ASSESSMENT OF TEACHERS' PREPAREDNESS ON THE IMPLEMENTATION OF THE COMPETENCY-BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN MIGORI COUNTY.

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DEDICATION

This thesis is dedicated to my beloved mother, the late Josephine Mohabe (Mkungujo). By making sure I attended school, she played a crucial role in molding me into a scholar and instilled in me the spirit of resilience. My loving husband, Isaiah Owino and my children, Lavinia Stacy, Kimberley Mboya, Ishmael Owino and Courtney Hawi.

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ABSTRACT

Countries have adopted Competency Based Curriculum (CBC) as a result of globalization and the requirement for skills relevant to the twenty-first century. Kenya started implementing CBC-based curriculum revisions in 2018. The primary developers of the Curriculum are teachers, but it is uncertain how well-prepared they are to do so in public elementary schools. This study, therefore, sought to establish the level of teachers' preparedness in the implementation of CBC in public primary schools in Migori County. Specific objectives of this study were; To determine the outcome of training on teachers, availability and use of instructional resources, level of teachers' ICT literacy skills on implementation of CBC in public primary schools in Migori County. Examine the difficulties that schools have in implementing the CBC in Migori County's public elementary schools. The design of a descriptive survey was used. Eight sub-county quality control and standards officials, 1812 grade 1-3 educators, and 604 head teachers from each of Migori County's sub-counties were the study's main subject. Eight Sub County Quality Control Officials (SQAOs), five hundred forty-one head teachers, and teachers in grades 1-3 made up the study's sample. The respondents were chosen using basic random sampling methods and stratified sampling methods. The information was gathered through questionnaires and interview schedules. Expert opinions were sought regarding the accuracy of the instrument, and the questionnaire's coherence and thoroughness were also evaluated beforehand. Cronbach's Alpha Coefficient, used to measure internal consistency, produced dependability coefficients for principals and educators of 0.704, 0.690, and 0.671, respectively. Descriptive and inferential statistics were used in the study's quantitative analysis of the data. According to the results, the majority of instructors (56.77%) had gone to training classes and (59%) agreed that they were familiar with the training's contents. Similarly, on availability of T/L resources majority (mean of 4.04 and 4.24) of teachers depended largely on textbooks and chalkboards as the exclusive T/L resources. Majority (91%) of teachers reported that all ICT resources were either unavailable or inadequate. According to the study's findings, effective CBC implementation in primary schools depends on CBC training, thus the resources that are available should be sufficient and put to good use. When ICT resources are available and integration capacity improved and the challenges identified are mitigated, the implementation of CBC could be made more effective. The study suggested using more skilled facilitators and increasing the number of CBC instruction sessions. All teachers should be required to receive training, there should be adequate financial and material support, and administration in elementary schools should implement a monitoring system to guarantee that the existing T/L resources are used efficiently. The Teachers Service Commission should hire more teachers; they should also foster a bottom-up approach to implementing a Competency-Based Curriculum. The

findings can be used by education stakeholders in improving competency-based curriculum.

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LIST OF ABBREVIATIONS AND ACRONYMS

CBC: Competence-based curriculum

CBE: Competency Based Education.

CPD: Continuous Professional Development.

CVI: Content Validity Index

DID: Department of International Development

ECDE: Early Childhood Development Education

GoK: Government of Kenya

HTS: Head Teachers

N.G.O Non-Governmental Organizations.

NACOSTI: National Council for Science, Technology, and Innovation

NCDC: National Curriculum Development Centre.

PA: Parent Association.

SQASO: Sub-County Quality Assurance and Standards Officers

TAFE: Technical and Further Education

TIE: Tanzania Institute of Education

TLR: Teaching Learning Resources

TZ: Tanzania

VIF: Variance inflation Factors

ZQASO: Zonal Quality Assurance and Standards Officers

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A country's social and economic progress is said to be fueled by education. In order to provide providing its residents with the knowledge, abilities, morals, and views that enable people to take charge of their own lives and the country growth, educational reforms necessitate curricular modification (Gruber 2018). A society requires a course of study that is useful and pertinent to its needs if it is to accomplish its educational aims. As a result, curriculum revision and reform are occasionally required to keep up with changing needs and circumstances. A predetermined sequence of expertise and abilities that pupils should be able to perform in the classroom or throughout a specific course is referred to as a curriculum (UNESCO, 2015).

Countries have switched from methods of teaching and learning based on competency to curricula that are content-based (UNESCO, 2015). Comprehensive teacher induction in competency-based curriculum (CBC) should be a top concern for the curriculum's effective implementation, which calls for a shift in teaching methods as competency-based curricula replace content-based ones (Kafyulilo & Rugambuka 2012). The need for acquiring skills for the twenty-first century and the globalization of the labor market have forced the transition. This suggests that competency-based teaching-learning techniques have gained considerable support and attention across the globe.

When it comes to giving students the chance to study and reach their full potential, teachers are essential. According to Zeiger (2018), educators must consider the change in perspective from instruction to learning and carry out formative evaluations of pupils' development within the framework of the CBC. Therefore, in order to employ proper pedagogical techniques, design lessons, select instructional materials that are acceptable for students at different levels, and create assessment instruments, teachers need to have the necessary knowledge and abilities. In a similar vein, Syomwene (2017) emphasizes that educators must consider their broader duties with regard to the connections that are made among the curriculum and students throughout instruction. Demssie, Wesselink e, Biemans, along with Mulder (2019) state that an approach to education based on competence is crucial for assisting students in improving their command of information and abilities and fostering self-assurance when addressing problems. As a result, it is a strategy that raises pupil achievement in school and gives them marketable skills.In contrast to traditional curricula, competency-based curricula (CBC) places more emphasis on what pupils are expected to accomplish than just know (Jengere, 2017).

IBE-UNESCO (2017) claims that CBC is a means by which a nation can equip its people with the values, knowledge, and skills they need to function in the rapidly-evolving global village. According to IBE-UNESCO (2017), CBC provides pupils with the tools they need to use learner-centered teaching to perform realistically and measurably. As a result, several countries have modified their curricula to reflect the concepts of essential competencies as well as educational outcomes.

This implies that implementation of CBC in learning institutions will enable learners to acquire competencies which will make them be productive members in society.

Numerous nations have considerably incorporated competency-based curricula into their educational systems. In the United States of America (USA), competency-based education was initially proposed in the 1960s (Sullivan & Bruce, 2014). According to Sanchez and Romero (2015), the curriculum reform began in teacher education whereby the CBC teaching-learning methodologies were integrated into the training institutions' learning processes by the US Division of Education. The curriculum placed a strong emphasis on observable skills that students should learn and use in everyday circumstances. A study conducted by Fein (2015) reported that in the 1970s, In various educational programs in the United States, the competency-based approach was introduced.Since then, a variety of professional fields and educational institutions have created and implemented competency-based learning systems. the USA.

For instance, Fein (2015) reported that more than 600 USA colleges had designed and implemented Competence Based Education (CBE) programs, and the number of learning institutions implementing CBC teaching-learning approaches is steadily increasing as the US Department of Education continues to approve more CBE programs for federal financial aid. According to Sanchez and Romero (2015), competency-based teaching-learning approaches have influenced the structure and delivery of formal education and training programs and have enhanced production of skilled workers in the US. This denotes that application

of competency-based teaching and learning strategies in education institutions can enhance production of skilled and competitive members in the society.

In addition to concerns regarding student failure and insufficient teacher training, Bristow and Patrick (2014) state that the Western nations of America experienced an economic slowdown as a result of the high prevalence of youth unemployment in those areas. These elements prompted educators to design outcome instruction in an approach that motivates them to tie their learning goals to visible behaviors on the part of the students. The majority of criticism directed at the educational system was directed at the graduates' poor acquisition of the required skills. The educational system in the United States has advanced remarkably in this regard.

Australian schools, TVET programs, and higher education institutions underwent significant implementation of CBC during the 1990s, thanks to significant efforts made by Obwoge (2016). Furthermore, Obwoge learned that the curriculum reform's major goal was to switch from a content-driven curriculum to one that was centered on competencies being met. Competence-based training is designed to help individuals acquire and demonstrate the skills necessary to achieve industry-specified criteria and improve Australia's competitiveness in the labor market, in accordance to the Australian National Centre of Vocational Education Research (2014). This suggests that competency-based training and education can increase the number of talented and competent people in the world who will support national economies.

Sabola (2017) did a study in Malawi to determine how well-trained teachers were to execute a new primary school curriculum. The survey found that there was little curricular implementation in schools. The research revealed that most

educators lacked training on how to use the curriculum. Furthermore, because the reviewed study was carried out in primary schools in Malawi, the conclusions might not be applicable to lower Kenyan primary schools. It's crucial to ascertain the level of CBC training received by Kenyan teachers of lower elementary schools and their proficiency in the implementation of the evaluation rubrics.

In Zimbabwe, a study on teachers' readiness to apply a newly established grade three curriculum was undertaken by Handwe and Mpofu (2017) with the aim of assessing primary school teachers' skill in creating lesson plans that are according to the updated curriculum. The research revealed that teachers' needs for successful lesson plan preparation were not adequately addressed by the training they received. According to the study, the Ministry of Education should launch short courses to fill up instructors' knowledge gaps about the curriculum.

Additionally, Zhuwale and Shumba (2017) looked into the teacher-related variables that hampered the effective curricular implementation in Zimbabwe's rural schools. The study found that the main obstacle to the curriculum's implementation was teachers' lack of pedagogical understanding regarding how to incorporate its components into instruction. However, because the study was conducted As Zimbabwe has a different environment than Kenya, the findings do not apply there.

Rwanda is one of the countries in the region which has implemented CBC and has made significant progress in implementing the curriculum as reported by Mbarushimana and Kuboja (2016). The curriculum was implemented in 2016 to replace instructor-centered and passive learning methods with learner-centered ones in elementary schools and teacher training colleges (Rwanda Education

Board, 2017). Ndihokubwayo, Habiyaremye, and Rukundo (2019) claim that the launch of CBC in Rwanda was carried out in order to facilitate the production of competent and skilled Rwandan individuals.On the same breath, Mugabo, Ozawa and Nkundabakura (2021), explained that the paradigm shift in Rwanda was aimed at equipping learners with knowledge, skills and values to make them relevant and competitive in society. To enhance effective According to Ndayambaje (2018), every teacher in primary schools in Rwanda have received frequent, in-depth in-service training regarding how to carry out the curriculum.

According to Ndayambaje (2018), the curriculum has not been successfully applied in certain primary schools in Rwanda due to resistance to the change by some teachers. It was reported that the teachers who were not willing to implement the curriculum perceived that CBC was difficult to implement compared to the content-based curriculum. Based on their perception, they kept employing outdated teaching and evaluation techniques. To address the issue of resistance to the change, Ndihokubwayo, Nyirigira, Murasira and Munyensanga (2021) explained that the Rwanda Education Board was working hard to change teacher's perceptions to the CBC through continual in-service training. From this report, it is evident that teacher's perception can hinder implementation of the new teaching-learning approaches hence, the need for this study to determine Kenyan primary school teachers' negative opinions on the CBC.

Tanzania, which is one of the countries in East Africa, introduced CBC in its basic education in 2005 (Muneja, 2015). According to Makunja (2016), the

curriculum changed the orientation of education from rote memorization to knowledge and skill acquisition, which is very instrumental. This was aimed at developing an education system that could produce learners who are amply equipped to competently solve the developmental challenges facing the nation. Considered as panacea to the problem of graduate employability Makunja (2016) noted that Tanzania's Ministry of Education and Culture urged citizens to treat the curriculum as a calculated tool for changing people's perspectives and building a nation of scholars.

Despite the national roll out of the curriculum in Tanzanians schools in 2005, studies show that the curriculum has not been employed effectively in most of her schools (Komba&Mwandaji, 2015). According to Hipolite (2019), Instructors were not well-versed in incorporating the new curriculum's elements into their lessons. Teachers being the key players in implementing the curriculum, lack of their preparedness were determined to be a significant obstacle preventing the successful application of CBC in Tanzania. The Tanzanian study suggests that a teacher's inability to receive ongoing training to provide them with the information and abilities related to the new curriculum may hinder the program's successful implementation in classrooms.

By Makunja (2016), it is established the difficulties instructors face when using CBC in Tanzanian educational settings. According to the survey, educators lacked the necessary skills to effectively incorporate the new curriculum's components into lessons. This was determined to be the primary barrier to the effective deployment of the CBC in schools. Given that the evaluated study was carried out in Tanzanian secondary schools, Kenya's lower elementary schools

cannot use its findings. Therefore, it was crucial for this study to determine how equipped Kenyan primary school teachers are to adopt CBC.

The CBC was established in Kenya in January 2018. This was done with the intention of switching from a heavily loaded, exam-oriented 8.4.4 curriculum to an educational system that would, between other things, ensure that pupils acquire skills and abilities needed to meet Kenya's Vision 2030 human resource aspirations (KICD, 2016). In order to transition switching from a competency-based strategy to one that is content-based (CBC), the direction of the instructional process must change from rote memorizing of content to the acquisition of pertinent abilities and skills (Jengere, 2017). This necessitates the use of student-focused based on activities pedagogy. In order for teachers to adopt pedagogical techniques that will enable them to effectively execute the Curriculum, it is necessary to train them in the new pedagogical paradigm.

To meet the needs of the Curriculum, It is expected of teachers to present lessons in the presence of reflective lesson plans that are tailored to learners needs and abilities (KICD, 2017). Therefore, the changes require conscious efforts by teachers to integrate the various aspects of CBC. According to Jengere (2017), While students are required to actively engage in the learning process, teachers are additionally obligated to create engaging learning activities focused on the development of the designated competencies through exploration and experience.

Furthermore, the curriculum highlights how crucial it is to incorporate digital literacy into instruction (KICD, 2017). Consequently, educators are expected to help learners acquire cognitive and technical skills in using technology for

information and communication to locate, assess, produce, and share information. This means that teachers should have adequate technological skills for them to be able to infuse digital literacy in learning. Despite the documented significant role of technology in primary schools, it is not known whether lower primary school teachers have the ability to integrate technology in CBC teaching-learning.

Further, the Curriculum emphasizes on formative assessment, which will enable teachers establish learner's abilities and understanding of concepts while learning is in progress (KICD, 2017). Teachers are expected to use rubrics for assessments that will be helping them gauge the learner's abilities to understand and perform tasks. Assessment using rubrics will also help teachers obtain evidence of a learner acquiring specific competencies in various learning activities (Jengere, 2017). Therefore, teachers are required to change from norm-referenced to criterion referenced judgment of learner's abilities and competencies as a measure of their progress in school (Waweru, 2018). It is therefore evident that the changes in the Curriculum call for preparing of teachers to get into terms with the paradigm shift. Therefore, they need to go through consistent training on how to assess learner's abilities in various learning areas.

In 2017, Kemboi and Nabwire carried out research in the North Rift region of Kenya. to examine teachers' proficiency with pedagogical knowledge when instructing in schools. According to the study's findings, most Instructors did not use learner-centered strategies including conversations, demonstrations, and inquiry. The reviewed study focused on the 8.4.4 curriculum and instructors'

capacity to teach it. in secondary schools using their pedagogical knowledge. These conclusions might not be applicable to the new elementary school curriculum. In a study published in 2018, Waweru (2018) investigated the level of training received by pre-primary school teachers in the Nyandarua North Sub-county to apply the CBC. Results indicated that 98.8% of educators lacked the necessary training to put the curriculum, particularly the new learning areas, into practice. Despite the reviewed study's significant findings, it only included lower primary school instructors; as a result, it was unknown how well Grades 1–3 teachers would be able to apply the curriculum.

Kisirkoi and Kamanga (2018) investigated the level of readiness List instructors in elementary schools in Narok County to implement CBC. The bulk of the teachers, 13, or 86.7% of them, agreed, according to the study's findings, that they didn't learn largely from their training, both pre- and in-service, which left them ill-equipped to carry out the curriculum. Even though the study under consideration was carried out in Kenya, it looked at the curriculum-implementation skills of teachers in lower elementary schools.

In a study by Abdullahi (2020), the impact of schools on the In Kenya's Garissa Sub-County, CBC adoption in preschools was examined. The study's conclusions showed that almost all of public pre-primary instructors were female and had pre-primary education backgrounds. The survey also showed that the institutions lacked enough instructional resources, particularly digital equipment. The self-reported data that was acquired for the study under evaluation using surveys and interview schedules may have been biased. The reviewed study also didn't look into how lower primary school instructors felt about the curriculum or how well

they could use digital media to carry out the program. Last but not least, Chemagosi (2020) aimed to determine teachers' readiness for competence-based curriculum implementation in low public primary schools in Kenya's Kilifi and Nandi counties. The effectiveness of the competency-based curriculum was greatly influenced by the teachers' readiness. Despite its results, it only looked at lower primary school instructors in public schools; as a result, it was unknown how well lower elementary school educators in Migori County could apply the curriculum.

According to a survey on the preparedness of teachers at private schools conducted in Dagoreti by Ondimu (2018), educators are ill-equipped to guide students across the new curriculum. Private educational institutions catering mostly to middle-class and upper-class pupils families were the study's main emphasis. To ensure that address the gap, the researcher collaborated with public elementary schools that educate all classes of students.

According to the 2018 report from (Sossion), numerous teacher-related issues are still up for debate. According to the report, instructors' lack of understanding of the new educational system makes it more difficult to apply CBC successfully. This article claims that a number of teachers are having trouble explaining the new material to students because they haven't received enough training. An investigation into the readiness of teachers to deliver the curriculum based on competencies in public elementary schools in Migori County was therefore necessary because there is little evidence to determine whether educators have been effectively trained for the execution of the CBC. Eight subcounties make up Migori County, and they are identified by the codes M1 through M8 (Table 1.1).

Table 1.1: Percentage of teachers who have been trained in the implementation of CBC in Migori County.

Sub County	Schools	Teachers	Trained Teachers	Percentage of Trained Teachers (%)
M1	69	756	276	36.51
M2	58	678	232	34.22
M3	127	1073	508	47.34
M4	68	830	272	32.77
M5	73	723	292	40.39
M6	76	686	304	44.31
M7	46	466	184	39.48
M8	31	373	124	33.24
Totals	**617**	**6232**	**2468**	**39.60**

Source: Migori County Educational Office (2021)

According to table 1.1, only a small percentage of teachers in Migori County have received training on how to apply CBC; on average, 39.6% of instructors have received training since the introduction of CBC. At 47.34%, Nyatike has the largest proportion of qualified teachers.

1.2 Statement of Problem

Zeiger (2018) argues that as teachers are the primary ones who carry out the curriculum, they must have a wide range of knowledge, abilities, and aptitudes to assemble the components and produce an atmosphere for learning. In order for a curriculum to be successful, teachers who are responsible for implementing it need be familiar with both its content and delivery methods.

Education stakeholders in Kenya have questioned whether teachers are capable and ready to implement CBC successfully. Multiple obstacles are already preventing the first phase of CBC deployment from moving forward. According

to a report by Kaviti (2018), CBC was hastily completed a short pilot study in 2017 that lasted ten weeks on average. Out of 160 000 instructors who delivered basic instruction in lower elementary schools, just 2,000 had received training.

Many parts of teaching remain uncertain, according to a 2018 research by the Kenya National Union of Educators. The research claims that teachers are not aware of the new curriculum, which makes it more challenging to implement CBC effectively in the nation's lower primary schools. According to the report, a number of teachers are having difficulties explaining the new material to the students since they haven't had enough training. On whether instructors in the country have received sufficient preparation for the implementation of CBC at the elementary school level, there is a lack of conclusive information.

The The Migori County Office of Education has been putting on seminars and workshops for teachers. Despite all of this, there is still widespread opposition to the application of curriculum based on competencies. Table 1.1 shows that only 39.60% of instructors have received the necessary training. The majority of the trained instructors have only received training a maximum of three times, and the instruction has primarily concentrated on outlining the curriculum rather than giving teachers teaching abilities.

A study by KNUT (2018) found that Kenyan teachers don't comprehend CBC, which could make it more difficult for the program to be implemented successfully in classrooms. The report also makes note of teachers' difficulties in communicating content to students as a result of their insufficient preparation. Though the government has given some instructors training in the new curriculum through the Teachers Service Commission and KICD, there is still much to be

desired. The few teachers who have received training lack adequate ICT skills, pedagogical content understanding, and knowledge of how to effectively use the teaching resources available. There is scant proof that a research was done to determine how prepared teachers are to apply CBC. Because of this, the study looked into how preparedness of teachers affected the implementation of a curriculum centered around competencies in public elementary schools in Migori County.

1.3 Purpose of the Study

This study aimed to assess teachers' readiness to put the competency into practice:based education in Migori County's public elementary schools.

1.4 Specific Objectives

The general objective of this study is to evaluate the teachers' preparedness for the adoption for the CBC in Migori County's public elementary schools. The study's specific goals were to;

i. Establish the influence ofteacherstraining inCBC on how instructors in the first, second, and third grades in the public primary institutions in Migori County are implementing the competency-based curriculum.
ii. Establish the Impact of Utilizing and Accessing Educational Resources on the competency-based educational program implementation by Migori County public primary school teachers in grades 1, 2, and 3.
iii. Establish the influence of teachers' ICT skills examines how teachers in grades 1, 2, and 3 are implementing competency-based curricula in public elementary schools in Migori Region.

iv. Explore the school-based challenges influencing the adoption of competency-based curricula in Migori County's public elementary schools.

1.5 Research Hypotheses

The following research hypotheses were tested.

H_{01}: Teacher training has no influence on the teachers of Migori County's public elementary schools offer levels 1, 2, and 3. implementing the competency-based curriculum.

H_{02}: Instructional resources have no influence on how instructors in the Grades one, two, and three in public elementary schools in Migori County are implementing the competency-based curriculum.

H_{03}: Teachers' ICT skills has no influence on how instructors in Migori County's public primary schools are implementing the curriculum includes levels 1, 2, and 3 that is competency-based.

1.6 Research Questions

The ensuing inquiries for research guided the studies

i. What is the impact of teacher preparation programs on the adoption of competency-based teaching methods in public elementary education in Migori County?

ii. What is how the availability of educational materials affects the competency-based curriculum's implementation in Migori County?

iii. What influence do teacher ICT skills have in the the adoption of competency-based instruction in Migori County's public primary schools

iv. What are the school-based challenges influencing the adoption of competency-based education in open primary schools in Migori County?

1.7 Justification of the Study

According to a study by the Kenya National Union of Teachers (KNUT) (2019), In the majority of primary schools, CBC implementation is still difficult in all the 47 Counties in Kenya, experiencing difficulties in implementing the Curriculum. The study elucidated that there is largely because of inadequate teacher training on Curriculum implementation that competency-based teaching-learning methodologies are used sparingly in the bulk of the Counties' schools. However, the report by KNUT does not clearly show the level of training received by primary school teachers in the Counties. In addition, the study did not delve to establish how lower primary school teachers perceive CBC and their technological skills which are important aspects that can influence teachers ability in implementing the CBC Curriculum.

Abuya (2017) asserts that a skilled and knowledgeable facilitator is necessary for the delivery and implementation of CBC. The success teachers are essential to the execution of a curriculum based on competencies. taking on the role of coaches. and facilitators instead of knowledge transmitters. Therefore, it is vital that instructors in public elementary schools, particularly in Migori County, Kenya, are ready to execute the CBC curriculum. As a result, the researcher believes it is crucial to address this subject.

1.8 Significance of the study

The study's results will give vital data to the Ministry of Educational institutions national school managers, administrators, planners, and policy makers in order to help them understand the needs of teachers with regard to implementing the CBC curriculum. Principals in the county, county educational officers, boards of administration, vendors, parents, teachers, and the community will all find the material to be of the utmost value. It will emphasize how crucial teacher readiness is to putting a competency-based curriculum into practice.

The Kenyan Institute of Curriculum Creation (KICD) hopes to use the study's results to guide changes to the teacher preparation program to comply with the needs of CBC. As a result, Pre-service teachers might possess the required information and skill on implementation of CBC.

The findings from this study may inform the County Government on in-service teacher development, by suggesting the aspects that lower primary school teachers need further instruction on the proper application of the CBC. The results could also assist the Teacher Service Commission (TSC) to develop quality programs for induction that would provide educators with the CBC-related skills and information they need.

The study findings may also be expected to inform school managers whether lower Teachers in elementary schools are ready to accept and use the CBC. From the study recommendations, the school managers may embrace change that would enhance curriculum implementation in elementary public schools.

The study findings may help lower primary school teachers to know the vital role they take part in the CBC's implementation in the classroom. Additionally, the

research would identify various gaps and deficits which they could address for affective implementation of the Curriculum.

In addition, the study findings may also inform policy guidelines needed to be put in place to support lower primary school teacher's professional development for the CBC to be implemented effectively. Finally, it is envisioned that the study would contribute to the body of knowledge, on primary school teacher preparedness to implement CBC and identify gaps that need to be filled in more research.

1.9 Assumption of the study

The investigator postulated the following:

i. That The educators who took part in the research were prepared in primary education. Thus, they had the the capacity to comprehend the inquiries and offer relevant information in regard to the variables under investigation.
ii. Some Teachers are ready for the curriculum based on competency put into practice in public elementary schools.
iii. That the respondents provided honest responses, hence collection of accurate research results, which may inform proper policies and actions.
iv. That CBC had been rolled out in all Kenyan public elementary schools, hence it is possible to extrapolate the study's conclusions.

1.10 Scope of the Study

Only the public primary schools in Migori County were included in the study. Four other facets of teachers were the subject of the investigation ‘preparedness in terms of, in-service training, teaching and learning materials, challenges and ICT skills. The respondents were the Head teacher, grade 1-3 teachers, and SQASO.Data was collected between January and September 2021.

1.11 Limitation and Delimitations of the Study

The study faced several limitations; for instance, the respondents were hesitant to divulge sensitive and crucial information out of concern for disclosing their level of readiness in implementing the competency-based program. By carefully addressing the respondents, explaining the study's objectives, and informing them of the confidentiality and anonymity of their answers through encoding and allow words to safeguard the data, the researcher was able to mitigate this. Secondly Principals are normally busy and their availability in schools may not be guaranteed hence making it difficult for interviews to be carried out with a number of them. The researcher mitigated on this by making prior arrangements for phone interviews with the affected principals.

Accessing schools during the Covid-19 pandemic was a big challenge. Most of the schools were not willing to receive visitors which might have led to postponement of the data collection exercise. To address this, the researcher sought a permit from the Ministry of Education to be allowed to collect data from

the schools, the researcher served the schools management with the permit and requested to be allowed to collect data. In addition to that, the researcher and the research assistants ensured that they adhered to the Ministry of Health guidelines of putting on masks and having sanitizers.

The study was limited to Migori County's public elementary schools, with the head teachers and teachers in those schools serving as its primary subjects. Studies that showed a low adoption of competency-based techniques in public primary schools in Migori County served as the basis for this.

The acceptance and application of the CBC could be impacted by a number of things. However, the scope of this study was limited to the level of CBC training that instructors had received, their technological aptitude, how they saw the curriculum, and the difficulties they encountered when implementing it. This was because teachers are key players in implementation of curriculum. Their preparedness was therefore, key to understanding implementation of the CBC.

1.12 Theoretical Framework

This study is based on Gross's (1971) theory of curriculum implementation. According to Gross (1971), elements like teacher competency, openness and knowledge of the executor, capacity of the executor, support from the management, and attitudes of the teachers, students, and stakeholders must be taken into account for the effective execution of any educational program.

According to Gross (1971), the instructor who is carrying out the implementation should be qualified and knowledgeable about the subject matter. He contends that ineffective and insufficient curriculum implementation might occur when

implementers are unaware of curricular changes. The person who implements the new curriculum should also see the changes it contains favorably. Learning new abilities and altering one's perceptions both contribute to change. Additionally, Gross (1971) emphasizes the necessity of altering people's attitudes in order to apply curricula effectively. By highlighting the necessity of modifying instructors' attitudes for efficient course implementation, Hawes (1979) concurs with Gross (1971).

According to Baumert, Kunter, Blum, Bruuner, Voss, Jordan, and Tsai (2010), a teacher's subject-matter expertise affects how they present their lessons to students and how well they learn. Given that this study is about curriculum implementation, the theory of curriculum implementation has a connection. According to an adaptation of this theory, qualified teachers who are familiar with the program's subject matter are necessary for the implementation of a competency-based curriculum.

