ministry of Education undertook was re-training the already available teachers from the pre-primary level to grade III. They were re-trained in the use of new teaching approaches which are required to be learner-centered. They were re-trained in how to manage and monitor the learners and how to improvise and utilize the instructional resources.*

Though underdeveloped, the perceptions also underscore the role of teacher training as a crucial tool for the successful operationalization of CBC in the schools. Just like the qualitative results, they also support the opinions of Leithwood et al. (2013) who observed that the most crucial thing for the achievement of the curriculum objectives of education is the provision of skills to teachers. Obuhatsa (2020), Murungi (2017) and UNESCO (2013) also echoed the same by showing that, even though there are the challenges in the two, training of teachers is the first towards the successful rollout of CBC.

This means teachers should first of all, be adequately endowed with the required skills to carry out their teaching activity better through the use of learner-centered teaching methods, assessments consistent with CBC rubrics and efficient use of teaching resources to ensure successful CBC roll-out in the classroom. That is, through re-training or building the capacity of teachers, they are made proficient in crucial skills required to familiarize themselves with new teaching methods and also in the assessment of the learner which is central to improved teaching pedagogy in the classroom.

#### **4.4.4 Triangulation of Research Findings**

Evidence from the teachers, headteachers, the parents' representatives and the Sub-county Directors of Education is an indication of the important role played by training of teachers in so far as the implementation of CBC is concerned. Both qualitative and the quantitative findings confirm the fact that, even though never attained, the training

of teachers is at the helm of the successful implementation of CBC. This is the case since through training and retraining, teachers gain skills required to transition from the traditionally adopted approaches, which were dominated by the teachers to the learner-centered approach. Although never all teachers have had CBC training, teachers who have had the training are in a position to assess the learners and manage their difficulties in the same breath as how to improvise and use the instructional resources. In short, the mixed findings confirm the fact that successful CBC implementation observed in terms of improved coverage of the syllabuses and the learner competencies, is hung on the level to which the teachers have gained the new approaches of teaching, the mastery of how to assess the children and how to improvise and use the support of the curriculum.

In short, through training, the approach of teaching and attainment is shifted from the teachers' role of the monopoly of the dominance of the teacher-centered to the learner-centered. Teachers can possess good body of knowledge and skills, the ability of being able to interconnect to all children, establish good checks and good selection of the instructional material good for children in different levels.

#### **4.5 Provision of Curriculum Support Materials and Implementation of Competency-based Curriculum in Public Primary Schools**

The study sought to assess how the provision of curriculum support materials influences implementation of competency-based curriculum in public primary schools.

##### **4.5.1 Descriptive Analysis**

Teachers provided descriptive data, which was gathered, arranged, and condensed into focused ideas. Table 10 displays the results;

**Table 10: Teachers' Views on the Influence of Provision of Curriculum Support Materials on Implementation of Competency-based Curriculum in Public Primary Schools**

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
In public primary schools, there is provision of adequate textbooks to enable teachers to implement CBC	29.4	13.6	7.2	38.1	11.5
Stationery provided by public primary schools to implement CBC is inadequate	50.4	14.4	5.8	20.1	9.3
There are few reference materials provided by public primary schools which has lowered the pace of CBC implementation	48.2	6.5	4.3	14.4	26.6
Inadequate provision of digital materials for learning has not made it easy to implement CBC in public primary schools	63.3	12.9	7.2	13.7	2.9
In public primary schools, there are no enough teaching aids to supplement teaching activities	50.4	10.8	3.6	33.1	2.1

Table 10 shows that, in the view of 41(29.4%) of the teachers, there are adequate textbooks in the public primary schools to enable teachers to conduct CBC, while 19 (13.6%) concurred, 10 (7.2%) were undecided, 53 (38.1%) disagreed, and 16 (11.5%) strongly disagreed. Twenty (20.4%) of the teachers and 70 (50.4%) of the instructors strongly believed the stationery provided by public primary schools to conduct CBC is inadequate. Nevertheless, 13(9.3%) strongly dissented, 28(20.1%) disagreed, and 8(5.8%) were undecided.

From the research, 67(48.2%) of the teachers firmly agreed that the unavailability of reference material provided by public primary schools in Kenya delayed the CBC implementation, 9(6.5%) agreed, 6(4.3%) were undecided, 20(14.4%) disagreed, and 37(26.6%) firmly disagreed. In Table 10, the greatest percentage of teachers, 88(63.3%), firmly agreed to the assertion that the unavailability of digital learning

resources made the implementation of CBC in public primary schools hard. The remaining teachers—18(12.9%) agreed, 10(7.2%) were undecided, 19(13.7%) disagreed, and 4(2.9%) were strongly opposed. Slightly more than half, 70(50.4%), of the teachers strongly agreed that, in public primary schools, there are no enough teaching aids to supplement teaching activities whereas 15(10.8%) agreed, 5(3.6%) were undecided, 46(33.1%) disagreed whereas 3(2.1%) strongly disagreed. These findings are consistent with the assertions of Baker et al. (2012) that low performance among learners is occasioned by insufficient instructional aids and poor use of teaching and learning resources. According to Baker et al. (2012), for teaching to be effective, there must be adequate preparation on the part of schools and teachers in terms of planning, design, production, selection, and utilization of relevant instructional resources.

These discoveries support the findings of a study conducted in South Africa in which Clotfelter et al. (2014) established that ineffective implementation of CBC and low performance among learners in elementary schools is attributed to insufficient and poor utilization of instructional materials. These outcomes further support the findings of a report authored by KNUT (2019) that, in Kenya and Igembe Central Sub-county in particular, the levels of preparedness of schools in terms of the provision of teaching and learning materials supplied in primary schools are still low to warrant improved implementation of CBC.

In disregard of these findings, Cramer and Castle (2014) mention that these are books, stationeries, digital resources, reference books and lesson notes among others and are very fundamental resources which ought to be in place for teaching and learning to occur efficiently and effectively. Such findings are an indication of the fact that the slow pace in the rollout of CBC in public primary schools evidenced by lack of adequate

syllabus coverage, unchanged pedagogy and-worst of all- low learning achievements among pupils in internal and national tests, is blamed on improper provision of relevant and appropriate books and other important key curriculum support resources. It therefore, means that, to roll out CBC effectively and achieve mastery of the content and improved learning achievements in key areas of learning, it is incumbent for the schools and stakeholders to adequately supply instructional resources. Besides, the study found that public primary schools where there was provision of curriculum support materials performed well with regard to the implementation of CBC. That is, syllabus coverage and classroom pedagogy were improved characterized by improved learning outcomes among pupils in key learning areas as enshrined in CBC rubrics.

However, from the study findings, inadequacy of curriculum support materials has been a significant hindrance to the effective implementation of the Competency-Based Curriculum (CBC) in public primary schools. The CBC, which focuses on developing students' practical skills and competencies rather than just theoretical knowledge, requires the availability of adequate resources to be successful. However, public primary schools in many regions have faced challenges in providing the necessary materials to facilitate this learning approach. One of the primary issues is the scarcity of learning resources such as textbooks, teaching aids, and digital tools tailored to the needs of the CBC. While the curriculum emphasizes student-centered learning, it is difficult to implement this effectively without proper support materials.

Teachers are often left to rely on outdated textbooks or make their own teaching aids, which do not align with the modern teaching methodologies required by CBC. This lack of appropriate materials reduces the quality of education and undermines the potential of the CBC to foster the desired competencies in learners. Additionally, the training of teachers to use these materials effectively has been insufficient.

Teachers may be well-trained in CBC theory, but without the right resources to implement the curriculum, their efforts are often limited. The inadequate provision of these resources leads to overcrowded classrooms, where teachers struggle to meet the diverse learning needs of their students. As a result, the intended outcomes of the CBC, such as critical thinking, problem-solving, and collaboration, are compromised. In conclusion, the lack of adequate curriculum support materials is a significant barrier to the successful implementation of the CBC in public primary schools. Addressing this challenge requires investment in both the provision of materials and teacher training to ensure the curriculum can be effectively delivered and its objectives realized.

#### **4.5.2 Inferential Analysis**

To establish the impact of the provision of the curriculum support materials on the adoption of the Competency-Based Curriculum (CBC) in public primaries, the data were collected in 21 sampled schools. The data pertain to the sufficiency of the curriculum support material to be rated as "Adequate" (3), "Not Adequate" (2), or "Not Sure" (1). The study also controlled for the mean achievement in the 2022 Kenya Primary School Education Assessment (KPSEA) of grade VI pupils. The detailed results of the analysis are in Table 11:

**Table 11: Levels of Adequacy of Curriculum Support Materials and Implementation of CBC Public Primary Schools**

<b>Levels of Adequacy of Curriculum Support Materials</b>	<b>Average Learning Outcomes among Grade VI Learners in 2022 KPSEA (%)</b>
3	40.30
2	39.20
2	53.90
2	37.90
2	35.50
2	58.70
1	30.10
1	23.04
2	50.91
3	44.88
1	36.87
2	68.93
2	42.95
3	54.89
2	49.01
3	45.89
2	32.98
2	42.99
1	34.93
3	58.10
3	54.80

**Source: Field Data (2023)**

Table 11 reveals that, in the public primary schools where provision of curriculum support materials is adequate, the mean learning achievement of pupils in national assessments were higher than in their counterparts where provision of the materials is inadequate. That is, the higher the adequacy level of the provision of the curriculum support materials, the higher the achievement in the Kenya Primary School Education Exams. This indicates that schools with adequate provisions of these materials tend to produce better academic results, as reflected in national assessments. These materials, which include textbooks, learning aids, and digital resources, offer students the tools they need to understand complex concepts, engage actively in lessons, and reinforce learning outside the classroom. In schools where these resources are readily available, teachers can effectively tailor their lessons to meet the needs of diverse learners, fostering an environment of active participation and deeper understanding.