The capacity of the execution is important for successful curriculum implementation, according to Gross (1971). The curriculum should be implemented by teachers who are knowledgeable enough to do it. It is essential to provide instructors with the training and information they need to manage a new curriculum. As a result, in order for the teachers to successfully apply the competency-based curriculum, they should get training through seminars, workshops, and in-service training.

According to Hall, Hord and Rutherford (2006), the most important factor that is normally overlooked when implementing a new curriculum is the human element which constitutes the implementers of the programme. This shows successful

implementation of the CBC goes beyond provision of materials and resources, the most important factor are the teachers who are the implementers. This informed the study to focus on the preparedness of primary school teachers to implement the curriculum. By doing this, the staff's comfort and competence level will increase, making them shift their focus from personal concerns to focusing on the desired outcomes of the program. This means that apart from training the implementers of a new program to equip them with skills and knowledge, it is also import to aim at changing their perception. This informed the current study to delve and establish how the lower primary school teachers perceive the Curriculum.

The idea will aid the research in determining how well-prepared teachers are in terms of their knowledge, technological prowess, and attitude toward implementing competency-based curricula. The competency-based curriculum places a strong emphasis on how students develop their self-confidence, interpersonal skills, and capacity to learn new things throughout their lives. The architects and active participants in the learning process are the students.

1.13 Conceptual Framework of the Study

The conceptual framework depicts a relationship between teacher preparedness and the implementation of the CBC as illustrated in Figure 1.1. The framework shows that implementation of CBC could be affected by the independent variables.

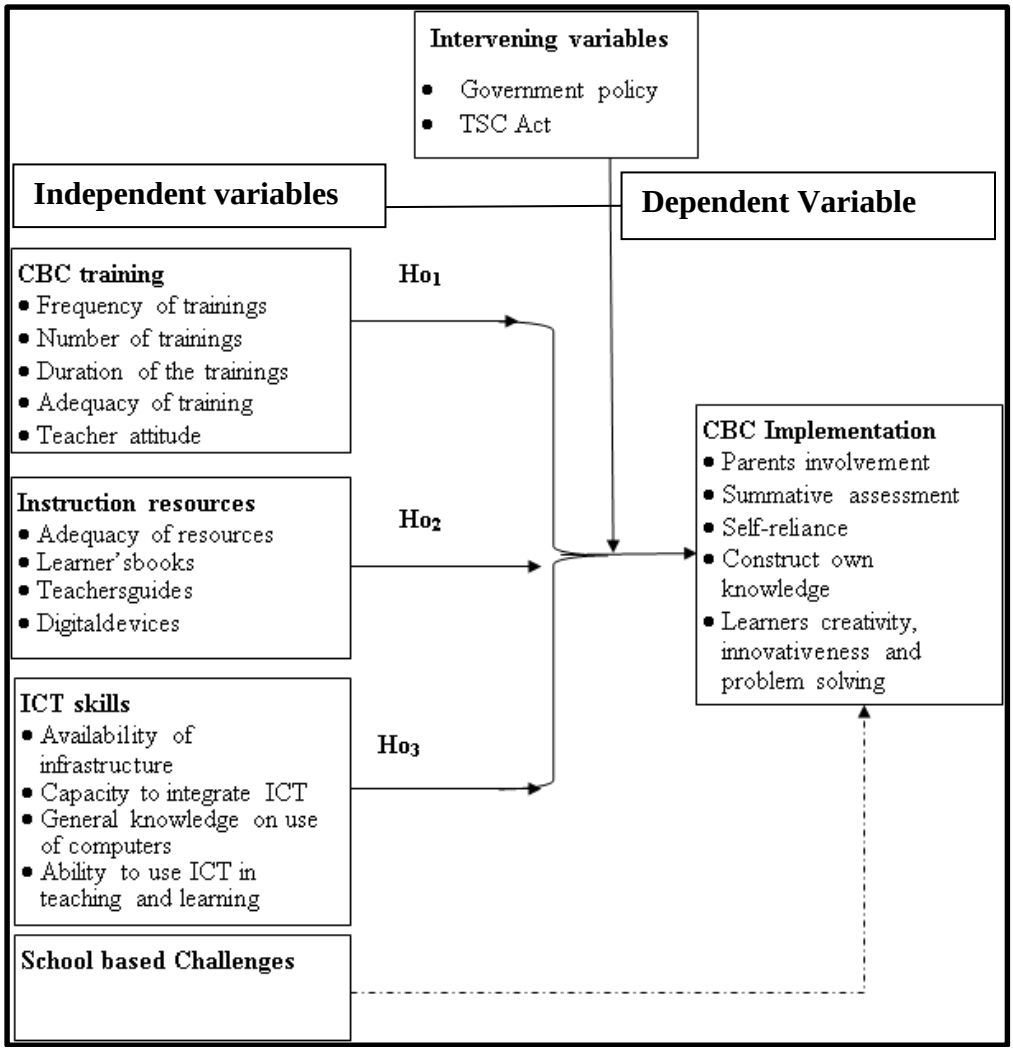

Figure 1.1: Conceptual Framework Source: Researcher (2021)

Figure 1.1 illustrates the interaction independent and dependent variables. In the study, the independent variables: In-service training, teaching and learning materials, ICT skills and school-based challenges constitute the cause variables; they are anticipated to have an effect on how successfully teachers implement the CBC curriculum. When a teacher is given proper in service, equipped well with adequate and relevant teaching and learning materials, the right ICT skills and the challenges identified and solved, this will lead to effective implementation of CBC.

1.14 Definitions of Significant Terms

Competency: refers to the capability to apply knowledge,expertise and views to practical situations to solve a problem or handle a task effectively (Kabita and Ji (2017). Inpractice, a learner needs only a consistent supply of resources for interaction and decipheringreason from the given instructions.

Competency-based curriculum: is a vehicle through which a country can empower its citizens with skills, knowledge and values that will help them fit in the global village which is characterized by advancing technology (IBE-UNESCO, 2017). It also enables learners to perform practically and measurably, using the skills acquired through learner-centered pedagogy.

Curriculum: refers to a set of knowledge and abilities that students are supposed to gain in a given order when attending school or doing a particular course (UNESCO, 2015).

Instructional materials: cite the resources that the instructor used to clarify concepts, particularly abstract ones.In this instance, the textbooks in question are required reading for schools and comply with CBC standards.

Teacher Preparedness -refers to the extent to which teachers are trained in CBC, their technological skills and their perceptions about the CBC and their ability to support the implementation of the CBC in primary schools.

Technological skills of teachers: Refers to teachers' skills in using technological devices like phones, computers, and projectors to implement the competency-based curriculum.

Training in CBC - refers to the number and duration of trainings which the primary school teachers have attended, the CBC areas covered in the training and the skills acquired from the training.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter contains literature one valuating teachers' preparedness in implementing a competency-based curriculum. The review will be divided into many areas: teacher training and competency-based curriculum implementation; educational resources materials and competency-based curriculum implementation; school-based obstacles in competency-based curriculum implementation; and teacher equipment with ICT abilities to administer the competency-based curriculum.

2.2 Teacher Training and Implementation of the Competency-Based Curriculum (CBC)

Comprehensive instructor training in (CBC) ought to be top of mind for proper achievement of the curriculum since teaching must alter as a result of the switch from content-driven to competency-based instruction (Kafyulilo & Rugambuka 2012). Zeiger (2018) argues that since teachers are the primary curriculum implementers, they must possess a wide range of abilities, capabilities, and knowledge to bring everything together and create a learning environment. Furthermore, according to KICD (2017), in order to make learning lively and effective, teachers must make an effort to include the CBC's components into their lesson plans. They must also be highly versed in the use of effective teaching techniques.

Jengere (2017) asserts that teachers need pedagogical expertise in integrating CBC components, such as the core capabilities, into instruction as a requirement of effective teaching-learning in schools. This suggests that teacher training is necessary for the accomplishment of execution of CBC in institutions. According to Zeiger (2018), instructors are essential in giving students the chance to learn and reach their full potential. However, in the setting of the CBC, teachers must comprehend the transition from teaching to studying and carry out formative assessments of students' development.

Similar to this, Syomwene (2017) emphasizes that teachers must keep in mind their additional obligations regarding the links made among the curriculum and students throughout instruction. In order to apply suitable pedagogical teachers must adopt strategies, design lesson plans, build assessment frameworks, and choose educational materials that are appropriate for students of all skill levels. to have the knowledge and abilities to do so.

Jengere (2017) highlights that the creation of reflective lessons is necessary for the effective execution of CBC. A lesson plan, as defined by Farrel (2012), is an oral account of the processes, subject matter, resources, timing, and learning atmosphere used in instruction. For example, Mokua (2010) studied how important stakeholders in South Africa's curriculum implementation—primary school teachers—were affected by their training. Research is being conducted to determine how educator preparation affects curriculum implementation and what part it plays in lesson planning.

The results showed that teachers are essential to carrying out the curriculum; as a result, it was advised that, for instance, for South Africa to achieve its educational

objectives, teachers should first receive training on how to create successful educational materials for the new curriculum. This suggests that prior to When introducing a new curriculum, educators ought to be prepared. prioritized. The research being investigated was carried out in primary educational institutions in South Africa; hence, it is crucial to ascertain how Kenyan teachers in lower primary schools have been taught in the CBC on their capacity to create efficient lesson plans.

As reported by Molapo (2018), who carried out research to ascertain how grade three teachers in South Africa's Limpopo primary institutions incorporated the new curriculum, instructor education in the curriculum may impact the adoption process. The majority of grade three instructors, according to the study, lacked the skills and knowledge required to oversee the program, which complicated the procedure for implementation. This suggests that insufficient teacher training impedes a curriculum's ability to be implemented effectively. The results of the study may not be applicable to Kenyan schools because they were performed in South Africa; as a result, it is necessary to determine how much CBC training lower elementary educators in Kenya have had and how well they can incorporate it into lessons.

Ambei and Kim (2018) carried out a study throughout Cameroon to ascertain the amount of CBC being utilized by elementary school instructors. The results showed that most teachers still don't know why the CBC is actually about. The research also claimed that effective implementation remained a major challenge, especially for teachers who had attended training and had some experience with the curriculum in the majority of cases due to a lack of resources and a lack of

expertise on how to innovate resources. According to the study's conclusions, it is crucial for Cameroon's educational stakeholders to come up with ideas, make sure teachers are knowledgeable about how to apply the curriculum effectively, and equip teachers with enough instructional tools. This study offers proof that instructors' lack of expertise on the curriculum can impede CBC implementation. However, because Kenya is a different environment from Cameroon, where the study was conducted, the results might not necessarily be applicable to Kenyan schools. Therefore, it was crucial to determine how much curriculum training teachers in Kenyan schools had received and how this is impacting the implementation process.

In a research on teachers' readiness Handwe and Mpofu (2017) evaluated the ability of primary school teachers to create lesson plans which complemented the newly implemented third-year curriculum in Zimbabwe. The research revealed that teachers' needs for successful lesson plan preparation were not adequately addressed by the training they received. According to the study, the government's The Ministry of Education ought to offer short courses to cover the gaps in teachers' curricular knowledge. This implies that when modifications occur, it is imperative that educators have training on developing lesson plans to the curriculum require new elements to be included in them. The CBC calls for lesson plans that have additional components compared to those in the previous curriculum. Not much has been researched on teachers' ability to prepare lesson plans that are aligned to the CBC. This indicates that there was a need to find out how well teachers are doing this in this era of CBC.

Zhuwale and Shumba conducted another investigation in Zimbabwe (2017), that looked into the factors affecting teachers that hampered the effective implementation of the curriculum in rural schools there. The study found that the main obstacle to the curriculum's implementation was teachers' lack of pedagogical understanding regarding how to incorporate its components into instruction. The report advocated for thorough curricular training for instructors. This suggests that training is essential for the successful integration of multiple curriculum components. However, because the study was conducted in Zimbabwe, which has a different setting than Kenya.

Sabola (2017) did a study in Malawi to see how well-prepared teachers there were to apply the new primary school curriculum. Finding out if Malawian primary school teachers could produce appropriate assessment tools for the revised curriculum was the aim of the research. According to the findings, there isn't much curriculum execution at educational institutions. As per the research, the majority of teachers lacked training on how to use the curriculum. They thus employed antiquated assessment techniques that were applied in the prior curriculum. This suggests that training teachers on ways to apply a curriculum is essential, especially when it requires a shift in evaluation techniques. However, the study used qualitative data only which was collected using face to face interviews, but the current study used interviews, questionnaires, observation guide and document analysis guide. Furthermore, as the reviewed research was carried out in Malawian primary schools, it's possible that Kenyan lower primary schools would not be able to use the findings. Determining the level of CBC

training received by Kenyan lower elementary school educators and their proficiency with the assessment rubrics is crucial.

According to Paulo (2014), who performed an investigation on pre-service teachers' readiness in implementing CBC in high schools in Tanzania, training for teachers has an impact on their capacity to administer a curriculum. 16 second-year teacher trainees at the institution of Dar-Salaam were specifically chosen for the study. The research revealed that pre-service educators had not received training on new evaluation techniques or how to write lesson plans in accordance with the CBC. As a result, they were still use conventional techniques for instruction and evaluation. To ensure that instructors have the instructional material and knowledge required to apply the competence-based curriculum, the report advised an examination of teacher education at all universities. This suggests that teacher training is essential for the efficient application of CBC. However, the study used purposive method in selecting the respondents which involves a smaller sample and the results may not be applicable to a larger population. Since this study was conducted in Tanzania, the findings may not be applicable in Kenya. It is important therefore, for us to establish the extent to which teachers in Kenya have been trained to be able to develop CBC lesson plans.

According to Studying how technical trainers in Arusha, Tanzania carry out the essential elements of CBC, Kanyonga, Maatana, along with Wendit (2019) successful execution of a new curriculum necessitates ongoing teacher training. By employing a case study methodology, a qualitative research methodology was used in the study. 24 trainers were chosen through a purposeful sampling process

from three technical education institutions in Arusha City. The study found that although most of the trainers had in-service training, they were not very knowledgeable about the curriculum. Additionally, it was claimed that the trainers lacked the expertise and abilities needed to effectively integrate the curriculum's essential components. The study suggested that technical trainers should receive ongoing training on how to use the CBC. This demonstrates the requirement for teachers to get ongoing in-service training in order for them to successfully apply the CBC. Although this study's findings are instructive, it was conducted in Tanzania, thus Kenya's lower elementary schools may not be able to use them. It is crucial to determine how much CBC training junior primary school educators in Kenya have received and how well they can incorporate the core competencies.

According to In 2015, Komba and Mwindaji examined whether educators in Tanzania used formative evaluations as per CBC requirements, inadequate training has an impact on instructors' abilities to evaluate students. Results revealed that 86% of teachers lacked a proper comprehension of CBC and that 76% of the teaching plans they had developed did not adhere to CBC's standards. Overall, there was little student participation in class activities, and less than half of the teachers that used formative assessment actually used it. The report suggested that teachers undergo frequent training to provide them the skills they need to administer the new curriculum. This suggests that it's critical to provide teachers with ongoing training on how to use CBC. Teachers will learn the information and abilities necessary to do formative assessments using assessment rubrics through in-service training. Not much has been documented on lower

primary school teachers ability to assess learners using the assessment rubrics. It is therefore important to find out how well teachers are doing this in schools.

Makunja (2016) conducted an different study in Tanzania with the aim of identifying the difficulties instructors have when adopting CBC in educational settings there. The study found that teachers lacked the necessary skills to effectively incorporate the new curriculum's components into lessons. This was determined to be the primary barrier preventing the CBC's effective adoption in classrooms. The study recommended that teachers be given the opportunity to engage in the process of developing curriculum and be trained in curriculum administration in accordance with these findings. This suggests that involving teachers in the creation of curricula is essential. They will be able to comprehend the many facets of the course of study before taking part in the course of action as a result.

To successfully administer a curriculum, teachers must preparation programs and continuing education are essential. The impact of preschool teacher preparation and continuing education on the implementation of the scientific program in Nairobi County was examined by Kangori (2014), whom brought this to light. The study found that professional development for teachers had an impact on how the curriculum was implemented in preschools. The study suggested that, through in-service programs, the government should guarantee preschool instructors' ongoing professional development. The ability of preschool instructors to apply the 8.4.4 preschool scientific curriculum was the main emphasis of this study, which was carried out in Kenya. These conclusions might not be applicable to the CBC curriculum's implementation. Because of this, it's important to determine

how well-trained instructors are to use the CBC and how well-equipped they are to incorporate the basic competencies into lessons.

Effective curriculum implementation is influenced by the pedagogical skills of the teachers. In 2017, Kemboi and Nabwire carried out research in the North Rift region of Kenya. to examine teachers' pedagogical knowledge and competency when teaching in schools. According to the study's findings, most teachers did not employ learner-centered techniques including inquiry, dialogues, and demonstrations. The survey came to the conclusion that a sizable portion of the teachers lacked the pedagogical competence necessary to apply the secondary school curriculum. This indicates that teachers won't be able to apply a curriculum if they don't have proper pedagogy training. The evaluated study concentrated on secondary school teachers' pedagogical knowledge and skill in teaching the 8.4.4 curriculum. These conclusions might not be applicable to the new lower primary school curriculum. This calls for research to determine the level of CBC training that lower elementary educators have received and their capacity to create curricula-aligned lesson plans.

at a related study, Okoth (2016) looked at form three teachers' preparation for implementing the updated English language curriculum at Kenya's Eldoret East Sub-County. The study used a mixed-methods descriptive design to investigate instructors' abilities to create English lesson plans. The survey found that teachers continued to use instructional materials for the previous curriculum. The main obstacle to the redesigned curriculum's adoption was determined to be a lack of suitable in-service training. The report suggested that in-service teachers receive ongoing training on the updated curriculum. This suggests When a new

curriculum was implemented successfully depends on ongoing teacher training. The evaluated study looked at secondary school English teachers' capacity to execute a changed curriculum. Because of the differing training and expectations in lower elementary schools, the findings might not be applicable there. It is crucial to determine how well-trained lower elementary school educators are and how well-equipped they are to create lesson plans that follow the CBC.

According to the KNUT (2019), which performed a study to determine how well-trained primary school teachers were in applying the CBC, a teacher's level of training may have an impact on how well the CBC is implemented. Data was gathered using questionnaires and interviewing protocols. Descriptive statistics were used to summarize the collected data. According to the study, only a small percentage of primary schools used CBC techniques, and the majority of instructors lacked the necessary training. The research advised the government, under the Ministry of Education, to start a structure for systematic education of during service and pre-service teachers, among other recommendations. This suggests that inadequate teacher training will prevent the CBC from being implemented effectively. Summaries from the descriptive statistics served as the foundation for the study under review's conclusions. Inferential statistics had to be used to analyze the data. This made it easier to determine the connection between teachers in lower primary schools' CBC training and their capacity to create lesson plans. Additionally, the study under evaluation made use of interview and questionnaire protocols to gather potentially biased self-reported data. The current study employed surveys, interviews, and observation checklists in addition to document analysis guidelines schedules to collect trustworthy and

accurate data. Through the use of an observation checklist and a document analysis guide, what was reported from the interview and questionnaire schedule was confirmed.

Waweru (2018) did a study and validated this to determine how well-trained teachers of lower elementary schools in Nyandarua North Sub-County were to apply the CBC. 100 primary school educators, 17 head teachers, and 2 instructional officers made up the study's purposively chosen sample size. Results indicated that 98.8% of educators lacked the necessary training to put the curriculum, particularly the new learning areas, into practice. According to the study, 95% of teachers found it impossible to prepare CBC lesson plans because of how long it took to create only one. Additionally, according to the poll, 50% of the teachers reported difficulty in developing and applying the evaluation rubrics. Furthermore, because they felt they lacked these skills, the most teachers in lower elementary schools (72.8%) in the study needed help incorporating the majority of the core competences into their teaching. According to the study's conclusions, the Department of Education should implement a suitable training framework for developing CBC lesson plans, including key skills, and employing evaluation rubrics. This suggests that the majority of lower-grade teachers struggled to create the necessary lesson plans because they had not been trained on how to execute the CBC. Despite the reviewed study's significant findings, it only looked at instructors in lower primary schools; as a result, it was unclear how well pre-primary school teachers would be able to apply the curriculum. This gap served as the inspiration for the current study, which sought to determine the level of CBC training that lower elementary school instructors had received and their

capacity to execute the curriculum in these schools. Additionally, summaries from descriptive data served as the foundation for the study under review's conclusions. It was necessary to undertake a research that could analyze the data using inferential statistics. This was done in order to build a link between teachers in lower elementary schools' CBC training and their capacity to create lesson plans.

In a 2018 study, Ondimu assessed whether Teachers at Nairobi County's Dagoretti Northern Sub-County's Private early education centers were ready to use the Competency Based Curriculum. The research used a descriptive survey methodology. Descriptive statistics were used to describe the information that was gathered utilizing questionnaires and an interview schedule. The survey found that the majority of preschool teachers had trouble using the evaluation criteria. The study also revealed that the majority of educators had not gotten enough training in the CBC, with 35.2% having only attended one training, 25.8% having taken two in-service courses, and 9.7% having taken more than five courses on CBC implementation. This suggests that preschool educators need greater instruction on how to carry out the program. The examined study looked at how well pre-primary teachers had been educated to use the CBC and their capacity to carry out preliminary evaluations using the rubrics, however it solely had a focus on private pre-primary institutions. It was also uncertain how much CBC training preschool educators in public schools had received or how proficient they were at using the evaluation rubrics. By examining how prepared In public preschools, CBC is to be used by pre-primary school instructors, the current study aimed to close this gap. Last but not least, the evaluated study

included interview and questionnaire protocols that gathered self-reported data that could have been skewed. A checklist for observation, a manual for document analysis, Scheduling for interviews and questionnaires were all used in the current study. The responses received from surveys and interview schedules were verified using information from checklists for observation and a document analysis guide.

Kisirkoi and Kamanga (2018) investigated the readiness of primary school teachers in Narok County, Kenya, to adopt CBC in a case study. 15 instructors across the lower primary school grades were randomly selected for the study, and they completed a questionnaire. The bulk of the teachers, 13, or 86.7% of them, agreed, according to the study's findings, that they didn't learn much from their pre-service and in-service training, which left them ill-equipped to carry out the curriculum. The study also revealed that 11 of the instructors (73%) did not know how to create additional learning materials other from textbooks, and 12 of the teachers (80%) did not have enough instructional resources in their respective classrooms. According to the report, only 7 teachers (46.6%) were proficient in using laptops for instruction, and 9 teachers (60%) created learning activities on their cellphones. Additionally, the survey showed that all 15 (15%) of the teachers did not obtain ongoing CBC training despite having insufficient knowledge of how to administer the curriculum.

Based on the findings, the study came to the conclusion that the school's instructors were not sufficiently trained to apply CBC. Even though the study under consideration was carried out in Kenya, it looked at the curriculum-implementation skills of teachers in lower elementary schools. As a result, it was necessary to determine the instructors' capacity to carry out the curriculum in pre-

primary schools. We are also unable to determine if the teachers' capacity to infuse the essential skills has been affected by their perceptions because the study under review failed to identify the teachers' perceptions regarding the CBC. Therefore, the current study looked into how pre-primary school teachers' perspectives and their capacity to apply the program in public schools relate to one another.

In a study by Abdullahi (2020), the impact of schools on the adoption of CBC in preschools in Kenya's Garissa Sub-County was examined. Data were gathered through the use of surveys as well as interview schedules in keeping with the descriptive research design of the study. The results of the survey indicated that most of public preschoolers instructors were female and had pre-primary education backgrounds. In addition, it was noted that the majority (68%) of instructors in public preschool programs had not gone to any training sessions on how to use the new curriculum. The survey also showed that the institutions lacked enough instructional resources, particularly digital equipment.

According to the study's conclusions, the ministry of schooling should provide additional instructional resources, particularly ICT equipment, in public primary institutions in order to improve curriculum implementation. Additionally, it was suggested that the government offer preschool instructors education and development initiatives to improve their grasp of the curriculum. The self-reported data that was acquired for the study under evaluation using survey and interview schedules may have been biased. In the current study, schedules for interviews, questionnaires, and an observational checklist were all used. The data provided by respondents from interviews and survey schedules were verified

using information from checklists for observation and a document analysis guide. The reviewed study also didn't look into how lower primary school instructors felt about the curriculum or how well they could use digital media to carry out the program. Based on the highlighted inadequacies, The current investigation examined how perceptions within public elementary schools affected how the curriculum was implemented. It also determined if teachers were able to use ICT to help implement the curriculum.

A further investigation by Chemagosi (2020) looked at how well-prepared teachers were to apply competence-based curricula in lower primary schools operated by the government in the Kenyan counties of Kilifi and Nandi. According to the study, which used a descriptive research methodology, teacher readiness has a substantial impact on how competency-based curricula are implemented (=0.342, t=7.985, p>0.05). This suggests that there is a considerable connection between the adoption of competency-based curricula and teacher preparation. Consequently, the hypothesis that states there is no connection between the deployment of competency-based curricula and teacher preparation was rejected. According to the study, in order to adequately prepare teachers for curriculum implementation, the Department of Education should provide them with the necessary training, expertise, and instructional resources. Despite the reviewed study's significant findings, it only included lower elementary school educators in public schools; as a result, it was unknown how well these teachers could apply the curriculum. This gap served as the basis for the current study, which sought to determine the level of CBC training that elementary school

educators had received and their capacity to apply the curriculum in the public schools.

2.3 Instructional Resources Materials and Implementation of the Competency-Based Curriculum

Educational resources are the main vehicle for delivering knowledge in the classroom in order to create a successful atmosphere for learning and instruction (Mundia, 2017). To achieve the alignment, teachers must think about creating the right instructional materials that promote learning activities, such as textbooks, worksheets, charts, three-dimensional in nature designs, simulations, puzzles, games, among many other things. Additionally, as a competency-based curriculum necessitates a change from focused on teachers to student-centered approaches, teachers will need instruction on the use of the new resources.

The advantages of using educational materials with kids are substantial. According to Genlott and Gronlund (2013), instructional materials can help students develop a positive outlook, feel passionate about their subject, acquire practical expertise and utilize manipulative abilities, visualize or endure something, accommodate various learning styles, stimulate students' curiosity and interest, reduce verbalization through repetition, and provide chances for autonomous study. Williams (2014) noted that a poor communicator cannot be a good teacher. Teaching involves effective communication between teachers and students, which is concretized via teaching materials. Information is expressed concisely and vividly in instructional materials for students.

In line with this, Igwe (2015) holds that teaching and learning He laments the absence of materials, which are essential to the process of learning and instruction. Any educational resource's production or choice should take into account a certain number of elements within the context of instruction. The choice and creation of educational resources for use in the delivery of lessons should take into account the goals of the lesson, content, evaluation tools, age, level, concern, background, style of learning, physical capabilities, the intended audience's size, the social atmosphere in the classroom, and sitting structure, listening and viewing arrangement, obtainable time, and space, among other factors (Oguntuase, Awe &Ajayi, 2013).

Insufficient teaching and learning materials, according to Ndichu and Nthinguri (2013), undermine teachers' ability to use sustainable instructional methods.Utilizing educational resources effectively is crucial for implementing curricula. Without sufficient instructional resources during the teaching process, learning would be impossible to translate into a long-lasting change in behavior.

Musset (2016) asserts that adopting a curriculum requires qualified teachers who can present content using suitable and pertinent teaching resources. Learning by doing is one of the most effective teaching strategies, and instructional materials encourage pupils to do it. Students rapidly disregard the things they are told but quickly recall what they do. Every learner's sense is engaged when educational materials are used. As a result, learning is more relevant when the learner uses many senses.Musset (2016) also noted that effective teaching materials are necessary for every lesson in order to improve student retention.

Additionally, the lack of any physical resources might be a significant obstacle to learning. The use of instructional materials can improve communication and boost students' academic performance. According to Mbarushiname and Kuboja (2016), comprehensive utilization of media, real-world resources, textbooks, and other resources tailored to certain abilities should be encouraged in the classroom. Additionally, he promotes group projects and the use of varied teaching strategies because a competency-based curriculum necessitates this.

Effective and fulfilling learning is the result of the systematic integration of numerous resources into the teaching-learning process. According to this point of view, curriculum materials are essential to the teaching-learning process, according to Igwe, Uzoka, and Ekwerike (2015). He regrets the fact that most secondary schools in Nigeria lack instructional resources. Teachers therefore employ the speak and chalk technique. According to the researcher's observations, Talk and chalk appears to be the preferred technique for instruction employed by chemistry instructors.

Despite the many advantages of employing learning resources, Okeke and Okoye (2013) assert that several issues prevent their utilization. These researchers have identified a number of issues, some of which are as follows: insufficient teachers' technical and professional expertise; low competence of educators in the field of effective resource utilization; inadequate knowledge of the different types of materials for instruction that can be used to teach various subjects; lack of time placement to accommodate effective resource utilization; and insufficient funds to purchase or improvise necessary instructional materials.

An investigation into the difficulties of putting into practice a curriculum based on competencies in elementary schools in Kinondoni Municipal of Dar es Salaam, Tanzania, was undertaken by researchers like Rwezaura (2016). A descriptive research approach and both qualitative and quantitative methods were used in the study. The results of this study revealed a number of difficulties in implementing CBC, including the prevalence of The prevalence of textbooks and teachers who adhere to the conventional method of teaching and learning that is teacher-centered, which favors lecture techniques over competency-based curriculum that are insufficient for the learner-centeredness approach.

Muneja (2015) conducted a second study on competence-based curricula, using a descriptive case study design, in-person interviews, non-participant observation, and document analysis to collect data. The study's findings identified a number of obstacles to the competence-based curriculum's successful implementation. These difficulties include, among others, teachers' inadequate comprehension of the CBC, their limited involvement in the creation of the curriculum, the dearth of good textbooks, and their lack of enthusiasm for implementing the CBC. The research tools were chosen with a subjective philosophical perspective. With the help of both objective and subjective philosophical viewpoints, the current investigation filled the gap.

According to HakiElimu (2012), there were routine curriculum changes occurring without proper planning for the process of learning and instruction. Most developers of curriculum and teachers agree that the curriculum implementers were rarely engaged with the entire process. Additionally, pupils are impacted by the regular changes in exam formats and the kinds of literature that students were

expected to read. Implementing the competency-based approach approach was hampered by the frequent curriculum changes.

The use of old teaching materials in conjunction with a new curriculum that they do not align with is against accepted best practices (Mundia, 2012). Also crucial to the CBC is the assessment of the learner's degree of competency mastery (Akala, 2021; Ndihokubwayo & Habiyaremye, 2018). By using textbooks on the pertinent, age-appropriate subject, educational resources ought to be governed by scope and sequence charts make the curriculum design easy to understand. Unlike the traditional approach, which saw the student as an unable receiver of information, instructional materials had to be designed with learning in mind.

2.4 Teachers' ICT skills in implementing the Competency-Based Curriculum

Technology is a prime enabler of sustainable competitiveness, with the power to elevate countries economic development (Masoum, 2015). As such, countries are delving in the use of ICT in educational institutions with the aim of equipping learners with digital literacy. According to Rwanda Education Board (2017), integration of ICT in CBC will help teachers and learners to make teaching-learning activities live which will help learners to understand concepts easily and quickly. The utilization of technology in preschools has greatly improved the educational system and sparked students' interest and excitement. This is highlighted by Kapur (2019), who asserts that when educators utilize computers and the internet to raise students' understanding of academic topics, they can also pique students' interests and change their mindsets.

In addition, Kapur (2019) highlights that making use of technologies by teachers when teaching-learning techniques are used, they assist students in carrying out their job duties in a smooth and effortless manner. Furthermore, teachers can utilize digital media to carry out class activities such as, formulation of lesson plans, assessment of learners, providing pre-school learners with pictures and images on the internet to emphasize a concept. In addition, teachers can engage children using movies and cartoons, which provide kids with a fun distraction from the classroom.

The significant role of ICT in preschools is also echoed by Masoum (2015) who conducted a study to identify ways in which ICTs are combined in three south-western Swedish preschools. Preschool teachers were observed and interviewed for the case study. The results corroborated the idea that ICT can improve preschool practices by offering a range of complimentary opportunities to improve and modify current curricula. Further, The study demonstrated how ICTs have been seized as tools for documentation and communication in the workplace, as well as objects to enhance current activities, cultural mediators, and ways to amuse young children studied preschools.

In India, a study was conducted by Al-Awidi and Aldhafeeri (2017) to examine The preparedness of educators to incorporate digital curricula in Kuwaiti schools. An online survey was used by a randomly selected sample of 532 educators to gauge their degree of preparation as part of the study's mixed-method research design. A subsample of the participants (n = 21) were interviewed in semi-structured interviews to further examine the variables influencing their preparation. A technology preparedness survey was created and put into use by

the researchers in the technical and pedagogical sectors. The study established that teachers' preparedness for implementing the digital curriculum is mediocre in terms of both their pedagogical and technical skills. The study argued that lack of digital skills among teachers hindered them from implementing the curriculum. The study suggested that teachers receive in-service training based on its findings on how to use technology in instruction. The results from Indian schools demonstrate that when teachers lack technological skills, they may not be able to effectively implement some elements of the curriculum, hence educators must be equipped with computer knowledge and skills.

Teachers must incorporate ICT into their regular lessons and replace antiquated techniques with more contemporary resources in order to keep up with the demands of the digital age. This is echoed by Ghavifekr and Zhang (2015) who conducted a study in Malasyia. The study's major goal was to determine primary school teachers' proficiency with computers in the context of teaching and learning. A total of 61 instructors were chosen at random to fill out a questionnaire from 10 Klang Valley public primary schools in Malaysia.

Children nowadays are growing up surrounded by a wide variety of technological items. It is therefore essential that children be intentionally exposed to these technological items at a young age. Sadly, early childhood education settings do not make use of these technological resources. The availability of ICT resources in early childhood settings in Ondo West Local Authorities Area, Ondo State, and the understanding of pre-primary school teachers about them were evaluated by Olowe (2018), a researcher based in Nigeria. The study employed a descriptive survey design investigation. Thirty-eight participants were specifically chosen as

the study's sample from twenty public and thirty private schools. The Knowledge Test on Information Materials (KTTM) and the Technology Components Observation Checklist (TMOC), two approved instruments, were utilized to gather the information. Standard deviation, mean, and percentage were among the descriptive statistics that were employed to analyze the data. Results from The study found that the availability of technology materials in elementary school classrooms is inadequate and that pre-primary instructors possess an average understanding of technology materials relevant to early childhood classrooms. This made it more difficult to teach the curriculum material effectively.

Another study conducted in Nigeria by Oluwadar (2015) investigated to find out how much preschool educators used ICT to teach math and natural science concepts in early childhood classrooms. A combination of semi-structured interviews and the Mathematics and Science Proficiency Tests were used to gather data from 16 preschool classes in the state of Ekiti. Students in the control group were solely taught standard science ideas related to mathematics (comparison, categorization, and general numerical understanding) and natural sciences (solubility, recycling). Students in the experiment group were solely taught science using ICT for the same subjects. Classes from the participating schools made up the experimental and control groups. The study's findings demonstrated that using ICT for teaching and learning is a cutting-edge approach that improves preschoolers' comprehension of the concepts of numbers along with natural science phenomena. This translates to more efficient curriculum delivery. Considering the results, the study suggested requiring the modernization of ICT

use in teaching and learning procedures by mandating Ekiti's early childhood education programs.

The Kenyan government is actively pursuing ICT integration as a way to stay up with the quick developments in technology brought on by a knowledge-based economy. This has caused the government to launch a number of e-initiatives relating to the integration of ICT in education and to highlight digital literacy as one of the fundamental skills that students should develop. ICT integration in basic education, according to some authors, can only happen if instructors are proficient in implementing and utilizing ICT in the classroom (Wambiri & Ndani, 2014).This was also reported by Wanga (2014) who conducted a study to examine factors ICT integration with curriculum execution in Kenya's Gilgil Sub-County's secondary schools. In the study, a descriptive research design was adopted, and 229 instructional staff members and 25 principals were randomly selected for the sample. A questionnaire designed for teachers and a guide to interviews intended for school principals were used to gather primary data. The study found that desktop computers were insufficient in the majority of the schools. Study findings indicate that accessibility of ICT skills and curricular integration in Gilgil Sub-County secondary schools have a good link ($r=0.68$, $p<0.05$).

Additionally, there is a significant positive association ($r=0.66$; p0.05) between the use of ICT software infrastructure, ICT hardware facilities, and ICT integration for curriculum implementation by teachers. Furthermore, there were significant positive correlations between teachers' opinions of ICT, its utilization in the curriculum, and their comprehension of it ($r=0.49$; p0.05 and $r=0.18$; p0.05,

respectively). The study's findings suggested that in addition to providing schools with the necessary ICT tools, teachers should receive adequate training on how to integrate ICT into the teaching and learning process.Ngatia (2015) conducted a study to find out how prepared the public secondary schools in Mukurweini, Nyeri County, Kenya were to use ICT for teaching and learning. According to the study, teachers did not frequently use computers for both teaching and learning. The school atmosphere and support system were lacking, and the instructors' views toward integrating ICT into the classroom were encouraging, despite the poor preparation of the school. Nevertheless, it was discovered that teachers lacked sufficient training and expertise in using ICT, which led to extremely low self-confidence in using ICT for instructing and acquiring. This affected the standard of instruction provided in the schools.

Another study conducted by Tonui and Kerich (2016) delved to establish challenges of using ICT Use for instruction and learning in basic school environments the Rift valley region of Kenya. The results show that the biggest obstacle facing educators is the lack of ICT resources, which makes it more difficult to deliver curricula effectively. Of the teachers surveyed, just 19.5% said there is enough ICT equipment available for use by teachers; the remaining 72.3% said otherwise. The lack of an organizational commitment to mandating educators to use ICT in conjunction with the absence of protocols for overseeing and assessing educators' use of ICT for curriculum management constituted another noteworthy barrier. The study also showed that inadequate teacher capacity building in ICT integration significantly impedes curriculum implementation. According to the study, many teachers agreed that ICT has a lot

of potential to improve learning activities, but there are a several barriers in the way, such as inadequate equipment, a lack of administrative and technical assistance, improper attitudes, and a lack of training.

Teachers need to be competent in order to use ICT in the classroom computer users. In order to determine teachers' readiness for incorporating ICT in lower elementary schools in the Kasarani region Sub-County, Kenya, Wambiri as well as Ndani (2014) conducted a study. 236 primary male and female instructors teaching standard one through standard three classrooms in 31 public educational institutions in the Kasarani region Division, Kiambu County, Kenya, made up the study sample. According to the study, most instructors who thought they were proficient with computers were younger, while most teachers who thought they were not proficient with computers tended to be older. When compared to fundamental computer knowledge and abilities or their ability to teach fundamental computer knowledge and skills, the majority of teachers with poor perceived competence—63.1%—reported inadequate proficiency in their capacity to teach using computers.

Furthermore, attitudes have a significant impact on how instructors behave when using ICT, according to Wambiri and Ndani (2014), who found that older teachers in their study generally had negative attitudes and views. Based on its findings, the study concluded that it is important to consider the attitudes and views of primary school teachers, especially those of their senior instructors, regarding the usage of computers. The survey also indicated that it is critical that the Department of Education address the attitudes and views of teachers toward computers along with their use in the classroom. This emphasizes the necessity of

giving long-serving teachers ICT training, particularly to those who received it prior to ICT being incorporated into the curriculum for teacher education. According to the study, unless they acquire specialized training regarding how to instruct with computers, teachers—even those who consider themselves to be computer-savvy—may not be ready to incorporate computers into their lessons. As a result, these educators might require specialized training on using ICT in the classroom. For these teachers, the Ministry of Education may need to offer professional development courses on ICT integration in the classroom. To enable working teachers to participate in the training, it might be offered in an in-service format that is designed to allow it to be done during the summer months.

Lastly, the study suggested that ICT pedagogy be added to the current primary educator curriculum in order to improve teacher preparation. This will make it easier to make sure that trainers concentrate on helping instructors advance their computer literacy instruction as well as their knowledge and proficiency with computers. The examined study was limited to the computer domain. Other ICT technologies are available for use in teaching and learning, especially when CBC is being implemented.

The paradigm shift from master to the CBC program, according to Murararaneza as well as Mtshali (2018) as well as Njagi (2020), implies that the teacher's role is gradually changing from taking notes to acting as an intermediary, with the student taking center stage. Furthermore, a number of countries emphasize the inclusion of technological sciences in the curriculum in schools. Stakeholders in charge of ICT integration supervise it at every stage of teaching and learning. Educators also get training to help them develop the knowledge and skills

required for digital learning. Oumaet al. (2013) state that in order to facilitate teaching and learning, teachers must build up a technology-based environment. To achieve Vision 2030, Kenya maintains a policy requiring all schools to use ICT into instruction (Mugalavai, 2012). The purpose of the present investigation is to determine how ready teachers are to use ICT in the classroom in the CBC era.

2.5 School based Challenges influencing implementing the competency-based curriculum

The use of competency-based approaches to teaching and learning is becoming more and more popular among those involved in the international education sector. However, research indicates that several countries that have embraced competency-based approaches to education have faced a variety of challenges that have hampered the smooth and effective execution of the curriculum. Byrne, Downey, and Souza (2014), for example, studied four case study schools in England that had implemented creative competence-based curricular projects in Year 7 for a range of social and educational objectives. The study covered the problems and difficulties that instructors face on a regular basis in the classroom as a result of the CBC. The study found that approaches to instruction and learning were inextricably impacted by the subject matter and framework of the curriculum, which was influenced by the attitude taken.

According to Byrne et al. (2014), changes made to the curricula in the instances in study schools have exposed inconsistencies between the more modern, progressive strategies with "weak" categorization as well as framing and the more

traditional, traditional methods of instruction and study with "strong" classification and framing. Effective classroom management was challenging because of the impact these conflicts had on the identities of the instructors. According to the study's findings, managing the tensions between more progressive and traditional pedagogies is beneficial for preparing students to integrate into 21st-century society more successfully than merely reproducing the demands of the nation's dominant educational discourse or the socioeconomic status quo. Acquah, Frimpong, and Kwame (2017) conducted a study in Ghana with the aim of identifying the obstacles that face the adoption of Competencies Based Training Courses (CBT) at training institutions in Ghana. According to the survey, competency-based approaches have greatly aided in meeting the industry's demand for graduates with advanced training. The study also showed that, despite the positive results, certain training institutions had struggled to implement the curriculum because they lacked institutional rules, funding, and infrastructure development. A case study in Rwanda was conducted by Mugabo, Ozawa, and Nkundabakura (2021) to explore the relationships between a school's attributes and its capacity to implement Competency Based Curriculum. For the study, the school facilities of twelve teachers were inspected, and they were also observed and interviewed. The study recommended developing comprehensive and reliable in-service training programs and offering enough instructional resources to support teachers in putting the new ideas into practice in light of the findings. The study's conclusions showed that discrepancies in teachers' use of CBC were brought about by their professional development, insufficient CBC training, a lack of resources for teaching and learning, and the schools' limited

infrastructure. According to the report from the study under consideration, implementation issues can arise from inadequate instructional materials and inadequate teacher preparation. Therefore, it was necessary to determine whether Kenyan schools similarly faced comparable difficulties.

Ndayambaje (2016) noted the difficulties Rwandan schools were having implementing competency-based curricula there. It was stated that some primary school teachers were opposing change even though all of them had received training on how to use the curriculum. Another problem that has been cited as impeding the successful adoption of CBC is a lack of adequate teaching-learning resources. This suggests that for implementation to be successful, sufficient educational materials and ongoing training for instructors to alter their perceptions of the CBC are necessary.

Numerous factors can impede the adoption of Tanzania uses competency-based curriculum (CBC), according to Makunja (2016), whom investigated the challenges instructors face when applying the curriculum. According to the report, there are a lot of challenges that teachers have when it comes to effectively implementing the curriculum in both teaching and learning settings. An absence of in-service training on curriculum content for instructors, a shortage of teaching resources, crowded classrooms, and inadequate student ability are the key barriers to successful execution of the educational program in Tanzania, according to the report. In light of the results, the study recommended that instructors be allowed to participate in curriculum creation. According to the report, the Ministry of Education should devise methods for dispersing educational materials that align with competency-based curriculum. This suggests that adequate classroom space,

educational materials, and teacher training are essential for the CBC's effective implementation.

Hipolite (2019) did a study in Tanzania that examined challenges associated with implementing CBC at public secondary schools in Morogoro Municipality. 36 individuals were surveyed through focus groups, interviews, and observations as part of the case study methodology and qualitative research strategy employed in this study. According to the survey, teachers had a variety of difficulties that prevented them from implementing the curriculum well, including having a lot of students in their courses, not having enough teaching-learning resources, and not understanding the CBC properly. According to the report, Tanzania's The Ministry of Education ought to provide adequate in-service training for all teachers and sufficient teaching and learning resources for their classrooms.

Muneja (2015) highlighted in another study the challenges Tanzanian secondary educators had when putting the CBC into practice. According to the survey, educators encountered a multitude of challenges that adversely affected their ability to execute the program. The three main issues Tanzanian instructors face are inadequate teaching and evaluation methods, low-quality instructional materials, and a lack of appropriate textbooks. Inadequate ICT resources to feed education and instructors' lack of motivation to implement the curriculum were other findings of the poll. The study recommended that in order to modify teachers' attitudes toward curriculum implementation, the The Ministry of Culture and Education ought to plan in-service training programs for them and offer sufficient resources and infrastructure in all schools.

Komba as well as Mwandanji (2015) looked into the problems associated with CBC implementation in Tanzanian high schools. The bulk of the teachers (86%) did not know enough about the curriculum, according to the statistics. Additionally, the study found that The bulk of the instructional plans that were reviewed (78%) lacked the traits of a competency-based lesson plan. Furthermore, fewer than half of the teachers who were observed conducted formative assessments, and teachers generally did not involve students in class activities. The researcher concluded that CBC hadn't been implemented properly in the schools she sampled based on the data suggested that regular in-service teacher training be conducted in order to enable them to acquire the most recent teaching skills necessary for the changes made to the curriculum. Effective implementation of any curriculum depends on how well teachers comprehend it and their ability to put it into practice.

A survey conducted in the According to Momany and Rop (2019), Bomet East Sub-County sought to determine the challenges faced by teachers in putting CBC into practice. According to the results, instructors' lack of preparation and execution skills for the curriculum was the main obstacle to the CBC's successful implementation. As per the report, the Ministry of Education and KICD ought to provide more in-service training sessions for instructors. In pedagogy, evaluation, and the design of instructional materials, this will help close capacity gaps. This suggests that in the event that teachers lack adequate CBC knowledge and competence, they will struggle to implement the curriculum. These findings are instructive, however as the study's focus was on junior primary school teachers,

more research is required to determine the challenges lower primary school educators face when implementing the CBC.

In a different study, Sifuna and Obonyo (2019) examined the obstacles standing in the way of CBC's effective implementation in Kenya. It was found that a methodical approach was not taken in the preparation and implementation of the curriculum. Not much is done to get teachers ready for the content and pedagogy of the program. It was also underlined that the curriculum reform process was not inclusive of parents and other significant stakeholders, and that the instructional materials were insufficient. The government's Ministry of Education was advised by the report to set up a suitable framework for teacher preparation, inform parents, and provide enough classroom space and instructional materials in each school. This means that implementing a curriculum requires effectively, it is important to give teachers enough training, educate parents, and provide adequate teaching and learning tools. It was important to examine the elements that were stressed in smaller primary grades because these may not apply to lower primary sections, and to find out if teachers at public smaller primary schools are encountering the same challenges. Teachers are likely to encounter challenges when implementing a new curriculum. The challenges of adopting CBC in all of Machakos County's public elementary schools were the subject of a study carried out by Wambua and Waweru (2019), the results of which are compiled in their study. The study included 342 teachers of Grades 1, 2, and 3. The study found that there was a shortage of suitable staff, infrastructure, and teaching and learning tools, and that teachers were not adequately prepared for the implementation of CBC. The study suggested that, in order to modify teachers'

attitudes toward the curriculum and ensure its successful implementation, More funding for teacher preparation should be allocated by the Ministry of Education. The study points out several obstacles to the successful implementation of CBC, but it only examined lower elementary schools. For this reason, it's critical to identify the difficulties lower primary school instructors face while putting the Curriculum into practice.

To implement the CBC, teachers must overcome many challenges. KNUT (2019) reports that the following factors limited the extent of CBC execution in schools: overcrowding in classrooms due to exceptionally high student enrollment; and a shortage of long-term classrooms, which compelled schools to combine some students from different grades. The study revealed that most public schools lacked PP1 and PP2 classrooms, necessitating outside instruction or learning under a tree. Additionally, according to KNUT, the government's transfer of textbooks to schools was delayed and the majority of CBC learning spaces lacked permitted books and resources. Finally, the research revealed that there was little shareholder involvement in the CBC roll-out and that the training sessions were insufficient, ineffectual, and short in duration. Although the study identified a number of obstacles to CBC implementation in Kenya, it did not detail the difficulties faced by teachers in lower primary schools in particular Counties. Therefore, it was necessary to undertake a study to determine the difficulties teachers in Nairobi City County have in implementing the curriculum. Mwarari, Githui, and Mwenje (2020) investigated the perceived difficulties of incorporating parents in the early childhood education program's execution of CBC in a different study. The study employed a cross sectional survey design

which involved 335 parents from two selected counties in Kenya. A questionnaire was used to collect data from the participants. Findings indicated that parents understood the value of involvement in educational activities and learning. However, they identified a number of problems that limited their ability to work with schools, including a lack of time, inadequate parental education regarding CBC, a lack of resources, and a lack of resources for themselves and their children. This means that if the parents are not made aware of its significance and how they must fulfill their tasks, involving them in learning activities as required by CBC may not be successful. The reviewed study concentrated on parental engagement in the implementation of CBC, but there may be numerous additional issues that need to be identified and resolved in order to prevent the curriculum from being implemented effectively.

In the lower elementary grades in Kenya's Kapsaret Sub County, Andiema (2020) conducted a survey to determine the level of preparedness among teachers to adopt CBC. Data were collected from the study's sample of 69 special needs teachers using a survey intended for public primary school teachers who teach special education. To analyze the data, descriptive statistics were employedand the results demonstrated that special needs teachers had a respectable comprehension of the curriculum. The survey also found that less students with special needs were enrolled, which was related to teachers' inadequacies in terms of their ability to help students with disabilities. The report recommended that the government ensure that facilities and resources are available to facilitate inclusive education and that special needs instructors receive specialized training on CBC implementation in inclusive settings. This study identified a number of obstacles

that prevent the adoption of CBC, but it only paid attention to those that affect teachers who have special needs. Determining the difficulties experienced by other teachers who do not have special needs is vital.

In a study done in Kibera Sub-County, Kenya, elementary schools, Sitenei (2020) looked at how school-based factors affect CBC. The majority of instructors (81.6%) who participated in training attended sessions lasting one week, according to the researcher's descriptive survey research design, while 18.4% attended sessions lasting two weeks. This suggested that the majority of teachers were undertrained in the new curriculum. Furthermore, it was claimed that given the huge class sizes, the time allotted for the CBC courses was insufficient. Additionally, it was claimed that the majority of the schools in the Kibra sub-county lacked or possessed insufficient curriculum-related materials. The results also showed that Kibra's public primary schools are extremely packed. Some students were compelled to study outside of class due to overcrowding, particularly in practical topics that required demonstration. This had some bearing on how well the curriculum was being taught. The instructors' efforts to manage pupil behavior, teaching and learning, as well as their teaching approach, were put to the test because the teacher-pupil ratio was so high (1:80).

According to the research, Additionally, the Kenyan Centre of Curriculum Creation (KICD) and the Kenyan Ministry of Education should handle the problem of implementing competency-based curricula. It is vital that the in-service program for training teachers be strengthened. To do this, the Ministry of Education should allocate more time for training sessions, and the Teacher Service Commission should organize seminars and workshops. Additionally, the

Government should promptly address the insufficient supply of instructional materials through the Ministry of Education. Absence of teachers in public schools The Government engages more teachers through the Teacher Service Commission (TSC), a teacher employer, in order to support the successful implementation of the Common Core State Curriculum (CBC) and maintain the necessary teacher-to-pupil ratio within public primary schools as specified by the Ministry of Education. Despite focusing mostly on lower primary classes, the study finds several barriers to the adoption of CBC. This means that challenges faced by lower primary school teachers when implementing the curriculum remain unknown.

In their 2020 study, Amunga, Were, and Ashioya sought to determine which CBC activities require parental participation as well as the challenges parents face when implementing the CBC. Teachers of lower primary school who were chosen at random for the research project were given open-ended surveys to fill up and were interviewed. Parents were not assisting schools in carrying out the curriculum, according to the findings. In addition to these difficulties, the teachers also mentioned a shortage of materials, a lack of parental support, a lack of sufficient time to plan lessons, and big class numbers when executing the curriculum. The study suggested that parents be made more aware of the situation, that the government provide more money to construct more classrooms, and that more teachers be hired in light of the findings. It is evident that teachers are having a difficult time putting the curriculum into practice; nonetheless, the study under consideration identified issues that mostly affected teachers in lower

elementary schools. The key question therefore becomes: What difficulties do lower primary school instructors have using CBC?

In a study published in 2020, Marion examined the challenges lower elementary school teachers in Kenya's Laikipia East Sub-County encountered when implementing CBC. The study's descriptive survey research approach involved the use of observation schedules and questionnaires to collect data. The findings demonstrated that teachers encountered several challenges when implementing the new curriculum. The instructors listed large class numbers as a major barrier to the introduction of CBC in public elementary schools. Teachers also reported that teaching digital literacy alongside more practical disciplines like music was severely impeded by a lack of appropriate teaching resources. The study also found that most teachers found it difficult to include digital literacy, problem-solving, and critical thinking skills because they said they were still honing these skills. The majority of teachers complained that there weren't enough resources for digital learning.

There were no problems with the bulk of the educational plans because they likewise satisfied the CBC requirements. Though the instructors acknowledged that the CBC instruction was too short and did not cover all the necessary groundwork for learning how to utilize CBC, they still found it invaluable. It is recommended that the government build additional classrooms, provide adequate resources for teaching and learning, and provide ongoing teacher training. The outcome of the study under consideration reveals a number of difficulties encountered when applying the curriculum in lower primary grades. This indicates that because of the numerous difficulties instructors encounter, CBC

hasn't been successfully implemented in the lower elementary grades. It is crucial to look into the difficulties experienced by instructors in lower primary schools because the results in lower primary grades could not apply to lower primary schools.

2.6 Summary of Literature Review

This chapter reviewed and discussed literature related to the objectives of the current study. In general, the existing literature proved that CBC has received a good deal of attention and support globally. However, this study established that a limited number of empirical research have been conducted in Kenya in regard to implementation of CBC in schools. This means that there is need for more studies to be conducted because it is through research that we can inform policy and change.

Numerous studies have examined the level of teacher training within the CBC and the way this is influencing curriculum implementation in relation to the education given to educators on how to administer the CBC. The results showed that the majority of educators lacked the necessary training and experience to complete the curriculum. However, most of the research that were conducted in public elementary schools have lower elementary educators as their main subject. This implies that little is known about lower primary school teachers' readiness to adopt CBC in public schools.

In addition, majority of the reviewed studies collected data from respondents using questionnaires and interview schedules. This might have led to collection of

self-reported data which could be biased. Therefore, apart from the The current study used a document analysis guide and an observation checklist in addition to questionnaires and interview schedules. These direct methods of data collection enabled the researcher to verify the self-reported data from the respondents.

In regard to teacher's technological skills, it was established that majority of the studies that exist delved to determine how teachers integrated ICT in teaching-learning in the 8.4.4 curriculum. The new curriculum advocates different teaching-learning and assessment approaches. Furthermore, the curriculum places a strong emphasis on digital literacy, one of the fundamental skills that students should learn. As a result, it's critical to ascertain how equipped educators are in this CBC era to use ICT into teaching and learning.