Pupils benefit from visual aids, practice exercises, and interactive activities that aid retention and comprehension. On the other hand, schools with limited access to curriculum support materials face significant challenges. Teachers may struggle to provide varied instructional methods, which can result in disengagement and hinder students' ability to grasp key concepts. Consequently, these students often score lower in national assessments, reflecting the impact of insufficient learning resources on their academic achievement. Therefore, ensuring adequate provision of curriculum support materials is essential for improving educational outcomes and promoting equity in education across public primary schools. Data in Table 11 were subjected to linear regressions analysis ( $Y = bX + a$ ) and the results are presented in Table 12:

**Table 12: Relationship between Adequacy of Curriculum Support Materials and Implementation of Competency-based Curriculum in Public Primary Schools**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	26.516	6.740		3.934	.001
Adequacy of Curriculum Support Materials	8.635	3.058	.544	2.824	.011

a. Dependent Variable: Implementation of CBC (KPSEA) in Public Primary Schools

Table 12 shows linear regression analysis which generated a linear model of the form; Implementation of CBC (KPSEA Results) in public primary schools = 26.516 + 0.544Adequacy of Curriculum support Materials. From these results, the coefficient for implementation of CBC manifested by KPSEA results in public primary schools in relation to the levels of adequacy of curriculum support materials is 0.544. This implies that for every increase in the provision of curriculum support materials, the learning outcomes of pupils in national assessments based on CBC rubrics are expected to

increase by a factor of 0.544 (positive coefficient). The constant value 26.516 signifies there is an effect of factors other than the provision of proper support material for the curriculum on the usage of CBC in public primary schools. It may be teachers' use of the same, preparedness of the learner or stakeholders' support among other factors. Table 12 also shows p-value 0.011 which is less than 0.05 ( $0.011 < 0.05$ ). It indicates that there exists a significant effect of provision of curriculum support materials on CBC implementation in public primary schools. In a nutshell, these materials, such as textbooks, teaching aids, digital resources, and assessment tools, are vital in creating an interactive and engaging learning environment. The CBC, which emphasizes skill acquisition and application rather than rote memorization, requires well-equipped classrooms where teachers can provide hands-on learning experiences.

Without adequate support materials, teachers may struggle to effectively deliver the curriculum, leading to gaps in students' learning outcomes. Schools with a sufficient supply of curriculum support materials experience better teaching outcomes, as educators are empowered to utilize diverse resources to cater to different learning styles. These resources also allow for more personalized teaching, making it easier to assess students' competencies and track their progress. In contrast, schools lacking sufficient materials often face challenges such as overcrowded classrooms, reliance on outdated content, and limited access to technology, which hinder effective CBC implementation.

#### **4.5.3 Thematic Analysis**

During the interviews, the headteachers and parents' representatives responded in favour of the view that the provision of textbooks has been done but is not adequate for the effective implementation of CBC in public primary schools. Headteacher, H3, noted;

*In our national primary school, despite the collaborative effort to provide textbooks in the core areas of learning in CBC, the number provided is still insufficient. The provision of textbooks has never achieved the 1:1 ratio of the learner to the book for the attainment of quality education.*

These were the expressions of the parent representatives who also complained that as well as there is no sufficiency in the provision of textbooks, some of them are disarrayed, useless and duplicated in the contents. Parents' representative, PR3, noted; In my own primary school, even though there have been attempts to offer textbooks, the material has been jumbled up and, in some instances, contains material not for a specific class. For instance, the Grade II English books have duplicated material in nearly 23 pages and some pages are blank.

But the Sub-county Directors of Education (TSC & MoE) contradicted in reply saying that, in spite of some mistakes, the government had made sure all public-primary-schools had adequate stocks of textbooks. Despite the contradiction, the opinions highlight the centrality of the provision of adequate relevant textbooks to the successful implementation of CBC in schools. On the issue of stationery, the headteachers, the parents' representatives and the Sub-county Directors of Education reported adequate provision of the same in public-primary-schools. Headteacher, H4, observed;

*There is also proper provision of stationaries for all the students in my primary school.*

*However, most of the interviewees responded in favour of the view that there are few reference and digital materials as well as teaching aids provided by public primary schools which have lowered the pace of CBC implementation.*

Headteacher, H5, stated;

*In my primary school, the Ministry of Education has only provided course books for teaching but rarely provides reference materials, digital tools and teaching aids. I have had to request parents and other donors to come in handy and supplement.*

On their side, the parents' representatives reinforced the opinions made by the head teachers that provision of reference books, digital resources and teaching aids had been wanting and had frequently undermined the operationalization of CBC. Nevertheless, the Sub-county Directors of Education declared that all efforts are being made to see to it that all the schools possess all the needed curriculum support material needed for the operation of CBC. Just like in quantitative results, these opinions also validate the opinions made by Baker et al. (2012), Clotfelter et al. (2014), Cramer and Castle (2014) and KNUT (2019) that the non-effective operationalization of CBC in public primary schools is due to the lack of adequate and proper use of instructional materials.

In summary, these views affirm the fact that curriculum support materials, such as textbooks, stationery, digital materials, reference materials and lesson notes among others, constitute a key component in the implementation of CBC in schools. This implies that, just as noted earlier, implementation of CBC in public primary schools has been slow and ineffective owing to inadequate provision of relevant and suitable books and other key curriculum support materials.

#### **4.5.4 Triangulation of Research Findings**

In the mixed results, most public primary schools don't have sufficient textbooks for the successful application of CBC. That is, despite the concerted efforts to provide textbooks, their supply has been inadequate with many having challenges in terms of mixed content and repetitions. On the contrary, the provision of stationery to all public primary schools has been adequate with every learner having enough writing materials at their disposal but the provision of reference materials, digital tools and teaching aids has been inadequate. This means the inefficacy of public primary schooling in the delivery of CBC is blamed on the lack of adequate provision of vital curriculum support material like textbooks, reference books, digital resources and teaching aids.

Both qualitative and quantitative results ratify the fact that public primary schools are challenged to manage the timely coverage of the syllabus, improved pedagogy in the classroom as visualized in CBC in addition to better learning performance of pupils in internal and national tests owing to the lack of proper provision of relevant and appropriate books and other important curriculum support material.

#### **4.6 Provision of Physical Facilities and Competency-based Curriculum Implementation in Public Primary Schools**

The study sought to determine how the provision of physical facilities influences the implementation of competency-based curriculum in public primary schools.

##### **4.6.1 Descriptive Analysis**

The descriptive data were gathered from teachers, summed up and synthesized into certain thoughts. Table 13 shows results;

**Table 13: Teachers’ Views on the Influence of Provision of Physical Facilities on Implementation of Competency-based Curriculum in Primary Schools**

<b>Test Items</b>	<b>Ratings</b>				
	<b>SA %</b>	<b>A %</b>	<b>U %</b>	<b>D %</b>	<b>SD %</b>
Public primary schools do not have conducive classrooms which has made implementation of CBC difficult	55.4	14.4	5.8	16.5	7.9
Inadequacy of safe playgrounds has lowered the pace with which CBC is being implemented in public primary schools	59.7	7.2	3.6	26.6	2.9
In public primary schools, there are no well-stocked resource centers to support the implementation of CBC	53.2	8.6	4.3	21.6	12.3
Public primary schools have inadequate well-conditioned sanitary facilities to improve CBC implementation	51.8	13.7	3.6	27.3	3.6
Inadequate provision of physical infrastructure has compromised learners’ mastery of concepts under CBC	45.3	6.4	2.2	42.5	3.6

**Source: Field Data (2023)**

As can be seen through the information in Table 13, it is noticeable that the great percentage of teachers, 77 (55.4%), strongly agreed with the perception that public primary schools do not have conducive classrooms, thus inhibiting the successful operation of the Competency-Based Curriculum (CBC) effectively. 20 (14.4%) teachers also agreed, while 8 (5.8%) were undecided. Conversely, 23 (16.5%) teachers were opposed, while 11 (7.9%) strongly opposed. In addition, the research disclosed that most teachers, 83 (59.7%), strongly agreed that the lack of adequate safe playgrounds had stalled the advancement of CBC rollout in public primary schools. Likewise, 10 (7.2%) agreed, 5 (3.6%) were indecisive, 37 (26.6%) disagreed, and 4 (2.9%) were strongly opposed to the above stance.

Further, the research also established that 74 (53.2%) of the teachers strongly agreed that public primary schools do not have well-stocked resource centers to facilitate the delivery of CBC. Additionally, 12 (8.6%) of the teachers agreed, 6 (4.3%) were undecided, 30 (21.6%) disagreed, and 17 (12.3%) of the teachers strongly disagreed with the same perception. Such findings are in agreement with research done in Ghana by Avery (2012), which revealed that the schools which had conducive classrooms, well-landscaped playgrounds, and well-stocked resource centers were successful in delivering CBC and recorded improved student learning achievements compared to the schools which had the facilities. It thus reflects the important role of conducive classrooms and well-stocked resource centers in the successful delivery of CBC.

Additionally, the majority of the teachers, i.e., 72(51.8%), strongly agreed that public primary schools do not have proper and well-maintained sanitary facilities, which hinders the successful implementation of CBC. Additionally, 19(13.7%) teachers agreed to the same view, while 5 (3.6%) were undecided. Conversely, 38(27.3%) teachers were in disagreement, while 5(3.6%) were in strong disagreement.

In short, the details reflected in Table 13 reveal the contribution of conducive classrooms, well-stocked resource centers, safe playgrounds, and well-prepared sanitary facilities to the successful implementation of CBC in public primary schools. The research also established the fact that 63(45.3%) of the teachers strongly agreed in the view that lack of adequate provision of physical infrastructure compromised learners' mastery of concepts in CBC while 9(6.4%) agreed, 3(2.2%) were undecided, 59(42.5%) disagreed while 5(3.6%) strongly disagreed. These results are in agreement with the results of the study conducted in Indonesia by Amilia et al. (2011), which established the fact that attainment of educational objectives through learning activities in educational institutions is determined by the provision of educational infrastructures.

These results are evidence of the fact that, in addition to other dynamics which define how CBC is implemented, physical infrastructures are important. That is, learning facilities which are well-structured and well-furnished in terms of well-equipped centers for resources, well-suitable classrooms, well-healthy toiletry facilities and outdoor space for outdoor activity, implementation of CBC are smooth and tend to showcase improved mastery of basic numeracy, language, creativity and environmental skills. These results also establish the fact further that physical facilities' condition in the school and the level of sufficiency of the facilities are the determinants of the successful implementation of CBC in public primary schools.