Finally, Numerous investigations have been carried out to establish challenges experienced in schools as they implement CBC. However, most of the studies which were carried out in public schools focused on lower primary grades. Challenges experienced in lower primary section may not be the same as those experienced in lower primary section. Teachers in public pre-primary schools are employed by the County Government, while teachers in lower primary grades in public primary schools are employed by the Teachers Service Commission (TSC). Therefore, the terms of employment and conditions in public primary schools may not be the same as those in lower primary section.

Despite numerous obstacles, such as high transition costs and limited access to The competency-based curriculum comprises educational tools, including been implemented. Preschool, grade one, grade two, and grade three schools were chosen from each county to start the pilot program for the new curriculum.

Determining the school-based issues impacting the introduction of CBC in Migori County's public elementary schools was crucial.

A curriculum's successful implementation is hampered by unprepared teachers. The capacity and readiness of teachers to execute CBC have come under scrutiny since its implementation in Kenya. The CBC program's first phase of implementation is confronting a variety of difficulties. Teachers must complete further training, seminars, and workshops to get the knowledge, competencies, and abilities necessary to fully implement the CBC. Teachers need to be well-prepared and have a positive outlook on implementation. The CBC rollout for lower primary, grades one through three, tended to lack defined policies because there had been no Sessional Paper to direct the process at the time. Therefore, it was crucial to determine how teacher preparation affected the introduction of CBC in public primary schools in Migori County.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The study methodology is presented in this chapter. It covers the study's variables, the population being studied, the study location, the sampling plan, and the participant sample size. It also provides information on the data collection tools, the pilot research, the legitimacy and dependability of the data and tools collection methods. Finally, it describes how the data was analyzed and ethical considerations which were observed during the study.

3.2 Geographical description of the study area

Migori County was the site of the study. In southwest Kenya, in what was once the Nyanza Province, sits the county of Migori. Latitude: -0.6667, Longitude: 34.8333 is where it is situated. Kenya's southwest region is bordered to the west and south by Tanzania, to the west by Lake Victoria, to the north by Homa-Bay District, to the east by Kisii County in Kenya, and to the south by Narok. Uganda shares a boundary with the county via Lake Victoria's Migingo Island. The county's main town, Migori, serves as its headquarters. Migori County's population was 1,116,436 in the Kenyan National Census of 2019 as opposed to 917,170 in the 2009 Census. Migori County is situated amid Western Kenya's sugar belt wetlands.

After Kisumu, Migori County has the most diversified population in all of Nyanza. AbaSubapeople, Joluo, Abakuria, Abagusii, Abaluhya, Somalis, Indians,

Arabs, Agikuyu, and Nubians are among the residents. Kenya values the county because of the border post's importance to the East African economy, located in Isebania.

The town of Migori serves as a vital conduit between Tanzania and Kenya and is the second-most prosperous commercial hub in Luo-Nyanza, following Kisumu. In Kuria District, Kehancha, Rongo, Awendo, and Isebania are some of the other significant towns in Migori County. Merely 15% of the populace in Migori County have education beyond the secondary level. At 19%, the Rongo district has the largest percentage of citizens with at least a secondary education. This is seven percentage points higher than the constituency with the lowest share, Kuria East. The percentage of people in Migori County with only a primary education is 65%.

There isn't an official national park as well as game reserve in the county. Nonetheless, the county is home to a number of fascinating locations that would be worthwhile to explore, including macalder mines, Gogo falls, thimlichohinga, muhuri bay and Kogaja village. (https:// en.m.wikipedia.org >wiki)

3.3 Research Design

This study was based on pragmatic research paradigm. The pragmatic approach adopted in this study therefore rejected views which oppose each other. Supporting this, Creswell (2013) argues that pragmatism enables one to work within the positivist and interpretivist paradigms, hence enabling the use of a variety of approaches to address the relevant research problems. The mixed-

methods research approach utilized in this study is quite consistent with pragmatic ways of dealing with problems in order to gather in-depth information.

Additionally endorsing this technique, Tashakkori and Teddlie (2010) note that it aids in addressing issues that neither qualitative nor quantitative methods alone can solve.

The researcher's ability to respond to confirmatory inquiries about the research problem at hand through the administration of closed-ended questionnaires and interviews was one of the main benefits of adopting mixed methods research in this study. While interviews, observations, and open-ended questions produce qualitative data that describe changes, surveys only provided quantitative data. The combination of the methodologies creates a stronger study design with more valid and trustworthy results by balancing the benefits of each methodology with those of the others.

A descriptive survey is simply a data collection system for carrying out research, using questionnaires, with an aim describing the phenomena and relationships between parts of the phenomena as they are, without any manipulation of any variables.

3.4 Target population

The study's target population included 2,424 respondents in Migori County, including 604 chief educators, 1812 teachers of grades 1-3, and 8 Sub Counties Quality Management Officers (SQASO). There are 604 primary schools in Migori County.

3.5 Sampling Techniques and Sampling size

Based on the characteristics of the sample, sampling is used to learn more about some characteristics or features of the entire population.

3.5.1 Sampling Procedures

Each group of personnel relevant to the study—teachers in grades 1-3 and head teachers of primary schools—was chosen using stratified sampling, with each group constituting a strata. According to Kombo& Tromp (2010), To guarantee that outcomes are proportionate and representative of the entire population, stratified random sampling is used when the initial population or sample frame consists of subsets of known size.

After stratification simple random sampling was adopted to sample of 604 grade 1-3 teachers, and 180 head-teachers. Simple random sampling allows for equal probability of the population being selected. Census sampling was used to include all the 8SQASOs, into the sample because there number was small.

3.5.2 Sample Size

Mugenda & Mugenda (2013) state that the sample size for a study should range from 10 to 30 percent of the intended population. As shown in Table 3.1, the study selected 30% of the desired population who took part in it.

Table 3.1: Sampling Frame

Respondents	Target Population	Technique	Sample Size

Head teachers	604	30%	180
Grade 1-3 Teachers	1,812	30%	544
SQAOs	08	100%	08
Total	**2,424**	**732**	

Source: Authors Data (2021)

The final sample number included all 8 SQASOs, 180 head teachers, and 544 teachers in grades 1-3, for a total survey size of 732 participants.

3.6 Data Collection Instruments

In order to gather questions, an interview schedule, and main data for this study were used. The researcher was able to gather comprehensive data by using a variety of study devices. Additionally, it enabled the scientist to triangulate the results. The instruments were developed by the researcher and the formulation of the items was guided by the objectives of the study and the variables which were being investigated.

Orodho (2014) highlights that triangulation allows researchers to pinpoint many facets of the variables they are studying by approaching it from different perspectives and using different approaches. As a result, the investigator was able to obtain accurate and comprehensive data that gave a thorough grasp of how prepared primary school teachers were to apply the CBC.

3.6.1 Questionnaire for Teachers and Head-teachers

Information from grade 1–3 teachers was gathered using questionnaires, and head-teachers. The reasons why the questionnaire was used included; first, it allowed the researcher to collect massive information from the 544 teachers and

180 headteachers second, the respondents were literate so they had the capacity of fill in the questionnaires; third, they allowed the researcher to address a large number of issues regarding the study variables and finally, questionnaires were economical as they allowed gathering a vast amount of data quickly.

The questionnaire was divided into two sections whereby the first section had items that were used to collect demographic information and second section had items covering specific objectives. The second section had items which measured the degree of CBC training received by instructors, followed by instruction resource section, then technological skills, later school based challenges in implementation of CBC.

Questionnaires were both open-ended and closed-ended. The demographic informationand school based challenges in implementation of CBC had close ended questions while the other sections had 5 Likert scale statements where: 1–strongly disagree; 2–disagree; 3-moderately agree; 4-agree; 5-strongly agree. The respondents were asked to indicate the extent to which they agree or disagree on various aspects of teacher preparedness inimplementation of CBC.

3.6.2 Interview Schedule for SQAOs

The purpose of the interview schedules was to gather data from the SQAOs. Qualitative information was gathered via semi-structured interview schedules from the SQAOs. Therefore, interview schedules were utilized in this study because they allowed collection of detailed information from SQAOs by asking follow up questions and clarifications making the information gathered more

relevant and useful. The data gathered from the interviews was essential to the study because it gave researchers a clear picture of how well-prepared primary school teachers are to use the CBC in public schools. Interviews enable researchers to gain a thorough grasp of a certain subject since they permit subsequent investigation of concerns that come up during the interview, according to Edwards and Holland (2016). The interview schedules had 23 questions items that gathered information relating to the variables in question which included the objectives of the study. The interviews enabled the researcher to collect qualitative data that complemented the self-reported data from the questionnaires.

3.7 Pilot Study

The pilot was done in Homa Bay County schools bordering Migori County. At least three schools were targeted for the 69 respondents. This ensured similar characteristics between the pilot and study respondents. The pilot study enabled the researcher to re-define and re-focus data collection and procedures regarding content and what could be obtained. It helped the researcher to ascertain the reliability and accuracy of the tools and identify potential issues that participants might run into when providing information.

To make sure the questionnaires could yield the necessary data to meet the study goals, a pre-test was conducted on them. Mugenda and Mugenda (2013) highlights the importance of piloting as a component in the research process. For the questionnaire, The questionnaire was sent to the pre-test participants, who were then requested to complete it and provide feedback on the design, language,

and order of the questions. Piloting the questionnaire tools helped the researcher remove ambiguity and achieve a high degree of precision, find out if participants understood the questions.

For the interview schedules, the researcher interviewed two SQUASOs. The semi-structured questions were pre-tested particularly for timing, flow, interest, attention span, meaning, task complexity, and question variants. Therefore, feedback data from the initial study influenced the redesign of the equipment used in the primary study's data collection.

3.7.1 Validity of Research Instrument

A test's validity is defined as how well it assesses the intended construct.It guarantees the measurement of the intended outcomes by the researcher using the study instrument (Gunby and Schutz 2016). Construct validity, face validity, and content authenticity are all blatantly evident in literature. Content validity refers to the ability of a test to capture all facets of a particular concept; this is typically accomplished by consulting with subject-matter experts. According to Plano and Ivancova (2015) and Monila and Cameroon (2015), content validity is the relevant and appropriate assessment of content and composition concerning what is being measured. For this study, a comprehensive literature analysis was conducted to ensure content validity by identifying the key items to evaluate the variables, as indicated in the conceptual framework.

The researcher used a scale called the content dependability index (CVI), which is derived from calculating or grading the relevant survey items based on whether or

not they are straightforward and significant in relation to the goals of the research, and then dividing the result by the total number of inquiries in the questionnaire. The material validity index (CVI) was computed using the rated findings and the following formula:

CVI =K/N

where K denotes the sample's size and N denotes the total amount of items inside the questionnaire. total amount of items that raters and supervisors have deemed valid. The results are indicated in Table 3.2.

Table 3.2: Content Validity Indices

Rater	Total Items	Valid Items	Fraction
1	70	62	0.87
2	70	62	0.87
3	70	64	0.91
4	70	63	0.90
5	70	62	0.87

Face validity is defined as the respondent's subjective assessment of the test's validity determined by how it appears or feels to them, as defined by Miles, Huberman, along with Saldana (2013). It discusses whether, when given at face value, the measure appears to be measuring what it is supposed to (Creswell, 2014). It comprises evaluating whether, in light of the variable's theoretical definition, the measure appears to measure the relevant variable. To ensure the instrument's face validity, the questionnaire was subjected to supervisors at Kisii University department of media and curriculum instruction specialists in the area of study to assess the items on the instrument and ensure that they are relevant and appropriate for the respondents.

According to Gunby and Schutz (2016), The degree to which a measure truly captures the theoretical idea it is meant to capture is known as construct validity. It gauges how well an instrument's data reliably and meaningfully represents a theoretical concept. In general, construct validity refers to how well the operational description of a variable reflects the true conceptual meaning. The

researcher carefully studied every item in the tools and carefully examined the degree to which each question assessed the relevant construct.

Construct validity was determined in this study by precisely identifying the variables that were being measured. and representing the principle of triangulation. Data obtained from the instruments was triangulated. This was achieved by carefully reviewing the similarity of the data obtained from the questionnaire and interview research instruments. The investigator verified whether the outcomes from the different tools led to the same conclusion. Before the primary investigation, the researcher made sure that all study variables were sufficiently covered as well as that all items were pertinent and clear. Any discrepancies that were found were fixed.

3.7.2 Reliability of Research Instruments

According to Heale and Twycross (2015), reliability refers to the quantitative coherence of an indicator of a specific construct. The test of reliability was established using the Cronbach's Alpha which is calculated using the formula:

$$Kr_{20} = \frac{(K)(S^2 - \sum S^2)}{(S^2)(K-1)}$$

Kr_{20} = Reliability Coefficient of internal consistency.

K = Number of items used to measure the concept.

S^2 = Variance of all score

$\sum S^2$ = Variance of individual items

Cronbach's alpha coefficient spans from 0 to 1, and scales get more trustworthy as alpha (α) values increase. According to Kurpius and Stafford (2006), tests that

have a reliability value of 0.7 or above are deemed trustworthy when used in social science research. During the pilot investigation, the researcher used the instrument. After the data were gathered, a social science statistical program was used to do reliability analysis employing the Cronbach's Alpha Coefficient. Cronbach's Alpha Coefficient was computed for every item in the study to assess the validity of the instrument. Table 3.3.

Table 3.3: Reliability Test of Constructs

Performance	**No. of items**	**Cronbach's Alpha**
Adequacy of Training	5	0.819
Teachers' attitude to CBC training	5	0.797
Adequacy of T/L resources	10	0.803
Effective use of T/L resources	8	0.790
Availability of ICT skills	10	0.771
Perceived usefulness of ICT	7	0.770
Teachers' capacity to integrate ICT	5	0.703
CBC implementation	6	0.768

Table 3.3's findings indicate that teachers' attitudes toward CBC education had a Cronbach Alpha value of 0.819 and that the effectiveness of CBC education had a Alpha coefficient of 0.797, availability and adequacy of T/L resources had a Cronbach Alpha coefficient of 0.803, Effective use of T/L resources had a Cronbach alpha coefficient of 0.790, Availability of ICT skills had a Cronbach Alpha coefficient of 0.771, Perceived usefulness of ICT had a Cronbach alpha

coefficient of 0.770, and Teachers' capacity to integrate ICT in their teaching had a Cronbach alpha coefficient of 0.703. In construct, CBC implementation constructs had a Cronbach alpha coefficient of 0.768. This suggests that all of the study's constructs have Cronbach Alpha coefficients greater than 0.7, indicating their suitability for use in gathering the necessary data. This is in line with Mugenda's (2013) recommendation that instruments with an alpha coefficient value of greater than 0.7 are deemed very reliable.

3.8 Data Collection Procedures

The researcher applied for a research authorization with the National Commission for Science, Technology, and Innovation (NACOSTI) after receiving approval from Graduate School Kisii University. The next step was to ask the Migori County Education Office for authorization to gather data from public primary schools after obtaining a study permit. The researcher printed enough copies of the research tools after receiving approval from the appropriate authorities. Two research assistants were identified by the researcher as having assisted with the data collection process. The research assistants were master's students in Kisii University, who had already done their research work and submitted their work for examination. Therefore, they had experience on collecting data. The research assistants were taken through a training which lasted for a day. During the training, the researcher explained to them what the research was about and how it was to be carried out. Further the researcher took them through the research instruments for them to familiarize with the tools and understand all the items in

the instruments before participating in the data collection exercise. According to Orodho (2017), research assistants should be trained on the data collection exercise if credible data is to be collected from respondents.

After training the assistants, the researcher made preliminary contacts with the head teachers to create rapport and familiarize with the school environments. The head teachers were requested to set dates when the researcher and research assistants would visit the respective schools to collect data.

On the scheduled dates, two research assistants assisting the researcher visited each of the primary schools in the County, whereby one school was visited in a day. The data collection exercise commenced by talking with the head teachers who introduced us to the teachers. After the introduction, the headteachers directed us to the classrooms and briefed the teachers the reason for our visit. The researcher talked briefly about the exercise and gave the participants the consent forms which they went through and signed before participating in the study.

While filling out the questionnaires, The respondents and the researcher agreed that after two days, the researcher would personally pick up all of the completed surveys. By mailing the questionnaires back to the researcher, this secured an excellent rate of return and eliminated any potential issues. The researcher arranged for interviews with the SQASOs each day for one officer. The eight SQASOs were interviewed in their offices. The interviewer requested via phone and personal contacts and reserved well in advance. The researcher provided a brief overview outlining the purpose of the study and the interview methodology at the start of each session. Responses from the interviews were recorded on the

interview schedules and audio recording was done as well to avoid biasness. The data collection exercise came to an end after two months.

3.9 Methods of Data Analysis

Following the data collection exercise, the research assistants assisted the researcher started sorting out the research instruments, which involved checking whether all the sections in the tools were filled. After that, the Statistics Package for the Social Sciences was used to code and enter quantitative information from the questionnaires. (SPSS) version 26. Accuracy of the data entry was confirmed before running any test by checking missing data and inspecting the minimum and maximum value for each variable. This ensured that all values for each variable were valid by not having a value that exceeds the scale used to measure. This involved qualitative and quantitative analysis.

The qualitative data was analyzed thematically; first the researcher familiarized with the data collected from the interview schedule and audio recordings. Transcription was done with the research assistants' assistance by listening to the audios and taking notes as we made preliminary codes which were used to describe the content. After generating codes, the researcher went through the list of codes and collated them in order to generate themes in regard to the study objectives. The themes were reviewed to ensure that data that was within the themes cohere together meaningfully with clear distinction between the themes. The themes were discussed, and the information gathered was utilized to support and clarify the significance of the quantitative information from the surveys. The analysis included the remarks of the interviewees.

The study used inferential and descriptive statistics to analyze data utilizing quantitative data analysis approaches. Descriptively Frequencies and percentages were used to examine the data, but inferential statistics, correlation and multiple regressions was employed. Establishing the best straight-line connection among the variability in the result (or dependent) factor, Y, and the variation within the predictor (or independence or explanatory) variable, X, is the goal of regression analysis. The equation can be used once the relationship has been estimated.

A multiple regression analysis was used to establish the relationship between CBC training and CBC implementation. The multiple regression model used in the analysis of the study objective is presented as follows:

$$Y = \beta_0 + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \epsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

where:-

Y is the dependent variable, which is the level of CBC Implementation

X_1 –is the regularity of CBC training attendance index

X_2–is the suitability of CBC instruction programs index

X_3–is the attitude of teachers towards CBC training programs index

$\beta_0, \beta_1, \beta_2 \; and \beta_3$ are the regression coefficients

$\epsilon$is the error term

The multiple regression model used in the analysis of the relationship between T/L resources and CBC implementation is presented as follows:

$$Y = \beta_0 + \beta_1 TLR_1 \; + \beta_2 TLR_2 + \epsilon$$

where:- Y is the dependent variable, which is the level of CBC Implementation

TLR_1–is the adequacy of the T/L resources index

TLR_2–is the use of the T/L resources index

$\beta_0, and \beta_1, \beta_2$ are the regression coefficients

$\epsilon$is the error term

The multiple regression model examining the connection between ICT skills and CBC implementation is presented as follows:

$$CBCImplementation = b_0 + b_1(ICT_1) + b_2(ICT_2) + b_3(ICT_3) + \epsilon$$

where:-ICT_1 −is the availability of the ICT skills index

ICT_2 –is the perceived usefulness of the ICT index

ICT_3 –is the teachers' capacity to integrate the ICT index

$b_0, b_1,\ b, and b_3$are the regression coefficients

$\epsilon$is the error term

The t-test was utilized at a 5% level of relevance to evaluate the regression coefficients' significance. This (0.05) level of significance was used in this study as it is the conventional threshold that is commonly used for declaring statistical significance. As elucidated by Orodho (2017), 0.05 level of significance means that there is 5% probability that the test will suffer from type I or type II error.

The effect size of the independent variables was measured using the standardized beta coefficients. Before the regression procedure, the assumptions of multicollinearity and normality of the dependent variable were carried out. The test for multicollinearity was done using the correlation coefficients subject to the recommendation by Tabachnick and Fidell (2007) of a threshold value of at most 0.7 for multicollinearity to be inferred to be absent. Also, the variance inflation factors (VIF) values were used to test for multicollinearity. The normality test of

the residuals was done using the histogram and normal PP plots of the predicted worth compared to the residuals standardized by the regression. From the histogram plot, the residuals will be considered normally distributed if the mean is approximately 0 and the variance is approximately 1. Likewise, for the normal P-P plot, normality of residuals will be inferred if the scatter points are evenly distributed.

Table 3.4: Summary of Methods of Data Analysis.

OBJECTIVES	INDEPENDENT VARIABLE	DEPENDENT VARIABLE	RESEARCH INSTRUMENTS	MODE OF ANALYSIS	MEASUREMENT
Effect of Teachers' CBC Training on the implementation of CBC	**CBC In-service Training** ✓ Number of Training Sessions ✓ Adequacy of CBC Training Programme ✓ Attitude of teachers towards the CBC Training	**Implementation of CBC** ✓ Parents' involvement ✓ Summative assessment ✓ Encouraging self-reliance amongst students ✓ Learners' being to construct their own knowledge ✓ Learners' creativity, innovativeness and problem solving skills	Questionnaires Interview Schedule	✓ Descriptive ✓ Pearsons correlation analysis ✓ Multiple linear regression analysis ✓ t-test for the significance of regression coefficients	Multi-item Summated Likert Scale
Effect of Instructional Resources in the implementation of CBC	**Instructional Resources** ✓ Availabibilty and adequacy of IR ✓ effective use of IR	**Implementation of CBC** ✓ Parents' nvolvement ✓ Summative assessment ✓ Encouraging self-relaince amongst students ✓ Learners' being to construct their own knowledge Learners' creativity, innovativeness and problem solving skills	Questionnaires Interview Schedule	✓ Descriptive ✓ Pearsons correlation analysis ✓ Multiple linear regression analysis ✓ t-test for the significance of regression coefficients	Multi-item Summated Likert Scale

School-Based Challenges in implementation of CBC	✓ instructional resources ✓ training of teachers on CBC ✓ large class sizes ✓ Understaffing of teachers ✓ of parental support ✓ teacher competence in practical subjects ✓ ICT skills ✓ infrastructure		Questionnaires Interview Schedule	Descriptive statistics	
Effect of ICT skills in the implementation of CBC	**ICT skills** ✓ Availability and Adequacy of ICT Resources ✓ Teachers' Perceived Usefulness of ICT in CBC Implementation ✓ Teachers' capacity to integrate ICT	**Implementation of CBC** ✓ Parents' involvement ✓ Summative assessment ✓ Encouraging self-reliance ✓ Learners' being able to construct their own knowledge ✓ Learners' creativity, innovativeness and problem solving skills	Questionnaires Interview Schedule	✓ Descriptive ✓ Pearsons correlation analysis ✓ Multiple linear regression analysis ✓ t-test for the significance of regression coefficients	Multi-item Summated Likert Scale

Source: Authors Data (2021)

3.10 Ethical and Logical Consideration

Once the permission was given, the researcher booked an appointment for to conduct the study.

The sampled participants were informed about the purpose of the study, how long it would take and what they were expected to do. Also, the respondents were given chances to express any queries or worries they may have had about the exercise, and the researcher gave them frank feedback in response. The liberty of the respondent was honored. By enabling their voluntary participation in the study, this was noted. They received comprehensive details regarding different facets of the research, they were allocated sufficient time to go through them and confirmed that they were willing to participate by appending their signatures.

The researcher ensured anonymity of respondents. They did not indicate their names on the research instruments. Where necessary, pseudonyms were used to achieve anonymity. Concealing the participant's names was meant to give out honest information freely without fear of any consequences. The researcher highly upheld confidentiality in the study. The responders received assurances that the researcher would only utilize the data they provided for this particular study. Further, the researcher ensured that all the instruments with responses from the participants were kept private and were only used to inform this study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSION

4.1. Introduction

This chapter presents the study's results and analysis, along with an interpretation and discussion of the findings. The demographic information of the respondents is displayed first, then come descriptive and inferential statistics. The quantitative data gathered from the questionnaires was meaningfully described using descriptive statistics. The results were provided in accordance with the study's goals.

4.2. Response Rate

Over the period of three months, a methodical A questionnaire was used to gather information for this study 724 respondents completed the questionnaire. As indicated in Table 4.1 below, 584 questionnaires were successfully filled out and returned by respondents, resulting in an answer rate of 79.78%.

Table 4.1: Response Rate

Respondents	**Sample**	**Returned**	**Response rate**
Head Teachers	180	148	**82.22**
Teachers	544	428	**78.68**
SQAOS	08	08	**100.00**

On the head teachers 148 out of the 180 representing 82.2% filled and returned questionnaires, while 428 grade one to three teachers out of 544 representing 78.68% filled and returned. The interview schedule results were obtained from all the 8 SQASOs. According to Fincham (2016), who claims that A rate of response of at least 75% is adequate for generalizing the results to the target population, the researcher deemed this response rate to be adequate and suitable to continue with the data analysis.

4.3 Demographic Distribution

Results on the respondents' background data are presented in this section the study regarding their gender, age, length of service, and educational qualifications.

4.3.1 Gender of the Respondents

After the respondents' genders were examined, the findings are shown in Table 4.2.

Table 4.2: Gender of the Respondents

Title	Males	Females	Total
QASOs	5	3	8
Head teachers	123	25	148
Teachers	183	245	428
Total	**373**	**211**	**584**

Results in Table 4.2 shows that 5 out of the 8 SQASOs interviewed were males while 3 were females. Out of 148 head teachers, 123 represent 83.1% were males, whereas 25 representing 16.9% were females. This indicates that generally, there were more male teachers in administrative positions than females. Out of the 429 teachers surveyed, 183, representing 43.6%, were males, while 245, representing 56.4%, were females. This indicates that more female teachers handled grade 1 to 3 students than male teachers.

4.3.2 Age of the Respondents

The analysis of the age profile of the respondents is shown in Table 4.3.

Table 4.1: Age of Respondents

Age		**Frequency**	**Total Frequency**	**percent**
≤30 years	SQASOs	0	112	19.4
	H/Teachers	0		
	Teachers	112		
31-39 years	SQASOs	2	183	31.8
	H/Teachers	27		
	Teachers	154		
41-49 years	SQASOs	5	210	36.5
	H/Teachers	103		
	Teachers	102		
50 and over years	SQASOs	1	79	12.3
	H/Teachers	18		
	Teachers	60		
Total			584	100.0

The results in Table 4.3 showed that 112 (19.4%) respondents who were all teachers were below 30 years. However, 183(31.8%)respondents comprising 2 SQASOs, 27 head teachers and 154 teachers were between the age of 31and

40years. While 210(36.5%) respondents comprising 5 SQASOs, 103 head-teachers and 102 teachers were between the age of 41and 50years. The remaining 79 (12.3%) respondents consisting of 1 SQASO, 18 head teachers and 60 teachers were above 50 years. The findings show that most of the academic staff in the primary schools in Migori County were below 49 years.

4.3.3 Level of Education of the Respondents

Respondents were asked to specify the greatest degree of educational qualification and results are presented in Table 4.4

Table 4.2: Descriptive Statistics of the Level of Education of the Respondents

Level of Education		Frequency	Total Frequency	percent
Certificate	SQASOs	0	328	56.2
	H/Teachers	97		
	Teachers	231		
Diploma	SQASOs	0	91	15.6
	H/Teachers	3		
	Teachers	88		
Degree	SQASOs	6	144	24.7
	H/Teachers	40		
	Teachers	98		
Masters	SQASOs	2	21	3.6
	H/Teachers	8		
	Teachers	11		
PHD	SQASOs	0	0	0.0
	H/Teachers	0		
	Teachers	0		
Total			584	100.0

According to the findings, 328 (52.6%) respondents comprising 97 head-teachers and 231 grades 1, 2 and 3 teachers had a certificate qualification. Ninety-one (15.6%) comprising 3 head-teachers and 88 grades 1,2 and 3 teachers had a

diploma qualification. One hundred and forty-four (24.7%) consisting of 6 SQASOs, 40 head-teachers and 98 grades 1, 2 and 3 had a degree qualification, while 21 (3.6%) consisting of 2 SQASOs, 8 head-teachers and 11 grades 1, 2 and 3 teachers had master's qualification. This indicated that most of the respondents (56.2%) had certificate qualification.

4.3.4 Length of Service of the Respondents

Respondents were asked to choose a time that best represented how long they had worked there. Their responses are displayed in Table 4.5.

Table 4.3: Descriptive Statistics of the Length of Service of the Respondents

Length of Service	Frequency	Percent
Below 5 yrs.	87	15.1
6-10 yrs.	160	27.8
11-20yrs	240	41.7
Above 20yrs	89	15.5
Total	**576**	**100.0**

The results presented in Table 4.5 show that 87 respondents representing 15.1%, had been in the service for less than 5 years. One hundred and sixty respondents representing 27.8%, had served for between 5 and 10 years. Two hundred and forty teachers representing 41.7% had served for between 11 and 20 years, and 79 teachers representing 12.4% had served for over 20 years. The results show that most teachers handling grades one to three in primary schools in Migori County

had served for between more than 11 years and could be considered experienced in implementation of CBC curiculum.

The results are consistent with Mallinger's (2018) hypothesis that teachers with extensive experience working with young children have developed a set of attributes that make them friendly to kids, are patient, have a sense of humor, and recognize that every child is unique. They are also adaptable and tolerant of young children's aptitude for and rate of competency acquisition.

4.4 Influence of Teacher Training and CBC Curriculum Implementation

Finding out how the competency-based learning initiative will be applied in Migori County's public elementary schools after teachers have completed CBC training was the primary goal of the research. A 5-point Likert scale was used to collect the responses, with 1 denoting "strongly disagree" and 5 denoting "strongly agree."" On a continuous scale, the evaluation of the response averages was done, with 1.5 denoting strongly disagree, 1.5–2.5 denoting moderate disagreement, 2.5–3.5 denoting agreement, 3.5–4.5 denoting agreement, and >4.5 denoting highly agreement. The effectiveness of the training was evaluated based on how frequently it was attended, how well it was thought to have prepared the teachers, and how the teachers felt about it.

4.4.1 Frequency of CBC Training

Teachers were asked to specify the amount of CBC classes outside of the required three in order to gauge attendance frequency. Table 4.6 displays their comments.

Table 4.4: Frequency of Training for Grade 1-3 Teachers and Head Teachers

Number of Training Sessions	Frequency	Percent
1	142	24.65
2	327	56.77
3	107	18.58
Total	576	100.00
Mean	1.939	
Standard Error	0.0273	
Standard Deviation	0.6552	
95% CI	**1.939∓0.054**	

Table 4.6's analysis results show that 142 teachers, or 24.65% of the sample, 31 teachers, or 56.77% of the samples, had participated in two training sessions, whereas 107 educators, or 18.59%, of the total, had completed three CBC workshops. The values varied by an average of 0.6552, with the mean presence frequency being 1.939(1.9390.054). The findings show that, on average, teachers had gone to two CBC training sessions. The study's results concurred with those of Isaboke et al. (2021), who found just 34.1% of the teachers had gone through CBC training. Isaboke et al.'s findings from 2021 showed that, while taking the recommended number of three sessions of training into account, the majority of educators (65.9%) Having participated in no more than two training sessions.

4.4.2 Adequacy of CBC Training Programme

The instructors were asked to judge their degree of agreement with several statements—which served as signals of how sufficient they thought the training they had received was—on a Likert scale with five points in order to assess the

suitability of the CBC instruction course that was being delivered. Table 4.7 provides an analysis of their responses.

Table 4.5: Adequacy of Training Received by Grade 1-3 Teachers and Head Teachers

	SA	A	N	DA	SDA	Mean	SD
The CBC instructors are knowledgeable in the training themes.	215	129	78	121	33	576	3.65
Thanks to the training I received, I was able to adequately get ready for my CBC sessions.	215	132	125	59	45	576	3.72
The instruction I received has made it simple for me to create the necessary professional record.	105	101	112	134	124	576	2.88
I now realize that lifelong learning enhances one's knowledge of and comprehension of the CBC program.	273	109	88	90	16	576	3.93
I can now choose teaching and learning resources in an effective manner because to the training I received.	164	169	107	98	38	576	3.56

154 respondents, or 26.7%, disputed that the CBC instructors are knowledgeable about the training subjects, 78 respondents, or 13.5%, were unsure, and 344 respondents, or 59.8%, agreed. The study's findings show that the instructors who took part in the CBC training had faith in the trainers, with an average of 3.65 signifying 'Agree' on the scale. In terms of if the training they underwent had

helped them adequately prepare for the CBC classes, 104 respondents -- 18.1% of the sample -- disagreed, 125 -- 21.7% -- were unsure, and 347 -- 60.2% -- agreed. The results of the study demonstrate that educators were confident in their knowledge of the training themes. The average weighting of 2.90 supported this.The results mentioned above are in line with the findings of Eleweke and Rodda (2007), whom discovered that properly qualified experts are necessary for the effective implementation of any program.

When asked if the training they attended had made it simple for them to put together the necessary professional background, 258 people disagreed, or 44.8% 112 respondents, or 19.4%, were unsure, and 206 respondents, or 35.8%, agreed. 106 respondents—representing 18.4% of the sample—disagreed, 88— 382 respondents, or 66.3% of the sample, agreed, while 15.3% of the respondents were unsure that ongoing education increases one's knowledge of and comprehending of the CBC curriculum.

333 those surveyed, or 57.8%, agreed that the training they underwent helped them chose teaching/learning resources successfully; 136 respondents, or 23.6%, and 107 respondents, or 18.6%, disagreed. These results were consistent with those of Mwaura (2012) in South Sudan, who found that teachers there lacked training in a variety of teaching techniques and lacked confidence when managing learners who had special needs in including courses, leading to inadequate implementation of inclusion education. In Homabay County, Okuta (2011) found that teachers in the position of inclusive classrooms were unprepared to apply various instructional pedagogies.

4.4.3 Attitude of teachers towards the CBC Training

Instructors were requested to assess their degree of concurrence with all of the topics measuring their mindset towards the CBC course of study on a scale based on five points in order to determine their attitude toward the training, which was a crucial sign of how much they learned from it and, in turn, the results of the training. Table 4.8 provides the evaluations of their answers.

Table 4.6: Attitude of teachers towards the CBC Training

	SDA	DA	N	A	SA	Mean	SD
The CBC education is impartial and educational.	48	71	120	187	150	576	3.56
Every time the CBC training courses are held, I enjoy them.	41	91	109	191	144	576	3.53
I fully support the CBC training programme	46	101	88	109	232	576	3.66
Anytime the CBC education classes are held, I will be happy to attend.	69	88	88	142	189	576	3.51
If further training sessions are implemented, I will be pleased.	63	77	137	117	182	576	3.48

According to the study's findings, teachers felt that the CBC education was impartial and educational. The average score of 3.56 illustrates this on a scale of 1 to 5 represents agreement. Of the 337 respondents, 327 were in agreement or strongly agreed, while 119 either did not agree or strongly did not agree. There were 335 respondents who agreed (4 and 5) and 132 who objected (1 and 2 in the scale) regarding whether instructors enjoy CBC instruction sessions anytime they

are held. The teachers appeared to agree that the CBC instruction sessions were entertaining, as evidenced by a mean score of 3.53. The findings demonstrate that educators were unconcerned about whether they would like the addition of more training sessions, as seen by the mean value of 3.48. However, 299 educators concurred, as opposed to 140 who dissented.

4.4.4 Aggregation of Training of CBC Teachers

The ratings for each respondent for Each variable was measured using the following set of items: summed up to obtain an index that measured the adequacy of the CBC training plans and perspectives on the training plan. In both cases, the indices ranged from 5 to 25. For the training adequacy indices, an index of more than 15 could imply that the teachers considered CBC training adequate, while an index of less than 15 could imply that the training was considered inadequate. For the teachers' attitude towards the training indices, an index of more than 15 could imply the teachers' attitude towards the CBC training was considered positive.

In contrast, an index of less than 15 could implya negative attitude. The descriptive statistics for the aggregate Table 4.9 displays the perspectives of teachers regarding training and the adequacy of training.

Table 4.7: Descriptive Statistics on Training of teachers' on CBC

	N	Min	Max	Mean	Std. Dev
Adequacy ofTraining programmes	576	5.00	25.00	19.93	8.32
The teachers' perspective on the CBC training	576	7.00	20.00	16.08	7.00

According to the results in Table 4.9, CBC instruction has a mean score of 19.93 and values that deviate from the mean by an average of 8.32. The study comes to the conclusion that teachers thought the instruction they were receiving was sufficient because the mean score was greater than 15. A composite average index at 16.08 was found for teachers' attitudes toward the CBC training, with a variance of 7.004, indicating that most teachers had favorable attitudes regarding the program.

These results are in line with a study by Waigera, Mweru, and Ngige (2020), who looked at how The attitudes of instructors and the use of instructional aids in pre-primary schools in Kenya. They discovered that educators with positive attitudes applied instructional content to their lessons more frequently than their counterparts with unfavorable mindsets. According to this study, encouraging the application of instructional methodologies in early childhood education (EYE) methods was greatly influenced by instructors' mindsets. However, Maimela (2015) findings disputed by indicating that teacher attitudes were not the only ones in charge of any curriculum implementation's success or failure. Hence there is need for further research on the attitudes of teachers towards curriculum implementation.

4.4.5 Implementation of CBC by Teachers

On a 5-point rating system, participants were asked to indicate how much they agreed with five subjective indicators of how well they are carrying out the various CBC implementation activities. The results are presented in Table 4.10.

Table 4.8: Implementation of CBC Curriculum by Teachers

	SA	A	N	DA	SDA	Mean	Std Dev
My involvement of parents in the learning of their children has been on the increase	94	55	99	195	133	576	2.62
I often use formative assessment of the learners	175	162	105	84	50	576	3.57
Classroom learning is most of the time connected to real-life activities that encourage self-reliance	174	140	130	85	47	576	3.54
In my teaching, I embrace all the diverse learning needs and abilities of the learner	160	179	103	70	64	576	3.52
I always guide learners toward constructing their knowledge	148	123	129	89	87	576	3.27
I always encourage skill application through creativity, innovation and problem solving	155	143	124	95	59	576	3.42

On the teachers involving parents in the children's learning being on the increase, 328 respondents representing 56.9% disagreed, 99 representing 17.2% were undecided, while 149 representing 25.9% agreed. The results of the study demonstrate that, despite the need for collaboration between educators and parents to ensure the proper implementation of the curriculum, parental involvement in their children's education was particularly limited. The study finding is in line with Owala's (2021) assertions that most parents of students now participating in competency-based education have very little knowledge of the new curriculum and are hesitant to support its implementation.

Further, he points out that the parents are unable to help their kids with their homework and other household responsibilities, which, as pointed out by (Amunga et al., 2020), makes the implementation of CBC difficult because To ensure the effective execution of the new curriculum, parents and teachers must collaborate and act as co-educators.

Regarding the statement that the teachers often used formative assessment of the learners, 337 respondents (4 and 5 on the scale), representing 58.5%, agreed with the statement., while 134 respondents (1 and 2 on the scale), representing 23.3% disagreed. With a mean response of 3.57, the study results show that teachers used a formative assessment approach to evaluate learners, which is a requirement in implementing the CBC curriculum.

Classroom learning is most of the time connected to real-life activities that encourage self-reliance; 314 respondents (4 and 5 on the scale), representing 54.5%, agreed to the statement, while 132 respondents (1 and 2 on the scale) represented 22.9% disagreed. With a mean response of 3.54, the study results show that most teachers use real-life activities in the teaching/learning process. However, the success can further be enhanced if requisite learning and teaching resources are available since their lack, as is the case in most schools, maybe a threat to implementing the competency-based curriculum (Owala et al., 2021). The study finding that teachers are using real-life activities in the presence of inadequate resources requires the creativity and innovativeness of the teachers and learners in improvising resources using the locally available material, which enables learners to interact with the existing resources, hence acquiring the required competencies.

Regarding the statement that teachers embrace all learners' diverse learning needs and abilities in their teaching, 314 respondents (4 and 5 on the scale), representing 54.5%, agreed with the statement. In comparison, 134 respondents (1 and 2 on the scale), representing 23.3%, disagreed. With a mean response of 3.52, the study results show that most teachers consider learners' different needs and abilitiesto carry out their lessons. This can, however, be hampered by Inadequate human resources and increased enrollment of students in these grades, which increases the amount of work that teachers are supposed to undertake and hence might not be able to address the specific needs of all the learners.

On whether teachers always guide learners towards constructing their knowledge, 271 respondents representing 47.0% agreed, while 176 respondents representing 30.6% disagreed. With a weighted average of 3.27, the study finding shows that the teachers were indifferent to the issue. However, since that number of teachers who agreed was more than those who disagreed, it can be construed that the majority of the teachers do guide learners towards constructing their knowledge as opposed to the teachers being the sources of knowledge themselves

Lastly, the ratings for each respondent were summed up to obtain an index thatmeasured the level of implementation of the CBC curriculum by the teachers. The index ranged from 6 to 30. An index of more than 18 could imply that teachers practiced most of the CBC implementation activities. In contrast, an index of less than 18 could construe low implementation by the teachers of the CBC program. The descriptive statistics for CBC implementation are reported in Table 4.11.

Table 4.9: Descriptive Statistics for CBC implementation Indices

	N	Min	Max	Mean	Std. Dev
CBC Implementation	576	11.00	27.00	21.1009	2.7081

The findings displayed in Table 4.11 show that the mean CBC implementation index was 21.10 with a standard deviation of 2.708. In the range of 6 to 30, the mean CBC implementation index was above 18; hence, it can be inferred that the teachers carried out most CBC implementation activities in their schools.

4.4.6 Correlation Analysis of the Relationship between CBC Training and Implementation of CBC

The coefficient symbol (r) denotes the correlation analysis, which was performed to ascertain the link between two variables. The final analysis's coefficient accepts values in the range of -1 and +1. In other words, the sign of the "r" indicates the direction of the link, while the coefficient value indicates the degree of the association. Positive values show that both variables increase or decrease simultaneously. Table 4.12 shows the findings of the analysis of Pearson's correlation, which evaluates the type and degree of connection between the CBC curriculum's implementation, how often training is conducted, the suitability of the course of study, and the perspectives of educators regarding the CBC training course.

Table 4.10: Correlation Analysis of the Relation between CBC Training and CBC Implementation

	Frequency of Attendance	Adequacy of training	Attitude of teachers	CBC implementation
Attendance Patterns	1			
sufficient training	0.323**	1		
Attitude of teachers	0.578**	0.690**	1	
CBC implementation	0.516**	0.704**	0.635**	1

**. Correlation is significant at the 0.01 level (2-tailed).

According to the positive connection, teachers who visited a greater number of workshops were better equipped than those who visited fewer sessions to carry out the various CBC execution tasks with efficiency.

The Pearson's coefficient of correlation of 0.704 shows a substantial positive link between the effectiveness of the CBC instruction course and CBC implementation that is noteworthy at the 1% significance level. This demonstrated that the more effective the CBC instruction course was, the more efficient the teachers developed them were at executing the various CBC execution activities; as a result, it was necessary to better equip the trainers to train the teachers and to make the training curriculum more pertinent to the needs of the educators as they worked to carry out the CBC curriculum.

At the 1% level, the positive coefficient of Pearson of 0.635 was significant relevance revealed a reasonably substantial positive link between teachers'

opinions toward the CBC course of study and CBC implementation across the instructors of Grades 1, 2, and 3. The positive association suggests that the training program was more successful for teachers that had a positive outlook on it. As a result, they were better equipped than individuals who had a bad attitude about the training to carry out each of the CBC implementation activities efficiently. The findings are corroborated by a study on the attitudes of instructors and students as correlates of mathematics ability conducted by Ndifor and Ngeche (2017).

This suggests that instructors' attitudes regarding the CBC course of study will affect both their willingness to participate in the sessions and their perception of the sessions' suitability.The Rwandan study of Rubagumya et al. (2018) on the application of CBC is in conflict with this study. The main problem was that the majority of teachers were committed to knowledge-based curricula and were resistant to change. Teachers perceived the new curriculum as being more difficult and lengthy than the based on expertise curriculum.

4.4.7 Multiple Regression Analysis on teacher Trainingand CBC Implementation

Before the multiple regression procedure, tests for multicollinearity and normality of the residuals were carried out.

4.4.7.1 Multicollinearity

High levels of correlation among independent variables, or predictors, are the hallmark of multicollinearity (Vatcheva, Lee, McCormick, & Rahbar, 2016). When multicollinearity exists, it may not be possible to assign the interpretation

of the regression coefficient to a single variable while holding the other variables constant because of the potential for overlapping data. According to the general rule, the The value of the VIF should be less than and the tolerance greater than 0.2 ten (Keith, 2006; Shieh, 2010). The variance inflation factor and tolerance was computed and results as shown in Table 4.13.

Table 4.11:Multicollinearity

	Tolerance	VIF
Frequency of Attendance	.936	1.068
Adequacy of training	.796	1.256
Attitude of teachers	.840	1.190

Table 4.13 shows that there is no multicollinearity among all the independent variables since the values of the VIF are less than 10 and tolerance values are greater than 0.10. the threshold value recommended by Leedy and Ormrod (2005). Therefore, there is no violation of the multicollinearity assumption has not been violated.

4.4.7.2 Test for Normality

The belief tells the researcher what range of values to expect and is based on the shape of the normal distribution (Keith, 2006). The researcher used a range of data to test this hypothesis, including P-Plots, skew, kurtosis, and eye inspection of data plots (Osborne & Waters, 2002). Histograms of the residuals that were standardized were used to further verify the normality (Stevens, 2009). The histogram chart and the plot of normal probability were used to calculate the test regarding normality of the variable that is dependent (CBC implementation). In Figure 4.1, the histogram plot is displayed.

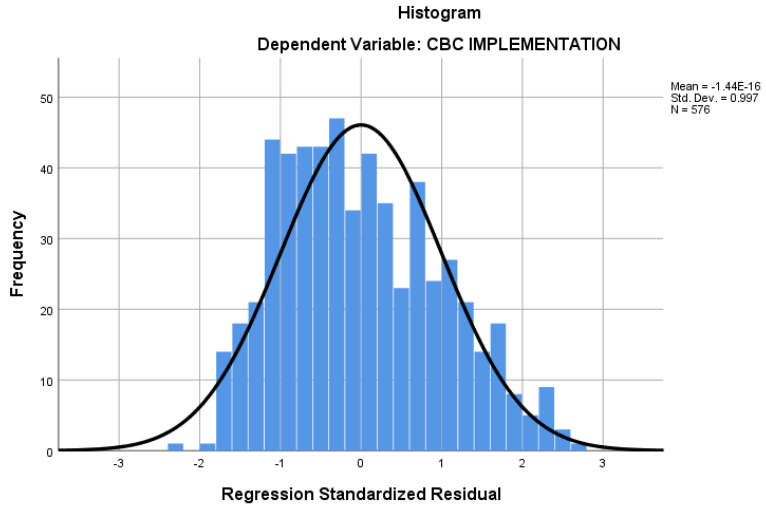

Figure 4.1: Histogram Plot

As shown in Figure 4.1, the histogram is a Diagrams with bars of the residuals with a normal curve overlay. Therefore, it was determined that the variables were regularly distributed. According to the histogram plot, the remaining values are normally distributed because the CBC implementation data has a mean of -1.44E-16, or around 0, and a standard deviations of 0.997, or roughly 1.

The residual plots and scatter plots included in the majority of statistical software programs were examined in further detail and showed linear vs. curved correlations (Keith, 2006; Osborne & Waters, 2002). Inconsistencies in linearity can be found using residual plots that display the standardized residuals vs. the anticipated values (Stevens, 2009). As illustrated in Figure 4.2, the linearity of the residuals was established using residual plots that displayed the standardized residuals and the projected values.

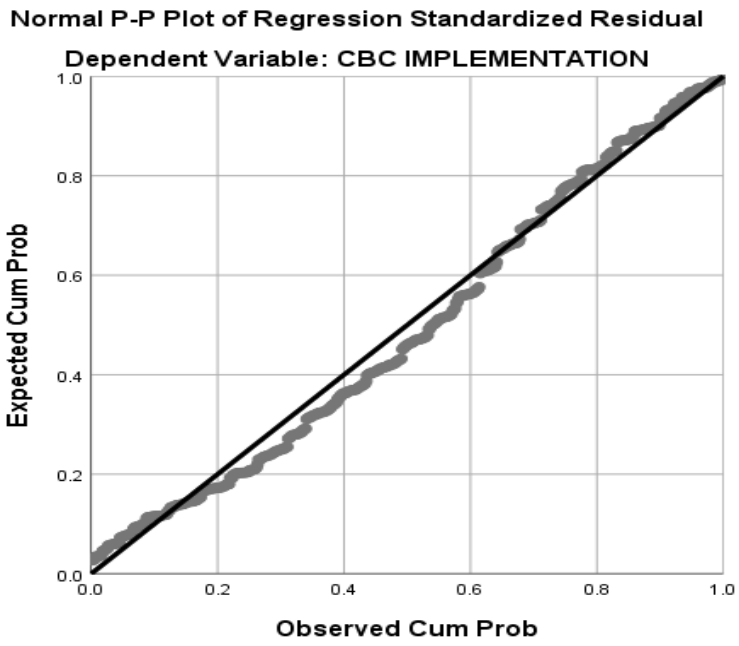

Figure 4.2: Normal P-P plot

It is deduced that the CBC Implementation data had a normal distribution based on Figure 4.2's showing of the residuals being uniformly distributed over the 450 lines.

CBC Training Model Summary

By measuring the program's appropriateness, attendance frequency, and teachers' views toward it, CBC training differences were shown to be the main sources of

variance in CBC implementation. These variations were evaluated using the coefficient of drive, or R2. We provide the results in Table 4.14.

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.716[a]	.512	.509	1.60849

a. Predictors: (Constant), Frequency of Attendance, Adequacy of training and teachers' attitude towards training
b. Dependent Variable: CBC Implementation.

There is a substantial correlation among the CBC training elements and CBC implementation, as shown by the analytical results in Table 4.14, where the correlation coefficient of multiple interactions was 0.716. The coefficient of drive (R2 = 0.512) shows that variations in the frequency of participation at CBC training sessions, the quality of CBC training, and the attitudes of teachers toward the CBC curriculum account for 51.2% of the variance in CBC execution for the study population of 576 grade 1, 2, and 3 teachers, while 48.8% is still unexplained. The F-statistic obtained from the ANOVA was used to determine whether the framework is capable of accurately predicting the efficiency of the CBC implementation for the instructors of grades 1, 2, and 3. Table 4.15 presents the results.

Table 4.13: Analysis of Variance

Model		SS	Df	MS	F	Sig.
1	Regression	758.936	3	252.978	200.043	.000[b]
	Residual	723.360	572	1.265		
	Total	1482.296	575			

a. Dependent Variable: CBC Implementation
b. Predictors: (Constant), Frequency of Attendance, Adequacy of training and teachers' attitude toward training

Source: Field Data (2022)

The findings demonstrate that the CBC teaching constructs (suitability of the education program, frequency of attendance, and teachers' attitude toward the training program) can jointly predict the adoption of the CBC by the teachers of grades 1, 2, and 3 in preschools (F (3,575) = 200.043, p 0.05). The outcomes show that the coefficient of regression for CBC implementation was statistically significant as a function of the suitability of the CBC course of action, frequency of attendance, and instructors' attitudes regarding the training program.

The normalized beta values and the t-test for the coefficients of regression were used to evaluate the importance of the various regression variables in the model. Table 4.16 displays the t-test results, the standardized beta coefficients, and the unstandardized regression coefficients.

Table 4.14 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.796	.718		12.245	.000
	X_1	.148	.046	.122	3.217	.047
	X_2	.343	.036	.365	9.402	.000
	X_3	.286	.036	.298	8.014	.000

a. Dependent Variable: CBC Implementation

Source: Field Data(2022)

The multiple regression model used in the analysis of the study objective is presented as follows:

$$Y = \beta_0 + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \epsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Based on the unstandardized coefficients, the regression equation was condensed to:

$$\mathrm{Y} = 8.796 + 0.148\mathrm{X}_1 + 0.343\mathrm{X}_2 + 0.286\mathrm{X}_3$$

where:-

Y is the dependent variable, which is the level of CBC Implementation

X_1 −is the frequency of attendance of CBC training

X_2–is the suitability of CBC training courses

X_3–is the attitude of teachers towards CBC training programs

$\beta_0, \beta_1, \beta_2 \; and \beta_3$ are the regression coefficients

$\epsilon$is the error term

The constant value (8.796) is the CBC implementation model indicates that without CBC training, CBC implementation index will be 8.796. Based on the multi-item Likert scale used to measure CBC implementation, the index of 8.796 is less than 18, implying that without the CBC training, teachers will not be able to carry out effectively the activities that constitute CBC implementation. The results indicate a positive relationship between CBC implementation and the the regularity of CBC training session attendance, the quality of CBC instruction, and the attitude of teachers toward the CBC curriculum, as demonstrated by the positive regression coefficients of $\beta_1 = 0.148$, $\beta_2 = 0.343$ and $\beta_3 = 0.286$ respectively.

These indicate that increased training efforts will result in increased CBC implementation levels through teachers' ability to complete the several CBC implementation tasks. The standardized beta coefficients results indicated that the suitability of the CBC course of study had the highest effect size of 0.365, which indicates that holding the other variables constant, a unit increase in the level of adequacy of the training program could resultin a 36.5% increase in how well teachers will implement the CBC curriculum. Teachers' attitude towards the CBC training program had the second-largest effect size of 0.298which implies that a unit increase affects the way educators view the CBC training course, holding the other factors constant, could result in a 29.8% increase in CBC implementation among the teachers of grades 1, 2, and 3. The frequency of attendance had the least effect size of 0.122, which indicates that a unit increase in the number of training sessions teachers attend could result in a 12.2% increase in CBC implementation

According to the first hypothesis (H01a), instructors in grades 1, 2, and 3 in Migori County do not implement CBC differently based on how frequently they receive CBC training. The results presented in Table 4.16 demonstrate a statistically significant, positive correlation ($\beta1=0.148$; $p=0.047$) between the frequency of attendance at CBC training and CBC implementation, with a significance level of 5%. We therefore reject the null hypothesis that the frequency of attendance of CBC training has no effect on CBC implementation and conclude that the number of times teachers attend CBC in-service training programmes will positively influence how well teachers will implement the various CBC implementation activities.

The first hypothesis (H01b) asserts that educators in grades 1 through 3 in Migori County do not administer CBC in accordance with the effectiveness of their CBC training. The results in Table 4.16 demonstrate a statistically significant positive link ($\beta2=.343$, $p=0.000$) between the adequacy of CBC instruction and its implementation, with a significance threshold of 5%. We therefore reject the null hypothesis that the adequacy of the CBC training has no effect on CBC implementation and conclude that the more adequate in-service training programme the effective the implementation of CBC. The more teachers will be able to gain from the training hence the better they will be in implementing the various CBC implementation activities.

According to the first hypothesis (H01c), instructors' attitudes on the CBC training have no influence on how the curriculum is implemented in grades one through three in Migori County. The results shown in Table 4.16 demonstrate a

statistically significant, at the 5% level of significance, positive link between the attitude of teachers (β3=.286, p=0.000) and the implementation of CBC. We therefore reject the null hypothesis that the teachers' attitude towards the CBC training has no effect on CBC implementation and conclude that teachers' attitude towards the CBC in-service training programme affects the implementation of the various CBC activities by the teachers. This is true because teachers' attitude towards the training will determine how much teachers learn during the training which in turn will determine how well the teachers carry out the specified CBC implementation activities.

The results of the study show that CBC in-service training considerably improves CBC implementation. This suggests that CBC training helps ensure that the curriculum is implemented correctly, which is why it must be carried out efficiently and by all teachers in order to maximize the advantages that the students should receive from the CBC curriculum. The study's findings are in line with the findings reported by Isaboke et al. (2021), who discovered a strong relationship between instructors' ability to implement the curriculum and their degree of CBC training. The study findings were also consistent with interview data findings amongst the SQASOs. They indicated that CBC training amongst the teachers has led to increased proper implementation of the various CBC activities by the teachers. This demonstrates that teachers in elementary schools have not had enough instruction on how to carry out the curriculum. The results are consistent with those of KNUT (2019), which found that teachers' insufficient training made it difficult for them to implement the curriculum. The CBC classes were brief, insufficient, and ineffective. This indicates that primary

school instructors have not received adequate training on how to implement the curriculum. The findings align with the findings from KNUT (2019), which discovered that teachers' inadequate training posed challenges to their ability to execute the curriculum. The CBC courses were short, inadequate, and unproductive.