#### **4.6.2 Inferential Analysis**

To establish the effect of the provision of physical facilities on the delivery of the competency-based curriculum in public primary schools, data were acquired from the 21 sampled public primary schools regarding the adequacy levels (Adequate = 3, Not Adequate = 2 and Not Sure = 1) of physical facilities and the mean learning

achievement in 2022 Kenya Primary School Education Assessment (KPSEA). Table 14 displays the results:

**Table 14: Levels of Adequacy of Physical Facilities and Implementation of CBC Public Primary Schools**

<b>Levels of Adequacy of Physical Facilities</b>	<b>Average Learning Outcomes among Grade VI Learners in 2022 KPSEA (%)</b>
2	40.30
1	39.20
1	53.90
1	37.90
2	35.50
3	58.70
1	30.10
2	23.04
2	50.91
3	44.88
1	36.87
2	68.93
2	42.95
3	54.89
2	49.01
2	45.89
1	32.98
1	42.99
1	34.93
3	58.10
2	54.80

**Source: Field Data (2023)**

Table 14 shows that public primary schools with adequate provision of physical facilities have had their learners register fairly good grades in national assessments. That is, the higher the levels of adequacy of physical facilities, the higher the learning outcomes of learners in Kenya Primary School Education Assessments. This indicates that adequate classrooms, functional toilets, sufficient learning materials, and a conducive learning environment are crucial for students to focus, engage, and perform well in assessments. Inadequate physical facilities, such as overcrowded classrooms or poorly maintained buildings, hinder effective teaching and learning. Teachers struggle to deliver lessons effectively, and students often face distractions that affect their concentration and academic achievements.

On the other hand, schools with well-maintained and appropriately equipped physical facilities create an environment where students can learn comfortably, access necessary resources, and participate actively in classroom activities. Moreover, the presence of adequate learning resources such as libraries, science laboratories, and sports facilities enriches the learning experience, motivating students to excel. By investing in the improvement of school infrastructure, the Kenyan education system can foster better learning outcomes, ensuring that learners are not limited by environmental factors. The results in Table 14 were subjected to Linear Regression Analysis ( $Y = bX + a$ ) and the results are shown in Table 15:

**Table 15: Relationship between Adequacy of Physical Facilities and Implementation of Competency-based Curriculum in Public Primary Schools**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	30.739	5.689		5.403	.000
Adequacy of Physical Facilities	7.664	2.915	.517	2.629	.017

a. Dependent Variable: Implementation of CBC (KPSEA) in Public Primary Schools

Table 15 displays linear regression analysis which produced a linear model of the type; Implementation of CBC (KPSEA Results) in public primary schools = 30.739 + 0.517Adequacy of Physical Facilities. From the model, the coefficient of implementation of CBC evidenced by KPSEA results in public primary schools for the level of physical facilities adequacy is 0.517. It means for every rise in the provision of physical facilities, the learning achievement of pupils in national tests based on CBC rubrics will rise by the factor 0.517 (positive coefficient). The constant value 30.739 means that the use of CBC in public primary schools is determined by factors other than

the provision of physical facilities. It could be teachers' use of such materials, readiness of the learner or stakeholders' support among others. Table 15 also displays a p-value of 0.017, which is smaller than 0.05 ( $0.017 < 0.05$ ). It implies there exists a significant effect of the provision of appropriate and adequate physical facilities on the use of competency-based curriculum in public primary schools. This implies that, in many public primary schools, the quality and availability of physical resources, such as classrooms, teaching aids, furniture, and learning spaces, directly influence how well the curriculum can be taught and how students can engage in learning activities. When physical facilities are substandard, it hampers the ability of both teachers and students to effectively apply and benefit from the CBC, which emphasizes active, learner-centered learning.

Adequate facilities enable teachers to implement innovative teaching strategies that align with the CBC's goals, such as group work, practical skills development, and project-based learning. For example, spacious classrooms, access to technology, and proper sanitation ensure a conducive learning environment that fosters engagement and critical thinking. Conversely, poor infrastructure, overcrowded classrooms, and lack of resources can lead to disorganization and reduced learning outcomes, hindering learners' ability to acquire the necessary competencies.

Furthermore, the physical environment impacts the motivation of both teachers and students. Well-maintained, resource-rich schools boost teachers' confidence in delivering the curriculum, while students are more likely to stay focused and engaged in their learning. Thus, appropriate physical facilities are a critical component in the successful adoption of a competency-based approach in public primary schools.

#### 4.6.3 Thematic Analysis

In the interviews, the head teachers, the parents' representatives and the Sub-county Directors of Education (TSC & MoE) also reacted in support of the opinion that public primary schools lack conducive classrooms which have complicated the CBC implementation. Headteacher, H6, observed;

*Implementation of CBC requires more learning space, which is conducive, for learners. However, in my primary school, classrooms are overcrowded thus, making it difficult to space learners as envisaged in CBC.*

The same feelings were also echoed by the parent's representatives who informed the committee that the classrooms are in bad condition. Parents' representative, PR4, noted;

*In my primary school, classrooms are not spacious nor are they conducive for learning while implementation of CBC requires few learners per class.*

Correspondingly, the Sub-county Directors of Education (TSC & MoE) also echoed sentiments. In addition, they recorded the observation that classrooms in most public primary schools are congested and therefore, not favorable for the proper conduct of CBC's envisioned effective learning to occur. Sub-county Director of Education (MoE), SCDEMoE2, observed;

*In my sub-county, despite the concerted efforts by the government and other stakeholders, to construct more classrooms, the available ones are still not conducive for learning since every class requires at least 15 to 20 learners for effective learning to take place under CBC.*

These views further point to the significance of having well-ventilated and conducted classrooms, which are not overcrowded for effective implementation of CBC to take place in primary schools. On the question of playgrounds for outdoor activities, the interviewees stated that all public primary schools have playgrounds where learners can undertake outdoor activities, however, their conditions are not good since they are not fully safe for learners. Headteacher, H7, stated;

*There are playgrounds in my primary school, but they are never the ultimate proof for the students. They usually create potholes, bumpy ones containing stones which are risky for the pupils. They also require maintenance sometimes, something which is sometimes hindered by lack of funds.*

The interviewees also admitted that most public primary schools lack centers for resources which are well-stocked with books and other teaching support material.

Headteacher, H8, confirmed;

*There is no resource centre in my primary school where the students can access teaching material comfortably.*

The same was echoed by the Sub-county Directors of Education in collaboration with the parents' representatives, who elaborated that the majority of public primary schools do not have resource centers such as libraries well-supplied with supportive material for the curriculum. Just like the qualitative findings presented for the qualitative findings, the qualitative findings also credit the perceptions made by Avery (2012) that the lack of delivery of CBC by most schools is attributable to the lack of conducive classrooms, well-organized playgrounds as well as well-supplied resource centers. On the aspect of sanitary facilities, the interviewees also reported that the majority of public primary schools do not have proper well-structured sanitary facilities. Headteacher, H9, elaborated thus;

*We have latrines and water points in our school but they are never good enough to cater to the vast number of learners. We are sometimes overstretched.*

In short, these opinions further validate the consideration of the provision of adequate and well-conditioned physical facilities being an important step towards the implementation of CBC in public primary schools.

#### **4.6.4 Triangulation of Research Findings**

According to the mixed results, there is no doubt that the role of physical facilities in the process of implementing the Competency-Based Curriculum (CBC) cannot be

overemphasized. Nevertheless, the mixed results have confirmed that many public primary schools do not have appropriate classrooms, which lead to overcrowding. As such, the number of pupils in the classrooms is vast, and they cannot accommodate the pupils as required in the CBC. Moreover, both the qualitative and quantitative results have confirmed that many public primary schools do have playground facilities for pupils to carry out outdoor activities, but the safety level of the pupils within the facilities is poor. Such areas are plagued with potholes, irregular ground, and stones, which put the pupils in harm's way. In addition, the study has revealed that a vast number of public primary schools do not have adequately stocked resource centers of books and other support materials for the CBC.

Against the background of the mixed results, there is no doubt that despite the fact that some of the public primary schools do have sanitary facilities, the condition of the facilities is neither satisfactory nor adequate to serve the large number of pupils. In short, these mixed results suggest that public primary schools are incapable of successfully implementing the CBC due to the lack of adequate and well-maintained physical facilities.

#### **4.7 Parents' Involvement and Competency-based Curriculum Implementation in Public Primary Schools**

The study was meant to explore the effect of parental participation on the implementation of the Competency-Based Curriculum (CBC) in public primary education.

##### **4.7.1 Descriptive Analysis**

The researcher gathered descriptive data through teachers, and collected and summed them up in specific thoughts. Table 16 shows the results;

**Table 16: Teachers' Views on the Influence of Involvement of Parents on Implementation of Competency-based Curriculum in Public Primary Schools**

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
In public primary schools, parents are often involved development of learning materials for learners as a way of improving CBC implementation	49.6	5.0	4.3	33.8	7.2
Public primary schools usually involve parents in providing instructional materials for the learners	52.5	12.2	2.9	26.6	5.8
In public primary schools, parents usually volunteer to undertake school activities such as school feeding programmes to support CBC implementation	44.6	15.8	4.3	28.8	6.5
To improve learners' mastery of concepts under CBC, parents are always involved in assisting learners with their homework activities	59.7	7.9	5.8	21.6	5.0
Involving parents in monitoring learners' behaviour has made it easy to implement CBC in public primary schools	54.7	8.6	3.6	26.6	6.5

**Source: Field Data (2023)**

As Table 16 shows, the vast majority of teachers, 69(49.6%), firmly agreed that parents are regularly engaged in the production of learning material for the public primary school learners, in order to support the use of the Competency-Based Curriculum (CBC). Also, 7(5.0%) of the teachers agreed to the effect, while 6(4.3%) were undecided. Conversely, 47(33.8%) of the teachers disapproved of the view, and 10(7.2%) were strong disapprovers. Moreover, the data shows that the greater proportion of teachers, 73(52.5%), firmly agreed to the idea that public primary schools usually involve the parents in supplying the instructional material for the learners. Furthermore, 17(12.2%) of the teachers agreed to the effect, while 4(2.9%) were undecided. On the other hand, 37 (26.6%) of the teachers disapproved of the view, and 8(5.8%) were strong disapprovers. From the findings, the assertions of Davis (2013) are supported in the effect that parents are engaged in the production of learning material

for the learners and also in supplying the instructional resources. For the effect, the stronger the level of parental participation in the learning of children, the higher the mastery of children's concepts and skills as espoused in CBC. The findings are an indication of the effect that, while they are never fully engaged, the parents are substantially crucial in supporting the efforts by the public primary schools in preparing the learning material for the children. The indication is further extended to the effect that the parents do supply the instructional materials.