4.5 Influence of instructional resources on implementation of competency-based curriculum

Finding out how instructional resources affected the implementation of a curriculum based on competencies was the study's second objective in Migori County's public primary schools. To do this, a 5-point multi-item Likert scale was used to determine the availability, sufficiency, and effectiveness of the teachers' teaching and learning materials.

4.5.1Availability and adequacy of teaching learning resources

The purpose of this part was to evaluate if the specified T/L resources were accessible in elementary schools along with whether they were sufficient to meet the needs of every student. The head teachers and teachers of grades 1-3 were asked to score the specified instructional materials in their schools on a five-point Likert scale. The results are shown in Table 4.17 following the examination of the responses.

Table 4.17: Availability and Adequacy of Teaching/Learning Resources

Items	None	inadequate	Fairly Adequate	Adequate	Most adequate	N	Mean
Textbooks	0	34	107	235	200	576	4.04
Chalkboard	0	0	34	372	170	576	4.24
Whiteboard	473	79	24	0	0	576	1.22
flash cards	123	111	273	69	0	576	2.50
Pictures	107	103	191	44	31	476	2.56
Radio	111	219	200	46	0	576	2.31
Desks	0	239	242	89	6	576	2.76
Models	43	243	201	89	0	576	2.58
Classrooms	0	243	189	121	23	576	2.87
Sports fields	0	234	211	109	22	576	2.86
Workshop	498	76	2	0	0	576	1.14
Television screens	234	129	210	3	0	576	1.97

The results of the analysis show that textbooks and chalkboards as T/L resources were available and adequate in the primary schools in Migori County as indicated by means of 4.04 and 4.24 both representing adequate on the scale. The findings are similar to findings by Chepkwony (2019) who established that 95% of the schools Belgut Sub-County, Kericho County, Kenya had adequate textbooks. This can be attributed to the government's effort to attain a student textbook ratio of 1:2 following the introduction of free primary education. Flashcards (mean=2.50), Pictures (Mean=2.56), Desks (Mean=2.76), Models(Mean=2.58), Classrooms (Mean=2.87) and Sports fields(mean=2.86) were established to be fairly adequate as indicated by their respective means based of the scale used. However, findings indicated that most of the pupils' desks were not comfortable

hence could be a contributing factor to the quality of education being experience sinceuncomfortable The student desks in these institutions raise serious questions about the caliber of instruction provided

Radio and television sets were established to be inadequate as indicated by means of 2.31 and 1.97 respectively. Further, 111 and 234 respondents indicated their schools had no radio and television sets respectively while only 46 and 3 respondents respectively indicated that radio and television sets were adequate in their schools. Likewise, Whiteboard (mean=1.22) and Workshops (mean=1.14) were established to be unavailable as indicated by means of approximately one on the scale.

The result was supported by SQASOs whose responses to the question on whether the teaching resources in the primary schools in Migori County for grades 1, 2 and 3pupils were adequate, indicated that there wereinadequate resources in most of the primary schools and pointed out that this affected the the CBC curriculum's implementation in specific schools. They however argued that teachers were improvising some in order to successfully complete the numerous CBC implementation activities, they shared some of the teaching tools and T/L resources.

4.5.2 Use of relevant Teaching / Learning Resources by Teachers

Instructors were asked to provide ratings using a 5-point Likert scale how often they use relevant teaching-learning resources to achieve the stated key CBC objectives.

Table 4. 18: Effective use of available T/L resources

Item	Not at all	Least effective	Fairly effective	Effective	Most effective	N	Mean
Use of the available resources to arouse interest in learners	92	102	235	124	23	576	2.80
Use of resources to help clarify, interpret and compare important concepts and phenomena	31	109	121	166	149	576	3.51
Use of resources to make learning more focused, effective and meaningful	46	107	334	79	10	576	2.83
Use of resources to build student innovativeness and creativity	121	116	209	121	9	576	2.62
Use of resources for students' development of problem-solving skills	151	123	232	67	3	576	2.39
utilizing resources to advance improved comprehension and skill development	55	244	178	67	32	576	2.61
Utilizing resources to foster engagement and communication between teachers and students	23	171	169	112	101	576	3.17
Use of resources to connect the classroom learning to real-life	23	155	173	133	92	576	3.20

The mean score for using the available T/L materials to assist explain, understand, and compare significant concepts and phenomena by instructors in grades 1, 2, and 3 was found to be 3.508681, or "effective" on the scale. On the question of whether The instructors of grades 1, 2, and 3 make use of the T/L resources available to arouse interest in learners, the study results showed that a mean value of 2.798611 was obtained, which indicates that the educators used the resources reasonably well teaching-learning resources to arouse interest in learners. This suggests that the majority of teachers of grades 1, 2, and 3 made advantage of the offered resources to create clarity of concepts and distinguish phenomena. Prior to beginning the implementation of any curriculum, it is important to choose appropriate teaching and learning resources. These resources must satisfy the needs of the students, pique their interest, and work within the limitations of the teaching and learning environment. Using the available T/L resources to make learning more focused, effective and meaningful, a mean of 2.826389 was obtained and represented ‘fairly effective on the scale. On whether the teachers use the available T/L resources to build student innovativeness and creativity, a mean of 2.619792 was obtained and represented ‘fairly effective on the scale. The findings show that teachers were reasonably successful in encouraging innovation and creativity—two qualities that are essential to the competency-based curriculum—through the use of T/L materials.

On the use of available T/L resources for students’ development of problem-solving skills, a mean of 2.388889, representing the least often on the scale, was obtained. This implies that the grades 1, 2 and 3 teachers pay little attention to the use of appropriate T/L resources to help learners develop their problem-solving

skills. Using the instructional resources to promote better understanding and development of different skills, a mean value of 2.612847, which represents ‘fairly often’ on the scale, was obtained.

On the use of available T/L resources for students’ development of problem-solving skills, a mean of 2.388889, representing the least often on the scale, was obtained. This suggests that the instructors of grades 1, 2, and 3 pay little attention to the use of appropriate T/L resources to help learners develop their problem-solving skills. The utilization of instructional resources to facilitate improved comprehension and skill development yielded a mean score of 2.612847, or "fairly often" on the scale. Exam results are more likely to be favorable for schools with proper resources, such as textbooks, than for those with insufficient supplies. Poor performance can therefore be linked to inadequate teaching and learning resources and tools.

On the question of whether The instructors of grades 1, 2, and 3 make use of the T/L resources available to promote teacher-student and student-student communication and interaction, a mean of 3.17 was obtained, which indicates that the teachers were fairly efficient with the resources at hand teaching-learning resources to promote communication between them and their students and amongst the students, on whether The instructors of grades 1, 2, and 3 make use of the T/L resources available to connect the classroom learning to real-life a mean of 3.201389was obtained which represents ‘fairly effective’ on the scale. In support of this findings, KemboiandNabwire (2017) claims that even the most dedicated instructor may not accomplish much in the absence of sufficient and pertinent teaching and learning resources. This is supported by Waweru (2018),

who notes that a lack of instructional resources demotivates students and causes them to perform poorly. The Department of International Development (DID) lists accessibility to educational resources as one of the factors that consistently boosts student achievement. The majority of teachers who were questioned by the study acknowledged that they occasionally utilize flash cards to educate, particularly when it comes to language and arithmetic exercises, which makes learning more pleasurable.

4.5.3 Mean Availability and adequacy of T/L resources and Effective use of the T/L Resources

To create one ranking for each latent variable, responses about the availability, sufficiency, and productive use of T/L inputs were compressed. A mean index of over thirty would be interpreted as indicating that the materials were both available and sufficient. The range of the T/L resource sufficiency and access index was 10 to 50. An average index of 10 would indicate that there were no resources available, whereas one of fewer than thirty would indicate that they were insufficient. The effective T/L resource consumption index varied between 8 up to 40. A mean score of more than 24 would suggest that the first, second, and third grade instructors made effective use of the T/L resources available. A mean index of less than 24 would be suggestive of improper use of the T/L resources by instructors. The outcomes are shown in Tables 4.19.

Table 4.15: Descriptive Statistics of Aggregated Variables (N=576)

	N	Min.	Max.	Mean		Std.
				Statistics	SE	Dev
The sufficiency and accessibility of T/L resource (TLR1)	576	10.00	41.00	27.6372	.342	8.21
Effective use of T/L resources (TLR2)	576	8.00	32.00	24.3611	.339	8.15

Table 4.19's data displays indicate that the T/L resources' availability and sufficiency had a mean value of 27.6372 and an average deviation of 8.20977. The materials accessible to use during grades 1, 2, and 3 in the elementary schools within Migori County are insufficient because the median number was below 30 but over 20. With a mean index of 24.3611 and an average deviation of 8.14701, efficient utilization of T/L resources by educators at their disposal was fairly effective in advancing the main principles in the competency-based curriculum.

4.5.4 Correlation Analysis of the Relationship between Teaching/Learning Resources and Implementation of CBC

Table 4.20 shows the findings On the Pearson's Correlation investigation comparing the curriculum used by the CBC, the access of T/L resources, the suitability of a T/L resources, and the use of T/L resources.

Table 4.16: Pearson correlations between teaching/Learning Resources and Implementation of CBC (N=576)

	CBC Implementation	TLR1	TLR2
CBC Implementation	1		
TLR1	0.593**	1	
TLR2	0.690**	0.642**	1

The results displayed in Table 4.20 demonstrate a significant positive correlation (Pearson's correlation value of 0.593) between the adoption of CBC and the adequacy of the T/L resources. This demonstrated that instructors could execute the CBC curriculum more effectively the more effective the T/L resources were. This outcome is consistent with Chemangosi's (2020) assertion that effective curriculum implementation requires the use of pertinent teaching resources, which is also confirmed by Urunana (2018). Who agrees that educational materials are important because they motivate pupils to actively engage in learning activities. The positive correlation coefficient, Pearson's, value of 0.690 considerable at the five percentile of significance revealed a substantial positive link between the utilization of the T/L resources available to teachers of Grades 1, 2, and 3 and the implementation of CBC. The positive connection suggests that effective teachers who utilized the T/L resources were more equipped to implement the variations than were effective teachers who did not. Nasibi (2005) affirms that schools with good and sufficient Educational materials function effectively. He acknowledges that accessibility to instructional materials and their

As most resources are used effectively, this speaks to the caliber of instruction are crucial for helping students understand concepts and acquire skills.

4.5.5 Multiple Regression Analysis of Instructional resource and CBC Implementation

Before the multiple regression procedure, tests for multicollinearity and normality of the residuals were carried out.

4.5.5.1 Test for Multicollinearity

The assumption of multicollinearity was measured using VIF statistics. The multicollinearity assumption has been met if the VIF statistic is between 1 and 10. Table 4.21 shows the multicollinearity test result.

Table 4.17: Instructional resource Multicollinearity

	Tolerance	VIF
TLR_1	0.588	1.700
TLR_2	0.588	1.701

The results show that all Because there was multicollinearity among the independent variables, the VIF values was less than 10 was absent.

The correlation analysis results in table 4.21 were also used to bolster the collinearity results. The correlation coefficient of the relationship between The utilization and sufficiency of T/L resources was 0.642. This correlation between the independent variableswas less than 0.7; hence based on the recommendation

by Tabachnick and Fidell (2007) of a threshold value of 0.7 for multicollinearity to be inferred, the study infers the absence of multicollinearity.

4.5.5.2 Test Normality

The histogram plot plus the plot of normal probability were used to calculate the test regarding normality about the variable that is dependent (CBC implementation). In Figure 4.3, a histogram plot is displayed.

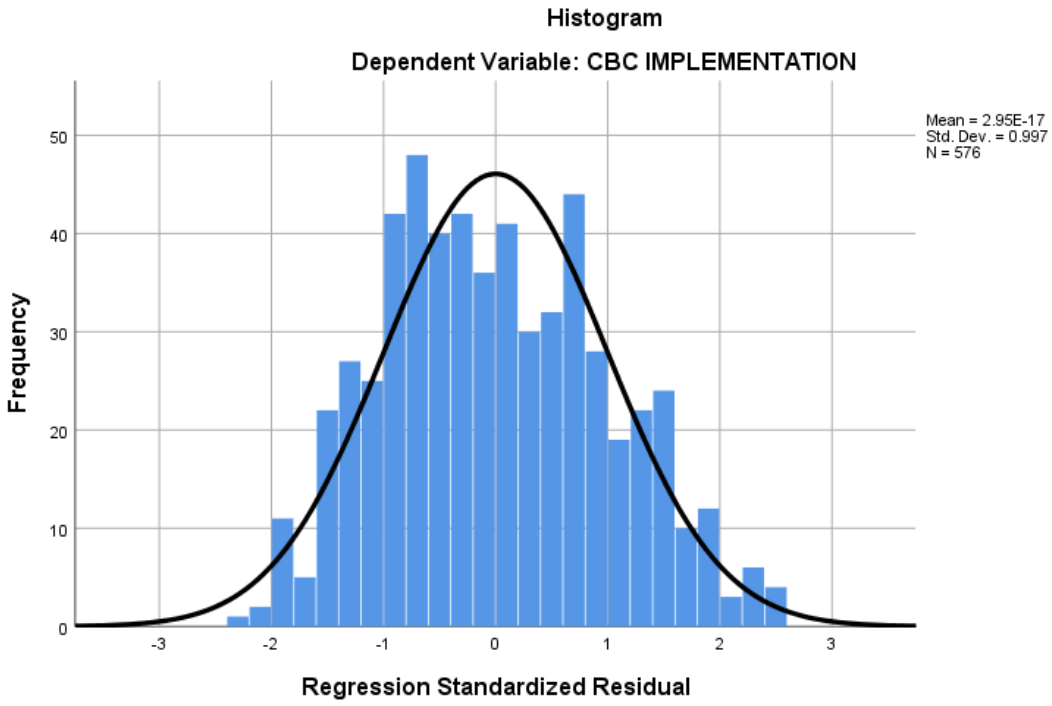

Figure 4.3: The histogram plot

The histogram plot shows that CBC implementation data is normally distributed with a mean of 2.95E-17, which is approximately 0 and a A deviation of 0.997, or almost one; hence the residuals are normally distributed.

The normal probability plot is also shown in Figure 4.4.

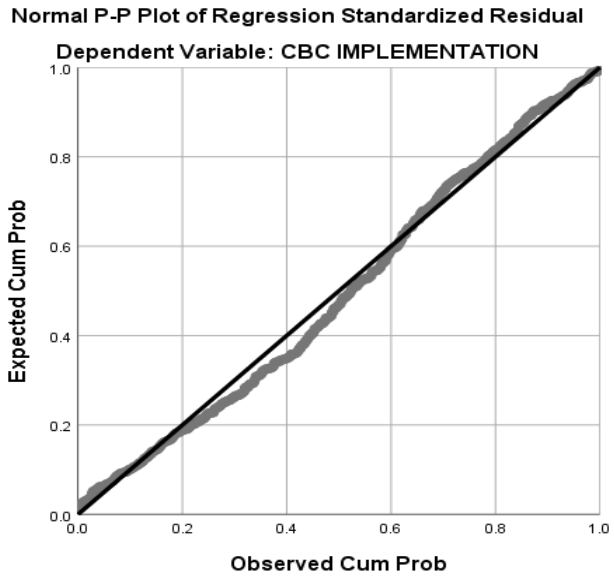

Figure 4.4: Instruction resource Normal P-P plot

The 450 lines of leftovers in Figure 4.4 were dispersed evenly, suggesting a regular distribution of the CBC Implementation data.

Instruction Resource model summary

The coefficient of determination, or R2, was employed to determine how much of the variation in CBC execution can be accounted for by adjustments to the availability, sufficiency, and utilization of T/L resources. Table 4.22 presents the findings.

Table 4.18: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.718[a]	0.515	0.512	3.359

a. Predictors: (Constant), TLR1, TLR2
b. Dependent Variable: CBC Implementation

The findings in table 4.22 show that the CBCimplementation model as a function of availability, adequacy and use of T/L resources yielded an R^2 value of 0.515. This indicates that 51.5% of the variation in CBCimplementationin the Migori County elementary schools offer grades 1, 2, and 3. can be explained by the threeT/L resources elements studied. Forty-eight pointeight percent remain unexplained. Table 4.23 further provides the results of the analysis of the variance (ANOVA).

Table 4.19:ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6850.600	2	3425.300	304.142	0.000[b]
	Residual	6453.226	573	11.262		
	Total	13303.826	575			

a. Dependent Variable: CBC implementation

b. Predictors: (Constant), TLR_1, TLR_2

According to the findings, the CBCimplementation model as a whole was statistically significant (F_3,572=304.142,p.05). The findings suggest that the independent factors are collectively reliable predictors of how well teachers in grades one through three in Migori County follow the CBC curriculum.

The regression coefficients, standardized coefficients and the t-test values for the significance of the regression coefficients are shown in table 4.24.

Table 4.20: Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	7.584	.508		14.926	.000
	TLR_1	.150	.022	.256	6.742	.000
	TLR_2	.311	.022	.526	13.872	.000

a. Dependent Variable: CBC Implementation

The multiple regression model used in the examination of the connection between CBC implementation and T/L resources is presented as follows:

$$Y = \beta_0 + \beta_1 TLR_1 + \beta_2 TLR_2 + \epsilon$$

The regression equation was determined by looking at the unstandardized coefficients condensed to:

$$\mathrm{Y} = 7.584 + 0.150\mathrm{TLR}_1 + 0.311\mathrm{TLR}_2$$

Where;

Y is the dependent variable, which is the level of CBC Implementation

TLR_1–is the adequacy of the T/L resources index

TLR_2–is the use of the T/L resources index

$\beta_0, and \beta_{1,} \beta_2$ are the regression coefficients

$\epsilon$is the error term

The t-test with the regression was used to evaluate the statistical significance of the coefficients of the regression coefficient's significance was used at a 5% level of significance. The constant value (7.584) indicates that CBC implementation index will be 7.584 without the availability and use of T/L resources. Based on the multi-item Likert scale used to measure CBC implementation, the index of 7.584 is less than 18, implying that without the proper use of T/L resources, teachers will not be able to carry out effectively the activities that constitute CBC implementation.

The availability, sufficiency, and efficient use of T/L resources are positively correlated with the application of CBC, as demonstrated by the positive coefficients of regression of β_1=0.150 and β_2=0.311 respectively. These indicate that adequate and effectively used T/L resources will result in increased CBC implementation levels through teachers' ability to select and appropriately use T/L resources to aid in CBC implementation activities.

The standardized beta coefficients of 0.256 indicate that a unit increase in the adequacy of T/L resources could result in a 25.6% increase in CBC implementation by the teachers. Like the standardized beta coefficients of 0.526 indicate that a unit increase in effective use ofT/L resources could result in a 52.6% increase in CBC implementation by the teachers. A comparison of the two

standardized beta coefficients shows that the use of T/L resources has the greatest effect size than the adequacy of the T/L resources.

The result indicates that schools should not just focus on just availing the T/L resources but on ensuring that the availed resources are adequate and that the grades 1, 2 and 3 teachers make effective use of the resources in the teaching/learning resources. This finding demonstrates that for Competency Based Curriculum to be implemented effectively teaching and learning materials have to be utilized. This result is consistent with a study on competency-based education conducted in Tanzania by Makunja (2016), which highlighted the lack of suitable learning and teaching materials as one of the challenges instructors faced when implementing competence-based curriculum with variations between institutions.

According to the second hypothesis (H02a), teachers in Migori County's grades 1, 2, and 3 do not employ sufficient T/L resources to carry out CBC. The results presented in Table 4.24 demonstrate that, at the 5% level of relevance ($\beta 1=0.150$; $p=0.000$), there was a statistically significant positive correlation between the adoption of CBC and the sufficiency of T/L resources. We therefore reject the null hypothesis that the adequacy of T/L resources has no effect on CBC implementation and conclude that the availing adequate T/L resources for use by the grades 1, 2 and 3 teachers will positively influence how well teachers will implement the various CBC implementation activities.

The second hypothesis (H02b) contends that instructors in grades 1, 2, and 3 in Migori County do not employ CBC effectively while using T/L materials. Results

in Table 4.24 demonstrate the beneficial connection and efficient utilization of T/L resources (β_1=0.311; p=0.000) and CBC implementationwas statistically significant at 5% level of significance. We therefore reject the null hypothesis that the effective Utilizing T/L capabilities has no bearing on how CBC is implemented and conclude that effective use of T/L resources by the grades 1, 2 and 3 teachers will result to proper the Competency Based Curriculum's implementation.

According to the results, both T/L resource elements have a major impact on Migori County teachers' capacity to apply CBC in levels 1, 2, and 3. This leads to the rejection of the second null hypothesis (H02), which states that T/L tools have no influence on CBC adoption by educators of grades 1 to 3 of Migori County. By opposing the null hypothesis, the study leads to an agreement that effective use of the T/L tools at hand has a beneficial major effect on CBC implementation.

4.6 Effect of ICT Skills in the Implementation of the CBC Curriculum

The study's final goal was to assess how ICT proficiency affected the way the CBC curriculum was implemented in grades 1, 2, and 3 in Migori County primary schools. The availability of ICT resources, instructors' perceptions of the technology's value, and teachers' abilities to incorporate the technology into their lesson plans were used to gauge students' ICT proficiency.

4.6.1 Availability of ICT skills

The Grade 1-3 teachers and It was requested of the Head Teachers to identify the adequacy of various ICT resources in their schools. The findings were as shown in Table 4.25

Table 4.21: Availability and Adequacy of ICT Resources in Primary Schools

	None	inadequate	Fairly Adequate	Adequate	Most adequate	N	Mean
Computers	316	213	47	0	0	576	1.53
Projectors	441	107	28	0	0	576	1.28
Teachers' laptops	322	223	29	2	0	576	1.50
Supply of reliable power	273	201	66	36	0	576	1.77
Whiteboards	333	201	39	3	0	576	1.50
CD-ROMS/ DVDs	299	258	19	0	0	576	1.51
Flash disks	409	167	0	0	0	576	1.29
Internet connectivity	420	130	14	2	0	576	1.30
Content simulation games	439	130	6	1	0	576	1.25
Learners' tablet PCs	216	320	40	0	0	576	1.52

According to Table 4.25's findings, all of the ICT resources in Migori County schools' primary grades were either nonexistent or insufficient. For example, 54% as well as 37.0% of the participants said that their respective educational institutions had no computers or were inadequate, making 91%. More than half76.7% of the respondents reported that they had no whiteboards.

In contrast, 18.6% indicated that the whiteboards they had were insufficient, as had 71% of respondents who provided comparable answers in the case. of Flash disks, Internet connectivity and Content simulation games with respective means of 1.289931, 1.302083 and 1.251736, all representing 'none' in the scale. Learners' tablets had a mean of 1.520833, representing 'inadequate' on the scale.

Availability of teachers' laptops, Supply of reliable power and availability of Whiteboards had respective means of 1.498264, 1.765625 and 1.5000. This indicates that schools had no laptops for teachers, and the whiteboards available were inadequate.

The interview schedule results by the SQASOs eluded the lack of ICT resources to inadequate funding by the government of the primary schools. These findings indicate a lack of effective ICT adoption and integration into classroom instruction, which will ultimately affect the efficacy of CBC implementation in Migori County's primary schools. Therefore, having access to computers as well as other ICT tools is essential to implementing the CBC curriculum at schools successfully.

4.6.2 Teachers' perceived Usefulness of ICT skills

Based on the provided parameters, the head teachers and teachers of grades 1-3 were asked to rate the perceived value of computer proficiency in their respective schools. The results are displayed in Table 4.26.

Table 4.22: Teachers' Perceived Usefulness of ICT in CBC Implementation

	SDA	DA	N	A	SA	N	Mean
The use of ICT enables me to implement the required CBC activities for my learners effectively	34	76	116	163	187	576	3.682
ICT use is compatible with the CBC curriculum	56	67	82	151	220	576	3.715
The use of ICT reduces the mental effort required in carrying out the CBC implementation activities	63	77	86	118	212	556	3.610
Interaction with ICT helps teachers to bring out clearly and in understandable ways the key learning points	59	61	85	191	180	576	3.646
The use of ICT makes the teaching/learning process to be enjoyable	40	61	140	137	198	576	3.681
I intend to integrate ICT into all my teaching activities	66	167	143	92	108	576	3.016
ICT integration in educational programs is successful at enhancing students' knowledge and abilities.	64	79	105	148	180	576	3.523

According to the analysis results in Table 4.26, the respondents agreed that the use of ICT can enable them to effectively implement the required CBC activities for their learners (mean=3.682), that ICT use is compatible with the CBC curriculum (weight 3.715), that Use of ICT reduces the mental effort required of them in carrying out the CBC implementation activities (weight 3.610), that the interaction with ICT can help teachers bring out clearly and in understandable ways the key learning points (mean=3.646), that the use of ICT can make the teaching/learning process to be enjoyable (mean=3.681) and that the integration using ICT in the classroom can be a helpful tactic for enhancing students' knowledge and skills (mean=3.523), and that the institution's management

possesses a high degree of honesty and leads the implementation of plan. The respondents' intention of incorporating ICT into every one of their instructional activities was not clear, as evidenced by their average rating of 3.016, which falls into the "neutral" category on the scale. Still, 200 respondents (34.7%) agreed, while 133 respondents (23.1%) disagreed. The results of the interviews and the study results in Table 4.26 were in agreement. Over 91% of the top teachers who participated in the interviews with SQASOs and head teachers believed that ICT is crucial to the implementation of the CBC curriculum in primary schools. This was likewise the case for the SQASOs, who all recognized ICT as a crucial component of the CBC curriculum's successful implementation. This suggests that instructors require extensive ICT training, and the government should provide the necessary ICT resources.These findings support Mumtaz's (2000) study, which found that instructors' lack of ICT expertise prevents curriculums from being implemented digitally. In their study, Hennessy, Harison, and Wamakote (2010) found that teachers' lack of knowledge and expertise was the greatest barrier to ICT implementation.

4.6.3 Teachers' Capacity to Integrate ICT

The teachers were asked to rank the degree to which they agreed with the statements measuring their ICT use capacity on a five-point Likert scale. Their ratings under each construct are analyzed in Table 4.27.

Table 4.23: Teachers' capacity to integrate ICT

	SDA	DA	N	A	SA	N	Mean
I can plan and integrate ICT into my teaching	250	131	57	70	68	576	2.262
ICT use was one of the CBC training areas	69	79	71	156	201	576	3.592
I often incorporate ICT as some of the instructional materials	133	200	134	57	52	576	2.471
Computer training was part of my teacher training course	53	69	84	187	183	576	3.656
I have basic computer skills	66	71	106	166	167	576	3.516

Regarding the teachers' ability to plan for and integrate ICT in their teaching, 381represnting, 66.1% disagreed (1 and 2 on the scale), while 138 respondents representing 24.0%, agreed (4 and 5 on the scale). With a mean score of 2.262, it is implied that instructors disagreed, despite the fact that the majority of them are handicapped by their lack of ICT even though they are willing to include ICT during the implementation of ICT.that they were able to organize and incorporate ICT into their lessons.

This indicates that a mean score of 3.592 on the scale denotes "Agree" with relation to the statement that ICT use constituted one of the CBC training areas. 219 respondents, or 38.0%, disagreed with the idea or had no opinion. This could be a result of some teachers not attending all of the mandatory CBC training sessions. Among the CBC training areas, the use of ICT was acknowledged by 357 instructors as either highly agreed or agreed.

Respondents disagreed that they often incorporated ICT resources as some of the instructional materials (Mean=2.471), which is linked to the inadequacy of the ICT resources in primary schools in Migori County. In this regard, 333 teachers disagreed (1 and 3 on the scale) compared to 109 who agreed. 370 teachers, or 64.2%, agreed that computer training was included in their teacher preparation program, whereas 119 teachers, or 20.7%, disagreed. The survey reveals that the majority of teacher training institutes have integrated ICT training modules, with a mean score of 3.656.