The research established that 62(44.6%) of the teachers strongly agreed to the opinion that, in public primary schools, parents tend to volunteer to carry out school activities like the feeding programmes in the schools to aid in CBC implementation while 22(15.8%) agreed, 6(4.3%) were undecided, 40(28.8%) disagreed while 9(6.5%) strongly disagreed. Over half, 83(59.7%) of the teachers strongly agreed to the opinion that, in order to enhance the learners' mastery of the CBC taught concepts, parents are always ready to help the learners in the homework activity while 11(7.9%) agreed. On the same breath, 8(5.8%) were undecided, 30(21.6%) disagreed while 7(5.0%) strongly disagreed.

These findings are consistent with findings of the study done in the Netherlands by Domitrovich et al. (2012) which uncovered that being prepared for school encompasses involving parents to support the children in school through taking part in academic clinics, parents' days, volunteering and implementing school feeding programmes. Domitrovich et al. (2012) also uncovered that there is potential for parents to further enhance their participation in supporting the children's success in academics. This can be done through acts like giving encouragement, preparing appropriate study spaces, giving positive behavioral examples such as having the habit of recreational reading, overseeing homework assignment, giving home-based tutoring, and preparing the

children for the encounters they are to have in higher grade levels. These findings also concur with the findings of research in Australia by Hartley et al. (2010), which showed that parents possess the potential of volunteering and giving support in different school-related projects. This can either be taking part in classwork, volunteering in the school events, or even taking an active role in the form of governance and the decision-making processes important in the planning of Competency-Based Curriculum (CBC) events. Additionally, these findings are consistent with the perspectives of the Rwanda Education Board (2018), emphasizing the significance of parental involvement in CBC implementation.

Parents can play a vital role by participating in volunteer initiatives such as school feeding programs and accompanying learners during fieldwork activities. These findings point to the fact that, though rarely undertaken, parents have a role to play in the academic activities of their children as required under CBC. In other words, the cultivation of strong parent-teacher linkages is increasingly and widely viewed as an essential component of strategies to improve the process of implementation of CBC as well as learners' educational outcomes. In addition, the findings of the study showed that 76(54.7%) of the teachers were in strong agreement that the inclusion of parents in the monitoring of the behavior of the learners made the CBC easier to implement in public primary schools, 12(8.6%) of the teachers were in agreement with the argument. 5(3.6%) of the teachers were undecided, while 37(26.6%) of the teachers were in disagreement with the argument.

Lastly, 9(6.5%) teachers strongly disagreed. These results give credence to the results of study in Mozambique where Conenzio and French (2016) established that parents form an important element in the application of CBC since they supply academic material, serve as role models to the learners and assist the learners in carrying out homework

activity. According to Conenzio and French (2016), in the schools where parents are continually included in the school management programmes, children achieve higher learning achievements, higher cognitive competence, improved problem-solving ability, more spirit in school, higher participation, and fewer behavior problems in school. These results demonstrate the value of parenting in promoting positive relationships and valuable sharing of information, outcomes that affect parents' satisfaction and may also contribute to child development and adjustment to CBC requirements. Besides, these findings attest to the fact that parents who maintain direct and regular contact with teachers have primary children who demonstrate positive engagement with peers, adults and learning and thus, experience minimal challenges at school. Hence, improving the involvement of the parents in school management activities leads to improvement in children's school attendance, homework completion, improved learning behaviours and even better learner's discipline.

#### **4.7.2 Inferential Analysis**

To examine the impact of parental participation in the implementation of competency-based curriculum in public primary schools, data were obtained from 21 sampled public primary schools. The data were the level of parental participation in crucial decision-making forums, rated on the scale "Very Often" (5) to "Never" (1), and the mean attainment of grade VI students in the 2022 Kenya Primary School Education Assessment (KPSEA). The findings of the analysis are reported in Table 17:

**Table 17: How Often Parents are Involved in School Decision-making and Implementation of CBC Public Primary Schools**

<b>How Often Parents are Involved in School Decision-making</b>	<b>Average Learning Outcomes among Grade VI Learners in 2022 KPSEA (%)</b>
3	40.30
2	39.20
5	53.90
1	37.90
5	35.50
4	58.70
1	30.10
2	23.04
4	50.91
3	44.88
4	36.87
5	68.93
2	42.95
3	54.89
2	49.01
2	45.89
3	32.98
4	42.99
2	34.93
3	58.10
5	54.80

**Source: Field Data (2023)**

Table 17 illustrates that in public primary schools where parents actively participate in crucial decision-making processes, learners tend to achieve commendable scores in their CBC assessments. This suggests a positive correlation between the frequency of parental engagement in school management activities and the academic performance of learners in Kenya Primary School Education Assessments. This indicates that, when parents are engaged in shaping educational strategies, curriculum choices, and school policies, it fosters a supportive learning environment both at school and at home. This partnership between parents and educators contributes to enhanced student motivation, well-being, and academic performance. In schools where parents actively participate, there is an increased sense of accountability and commitment to the learners' educational progress. Teachers and parents collaborate to set realistic learning goals, provide personalized support, and address individual student needs.

This cooperative effort strengthens the overall academic experience, helping students feel more connected to their learning journey. Furthermore, when parents are involved in decision-making, they become more attuned to the requirements of the CBC, enabling them to support their children's learning beyond the classroom. Studies have shown that learners in these schools tend to achieve commendable scores in CBC assessments, as they benefit from an environment that nurtures their competencies, fosters creativity, and encourages critical thinking. Therefore, parental engagement is a key factor in improving learners' academic performance and outcomes. The findings presented in Table 17 underwent a thorough Linear Regression Analysis ( $Y = bX + a$ ) and the outcomes are presented in Table 18:

**Table 18: Relationship between Involvement of Parents and Implementation of Competency-based Curriculum in Public Primary Schools**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	30.373	5.536		5.486	.000
Frequency of Parental Involvement	4.599	1.655	.538	2.779	.012

a. Dependent Variable: Implementation of CBC (KPSEA) in Public Primary Schools

Table 18 shows linear regression analysis which generated the linear model of the form; Implementation of CBC (KPSEA Results) in public primary schools = 30.373 + 0.538Frequency of Parental Involvement. From the model, the value of the coefficient for implementation of CBC evidenced by KPSEA results in public primary schools in reference to the level of physical facilities adequacy is 0.538. It implies that for every increase in the provision of physical facilities, the learning achievement of pupils in national tests in reference to CBC rubrics is estimated to increase by the factor 0.538 (positive coefficient).

The constant 30.373 means that use of CBC in public primary schools is not only affected by the involvement of parents, but also factors which were not under study like initial learning activity which were ongoing, readiness of the learners, socio-economics as well as attitude of teachers. Table 18 also displays p-value 0.012, which is less than 0.05 ( $0.012 < 0.05$ ). This means there is a significant effect of involvement of parents on the use of competency-based curriculum in public primary schools. This implies that parents play a critical role in reinforcing the curriculum at home by supporting their children's learning, providing necessary resources, and fostering a conducive environment for study. When parents are actively engaged, they help bridge the gap between school learning and real-life applications, allowing children to apply their skills in everyday situations.

Furthermore, parental involvement enhances communication between schools and families, ensuring that teachers and parents work together to address any challenges faced by students in adapting to the CBC. This collaborative approach promotes a sense of community, which is essential for the success of the curriculum. However, the effectiveness of parental involvement can vary depending on factors such as parents' educational background, socio-economic status, and the availability of time. Thus, while parental engagement can significantly boost the implementation of CBC, efforts must be made to ensure that all parents, regardless of their background, have the opportunity and resources to contribute effectively to their children's learning process.

#### **4.7.3 Thematic Analysis**

In the interviews, headteacher, parents' representatives and the Sub-County Director of Education (TSC & MoE) further revealed that the parents are also supportive of the success of CBC and reported they are usually participants in the development of the

learning material used by the students for the purpose of improving the implementation of CBC. Headteacher, H10, declared;

*In my primary school, parents are usually invited to meetings with teachers to understand their value in their children's education and undertake activities such as learning material development.*

The parent representatives also echoed the same feelings of continually helping in the production of learning material for the children. The Sub-county Director of Education (TSC and MoE) also reaffirmed the requirement of CBC in parental contribution to learning material production. The Sub-County Director of Education (TSC), SCDETSC3, noted;

*There is a requirement for the parents to support the children by participating in the creation and improvisation of study materials*

The interviewees also supported the view that public primary schools usually involve parents in providing instructional materials for the learners. Headteacher, H11, noted;

*The parents in our first-level school are also obligated to supplement the Ministry of Education's endeavor of allowing the children to access adequate teaching and learning resources.*

Similar views were expressed by parents' representatives who stated that they always provide teaching and learning materials. Parents' representative, PR5, affirmed;

*In our school, I continuously procure curriculum support material for my child since the provision made by the government is hardly sufficient for all the learners.*

Correspondingly, the Sub-county Directors of Education also presented the same opinions and confirmed that parents complement the government's efforts in supplying the learning-support material for the curriculum. Just like in the case of Davis (2013), these opinions confirm the reality where the more actively the parents are implicated in the children's learning, the greater the children's mastery of the CBC-conceived concepts and skills.

On the issue of volunteering, contrary to the opinions of most teachers, the greater number of interviewees also responded in affirmation of the opinion the parents tend to volunteer to carry out the school activities like the feeding program in the schools in efforts to implement CBC. Headteacher, H12;

*In my primary school, parents are often involved in activities such as cooking for their children under school feeding programmes*

These opinions were echoed by several of the parents' representatives who observed that they generally have a schedule of how they are to participate in the school feeding programme activities of cleaning and cooking. Parents' representative, PR6, had the following to say;

*There is also a time designated to show when all the parents are required to visit school and take part in the acts of cooking and cleaning in the school feeding programmes. On several occasions, I only volunteer to attend school in order to inspire my children to strive in the academic activity.*

The Sub-county Directors of Education (TSC & MoE) also stated that parents are required to be active participants in their children's academic undertakings by volunteering and performing hands-on tasks at school which motivates their children to value education. Just like quantitative findings, these views underscore the important role which parents play by volunteering to participate in school activities. These perspectives are consistent with the viewpoints articulated by Domitrovich et al. (2012), emphasizing that parents can become more engaged in assisting their children with their academic progress.

They achieve this by offering encouragement, creating conducive study environments, setting positive examples through activities like recreational reading, overseeing homework, providing home tutoring, and preparing their children for the expectations of higher grade levels.

These viewpoints further corroborate the assertions made by Hartley et al. (2010), highlighting that parents have the capacity to volunteer their support in diverse ways within the school environment. They can actively engage in classroom activities, extend their help during school events, and assume pivotal roles in governance and decision-making processes, which are imperative for the effective planning and implementation of Competency-Based Curriculum (CBC) activities. On monitoring learners' behaviour, the interviewees also noted that involving parents in monitoring learners' behaviour has made it easy to implement CBC in public primary schools. Headteacher, H13, stated;

*I personally notify the parents in my school whenever I witness misconduct in the children. It has assisted the parents in building positive behavior patterns in the children.*

Parents' representatives also stated that they often monitor the behaviour of their children at all times. The Sub-county Directors of Education also stated that parents must be involved in monitoring the behaviour of their children at all times. These views also support the assertions of Conenzio and French (2016) that parents constitute a critical component in the implementation of CBC since they act as role models to learners and help shape their behaviour patterns. This indicates that parents are key pillars in primary schools in improving children's school attendance, homework completion, improved learning behaviours and even better learner's discipline.

#### **4.7.4 Triangulation of Research Findings**

Both quantitative and qualitative findings affirm the fact that parents have immense contribution to the success of CBC implementation by undertaking a series of activities. However, according to teachers, not all parents take part in activities such as the development of learning materials for learners but they provide instructional materials. From the study, many parents take part in volunteering activities such as school feeding programmes, help their children with homework activities and constantly monitor their

behaviour patterns. They participate in activities such as such as cooking and cleaning. This suggests that parents play a valuable role in enhancing their children's academic performance. They do so by offering encouragement, creating conducive study environments, setting positive examples through activities like cultural reading, overseeing homework, providing home tutoring, and preparing their children for the expectations of higher grade levels. From these mixed findings, it is evident that, though not all participate in school programmes, parents constitute a key component of school management and their involvement is crucial for the successful implementation of CBC in public primary schools.

#### **4.8 Influence of School Management Preparedness on Implementation of Competency-based Curriculum in Public Primary Schools**

To test the impact of having the school management prepared to follow the competency-based curriculum in the public primary schools, information on the number of times the teachers were trained, how well the supporting material of the curriculum and physical infrastructure are and how frequently the parents are involved in the decision-making process of the school (as shown in the first columns of Tables 9, 12, 15 and 18) were connected to the CBC implementation unveiled through 2022 KPSEA findings are presented in 19;

**Table 19: School Management Preparedness and Implementation of Competency-based Curriculum in Public Primary Schools**

<b>Implementation of CBC (2022 KPSEA Results) (Y)</b>	<b>No. of Times Teachers have been Trained on CBC (X1)</b>	<b>Levels of Adequacy of Curriculum Support Materials (X2)</b>	<b>Levels of Adequacy of Physical Facilities (X3)</b>	<b>How Often Parents are Involved in School Decision-making (X4)</b>
40.30	1	3	2	3
39.20	10	2	1	2
53.90	12	2	1	5
37.90	13	2	1	1
35.50	11	2	2	5
58.70	7	2	3	4
30.10	8	1	1	1
23.04	3	1	2	2
50.91	5	2	2	4
44.88	12	3	3	3
36.87	4	1	1	4
68.93	17	2	2	5
42.95	10	2	2	2
54.89	13	3	3	3
49.01	12	2	2	2
45.89	8	3	2	2
32.98	6	2	1	3
42.99	6	2	1	4
34.93	7	1	1	2
58.10	7	3	3	3
54.80	16	3	2	5

**Source: Field Data (2023)**

Table 19 further indicates that the four components of school management preparedness (teacher training, provision of curriculum support materials, provision of physical facilities and parental involvement) influence implementation of the competency-based curriculum in public primary schools, though at different levels. The data presented in Table 20 was further run through multiple linear regression analysis.

**Table 20: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.797 <sup>a</sup>	.635	.544	7.50966	.635	6.969	4	16	.002

a. Predictors: (Constant), Teacher training, provision of curriculum support materials, provision of physical facilities and involvement of parents

Table 20 confirms that "R Square Change", R<sup>2</sup> is 0.635. It implies that factors of school management preparedness under observation have 63.5% contribution to the CBC implementation in public primary schools. The results are statistically significant since the p-value mean is 0.002 < 0.05. It means that factors of school management preparedness such as training of teachers, provision of curriculum support material, provision of physical facilities and parental participation have joint contribution of 63.5% to the success of CBC implementation. It implies that other factors which were not incorporated in the study variables have 37.5% contribution to the implementation. It was confirmed by multiple linear regression model ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) in Table 21:

**Table 21: Relationship between School Management Preparedness and Implementation of Competency-based Curriculum in Public Primary Schools**

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	12.448	6.435		1.934	.041		
	X1	.929	.426	<b>.350</b>	2.179	.045	.885	1.130
	X2	3.002	3.140	<b>.189</b>	.956	.035	.583	1.715
	X3	4.278	2.831	<b>.288</b>	1.511	.015	.626	1.597
	X4	3.171	1.344	<b>.371</b>	2.360	.031	.924	1.083

a. Dependent Variable: Implementation of CBC in Public Primary Schools

Key: X1-Teacher Training; X2-Provision of Curriculum Support Materials; X3-Provision of Physical Facilities and X4-Parental Involvement

Table 21 represents a multiple linear regression equation of the type; Implementation of CBC = 12.448 + 0.350X<sub>1</sub> + 0.189X<sub>2</sub> + 0.288X<sub>3</sub> + 0.371X<sub>4</sub> + 7.50966. The results obtained in the multiple linear regression model highlight the fact that multiple

dimensions of school readiness are crucial determinants of the level to which competency-based curriculum is implemented in public primary schools. Nevertheless, the value of 12.448 as the constant value means that implementation of CBC in public primary schools is also determined by something else outside the study (37.5%). Table 21 also reflects the fact that the mentioned dimensions of school management preparedness determine the implementation of CBC at various extents, that is, the involvement of the parents ( $\beta_4 = 0.371$ ) followed by training of teachers ( $\beta_1 = 0.350$ ), provision of physical facilities ( $\beta_3 = 0.288$ ) and provision of support material for the curriculum ( $\beta_2 = 0.189$ ) in descending order. In conclusion, the findings highlight the fact that implementation of competency-based curriculum is established by the level of school management preparedness in terms of teachers training, provision of support material for the curriculum, physical facilities and parental involvement.

#### **4.8.1 Test for Multicollinearity**

Vector Inflation Factors (VIF) in Table 21 are all higher than 1 (VIF (1.130, 1.715, 1.597 and 1.083) $>1$ ). It therefore implies that the independent variables, i.e., provision of teacher training, provision of support material for the curriculum, provision of physical facilities and parental involvement are independent and therefore not internally correlated. This indicates that these variables each address different aspects of the educational process, functioning independently to influence learning outcomes. Teacher training focuses on equipping educators with the necessary skills and pedagogical strategies, while support materials help to enhance the curriculum's delivery and facilitate understanding. Physical facilities contribute to a conducive learning environment, ensuring that students have access to safe and adequate spaces for their academic activities. Parental involvement, on the other hand, promotes engagement and support from outside the school, impacting a student's motivation and attitude towards

learning. Each of these variables operates independently, as they involve separate mechanisms that do not inherently influence one another. Teacher training, for instance, does not depend on the availability of physical facilities or parental involvement. Similarly, the provision of support materials is not reliant on teacher training or parental input, but rather on curriculum design and available resources. Therefore, these independent variables do not exhibit internal correlation, and their effects on educational outcomes can be considered separately when assessing the overall quality of the educational experience.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents a summary of the main research findings, conclusions, recommendations and suggestions for further research as discussed under the research objectives.

#### 5.1 Summary of Research Findings

In the following section, a short description of the results of the study is presented. The major purposes of the study included an evaluation of the implementation of competency-based curricula in public primary schools, in addition to determining the effect of teacher training schemes, supporting curricular materials, physical infrastructures, and parental participation in the implementation of the competency-based curricula.

##### 5.1.1 Status of Implementation of Competency-based Curriculum in Public Primary Schools

The study revealed that the implementation of the Competency Based Curriculum (CBC) remains a significant challenge in public primary schools within Igembe Central Sub-county. A considerable number of teachers are unable to complete the syllabus within the stipulated time, and classroom pedagogy is suboptimal, resulting in poor learning outcomes for learners in critical areas under CBC. The study findings indicate that a significant proportion of pupils in public primary schools struggle with basic numeracy skills, fluency in communication, reading, writing, and vocabulary comprehension. However, the study also revealed that many primary school learners exhibit high levels of creativity, as evidenced by their ability to color shapes, create patterns, draw diagrams, and undertake crayon etching with ease.

These results are in alignment with the low achievement of students in the 2022 Kenya Primary School Examinations Assessment (KPSEA).

### **5.1.2 Teacher Training and Implementation of Competency-based Curriculum in Public Primary Schools**

The research established that teacher training plays an unparalleled role in CBC implementation in public primary schools. Through training and re-training, teachers are equipped with skills needed to transform from the use of conventional approaches, which were centered on the instructor, to student-centered approaches. Nevertheless, teachers are not equally equipped in CBC training of the important thematic areas of teaching approaches, how to conduct learner assessment and how to improvise and use teaching resources. That means CBC effective CBC implementation depends on the training of teachers. In other words, through training, the teaching method is changed to student-centered approach. To further support the assertion, the linear regression test was carried out, where the p-value of 0.014 emerged, which is less than the 0.05 level of signification. The finding thus provides further evidence to attest to the assertion made. Teacher training plays a significant role in influencing the CBC implementation in public primary schools.