With regard to having basic computer skills, 333 respondents, representing 57.8%, agreed, while 137 teachers representing 23.8%, disagreed. With a mean of 3.516, the study concludes that most teachers have basic computer skills, which may be traced to the earlier results that computer training was part of their teacher training course. However, despite having the basic computer skills, the earlier results that teachers are not able to plan for the ICT utilization and integration in the educational process indicates the mismatch between the basic computer skills obtained from college.

The ICT integration requirements for CBC hence the for the in-service training to focus on filling the gap. These outcomes support earlier studies on the low rate of

ICT adoption in schools as a teaching tool to encourage students to engage in well-designed ICT-based activities in and out of the classroom, hence promoting their active learning (Singer et al., 2014).

4.6.4 Aggregation of Availability of ICT skills, perceived usefulness of ICT and Teachers' Capacity to use ICT Variables

Responses on the availability of ICT skills, perceived usefulness of ICT and Teachers' ICT skills were collapsed and composite indices computed. The index for the availability of ICT skills ranged from 10 to 50 that for the perceived usefulness of ICT ranged from 7 to 35, while the indices for teachers' capacity to use ICT ranged from 5 to 25. For every variable, the standard deviation and mean were computed. Tables 4.28 give a presentation on the findings.

Table 4.24:Descriptive Statistics of Aggregated Variables (N=576)

	N	**Min.**	**Max.**	**Mean**	**Std. Dev**
Availability of ICT facilities (ICT_1)	576	10	32	14.9802	4.0677
Perceived Usefulness of ICT (ICT_2)	576	11	35	26.111	6.3451
Teachers Capacity to use ICT (ICT_3)	576	6.00	21.00	13.7637	4.4959

According to the data in Table 4.28, the mean index for the abundance of ICT skills was 14.9802, with a variance of 4.0677. Since the mean was lower than 30,

it was possible to conclude that the ICT resources available in Migori County's primary schools for use in grades 1, 2, and 3 were insufficient. The teachers' perceived utility of ICT had an average index of 26.111 and a variance of 6.3451, showing that the teachers thought it was vital to include ICT in the CBC curriculum and that they had high expectations for using ICT if it were available. Teachers' capacity to use ICT had a mean of 13.7637, with the other scores deviating from the mean by 4.4959. The mean indicates that teachers, even though they had received in-service training on ICT integration in teaching, had difficulties integrating it into their teaching process. Murithiand Yoo(2021) observed that this could be attributed to a lack of follow-up in-service training for the teachers. The conclusions that the majority of instructors lack the technological know-how to integrate ICT in the classroom are further supported by Chege (2014). The survey also showed that a large number of educators suggested additional training to give them greater comfort using ICT. This is interpreted to represent the same situation that exists nationwide at the moment because not much progress has been made in ICT literacy.

4.6.5 Correlation Analysis of ICT skills and CBC Implementation

The nature and strength of the association among the availability of ICT skills, teachers' ability to utilize ICT, and CBC implementation in Migori County primary schools, as well as the perceived use of ICT, were examined using the bivariate correlation technique. In order to determine if independent variables were connected to teachers' implementation of the CBC curriculum and whether

there was interdependency between them, the coefficient of Pearson correlation was employed. The results are presented in Table 4.29.

Table 4.25:Correlation Analysis of ICT skills and CBC Implementation

		Availability	Usefulness	Capacity	CBC Implementation
Availability of the ICT skills	Pearson Association	1			
	Sig. (2-tailed)				
	N	576			
Perceived usefulness of ICT	Pearson Correlation	.404**	1		
	Sig. (2-tailed)	.000			
	N	576	576		
Teachers' capacity to integrate the ICT	Pearson Correlation	.285**	.717**	1	
	Sig. (2-tailed)	.000	.000		
	N	576	576	576	
CBC Implementation	Pearson Correlation	.493**	.671**	.644**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	576	576	576	576

According to Table 4.29's analytical results, there was a small but positive link between the adoption of CBC in Migori County's primary schools and the accessibility of ICT skills (r = 0.493). Similarly, a positive correlation value of 0.671, substantial at the 0.01 levels, showed a high positive link between instructors' perceived utility of ICT use and CBC implementation.

Teachers' capacity to use ICT was also positively and significantly related to CBC implementation (r =0.644) at a 0.01 significance level. The positive correlation shows that if the ICT resources are adequately availed, teachers' perception of ICT use is positively enhanced, and teachers' ICT integration capacity is improved. The implementation of the CBC curriculum will be made more effective. The results support an investigation by Rwigema and Andala (2022), which underlines that the failure to incorporate ICT in the classroom negatively affects the implementation of CBC, a curriculum that is based entirely on digital content.

4.6.6 Test for Multicollinearity ICT skills and CBC Implementation

The assumption of multicollinearity was measured using VIF statistics. The multicollinearity assumption has been met if the VIF statistic is between 1 and 10. Table 4.30 shows the multicollinearity test result.

Table 4.30: ICT skills and CBC Implementation Multicollinearity

	Tolerance	VIF
Availability of the ICT skills	0.458	1.450
Perceived usefulness of ICT	0.348	1.671
Teachers' capacity to integrate the ICT	0.448	1.889

The results show that all There were less than ten VIF values, indicating that multiple correlations between There were no independent variables. Considering the threshold value inferred, the study infers the absence of multicollinearity.

4.6.7 Test Normality for ICT skills and CBC Implementation

The histogram chart and the plot of normal probability were used to calculate the test regarding normality of the variable that is dependent (CBC implementation). In Figure 4.5, a histogram plot is displayed.

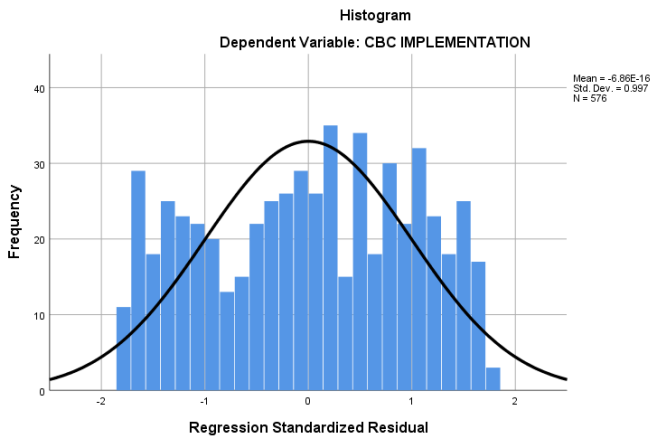

Figure 4.5:The histogram plot shows that ICT skills and CBC Implementation is normally distributed

With a mean of -6.86E-16, or around 0, and a deviation from the mean of 0.997, or roughly 1, the histogram plot reveals that the CBC execution data is normally distributed; as a result, the residuals are also normally distributed. In Figure 4.6, the standard likelihood plot is also displayed.

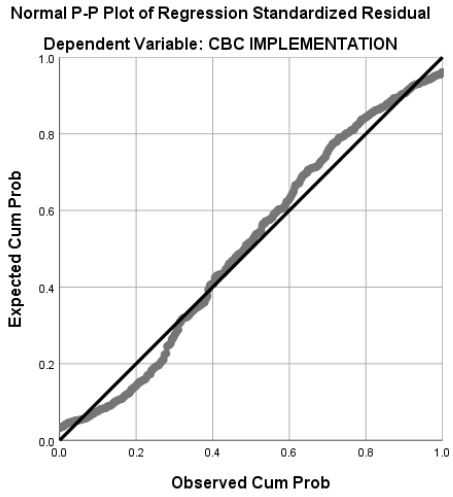

Figure 4.6: ICT skills and CBC Implementation was normally distributed

shows that the remainders were dispersed evenly over the 450 lines, indicating a normally distributed set of CBC implementation data.

Table 4.31 displays the model summary findings from the regression study.

Table 4.31: Model Summary

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate
1	.679[a]	.461	.457	2.89042

a. Predictors: (Constant), availability of ICT, teachers' perceived usefulness, teachers' capacity to integrate ICT
b. Dependent Variable: CBC Implementation

The application of CBC and ICT skills showed a very good correlation (coefficient of multiple correlation: 0.679). According to the coefficient of determination R2 = 0.461, changes in the availability of ICT resources, teachers' perceptions of the value of ICT, and teachers' ability to incorporate ICT into

lesson planning and execution can account for 46.1% of the variation in CBC implementation for Migori County elementary schools offer levels 1, 2, and 3.

The F-test from the ANOVA was used to see whether the model can significantly predict how the CBC curriculum will be implemented by teachers of grades 1, 2, and 3. The findings are shown in Table 4.32.

Table 4.32: ANOVA[a]

Model		SS	Df	MS	F	Sig.
1	Regression	903.066	3	301.022	163.067	.000[b]
	Residual	1055.863	572	1.846		
	Total	1958.929	575			

c. Dependent Variable: CBC Implementation

b. Predictors: (Constant), availability of ICT, teachers' perceived usefulness, teachers' capacity to integrate ICT

The study results show that the availability of ICT resources(ICT_1), teachers' perceived usefulness of ICT (ICT_2) and teachers' capacity to integrate ICT (ICT_3) jointly explained the variation in CBC implementation for grades 1, 2 and 3 for primary schools in Migori County ($F(3, 575) = 183.0676$, $p < 0.05$). The regression coefficients' t-test and the standard beta values were employed to evaluate the model's multiple regression coefficients' significance. Table 4.33 displays t-test scores, standardized beta coefficients, and unstandardized regression coefficients.

Table 4.33: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.385	1 .181		5.506	.000
	Availability of ICT	.006	.0148	.173	3.862	.011
	Perceived usefulness	.347	.0734	.291	4.723	.003
	Teachers' capacity	.162	.0364	.207	4.456	.001

a. Dependent Variable: CBC Implementation

Source: Field Data (2022)

The association among ICT skills and CBC adoption using a multiple regression model is presented as follows:

$CBCImplementation = b_0 + b_1(ICT_1) + b_2(ICT_2) + b_3(ICT_3) + \epsilon$…….Equation 3

Given the informal coefficients, the regression equation that follows becomes:

$$\text{CBC Implementation} = 6.385 + 0.006\ \text{ICT}_1 + 0.347\ \text{ICT}_2 + 0.162\ \text{ICT}_3$$

Where:

-ICT_1 −is the availability of the ICT skills

ICT_2 –is the perceived usefulness of the ICT

ICT_3 –is the teachers' capacity to integrate the ICT

$b_0, b_1,\ b, and b_3$are the regression coefficients

$\epsilon$is the error term

In assessing the significance of the regression coefficients, the t-test for the

regression coefficient's significance was used at a 5% level of significance.

The constant regression value of 6.385 indicates that CBC implementation without the influence of the ICT skills will be 6.385 which is far much below the threshold value of 18 from the CBC implementation scale. The study results indicate a positive relationship between the availability of ICT skills and CBC implementation, teachers' perceived usefulness of ICT skills and CBC implementation and between teachers' capacity to integrate ICT and CBC implementation, as indicated by the positive regression coefficients of $b_1 = 0.006, b_2 = 0.347$ and $b_3 = 0.162$ respectively.

To calculate the effect size of the independent variables, standardised beta coefficients were employed. The findings, which are shown in Table 4.33, show that teachers' perceptions of the usefulness of ICT in performing the various CBC execution tasks had the largest effect size of 0.291. This means that, while all other factors remain constant, a unit increase in teachers' perceptions of the usefulness of ICT could lead to a 29.1% rise in CBC execution among teachers of grades 1, 2, and 3. The second-largest impact size of 0.207 was found for teachers' ability to incorporate ICT into CBC implementation activities. This means that for every unit improvement in teachers' ICT integration capability, there may be a 20.7% rise in CBC execution performance. The least significant but still significant effect size was 0.173 for the availability of ICT resources, indicating that a unit increase in this index's availability might lead to a 17.3% increase in teachers' ability to implement CBC.

The third hypothesis (H03a) contends that instructors in grades 1, 2, and 3 in Migori County do not apply CBC differently based on the availability of ICT resources. The results presented in Table 4.33 demonstrate that, at the 5% level of significance, there was a statistically significant positive correlation (β =.006; p =.011) between the adoption of CBC and the sufficiency of T/L resources. We therefore reject the null hypothesis that availability of ICT resources has no effect on CBC implementation and conclude that the availing ICT resources for use by the grades 1, 2 and 3 teachers will positively affect CBC implementation amongst the grades 1, 2 and 3 teachers. This suggests that primary schools equipped with ICT resources are in a better position than those without to implement the competency-based curriculum.

The third hypothesis (H03b) contends that educators in grades 1 through 3 in Migori County do not adopt CBC because of their perceptions of the technology's utility. Results in Table 4.33 demonstrate that, at the 5% level of significance, there was a statistically significant positive correlation (β=.347; p=.003) between the adoption of CBC and teachers' perceptions of the use of ICT. We therefore reject the null hypothesis that teachers' perceived usefulness of ICT has no effect on CBC implementation and conclude that the how useful teachers consider ICT to be will have an influence on whether the they will use ICT in CBC implementation activities. This implies that primary schools in which the teachers perceive ICT to be important will be better placed to effectively implement the competency based curriculum compared to those whose teachers attach no importance to ICT.

According to hypothesis three (H03b), educators in grades one through three in Migori County execute CBC without regard to their ability to integrate ICT into their teaching. At the 5% level of significance, Table 4.33's findings demonstrate a statistically significant positive connection (β =.162; p =.001) between the implementation of CBC and teachers' ICT integration skills. It follows that we deny the null hypothesis and conclude that instructors will be better equipped to work efficiently to execute the CBC curriculum if they can integrate ICT into the teaching and learning process. This implies that primary schools in which the teachers have the ability to use ICT in the classroom / learning processes will more effectively implement the competency based curriculum compared to those whose teachers lack the capacity to integrate ICT.

The t-test shows that all the three sub-hypotheses $H0_{3a}$, $H0_{3b}$ and $H0_{3c}$were rejected hence based on these findings, hypothesis three ($H0_3$) that stated that ICT skills has no effect on the implementation of CBC by instructors in grades 1, 2, and 3 at Migori County's elementary schools is rejected. By rejecting the hypothesis, the study concludes that ICT skills has a significant influence on the effective implementation of CBC hence is a key component for its success. It is therefore evident that teacher’s technological skills can influence implementation of CBC in lower primary schools. As to Kapur's (2019) findings, educators can incite students' enthusiasm and change their mindsets by using digital media to raise awareness of academic subjects. Therefore, it is important that primary school teachers are trained on how to use ICT in delivering the CBC in public schools.

The results align with the investigation carried out by Ghavifekr and Rosdy (2015) concerning the effectiveness of incorporating ICTs into educational institutions to facilitate hands-on learning. One of the most crucial elements in the success of instructional technology, according to the study, is teachers' readiness to use ICT tools and resources. Furthermore, the results align with those of Wanga's (2014) investigation into the variables impacting the integration of ICT in secondary school curricula: a case study of Gilgil sub-county, Nakuru County, in Kenya. The results of the study showed a strong correlation between teachers' ICT competence and how well they integrated ICT into their lesson plans. Wanga also found a strong positive correlation ($r=0.49$; $p<0.05$) between teachers' ICT competence and how well they integrate it into their curricula.

These study findings were also consisted of interview results from the SQASOs. They all indicated that ICT was a key component expected to influence how well the CBC curriculum was implemented. During the interviews with the SQASOs, it was established that there was a need for teachers who were directly in charge of implementing the CBC curriculum to change their attitudes towards the use of ICT. This implies that teachers' perception of the role of ICT in CBC implementation was not commendable.

4.7 School-Based challenges in implementing the competency-based curriculum in public primary schools in Migori County.

The fourth objective of the study was to determine how challenging it would be for Migori County's public elementary schools to adopt a competency-based curriculum. Respondents were asked to indicate that the aforementioned issues

made it difficult for CBC to be successfully implemented in their schools in order to meet the goal. After the responses were examined, the findings are presented in Table 4.34.

Table 4.264: School-Based challenges faced by Grade 1-3 teachers and Head teachers in implementing the competency-based curriculum.

Items	YES		NO	
	Frequency	Percent	Frequency	Percent
Inadequate instructional resources	456	79.1	120	20.9
Inadequate training of teachers on CBC	363	63.0	213	37.0
Large enrollment leading to large class sizes	571	99.1	5	0.9
Understaffing of teachers	576	100	0	0
Lack of parental support	341	59.2	225	40.8
Unpreparedness of learners for CBC	276	48.0	300	52.0
Lack of teacher competence in practical subjects	291	50.5	285	49.5
Lack of ICT skills amongst a majority of teachers.	377	65.5	199	34.4
Inadequate infrastructure for CBC learning e.g. workshops, sports fields e.t.c	517	89.8	59	10.2

The findings indicated inadequate Resources for instruction and learning in primary schools sampled since 456 of the respondents representing 79.1%, indicated inadequate teaching and learning resources to allow for the effective implementation of the CBC curriculum. This finding is similar to findings on the adequacy of T/L resources. It was established that most of the T/L resources such as classrooms, real-life objects, models, etc., were either unavailable or

inadequate for most of the primary schools in Migori County. This could hinder students from fully participating in the learning process.

Further responses from the head/teachers indicated that infrastructural facilities were not enough in the majority of the schools and were in line with SQASOs interviewed that most schools missed most of the instructional materials, hence hampering student participation in the learning processes. Insufficient T/L resources hinder effective implementation of the CBC curriculum, and students cannot develop the independent learning skills. These problem-solving and curious minds are part of the basic tenets of the CBC curriculum.

Large class size was also identified as one of the challenges hindering effective implementation of the CBC curriculum by 571 respondents representing 99.1%. This implies that the number of students in the classrooms was higher than the capacity of the class of at most 45 recommended by the Ministry of Education. The scenario is made worse by the challenge of understaffing of teachers in most primary schools, making the teacher-pupil ratio above the recommended 1:45. A majority of the SQASOs bolstered the result. They indicated that classes were overcrowded in most primary schools in Migori County, making it difficult for teachers to move freely in the class and interact with students. The study results indicate that large class size tends to affect student-teacher interactions, hindering effective implementation of the CBC curriculum.

Teachers will not apply the learner-centered interactive teaching methods recommended under the curriculum based on competencies. These results confirm those found in the literature already in existence. by Cheptoo and Ramdas (2020) that CBC is a learner-centered constructivist approach to

education that shifts teachers' roles and beliefs in teaching and learning processes. It is difficult for teachers to effectively facilitate the implementation of the CBC curriculum in Kenya, Tanzania, Uganda, and Rwanda due to a number of circumstances, including the enormous number of students in the classroom. This could ultimately corroborate Young's (2009) finding that big class sizes can result in teaching and learning that is just skimmed over the surface.

Lack of parental support was also identified as a challenge to effective implementation of CBC by 341 respondents representing 59.2% who indicated Yes compared to 225 representing 40.8% who didn't see it as a challenge. Marion (2020) observed that lack of parental support is a key hindrance to implementing competency-based curricula. They are required to provide some of their children's required T/L resources and supervision as they practice some learning activities at home. She further contends that parents have to create conducive and friendly environments at home for learners to practice what they learn in school effectively. This finding aligns with the work of Mandukwini (2016), whom found that parents' disinterest in school activities makes it more difficult to carry out the curriculum. According to secondary school administrators in Nigeria, Mugabo and Nkundabakura (2021) discovered comparable outcomes when investigating the influence of family involvement in the curriculum's implementation. According to the report, there was very little parental involvement in the curriculum's implementation in the classroom.

On the unpreparedness of learners for CBC being a challenge, the study results show that 48% of the respondents indicated that students were not prepared for the CBC program. In comparison, a majority (52%) indicated that the students

were prepared for the CBC program and hence can be inferred to have the right attitude towards the competency-based curriculum. As observed by Marrion (2020), student involvement in the teaching and learning process largely depends on their attitude towards the process. A positive attitude towards the CBC Programme would easily enable the student to develop a creative, problem solving, and curious mindset, all key to the successful implementation of CBC. This is supported by Hatmanto, (2011). He asserts that students can engage completely in class if they are prepared, but if not, they will not be able to exercise critical thinking during the lesson.

Lack of teacher competence in practical subjects due to inadequate on-the-job CBC training was identified as a challenge to the implementation of CBC by 291 respondents representing 50.5%. Two hundred and eighty-five respondents representing 49.5 did not consider it a challenge. The findings assert that the lack of properly trained teachers was a challenge to the effective implementation of CBC. Limited on-the-job CBC training is likely to make teachers deficient in the knowledge and skills needed to handle the practical aspects of CBC that are its major building blocks. Therefore, it is pertinent that the Ministry of education provide more short courses on CBC for teachers since the sessions provided are too few and may not provide the required knowledge and skills.

These findings are in tandem with findings by Muiti (2020) who posits that, training of employees on competency based curriculum encourages employee engagement, equips them with new skills, encourages employee sense of

belonging and also has an impact on individual employee behaviour change and enables them to perform their duties effectively in line with compliance.

Lack of ICT skills amongst most teachers was identified as a challenge to the successful implementation of the CBC curriculum as indicated by 377 teachers representing 65.5% compared to 199 respondents representing 34.4% who did not consider it a challenge. The finding corroborates earlier results which indicated teachers' ability to integrate ICT had a significant influence on the effective implementation of CBC.

Five hundred and seventeen teachers representing 89.8%, identified inadequate infrastructure for CBC learning, for example, workshops, sports fields, and so on, as a challenge to the successful implementation of the competency-based curriculum. This was in comparison to the 59 teachers representing 10.2% who did not consider it not a challenge. The findings are further presented in Figure 4.7

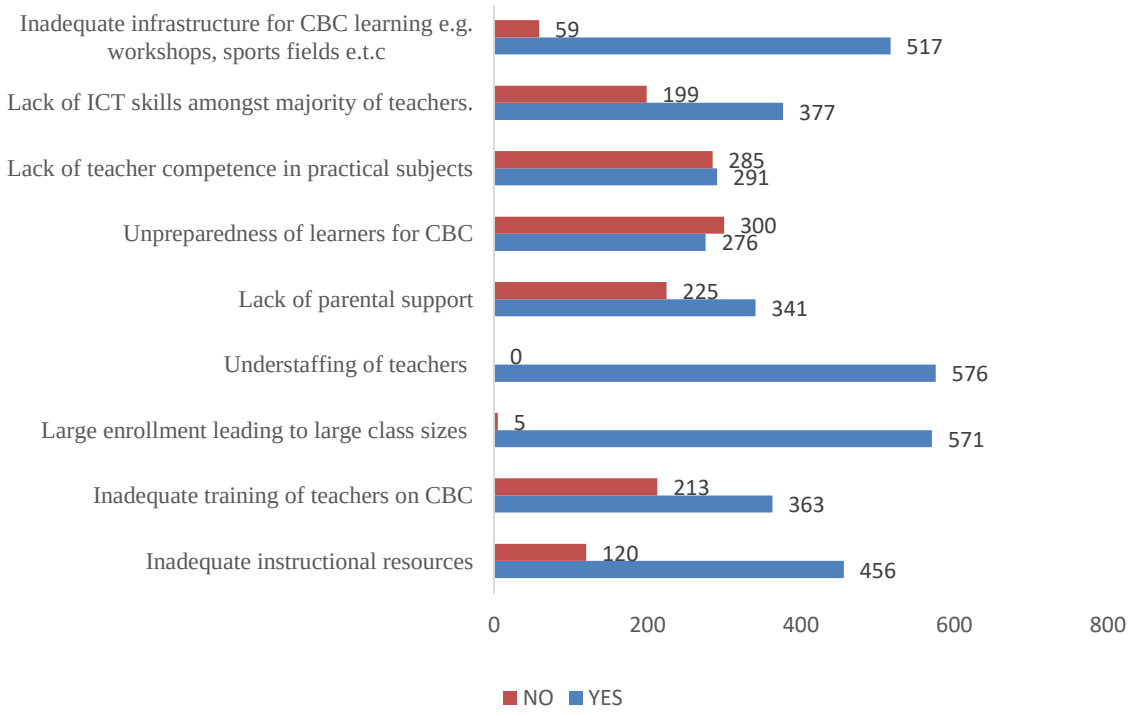

Figure 4.7: Challenges to CBC Implementation

The large enrollment leading to large class sizes, understaffing of teachers and inadequate infrastructure for CBC learning, for example., workshops, sports fields and so on, are the key challenges to the effective implantation of the curriculum that is competency-based.

The results are in line with interview responses from the SQASOs. All eight officers (100%) identified the three as the key hindrances to the successful implementation of the CBC curriculum. The findings are in tandem with findings by Sifuna and Obonyo (2019) which revealed that inadequate involvement of Doubts were raised by educational stakeholders in the curriculum reform process. It goes on to say that if these issues are not resolved quickly, there is a severe risk to the curriculum's success.

Further, the respondents were requested to identify measures that can be implemented to mitigate the challenges to the efficient application of the curriculum based on competency. The results are as shown in table 4.35.

Table 4.35: Measures to mitigate the challenges to CBC implementation

Items	Yes		No	
	Frequency	**Percent**	**Frequency**	**Percent**
Provision of more CBC training workshops and seminars for teachers	517	89.8	59	10.2
Sensitization of parents on their roles in the implementation of CBC	557	96.7	9	3.3
Provision of teaching and Learning resources	576	100.0	0	0.0
Provision of more funds for infrastructural development	576	100.0	0	0.0
Employment of more teachers by the teachers' service commission	576	100.0	0	0.0

On whether the provision of more CBC lectures and training sessions for educators could help improve the implementation of the CBC curriculum, 517 teachers representing 89.8% recommended that the provision of more training seminars and workshops for educators could help improve the levels of effective implementation of the CBC curriculum. As emphasized by the majority of the SQASOs, such training would help equip the teachers with the requisite knowledge and skills for the successful implementation of the competency-based curriculum.

On whether the sensitization of parents on their roles in the implementation of CBC could help improve CBC implementation, five hundred and fifty-seven

teachers representing 96.7%, indicated that this could be useful. Provision of teaching and learning resources, Provision of more funds for infrastructural development and employment of more teachers by the teachers' service commission were identified by all the teachers as measures that could help enhance the implementation of the CBC curriculum.

The majority of primary schools have huge class sizes. This issue will be helped by funding for infrastructure improvements and hiring additional teachers, which will also increase teachers' efficacy in carrying out CBC implementation activities. Countries that support teacher continuing education in ongoing professional development and include educators in curricular decision-making demonstrate good student accomplishment in schools, claim Darling, Harmomg, Wei, as well as Andree (2010). Therefore, in order to properly administer the competency-based curriculum, all teachers should obtain induction and training.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides suggestions for further research as well as a summary of the results, conclusions, and recommendations to different stakeholders.

5.2 Summary of Findings

Majority of the educators concurred that throughout the execution of CBC curriculum they often use formative assessment of the learners, classroom learning always is connected to real-life activities that encourage self-reliance and their teaching, embraced all the diverse learning needs and abilities of the learner. Majority of the teachers disagreed that the involvement of parents in the pupils learning has been on the increase. The teachers were undecided whether they always guide learners toward constructing their knowledge and encourage skill application through creativity, innovation and problem solving. This implies that parents have very little knowledge of the new curriculum and are hesitant to support its implementation. This complicates the execution of CBC because successful execution of the refreshed curriculum requires collaboration and co-education between teachers and parents. Based on the study's aims, a summary of the findings was provided in this section.

5.2.1 Effect of CBC training undertaken by teachers on implementing the competency-based curriculum in public primary schools

Majority of teachers had attended two training session, compared to those who had attended one and three CBC training sessions. This implied that all The educators were trained in CBC but the sessions varied. Almost all of the teachers concurred that the CBC training programs were adequate and that the trainers were knowledgeable about the training topics. The educators concurred that the training they underwent had given them the skills necessary to properly plan for the CBC sessions and select instructional materials.

Further the findings showed that the training had made the teachers to understand how their further education increases one's familiarity with and comprehension about the CBC curriculum. Finally, teachers questioned if the training I had taken had made it simple for me to create the necessary professional record. This implies that the training received by teachers were not adequate and more is needed

to assess the teachers' attitude toward the course of action, which was a crucial factor in determining how much they took away from the instruction and, in the end, the training's outcomes. The instructors were ready to attend the CBC training course, thoroughly supported the CBC education program, and relished the CBC sessions that were conducted lessons. They also had a favorable attitude about the CBC training being objective and instructive. The findings indicate that the teachers weren't sure whether they were happy with the addition of extra training sessions.