### **5.1.3 Provision of Curriculum Support Materials and Implementation of Competency-based Curriculum in Primary Schools**

The study found that many public primary schools lack enough textbooks for effective implementation of CBC. That is, despite the concerted efforts to provide textbooks, their supply has been inadequate with many having challenges in terms of mixed content and repetitions. On the contrary, the provision of stationery to all public primary schools has been adequate with every learner having enough writing materials at their disposal but the provision of reference materials, digital tools and teaching aids has been

inadequate. This implies that the inability of public primary schools to provide adequate curriculum support materials such as textbooks, reference materials, digital tools as well as teaching aids has occasioned their inability to effectively implement CBC. This was supported by performing linear regression analysis which was undertaken which generated a p-value,  $0.011 < 0.05$ ). This further shows that there is a significant influence of provision of curriculum support materials on implementation of competency-based curriculum in public primary schools.

#### **5.1.4 Provision of Physical Facilities and Competency-based Curriculum Implementation in the Public Primary Schools**

The research discovered that most public primary schools do not have favorable classrooms because most classrooms are congested. The research also discovered that most public primary schools have playfields where the outdoor activities of the learners are done, but the safety of the playfields to the learners is lacking. They are full of potholes, bumpy and containing stones which are hazardous to the learners. The research also discovered that most public primary schools lack adequately stocked resource centers with books and other curriculum support materials.

The research established numerous public primary schools possess sanitary facilities even though the conditions of the facilities are neither conducive nor adequate to support the large number of learners. This implies the difficulties of public primary schools in successfully operationalizing the Competency-Based Curriculum (CBC) could be due to the inability of the schools to offer adequate and well-kept physical facilities. This argument is supported by the findings of a foregoing linear regression test which had a p-value of 0.017, thus showing statistical significance ( $p\text{-value} < 0.05$ ). The findings indicate the provision of physical facilities to have had significant effects on the delivery of competency-based curriculum in public primary schools.

### **5.1.5 Involvement of Parents and Implementation of Competency-based Curriculum in Public Primary Schools**

The research unveiled the fact that parents significantly impact the success of CBC implementation through conducting various activities. But they do not participate in some of the activities like the creation of teaching material for the students but supply teaching material. Most of the parents participate in volunteering activity like feeding program in the schools, assistance in homework to the children, and they also continuously monitor the pattern of behavior. They also participate in activities like cleaning and cooking. It is revealed here that parents are supportive since they encourage the children to read for fun, monitor the homework of the children, actively teach the children in the homes, and prepare them for higher grades.

While all parents do not take part in school programmes, they are an important part of school management and the participation is vital for the effective use of CBC in public primary schools. These results were also confirmed by conducting linear regression analysis which produced a p-value,  $0.012 < 0.05$ ). It means there is significant effect of participation of parents on the use of competency-based curriculum in public primary schools. In short, preparedness of school management determines the use of CBC in public primary schools. It was confirmed by conducting multiple linear regressions.

From the multiple linear regression analysis at a 95.0% confidence level, it is also evident that the components of school management preparedness have a combined influence of 63.5% (p-value,  $0.002 < 0.05$ ) on the implementation of competency-based curriculum in public primary schools. This implies that school management preparedness in terms of teacher training, provision of curriculum support materials, provision of physical facilities and involvement of parents have a direct relationship with implementation of competency-based curriculum in public primary schools with

other dynamics, which were not part of the variables for investigation contributing 37.5% influence on implementation of Competency-based curriculum.

## **5.2 Conclusions**

The research found out how the different dimensions of school readiness are influential in the implementation of competency-based curricula in public primary schools. From the findings, the study draws the following conclusions:

### **5.2.1 Status of Competency-based Curriculum Implementation in Public Primary Schools**

The findings of the study are explicit in the sense that CBC implementation in public primary schools in Igembe Central Sub-County is still challenging. Most teachers don't teach syllabus within the stipulated time, unchanged classroom teaching methodology replete with low achievement of students in the focus areas of learning in CBC.

### **5.2.2 Teacher Training and Competency-based Curriculum Implementation in Public Primary Schools**

Additionally, the survey found that many public primary schools had. However, despite the noble role of teacher training, not all teachers have undergone CBC training on key thematic areas such as teaching approaches, how to undertake learner assessment and how to improvise and utilize instructional resources.

### **5.2.3 Provision of Curriculum Support Material and Competency-based Curriculum Implementation in Public Primary Schools**

According to the study, many public primary schools lack enough textbooks for the effective implementation of CBC. That is, despite the concerted efforts to provide textbooks, their supply has been inadequate with many having challenges in terms of mixed content and repetitions. On the contrary, the provision of stationery to all public primary schools has been adequate with every learner having enough writing materials

at their disposal but the provision of reference materials, digital tools and teaching aids has been inadequate.

#### **5.2.4 Provision of Physical Facilities and Implementation of Competency-based Curriculum in the Public Primary Schools**

Research concluded that most public primary schools do not have favorable classrooms because most of the classrooms are congested. Moreover, the survey established that most public primary schools had playgrounds where the outdoor activities of the learners are done, but the safety of the playgrounds is wanting for the learners. The playgrounds are full of potholes, bumpy and stony which are hazardous to the learners. Nonetheless, they lack well-equipped resource centers with books and other supportive material for the curricular.

#### **5.2.5 Parents' Involvement and Implementation of Competency-based Curriculum in Public Primary Schools**

From the findings of the research, all the parents do not participate in the academic operations of the children. Hardly do they conduct preparations of learning material, the provision of teaching material, volunteering services nor do they closely monitor children behavior. Concisely, the study established that, in sum, the lack of the proper training of teachers by the management, the lack of the support of the curriculum material, the physical facilities and the fact that the parents are hardly participating in the academic operations have brought slow take-off the operationalization of CBC public primary schools witnessed slow coverage of the syllabuses, unchanged classroom pedagogy and sluggish learning performance in the key learning areas under CBC.

### **5.3 Recommendations for Practice**

This section outlines the study recommendations in terms of practice, policy and further research.

### 5.3.1 Recommendations of the Study

The research recommends the following;

- i. In the area of teacher training and competency-based curriculum application in public primary schools, the study advocates for further training and re-training of teachers to equip them with the pre-requisite skills needed in the successful application of CBC.
- ii. On the provision of curriculum support materials and implementation of competency-based curriculum in public primary schools, the study recommends that headteachers should partner with other stakeholders such as Public Benefits Organizations and donors to ensure that public primary schools have adequate curriculum support materials other than textbooks. These may include reference materials, lesson notes, past papers, revision books and teaching aids among others.
- iii. In the provision of physical facilities and the delivery of competency-based curriculum in public primary schools, the study recommends that the Ministry of Education and other stakeholders must continue the process of building additional conducive classrooms to mend the ones in disrepair, more sanitary facilities and offer well-stocked resource centers with current learning material centered on key areas of learning in CBC. It will be for the purposes of achieving higher levels of adequacy.
- iv. On the involvement of parents and implementation of competency-based curriculum in public primary schools, the study recommends that parents should plan their time well and attend school functions and meetings so that they can learn their role in their children's education and why it is necessary for them to undertake activities such as learning material development, provision of

instructional materials, volunteering and monitoring of their children's behaviour.

### **5.3.2 Recommendations for Policy**

The Ministry of Education should formulate a policy detailing procedures through which different stakeholders can partner with school management to enhance the implementation of competency-based curriculum.

### **5.3.3 Recommendation for Further Research**

- i. Research should be done to determine the extent to which the attitude of head teachers influences the (CBC) implementation in public primary schools.
- ii. A study could explore the effect of teachers' characteristics on the delivery of the Competency-Based Curriculum (CBC) in public primary schools.
- iii. The CBC level in public primary school curricula ought to be raised to support the quality of educational provision in public primary schools.

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## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

April 2023

Dear Sir/Madam,

#### RE: PERMISSION TO CARRY OUT RESEARCH

I am pursuing my studies in the field of Doctor of Philosophy in Educational Management, Leadership and Administration in Mount Kenya University. I conduct my research, which is called the Influence of School Management Preparedness on the Implementation of Competency-based Curriculum in Public Primary Schools in Igembe Central Sub-county, Meru County, Kenya. You are selected to participate in the study in order to accomplish the same. It is respectfully requested of the responders to participate fully in the research. You will not have your identity in the report; the information is used only for academic purposes. You will be granted access to the findings of the study if you request so.

Your assistance and co-operation will be highly appreciated.

Thank you in advance.

Yours faithfully,

Mwereria Joseph Miriti

## APPENDIX II

### INFORMED CONSENT FORM

Dear interviewee,

The examiner is a student undertaking a degree course in Doctor of Philosophy in Educational Management, Leadership and Administration at Mount Kenya University. My research topic is Influence of School Management Preparedness on the Implementation of Competency-based Curriculum in Public Primary Schools in Igembe Central Sub-county, Meru County, Kenya. I will ask you some questions as part of this study, so please be patient with me. Regarding your information, I shall uphold your privacy and confidentiality. Your information will be accessible only to the researcher and will not have your identity recorded anywhere on the materials. As a voluntary participant, you are free to revoke your consent and stop participating at any point both before and during the research. For this involvement, we won't provide any compensation or facilities. To confirm your participation in this study, kindly sign the form provided below.

**Participant:**

----- Code of Participant	----- Signature	----- Date
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**Researcher:**

----- Name of Researcher	----- Signature	----- Date
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**APPENDIX IV**  
**QUESTIONNAIRE FOR TEACHERS**

Dear interviewee,

The individual conducting this research is currently a student enrolled in the Doctor of Philosophy program specializing in Educational Management, Leadership, and Administration at Mount Kenya University. My research focuses on **Influence of School Management Preparedness on the Implementation of Competency-based Curriculum in Public Primary Schools in Igembe Central Sub-county, Meru County, Kenya**. The information you provide will be confidential and used for this study only.