According to the findings of the Pearson's connection study, there was a reasonably substantial positive connection (r=0.516) among the rate of CBC education for teachers and the application of CBC among the instructors of Grades 1, 2, and 3. The effectiveness of the CBC course of study (r=0.704), teachers' views toward the CBC teaching program (r=0.635), and CBC implementation all had substantial positive correlations.

According to regression analysis's coefficient of measurement R2 = 0.512, teachers' attitudes about the CBC training program, the frequency with which instructors attend CBC training sessions, and the quality of the CBC training all account for 51.2% of the disparity in CBC implementation. There was the positive relationship between frequency of attendance of CBC training (β_1=0.148; p=0.047), adequacy of the CBC training (β_2=.343, p=0.000) as well as teachers' attitude (β_3=.286, p=0.000) and CBC implementation.

According to the findings, there is a connection among CBC implementation and teachers' attitudes regarding the CBC training program as well as their participation at training sessions on a regular basis.The study concludes that CBC in-service training has a positive significant effect on CBC implementation. This implies that CBC training contributes to the proper implementation of the CBC curriculum and the need for it to be done involve all teachers. An increase in training efforts will result in improved CBC implementation through teachers' ability to carry through the several CBC implementation initiatives

The study has made the following contributions to the existing body of knowledge. A number of studies have delved to establish the preparedness of teachers to implement CBC in schools. However, many of such studies have

focused in private lower primary schools and lower primary grades in public schools. As a result, little information was available regarding how ready primary school instructors were to execute the curriculum in lower elementary public schools. The majority of primary school instructors in lower primary schools, according to this study, do not know enough about CBC, which closes the knowledge gap. This is the outcome of the teachers not being included in the training sessions offered by the Ministry of Education.

5.2.2: Influence of availability and use of instructional resources on implementation of competency-based curriculum in public primary schools in Migori County

The radio, flash card, pictures, television screens, whiteboard and workshop were inadequate and unavailable. The findings showed that textbooks and chalkboards instructional resources were available and adequate in the primary schools in Migori County. This can be attributed to the government's effort to attain a student textbook ratio of 1:2 following the introduction of free primary education. On how often teachers use relevant teaching-learning resources to achieve the stated key CBC objectives. Majority of the teachers agreed that they use resources to help clarify, interpret and compare important concepts and phenomena. Majority of the teachers disagree that had resources for students' development of problem-solving skills.

Majority of the Teachers used the resources provided to them the least effectively to arouse interest in learners, to develop students' inventiveness and creativity and to make learning more targeted, efficient, and meaningful. The majority of

teachers exhibited the least effectiveness when it came to utilizing resources to foster greater comprehension and skill development, to encourage communication and interaction between teachers and students, and to make the connections between classroom instruction and real-world experiences.

The application of CBC and the use of T/L funds have a strong positive correlation, as indicated by the results of the Pearson's link analysis (r=0.690 and r=0.593, correspondingly). This implies that the more appropriate the T/L materials are, the more effectively instructors would be able to implement the CBC curriculum.The regression analysis indicated 51.5% of the variation in CBC implementation in the Migori County elementary schools offer grades 1, 2, and 3. can be explained by the instructional resources. The results indicate a positive relationship between The sufficiency and accessibility of T/L resources (β1=0.150) as well as their efficient utilization **(β_1**=0.342; p=0.000**)** and CBC implementation**.**These indicate that adequate and effectively used T/L resources will result in increased CBC implementation levels through teachers' ability to select and appropriately use T/L resources to aid in CBC implementation activities.

5.2.3: Effect of ICT skills in implementing CBC curriculum in grades 1, 2 and 3 in public primary schools in Migori County.

All the ICT resources were insufficient or nonexistent in basic schools in Migori County schools. The schools had no computers, whiteboards, Flash disks, Internet connectivity, Content simulation games, Learners' tablets, teachers' laptops, and supply of reliable power.

The use of ICT enabled them to effectively implement the required CBC activities for their learners and ICT use was compatible with the CBC curriculum. The use of ICT reduces the mental effort required of them when executing the CBC implementation tasks and the interaction with ICT can help teachers bring out clearly and in understandable ways the key learning points The use of ICT can make the teaching/learning process to be enjoyable and that the The use of ICT in the curriculum can be a useful tool for increasing students' knowledge and abilities.

The schools had not integrate ICT in all their teaching activities. This implies a need for serious training of teachers on the use of ICT and the provision by the government of the relevant ICT resources.

On teachers' capacity to integrate ICT majority of the teachers agreed that ICT use was one of the CBC training areas My teacher training program included computer instruction, and I had some basic computer knowledge. The instructors disagreed that they had no ability to plan for and integrate ICT in their teaching and often incorporate ICT as some of the instructional materials.

The correlation between the presence of ICT capabilities and the implementation of CBC in Migori County elementary schools was found to be significantly positive ($r = 0.493$, $p<0.01$), according to the findings from the Pearson correlation coefficient. Instructors' opinions on the value of ICT use were found to be significantly positively correlated with the deployment of CBC. The deployment of CBC and teachers' ICT ability showed a strong and positive connection ($r = 0.644$) at the 0.01 significance level. The capacity, perceived

utility, and availability of ICT skills among instructors improved the CBC curriculum's implementation.

The multivariate regression model's coefficient for evaluation (R2 = 0.461) indicates that variations in the accessibility of ICT resources, teachers' perceptions of the usefulness of ICT, and teachers' ability to integrate ICT accounted for 46.1% of the variation in the implementation of CBC for grades 1, 2, and 3 in the primary schools in Migori County. Findings shows that there was positive relationship between adequacy of T/L resources (β=.006; p=.011) and CBC implementation. This implies that primary schools in which the ICT resources are available are better positioned to effectively employ a competency-based curriculum in contrast to schools without ICT facilities.

Positive correlations were found between teachers' perceived usefulness of ICT (β=.347; p=.003) and CBC implementation. The more the teachers perceived usefulness of ICT will have an influence on CBC implementation activities. This implies schools where teachers perceive ICT to be important will be better placed to effectively implement the competency based curriculum compared to those with negative perception. There was positive relationship between teachers' ability to integrate ICT and CBC implementation (β=.162; p=.001). This implies that primary schools in which the Teachers are able to use ICT into teaching/ learning processes will more effectively to implement the competency based curriculum compared to those without. The study concluded that there was a positive relationship between the teachers' ICT and CBC implementation.

5.2.4: School-based challenges in implementing the competency-based curriculum in public primary schools

All the teachers were in agreement that on understaffing of teachers and large enrollment leading to large class sizes were the major school-based challenges in Migori County public primary schools are putting the competency-based curriculum into practice. Other school based challenges were inadequate infrastructure for CBC learning such as in service training and workshops as well as inadequate instructional resources. Inadequate training of teachers on CBC, lack of parental support and lack of ICT skills amongst most teachers. Few teachers identified unpreparedness of learners for CBC and lack of teacher competence in practical subjects as school-based challenges influencing application of a curriculum based on competency.

5.3 Conclusions

The study's original objective was to ascertain how teachers' involvement in competency-based curriculum (CBC) training impacted a CBC being implemented in Migori County's public elementary schools. CBC implementation between the teachers of grades 1, 2, and 3 in Migori County was shown to be significantly influenced by the three CBC education elements, according to study findings. The majority of elementary school instructors lacked any instruction in how to carry out the curriculum. The handful who had received training nevertheless lacked the necessary knowledge and abilities to manage various topics intended for inclusion in the curriculum. More training opportunities are required because the Teachers lacked the necessary tools to implement the

curriculum. According to the study's findings, CBC education is a crucial task that might enable the successful CBC's introduction in primary schools.

The second goal of the study was to determine how T/L resources affected the competency-based curriculum in the public elementary schools in the county of Migori. According to the study, a deficiency of suitable teaching-learning resources was one of the issues preventing the effective implementation of CBC in primary schools. This suggests that inadequate instructional resources may make it difficult to adopt CBC in public elementary schools. As a result, it is necessary to provide sufficient resources and CBC teaching aids in the classrooms.

Finding out how ICT proficiency impacted the adoption of a curriculum based on competencies in the public primary schools of Migori County was the aim of the third study. Based on the aforementioned findings, it was determined that information and communication technology (ICT) proficiency plays a crucial role in ensuring that CBC students in grades 1, 2, and 3 in Migori County primary schools achieve satisfactory performance. The study further concludes that if ICT resources are adequately availed, teachers' perception ofICT use is positively enhanced, and teachers' ICT integration capacity is improved. The implementation of the CBC curriculum will be made more effective.

The study's fourth goal was to determine how challenging it would be for public primary schools in Migori County to adopt a competency-based curriculum. According to the study's findings, the study concludes that inadequate instructional resources, inadequate training of teachers on CBC, large enrollment

leading to large class sizes, understaffing of teachers, lack of ICT skills amongst the majority of teachers and inadequate infrastructure for CBC learning were key challenges that were hindering the successful implementation of CBC in primary schools in Migori County.

5.4. Recommendations

The study presented the recommendation of the study based on policy and practice as summarized in the following sections.

5.4.1 Recommendations for Policy

The study's conclusions have significant policy ramifications and offer valuable insights into management, general administration, and educational planning. The study suggests, in light of its results and conclusions, that;

i. The government ought to appropriately design a primary school in-service training program on a regular basis. teacher's preparation on how to implement the curriculum. A comprehensive and consistent training of the teachers will prepare them regarding the teaching-to-learning paradigm change.

ii. The Ministry of Education, through the relevant departments, should endeavour to avail enough quality T/L resources to schools. The management in the primary schools should put in place a monitoring system to ensure that the available T/L resources are effectively utilized in every lesson delivered by the teachers.

iii. More teachers should be hired by the TSC to meet the 1:45 teacher s-student ratio. This will help make it easier for a teacher to supervise the

learners and help them achieve individualized learning outcomes, which is key in CBC.

iv. It is advised that more sessions on integrating ICT into schoolwork be added to the TSC's updated CBC training guidelines. These will provide teachers with the most recent ICT abilities and methods as well as instruction on how to use them in the classroom.

v. For a successful shift The Ministry of Education (MoE) must design, develop, and identify technology-based platforms—such as social media platforms like Facebook, Instagram, LinkedIn, Twitter, and WhatsApp groups—that facilitate the transition from a knowledge-based to a competency-based curriculum prior to implementing the competency-based curriculum. This will support in-person teacher professional development initiatives, which might not be sufficient on their own for a successful transition. It will also promote in-person professional development activities like peer conversations, mentorship, unofficial peer reviews, and peer feedback outside of formal settings.

vi. The school management should organize sensitization programs for the parents to enlighten them on the CBC curriculum and their role as parents in ensuring that the learners gain the intended knowledge and skills.

5.4.2 Recommendations for Practice

i. The Teacher Service Commission ought to engage more skilled facilitators and hold more CBC in-service training sessions. All instructors

should be required to attend the training; this will help lessen the hostility that most teachers have against the CBC curriculum. The routine in-service education course will give teachers the know-how and abilities they need to successfully execute the curriculum.

ii. Adequate learning facilities and resources are paramount for effective implementation of the curriculum. Additionally, the County government should educate parents in order to assist them comprehend why CBC is all regarding and their involvement in its execution. This should be done in conjunction with the schools.

iii. The KICD in collaboration with the Government should develop and distribute digital learning resources to public primary schools to enable the teachers infuse digital literacy in learning. Further, the government should device in-service training programs on use of ICT in teaching-learning to equip the teachers with the requisite knowledge and skills in integrating technology in classrooms.

vii. The Government of Kenya (GoK) should foster a bottom-up approach to implementing a Competency-Based Curriculum. The Ministry of education needs to consider the voices of all stakeholders for inclusion and ownership of the curriculum.

5.5 Suggestions for Further Study

The report makes the following suggestions based on its findings:

i. Given that the study was a cross-section it is advised that additional research using a longitudinal design be done in order to confirm the

study's conclusions. It is advised that logistic regression methods be used in the longitudinal study rather than the conventional regression method. This will make it easier to create a model that, using odds ratios, might calculate the possibility that a specific primary school will successfully implement the CBC curriculum.

ii. The elementary schools in Migori County were the exclusive focus of this investigation. To evaluate the study's generalizability to Kenya's primary schools, a parallel investigation should be conducted to see if the results are applicable to different Counties in Kenya.

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APPENDICES

APPENDIX i: INTRODUCTORY LETTER.

Dear Sir/Madam,

My name is **EVERLYNE MWITA**, a Ph.D. student undertaking **DEGREE IN DOCTOR OF PHILOSOPHY IN CURRICULUM INSTRUCTION ANDMEDIAtitled "EVALUATION OF TEACHERS PREPAREDNESS IN IMPLEMENTING COMPETENCY-BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN MIGORI COUNTY, KENYA."** Your provided information will be handled in strict confidence. Since information is solely being used for academic purposes, no portion of it will be provided to any person, business, or government. Kindly mark the relevant answer correctly. For every question, only check one option.

APPENDIX ii: QUESTIONNAIRE FOR GRADE 1-3 TEACHERS

This survey's objective is to collect information about primary school teachers to adopt a competency-based curriculum. The study will be the exclusive use of all submitted data. Please answer all questions honestly, being sure to include your names.

INSTRUCTIONS

Please tick (∨) or fill in the information as appropriate.

SECTION A: Demographic Information

1. Gender Male [ ] Female [] Other [ ]
2. How old are you .20-29[ ]30-39[ ] 40-49[ ] Above 50 [ ]
3. Level of your education;

Certificate [ ]

Diploma [ ]

Bachelor's Degree [ ]

Master Degree [ ]

PhD [ ]

Others [ ]

4)Which Grade do you teach --------- . Grade 1 [ ] Grade 2 [ ] Grade 3 [ ]

5) How many years have you worked as a teacher. 0-10[ ] 11 -20 years [ ]

21 – 30 [ ]31 and above [ ]

PART B: Specific Objectives

Kindly fill in allthe spaces in the **Sections**below.

Section A: Trainingis undertaken by teachers on CBC

1. Have you attended any training on CBC?

   Yes[]

   No[]

2. If Yes, how many training sessions have you attended?

   _____

I. Adequacy of CBC Training Programme

On the Five-Point Likert Scale, rate your level of agreement with the given indicators of the a**dequacy of the CBC Training programmes**

	SA	**A**	**N**	**DA**	**SDA**
The training themes are well-versed in by the CBC instructors.					
Thanks to the training I received, I was able to adequately get ready for my CBC sessions.					
The instruction I received has made it simple for me to create the necessary professional record.					
I now realize that lifelong learning enhances one's knowledge of and comprehension for the CBC curriculum.					
I can now choose teaching and learning resources in an effective manner because to the training I received.					

II. Attitude of teachers towards the CBC Training

Rate your level of satisfaction with the provided indications for your attitude toward the CBC course of action on a 5-point Likert scale.

	SDA	**DA**	**N**	**A**	**SA**
The CBC program is impartial and educational.					
Every time the CBC training courses are held, I enjoy them.					
I fully support the CBC training Programme					
Anytime the CBC training courses are held, I will be happy to attend.					
If further training sessions are implemented, I will be pleased.					

Section B: Instructional resources

Availability and adequacy of teaching learning resources

Rate the level of adequacy of the stated instructional resources in your primary school on the five-point Likert scale ranging from none which indicates that the stated T/L resource is not available to Most Adequate

Items	**None** **1**	**Inadequate** **2**	**Fairly Adequate** **3**	**Adequate** **4**	**Most adequate** **5**
Textbooks					
Chalkboard					
Whiteboard					
flash cards					
Pictures					
Radio					
Desks					
Models					
Classrooms					
Sports fields					
Workshop					
Television screens					

Effective Use of the Teaching / Learning Resources by Teachers

Rate on the 5-point Likert scale how often you make use of the available teaching-learning resources to achieve the stated key CBC objectives.

Item	Not at all	Least effective	Fairly effective	Effective	Most effective
Use of the available resources to arouse interest in learners					
Use of resources to help clarify, interpret and compare important concepts and phenomena					
Using resources to improve the effectiveness, focus, and significance of learning					
Utilizing tools to foster students' creativity and inventiveness					
Use of resources for students' development of problem-solving skills					
Use of resources to promote better understanding and development of different skills					
Utilizing resources to foster engagement and communication between teachers and students					
Use of resources to connect the classroom learning to real-life					

Section C: ICT skills

I. Availability and Adequacy of ICT Resources in Primary Schools

	None	**inadequate**	**Fairly Adequate**	**Adequate**	**Most adequate**
Computers					
Projectors					
Teachers' laptops					
Supply of reliable power					
Whiteboards					
CD-ROMS/ DVDs					
Flash disks					
Internet connectivity					
Content simulation games					
Learners' tablet PCs					

II. **Teachers' Perceived Usefulness of ICT in CBC Implementation**

	SDA	**DA**	**N**	**A**	**SA**
The use of ICT enables me to implement the required CBC activities for my learners effectively					
ICT use is compatible with the CBC curriculum					
The use of ICT reduces the mental effort required in carrying out the CBC implementation activities					
Interaction with ICT helps teachers to bring out clearly and in understandable ways the key learning points					
The teaching and learning process is made more enjoyable by the usage of ICT.					
I intend to integrate ICT into all my teaching activities					
ICT integration in educational programs is successful at enhancing students' knowledge and abilities.					

III. Teachers' capacity to integrate ICT

	SDA	**DA**	**N**	**A**	**SA**
I can plan and integrate ICT into my teaching					
ICT use was one of the CBC training areas					
I often incorporate ICT as some of the instructional materials					
My teacher training program included computer instruction.					
I have basic computer skills					

Section D: Implementation of CBC by Teachers

Respondents were asked to rate on the 5-point scale their level of agreement with five subjective indicators of how well they are completing the several CBC implementation tasks. The results are presented in Table 4.9.

	SA	A	N	DA	SDA
My involvement of parents in the learning of their children has been on the increase					
I often use summative assessment of the learners					
Classroom learning is most of the time connected to real-life activities that encourage self-reliance					
In my teaching, I embrace all the diverse learning needs and abilities of the learner					
I always guide learners toward constructing their knowledge					
I always encourage skill application through creativity, innovation and problem solving					

Section E: School Based Challenges in the implementation of CBC.

1. Please enumerate some of the main school based challenges facing CBC.S_____

   _____

   _____

   ___

2. Suggest ways to overcome the challenges listed in question 2.?

   _____

   __

   _____

   ___

APPENDIX iii: QUESTIONNAIRE FOR HEADTEACHERS

The purpose of this survey is to gather data regarding the readiness of primary school teachers to adopt a competency-based curriculum. The study will be the exclusive use of all submitted data. Please answer all questions honestly, being sure to include your names.

INSTRUCTIONS: Please tick (∨) or fill in the information as appropriate.

Part A: Demographic Information

1. Gender Male [ ] Female [ ]
2. How old are you? [20-29][30- 39] [40-49] [50 and above]
3. How How long having you been an educator? [Below 10 years] [11-200 years] [21-30] [31 and above]
4. How long have you served as a Headteacher? [Below 5 years] [6-10 years] [11-16 years] [16 and above]
5. a. Have you attended any training on CBC?

   Yes [ ]

   No [ ]

   b.Pleaseexplain._____

   Are you able to mentor your teacher on CBC?

   Yes[ ]No[ ]

Part B: Specific Objectives

Section A: Teacher training

Nature of Training Undertaken by teachers on CBC.

1. How many CBC training sessions have teachers attended on average since the Competency-based Curriculum inception?
2. What is the frequency of training sessions?

   Monthly [ ]

   Per Term [ ]

   Annually [ ]

   Other: _____
3. For how long does one training session take

   Hours [ ]

   Days [ ]

   Week [ ]

   A month and above [ ]
4. a.Is the CBC training sufficient to equip teachers well in implementing CBC?

   Yes [ ]

   No [ ]

   b..Please explain.

   _____

II. Adequacy of CBC Training Programme

On the Five-Point Likert Scale, rate your level of agreement with the given indicators of the a**dequacy of the CBC Training programmes given to your teachers**

	SA	**A**	**N**	**DA**	**SDA**
The training themes are well-versed in by the CBC instructors.					
Thanks to the training I received, I was able to adequately get ready for my CBC sessions.					
The instruction I received has made it simple for me to create the necessary professional record.					
I now realize that lifelong learning enhances one's knowledge of and comprehension for the CBC curriculum.					
I can now choose teaching and learning resources in an effective manner because to the training I received.					

III. Attitude of teachers towards the CBC Training

Rate your degree of agreement on a 5-point Likert scale with the statements made about how your teachers feel about the CBC education program.

	SDA	**DA**	**N**	**A**	**SA**
The CBC program is impartial and educational.					
Every time the CBC training courses are held, I enjoy them.					
I fully support the CBC training programme					

Anytime the CBC classes are held, I will be happy to attend.					
If further training sessions are implemented, I will be pleased.					

Section B. Instructional resources

Availability and adequacy of teaching learning resources

Rate the level of adequacy of the stated instructional resources in your primary school on the five-point Likert scale ranging from none which indicates that the stated T/L resource is not available to Most Adequate

Items	**None** **1**	**Inadequate** **2**	**Fairly Adequate** **3**	**Adequate** **4**	**Most adequate** **5**
Textbooks					
Chalkboard					
Whiteboard					
flash cards					
Pictures					
Radio					
Desks					
Models					
Classrooms					
Sports fields					
Workshop					
Television screens					

Effective Use of the Teaching / Learning Resources by Teachers

Rate on the 5-point Likert scale how often your teachers make use of the available teaching-learning resources to achieve the stated key CBC objectives.

Item	Not at all	Least effective	Fairly effective	Effective	Most effective
Use of the available resources to arouse interest in learners					
Use of resources to help clarify, interpret and compare important concepts and phenomena					
Use of resources to make learning more focused, effective and meaningful					
Use of resources to build student innovativeness and creativity					
Use of resources for students' development of problem-solving skills					
Use of resources to promote better understanding and development of different skills					
Use of resources to promote teacher-student and student-student communication and interaction					
Use of resources to connect the classroom learning to real-life					

Section C: ICT Skills

1. Does your school have a computer laboratory?

   Yes[ ]

   No[ ]

2. How suitable is the usage of the subsequent facilities for teaching and learning in your school?

	None	inadequate	Fairly Adequate	Adequate	Most adequate
Computers					
Projectors					
Teachers' laptops					
Supply of reliable power					
Whiteboards					
CD-ROMS/ DVDs					
Flash disks					
Internet connectivity					
Content simulation games					
Learners' tablet PCs					

3. Teachers' Perceived Usefulness of ICT Skills in CBC Implementation

	SDA	DA	N	A	SA
The use of ICT enables teachers to implement the required CBC activities for my learners effectively					
ICT use is compatible with the CBC curriculum					
The use of ICT reduces the mental effort required in carrying out the CBC					

implementation activities					
Interaction with ICT helps teachers to bring out clearly and in understandable ways the key learning points					
The teaching and learning process is made more enjoyable by the usage of ICT.					
I intend to integrate ICT into all my teaching activities					
Using ICT into curriculum implementation helps students' knowledge and skills to grow.					

Teachers' Capacity to Use ICT.

4. Please rate your level of agreement with the following statements measuring your ICT skills on the five-point Likert scale.

	SDA	DA	N	A	SA
I can arrange for the use of ICT in my lessons.					
I've gone to in-person ICT training.					
I often incorporate ICT as some of the instructional materials					
My teacher training program included computer instruction.					
I have basic computer skills					

ICT Teacher Skills Preparedness

1. How well are teachers equipped with ICT skills to facilitate the teaching of CBC?

   Very Well Equipped [ ] Equipped [ ]

   Not well equipped [ ]

2. Have the school teachers attended remedial ICT classes to equip themselves better?Yes[ ] No [ ]

   If yes, what can you comment about these remedial training sessions?

   _____

   ___

3. How equipped is the school with ICT tools for teachers to use?

   Very Well Equipped [ ] Equipped [ ] Not well equipped [ ]

4. How many teachers are there in the school to support other teachers on ICT use? Less than 3 [ ] 3 – 6 [ ] Over 6 teachers [ ]

Section D: School-Based Challenges

1. How cooperative is the government when it comes to facilitating CBC teaching in terms of resource provision

   Not Cooperative [ ]SomehowCooperative[ ]

   Cooperative [ ]Very cooperative [ ]

   Explain

   _____

   ___Does the school have apolicy to guide the implementation of CBC

   Yes [ ] No [ ]

   If yes, explain the role of this policy in detail:

2. What other hurdles are in the school affecting the implementation of CBC?

_____

_____

_____

_____

APPENDIX iv: INTERVIEW SCHEDULE FOR SQASO'S

1. What role do you play as a SQASO in implementing a Competency-Based Curriculum?
2. CBC is a new curriculum being implemented in stages. Please comment on its status of implementation in Migori County.
3. What could you attribute the status (whether the situation is good, bad, expected, low etc.) ?

a. Is training a major contributor to the status? How.

b. Please elaborate more on what the training involves.

c. Who is targetedfor the training?

d. One of your roles must be supervision of the training activities.

e. What do you focus on while supervising the implementation of CBC?

4. Do you think the training is helping the teachers to be better prepared for the implementation of the new curriculum?
5. a. Are there areas that can be changed/improved to make the training efficient and effective?

   b. Please elaborate.

6. How receptive are teachers to all the aspects of the traininge.g, materials, mode, content, trainers, etc._____

7. CBC is said to be requiring different approaches and resources for its effective implementation. Please comment on the state and type of resources in schools in Migori County.
8. Do you find the resources used/required significantly different from the requirements of the other curriculum?
9. Who supplies the resources?
10. Comment on the resources' adequacy and availability in effectively implementing the CBC.
11. Interms of curriculum implementation and material availability, how well are the grade 1 to 3 teachers prepared.
12. What are the school-based challenges experienced in the school in introducing the curriculum based on competencies in the county of Migori's public primary schools?
13. How are the challenges being mitigated, By who?
14. In your opinion, are the mitigating measures working?
15. Who are the major stakeholders in implementing CBC, and what are their specific challenges?
16. What is the role of ICT in the implementation of CBC?
17. Changes in technology will require teachers to rethink the use of ICT in teaching at all levels, are teachers in the CBC prepared?
18. What is the CBC teachers' ICT literacy level in Migori County generally?
19. In your opinion, are the skills sufficient and or adequate? Elaborate, please.
20. In your opinion, are the skill levels a major challenge to implementing CBC?

How?

22. What could be your comment on what should be done or not done concerning teachers' ICT literacy levels to influence the implementation of CBC? How and by who?
23. Finally, please comment on any aspect that influences and how it influences teachers' preparedness in implementing CBC.

APPENDIX v: RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **116887**

Date of Issue: **25/February/2022**

RESEARCH LICENSE

This is to Certify that Ms.. MWITA MWITA EVERLYNE of Kisii University, has been licensed to conduct research in Migori on the topic: AN EVALUATION INTO NATURE OF TEACHERS PREPARATION FOR THE IMPLEMENTATIONOF COMPETENCY-BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN MIGORI COUNTY, KENYA for the period ending : 25/February/2023.

License No: **NACOSTI/P/22/15962**

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Website: www.nacosti.go.ke

APPENDIX VI: LETTER FROM THE COUNTY DIRECTOR OF EDUCATION

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
State Department of Early Learning and Basic Education

Telegrams: "schooling" Rigori
Telephone: Kisumu 057 - 2024599
Email:
countyeducationrigoriu@gmail.com

COUNTY DIRECTOR OF EDUCATION
RIGORI COUNTY
PROVINCIAL HEADQUARTERS NYANZA
3RD FLOOR
P.O. BOX 575 - 40100
RIGORI

3rd January, 2022

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION
MRS. RWITA EVERZYNE – NACOSTI/P/22 /15962

The above named is from Kisii University

This is to certify that he has been granted authority to carry out research on *"Burnout on Job Psychological Motivation Among Correctional Officers in Kisumu Maximum Prison, Kisumu County, Kenya"* for the period ending 6th December, 2022.

Any assistance accorded to him to accomplish the assignment will be highly appreciated.

ORINA NYANKIRA
For: COUNTY DIRECTOR OF EDUCATION
RIGORI COUNTY

APPENDIX VII: PLAGIARISM REPORT

ASSESSMENT OF TEACHERS' PREPAREDNESS ON THE IMPLEMENTATION OF THE COMPETENCY-BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN MIGORI COUNTY.

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