**Section A: Demographic Information**

*Instruction: Please tick against your most appropriate answer and fill in the spaces provided.*

1. Gender: Male  Female
2. Level of education  
Certificate  Diploma  Degree  Post-graduate
3. Duration of teaching  
Below 1 year  1-5 years  6-10 years  Over 10 years

**Section B: Implementation of Competency-based Curriculum in Public Primary Schools**

1. On a scale of 1-4, how would you rate the extent to which CBC has been implemented in your school?

No.	Test Items	Great Extent	Fair	Low Extent	Not Sure
		4	3	2	1
1	Improved learner competencies in number work skills				
2	Learners can undertake language tasks such as reading, writing and oral activities				
3	Improved competencies in creativity among learners				
4	Learners can undertake tasks in environmental activities				

## Section C: Teacher Training and Implementation of Competency-based

### Curriculum in Public Primary Schools

1. Have you ever undergone CBC training?    Yes    [   ]                    No    [   ]
2. If question one is Yes, state the number of times you have undergone CBC training  
.....
3. What are some of the skills that you have been trained on under CBC?  
.....
4. Please evaluate the degree to which you concur with the provided statements regarding the impact of your training on the execution of the Competency-Based Curriculum (CBC) in your school.

Key: SA-Strongly Agree    A-Agree    U-Undecided    D-Disagree    SD-Strongly Disagree

No.	Test Items	SA	A	U	D	SD
		5	4	3	2	1
1	I have been trained on teaching methods to be used in the implementation of CBC in my school					
2	I have not been trained on how to handle learners as a way of implementing CBC in my school					
3	I have mastered different skills on how to effectively implement CBC in my school					
4	Through CBC training, I have acquired new skills on how to use instructional resources while teaching					
5	To improve my learner competencies as envisioned under CBC, I have undergone training on how to assess learners					

## Section D: Provision of Curriculum Support Materials and Implementation of

### Competency-based Curriculum in Public Primary Schools

1. Please, tick some of the available curriculum support materials in your primary school  
  
Textbooks    [   ]    Stationery    [   ]    Reference materials                    [   ]  
Digital materials    [   ]    Teaching aids [   ]    Others (Specify).....

2. On a scale of 1-3, how would you rate the levels of adequacy of curriculum support materials in your school?.....
3. What is the pupil-book ratio in your primary school?.....
4. Assess your level of agreement with the statements concerning how curriculum support materials have influenced curriculum support materials available in your school on the implementation of competency-based curriculum

No.	Test Items	SA	A	U	D	SD
		5	4	3	2	1
1	In my primary school, we have been provided with adequate textbooks to enable us to implement CBC					
2	Stationery provided by my primary school to implement CBC is adequate					
3	There are few reference materials provided by my primary school which has lowered the pace of CBC implementation					
4	Digital materials provided for learning have made it easy to implement CBC in my primary school					
5	In my primary school, there are no enough teaching aids to supplement my teaching activities					

**Section E: Provision of Physical Facilities and Implementation of Competency-based Curriculum in Public Primary Schools**

1. Please, what are some of the available physical facilities to help implement CBC in your school
  - Conducive classrooms [ ]
  - Safe playgrounds [ ]
  - Well-stocked resource centers [ ]
  - Well-conditioned sanitary facilities [ ]
  - Others (Specify).....

2. Please share your assessment of the physical facilities' adequacy for implementing the Competency-Based Curriculum (CBC) in your school.....
3. Kindly provide your response or rating to gauge your agreement with the statements regarding the impact of physical facility provision on the implementation of the Competency-Based Curriculum (CBC) in your school.

No.	Test Items	SA	A	U	D	SD
		5	4	3	2	1
1	My primary school does not have conducive classrooms which has made implementation of CBC difficult					
2	Inadequacy of safe playgrounds has lowered the pace with which CBC is being implemented in my primary school					
3	In my primary school, there are no well-stocked resource centers to support the implementation of CBC					
4	My primary school has inadequate well-conditioned sanitary facilities to improve CBC implementation					
5	Inadequate provision of physical infrastructure has compromised learners' mastery of concepts under CBC					

## Section F: Involvement of Parents and Implementation of Competency-based

### Curriculum in Public Primary Schools

1. Please, mark the specific activities parents are involved to undertake in your school with regard to CBC implementation
  - In learning material development [ ]
  - Provision of instructional resources [ ]
  - In volunteering activities [ ]
  - Assisting learners with homework activities [ ]
  - In monitoring learner behaviour [ ]

2. On a scale of 1-3, rate how often parents are involved in the implementation of CBC in your primary school

Often (3) [ ]

Rarely (2) [ ]

Never (1) [ ]

3. Rate to what extent you agree with the following statements on the influence of parental involvement in school management on the implementation of CBC in your school

No.	Test Items	SA	A	U	D	SD
		5	4	3	2	1
1	In my primary school, parents are often involved development of learning materials for learners as a way of improving CBC implementation					
2	My primary school usually involves parents to provide instructional materials for the learners					
3	In my primary school, parents usually volunteer to undertake school activities such as school feeding programmes to support CBC implementation					
4	To improve learners' mastery of concepts under CBC, parents are always involved in assisting learners with their homework activities					
5	Involving parents in monitoring learners' behaviour has made it easy to implement CBC in my school					

Thank you

Mwereria Joseph Miriti

**APPENDIX V**  
**INTERVIEW GUIDE FOR HEADTEACHERS AND PARENTS’**  
**REPRESENTATIVES**

Dear interviewee,

The individual conducting this research is currently a student pursuing a Doctor of Philosophy program in Educational Management, Leadership, and Administration at Mount Kenya University taking research on the Influence of School Management Preparedness on the Implementation of Competency-based Curriculum in Public Primary Schools in Igembe Central Sub-county, Meru County, Kenya. Rest assured that any information you share will be handled with strict confidentiality and solely utilized for the purpose of this research study. Your privacy and data security are of utmost importance.

**Section A: Demographic Information**

1. Gender:.....
2. What is the highest level of education?.....
3. For how long have you been a school head?.....

**Section B: Implementation of Competency-based Curriculum in Public Primary Schools**

1. How would you rate the extent to which CBC has been implemented in your primary school in terms of improving learner competencies in number work, language, creativity and environmental activities?

**Section C: Teacher Training in Public Primary Schools**

1. Have teachers in your school ever undergone CBC training?
2. How many times have teachers in your school undergone CBC training?
3. What are some of the skills your teachers have been trained on under CBC?
4. How has training of teachers influenced implementation of CBC in your school?

#### **Section D: Provision of Curriculum Support Materials in Public Primary Schools**

1. What are some of curriculum support materials available in your primary school to support CBC implementation?
2. On a scale of your choosing, how would you evaluate the degree of sufficiency of the curriculum support materials available in your school?
3. What is the pupil-book ratio in your primary school?
4. To what degree has the provision of curriculum support materials impacted the execution of the CBC in your primary school?

#### **Section E: Provision of Physical Facilities and Implementation of Competency-based Curriculum in Public Primary Schools**

1. What are some of the physical facilities available in primary schools to help implement CBC?
2. How would you assess the sufficiency of the physical infrastructure in your primary school concerning the implementation of the Competency-Based Curriculum (CBC)?
3. To what extent has the provision of physical facilities influenced the implementation of competency-based curriculum in your primary school?

#### **Section F: Involvement of Parents and Implementation of Competency-based Curriculum in Public Primary Schools**

1. What are the specific activities your primary school involves parents to undertake with regard to CBC implementation?
2. How has the involvement of parents in school activities of their children influenced the implementation of CBC?

Thank you

Mwereria Joseph Miriti

**APPENDIX VI**  
**INTERVIEW GUIDE FOR SUB-COUNTY DIRECTORS OF EDUCATION (TSC**  
**AND MoE)**

Dear interviewee,

The individual conducting the research is currently enrolled as a student pursuing a Doctor of Philosophy degree program in Educational Management, Leadership, and Administration at Mount Kenya University. The specific area of focus for this research project is as follows: Influence of School Management Preparedness on the Implementation of Competency-based Curriculum in Public Primary Schools in Igembe Central Sub-county, Meru County, Kenya. Any data or information you furnish will be handled with the utmost confidentiality and solely utilized for the purposes of this investigation.

**Section A: Demographic Information**

1. Gender:.....
2. What is the highest level of education?.....

**Section B: Implementation of Competency-based Curriculum in Public Primary Schools**

1. How would you rate the extent to which CBC has been implemented in public primary schools in your sub-county?

**Section C: Teacher Training in Public Primary Schools**

1. How many times have teachers in your sub-county undergone CBC training?
2. What are some of the skills the teachers have been trained on under CBC?
3. How In what ways has the training of teachers affected the execution of the Competency-Based Curriculum (CBC) in primary schools within your sub-county?

#### **Section D: Provision of Curriculum Support Materials in Public Primary Schools**

1. What are some of curriculum support materials which have been provided to primary schools to support CBC implementation in your sub-county?
2. How would you assess the sufficiency of the curriculum support materials you've provided to primary schools within your sub-county?
3. To what degree has the availability of educational resources and curriculum support materials impacted the implementation of CBC in your sub-county?

#### **Section E: Provision of Physical Facilities in Public Primary Schools**

1. What are some of the physical facilities available in primary schools to help implement CBC in your sub-county?
2. How would you evaluate the sufficiency of the physical infrastructure in your sub-county for effectively implementing the Competency-Based Curriculum (CBC)?
3. To what extent has the provision of physical facilities influenced the implementation of competency-based curriculum in your sub-county?

#### **Section F: Involvement of Parents in Public Primary Schools**

1. What are the specific activities parents are supposed in the implementation of CBC?
2. To what extent has the involvement of parents in school activities of their children influenced the implementation of CBC in your sub-county?

Thank you

Mwereria Joseph Miriti

## APPENDIX VII

### OBSERVATION CHECKLIST FOR PUPILS

#### A. Basic Numeracy Skills

Aspects of Basic Numeracy Skills	Observation	
	Can Attempt	Cannot Attempt
Number recognition		
Counting and sequencing		
Rote counting		
Basic operations		
Number value		

#### B. Language Skills

Aspects of Language Skills	Observation	
	Can Attempt	Cannot Attempt
Reading skills such as phoneme awareness, phonetics, vocabulary, picture reading or recognition		
Writing skills such as forming words, joining syllables to make words and sentence construction		
Oral skills such as storytelling, news telling		

#### C. Creativity Skills

Aspects of Creativity Skills	Observation	
	Can Attempt	Cannot Attempt
Coloring		
Pattern writing		
Drawing and tracing		
Printing, e.g. hand, leaf and potato printing		
Crayon and pencil etching		

#### D. Essential Environmental Skills

Aspects of Essential Environmental Skills	Observation	
	Can Attempt	Cannot Attempt
Ability to tell their names for identity		
Identify their sex for self-awareness		
Identify their body parts (heads, hands, legs, etc.)		
Identify objects within their environment (home and school)		

Thank you, Mwereria Joseph Miriti

## APPENDIX VIII

### DOCUMENT ANALYSIS GUIDE FOR THE RESEARCHER

#### A. Basic Numeracy Skills

Aspects of Basic Numeracy Skills	Levels of Learner Competencies			
	Excellent 4	Good 3	Fair 2	Below Average 1
Number recognition				
Counting and sequencing				
Rote counting				
Basic operations				
Number value				

#### B. Language Skills

Aspects of Language Skills	Levels of Learner Competencies			
	Excellent 4	Good 3	Fair 2	Below Average 1
Reading skills such as phoneme, awareness, phonetics, vocabulary, picture recognition or reading				
Writing skills such as forming words, joining syllables to make sentence and words construction				
Oral skills such as news telling, storytelling				

#### C. Creativity Skills

Aspects of Creativity Skills	Levels of Learner Competencies			
	Excellent 4	Good 3	Fair 2	Below Average 1
Coloring				
Pattern writing				
Drawing and tracing				
Printing, e.g., hand, leaf and potato printing				
Crayon and pencil etching				

#### D. Essential Environmental Skills

Aspects of Essential Environmental Skills	Levels of Learner Competencies			
	Excellent 4	Good 3	Fair 2	Below Average 1
Ability to tell their names for identity				
Identify their sex for self-awareness				
Identify their body parts (heads, hands, legs, etc.)				

Identify objects within their environment (home and school)				
<b>LEVELS OF SCHOOL MANAGEMENT PREPAREDNESS</b>				
<b>Variables</b>	<b>Available</b>	<b>Not Available</b>	<b>Adequate</b>	<b>Not Adequate</b>
<b>Teacher Training</b>				
• Number of teachers				
• Number of teachers trained on CBC				
<b>Curriculum Support Materials</b>				
• Textbooks				
• Stationery				
• Reference and digital materials				
• Teaching aids				
<b>Physical Facilities</b>				
• Conducive classrooms				
• Safe playgrounds				
• Resource centers				
• Sanitary facilities				
<b>Involvement of Parents</b>	<b>Often</b>	<b>Sometimes</b>	<b>Rarely</b>	<b>Never</b>
• In learning material development				
• Provision of instructional resources				
• In volunteering activities				
• Assisting learners with homework activities				
• In monitoring learner behaviour				

Thank you

Mwereria Joseph Miriti

## APPENDIX IX

### ETHICAL CLEARANCE FROM MOUNT KENYA UNIVERSITY



REF: MKU/ISERC/2649

Date: 15 March 2023

TO: MWERERIA MIRITI JOSEPH

REG: PHDED/2014/75981

Dear Sir/Madam,

**RE: INFLUENCE OF SCHOOL MANAGEMENT PREPAREDNESS ON IMPLEMENTATION OF COMPETENCY BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN IGEMBE CENTRAL SUB-COUNTY, MERU COUNTY, KENYA**

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **1710**. The approval period is **15/03/2023 - 14/03/2024**.

This approval is subject to compliance with the following requirements;

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

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

Yours sincerely,  **The Chairman**  
**Mount Kenya University**  
**Ethics Review Committee**  
**P. O. Box 342 - 0100, Thika**

**Dr. Peter G. Kirira**  
**Chairman, Mount Kenya University ISERC**

## APPENDIX X

### INTRODUCTION LETTER FROM THE SCHOOL OF POSTGRADUATE STUDIES OF MOUNT KENYA UNIVERSITY



#### DIRECTORATE OF GRADUATE STUDIES

PHDED/2014/75981

28<sup>th</sup> March, 2023

*National Commission for Science Technology & Innovation (NACOSTI)*  
*Off Waiyaki, Upper Kabete*  
*P.O Box 30623- 00100*  
*NAIROBI, KENYA*

Dear Sir/Madam,

**RE: MWERERIA MIRITI JOSEPH – REGISTRATION NO. PHDED/2014/75981**


The purpose of this letter is to introduce the above named student who is pursuing Doctor of Philosophy in Education Degree in the Department of Educational Psychology and Technology in the School of Education.

The title of the research is *“Influence of School Management Preparedness on Implementation of Competency Based Curriculum in Public Primary Schools in Igembe Central Sub-County, Meru County, Kenya.”*

It has been cleared by the University’s Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **March, 2023 and May, 2023.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

  
Dr. Samuel M. Karenga, Ph.D.  
Director, Graduate Studies

Enc.

Mount Kenya University  
P. O. Box 342 - 01000, THIKA  
Office of the Director  
Graduate Studies



**APPENDIX XII**  
**RESEARCH AUTHORIZATION LETTER FROM COUNTY COMMISSIONER,**  
**MERU**

REPUBLIC OF KENYA



OFFICE OF THE PRESIDENT  
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telegrams:  
Telephone:  
Email: [ccmeru@yahoo.com](mailto:ccmeru@yahoo.com)  
Fax:

COUNTY COMMISSIONER  
MERU COUNTY  
P.O. BOX 703-60200  
MERU.

When replying please quote  
Ref:EDU.12/3 VOL IV (84)  
and Date:

*24<sup>th</sup> April, 2023*

**TO WHOM IT MAY CONCERN**

**RE: RESEARCH AUTHORIZATION -MWERERIA JOSEPH MIRITI**

This is to inform you that **Mr. Mwereria Joseph Miriti** of Mount Kenya University has reported to this office as directed by the National Commission for Science, Technology and Innovation and will be carrying out research on the topic: **“Influence of School Management Preparedness on Implementation of competency Based Curriculum in Public Primary Schools** in Igembe Central Sub-County, Meru County.

Since Authority has been granted by the said commission the above named person can embark on his research for a period ending on **11<sup>th</sup> April, 2024**.

Kindly accord him the necessary assistance.

A handwritten signature in blue ink, appearing to read 'M. Imbusi'.

**MARTHA K. IMBUSI**  
**FOR: COUNTY COMMISSIONER**  
**MERU**

**APPENDIX XIII**  
**RESEARCH AUTHORIZATION LETTER FROM COUNTY DIRECTOR OF**  
**EDUCATION, MERU**



REPUBLIC OF KENYA  
MINISTRY OF EDUCATION  
State Department for Basic Education

Telegrams: "ELIMU" Meru  
Email: [cdemerucounty@gmail.com](mailto:cdemerucounty@gmail.com)  
When Replying please quote

County Director of Education  
Meru County  
P O Box 61  
MERU

*Ref: MRU/C/EDU/11/1/285*

*24<sup>th</sup> May, 2023*

TO WHOM IT MAY CONCERN

**RE: RESEARCH AUTHORIZATION – MR. MWERERIA JOSEPH MIRITI**

Reference is made to letter Ref.NO.NACOSTI/P/23/25145 dated 11<sup>th</sup> April, 2023.

Authority is hereby granted to **Mr. Mwereria Joseph Miriti** to conduct research on "*Influence of School Management Preparedness on Implementation of Competency Based Curriculum in Public Primary Schools*" in Igembe Central Sub-county, Meru County Kenya for the period ending 11<sup>th</sup> April, 2024.

The person undertaking this study is bound by all the ethical rules and regulations governing surveys of this nature.

FOR: COUNTY DIRECTOR OF EDUCATION  
MERU COUNTY  
P. O. BOX 61- 60200  
Tel: 064-32372 MERU

**Kamande Mburu**  
**For: County Director of Education**  
**MERU COUNTY**

**APPENDIX XIV**  
**RESEARCH AUTHORIZATION LETTER FROM THE COUNTY**  
**GOVERNMENT OF MERU**

COUNTY GOVERNMENT OF MERU



DEPARTMENT OF LEGAL AFFAIRS, PUBLIC SERVICE  
MANAGEMENT AND ADMINISTRATION

*Email: [merucounty@meru.go.ke](mailto:merucounty@meru.go.ke)  
When replying please quote*

*Meru County Headquarters  
P.O. Box 120-60200  
MERU*

Ref: CGM/1/16/VOL.1/96

To: Mwereria Joseph Miriti

From: Chief Officer- Legal Affairs, Public Service Management & Administration

Date: May 22<sup>nd</sup> , 2023

**RE: AUTHORIZATION OF RESEARCH**

County Government is mandated to oversee the running of ECDE centres that is domiciled in all our primary schools. Our ECDE centres have adopted the implementation of CBC hence a good place for carrying out your research.

I hereby authorize you to conduct research on Implementation of Competency Based Curriculum in Public Primary Schools in Igembe Central Sub- County, Meru County.

Your Research period ends on 11<sup>th</sup> April, 2024.



**Chief Officer- Legal Affairs, Public Service Management & Administration**

**APPENDIX XV**  
**THE MAP OF MERU COUNTY SHOWING IGEMBE CENTRAL SUB-COUNTY**



Source: IEBC (2012)

# APPENDIX XVI

## SIMILARITY INDEX REPORT



Page 1 of 237 - Cover Page

Submission ID trn:oid::3618:103170403

### MWERERIA JOSEPH MIRITI

#### INFLUENCE OF SCHOOL MANAGEMENT PREPAREDNESS ON IMPLEMENTATION OF COMPETENCY BASED CURRICULUM I...

- My Files
- My Files
- Mount KenyaUniversity

#### Document Details

Submission ID  
trn:oid::3618:103170403

Submission Date  
Jul 2, 2025, 12:38 AM GMT+5:30

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File Name  
JOSEPH MIRITI REVISED THESIS 2025.doc

File Size  
4.6 MB

232 Pages  
52,107 Words  
323,449 Characters



Page 1 of 237 - Cover Page

Submission ID trn:oid::3618:103170403

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