

**TEACHERS' COMPETENCE AND ITS INFLUENCE ON EFFECTIVE
IMPLEMENTATION OF COMPETENCY BASED CURRICULUM IN
PUBLIC PRIMARY SCHOOLS IN MACHAKOS COUNTY, KENYA**

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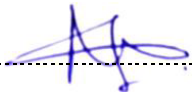
E55/CE/28915/2015

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF
MASTERS OF EDUCATION (EDUCATIONAL ADMINISTRATION) IN
THE SCHOOL OF EDUCATION AND LIFELONG LEARNING OF
KENYATTA UNIVERSITY**

MAY, 2023

DECLARATION

I declare that this project is my original work and has not been presented for a degree in any other university. Referenced sources which have been duly acknowledged have been used to complete this research project. Anti-plagiarism regulations have been used to cite borrowed sources which include: texts, data (including spoken words), graphics, tables and internet sources.

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DEDICATION

A dedication of this research work is meant to my dear husband Timothy Katunge Muia for his love, encouragement and financial support during my Study period. To our lovely children Rachael Ndanu Timothy, Beckie Ndunge Timothy and Peter Muia Timothy, as you venture to greater academic heights, hopefully, may this research project be an inspiration to you.

ACKNOWLEDGEMENT

God's sufficient grace during my study period was always sufficient and I thank Him for His gracious gift of life. Sincere gratitude goes to my university supervisor Dr. Samuel Waweru whose expert guidance enabled me to accomplish my project. My lecturers at the Department of Education Management, Policy and Curriculum Studies, I appreciate you for imparting knowledge in me during course work. I owe much gratitude to my beloved husband Timothy Katunge Muia for financing my education and the moral support accorded to me by my family members during the course. My parents-in-law Mr. Peter Muia Muoki and Mrs. Rael Mbesa Muia deserve special thanks for taking care of my young ones during my study period. Much appreciation goes to my parents Mr. Douglas Mutua Maele and Mrs. Patriciah Ndunge Mutua for encouraging me to further my education. I appreciate our dear cousin Mr. Kelvin Nzivo for printing my work and taking it to KU whenever I needed his help, may God bless him. To my colleagues especially my group mates during course work "Focus Queens" I thank you for the team work and support throughout my course period.

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ABBREVIATIONS AND ACRONYMS

CBC	Competence Based Curriculum
CBE	Competence Based Education
CBT	Competence Based Training
CBTE	Competence Based Teacher Education
JSS	Junior Secondary School
KICD	Kenya Institute of Curriculum Development
KNUT	Kenya National Union of Teachers
KPSEA	Kenya Primary School Education Assessment
MOE	Ministry of Education
MOEST	Ministry of Education, Science and Technology
NACOSTI	National Commission for Science, Technology and Innovation
SDG	Sustainable Development Goal
TSC	Teacher Service Commission
TSLN	Thinking Schools Learning Nation
PBTE	Performance Based Teacher Education

ABSTRACT

The Kenyan government has embarked on system of education reform from 8.4.4 system to 2-6-3-3-3 with an aim of enhancing the education system standard. The basis of this crucial change is to ensure development of knowledge-based skills necessary in today's job market globally. The study purpose was to carry an investigation on teachers' competence influence on effective Competency Based Curriculum (CBC) implementation. Its objectives include: Establishing the teachers' competence based on skills, values, knowledge and attitudes; finding out the extent of CBC implementation; to establish the constraints facing effective implementation of CBC and to establish the attitudes of teachers towards CBC. Gross, (1971) Curriculum Implementation Theory was the basis of this study. Adoption of a descriptive survey design was done and it targeted 79 public primary schools, 941 TSC teachers, 79 deputy head teachers and 79 head teachers in Matungulu Sub-County. 20% of the target population which comprise of a sample size of 16 schools, 16 head teachers, 16 deputy head teachers and 188 public primary school teachers was selected using stratified random sampling. The data collection tools utilized were an interview schedule, questionnaire and an observation checklist. Three public primary schools were used to pilot the instruments of research so as to ensure clarity of content and objectives coverage. Data were collected from the field using both quantitative and qualitative method. Descriptive statistics such as; frequency counts and percentages were utilized in analyzing data quantitatively by use of Statistical Package for Social Sciences (SPSS) programme. Qualitative data were analyzed by use of thematic approach which entailed describing each research objective based on the response given. Pie charts, bar graphs and frequency tables, were used to present the report of the analysis. The study established that teachers' in-service training which was done yearly was not adequate for effective curriculum implementation. It established in the study that there were various constraints which hinder its effective implementation which include high teacher-pupil ratio and lack of adequate learning and teaching materials. Most schools indicated teacher-pupil ratio of 1:80 which was above the MOE requirement of one teacher to 35-40. Most schools indicated in adequate learning and teaching resources such as ICT and Audio-Visual Equipment. A number of recommendations to Ministry of Education, KICD and TSC were made, these include: The MOE should organize for more in-service training in order to create an attitude which is positive towards the curriculum for its successful implementation, MOE should ensure adequacy of learning and teaching resources; More public primary classrooms should be built by the government to cater for increased enrolment and TSC should employ more teachers to cater for high teacher-pupil ratio. This will ensure effective Competency Based Curriculum implementation in Kenya.

CHAPTER ONE

INTRODUCTION

A presentation of the background of the study, purpose of the study, statement of the problem, research objectives, research questions to guide the study, delimitation of the study, study limitation and also the significance of the study. Assumption of study, conceptual and theoretical framework was also discussed.

1.1 Background of the Study

Quality education is a global demand since the education system form the basis of any country's development. This development can be in terms of; technology, agriculture, health, good governance and environmental protection. In order to shape the learners understanding, there is need to have a clear understanding of local, regional and global context which can be realized through a Competency Based Curriculum (CBC).

Competence Based Education has been designed to ensure that learners are able to demonstrate their learned competencies after acquiring the necessary knowledge, skills, values, attitudes and abilities. To acquire these competencies, learning should be related to the content of the study. The C B C is aimed at developing higher thinking capacity which summarizes the Blooms Taxonomy which includes; application, analysis, synthesis and evaluation (Bloom, 1956).

Weddel (2006) define competencies as a combination cognitive skill, practical knowledge, theoretical, behaviors and values applicable for enhancing better performance. This involves; skills, attitudes, knowledge and behaviors required for viable execution of genuine world assignments or exercises. Ji (2017) argues that

CBC should aid learners in acquisition of competencies in order to provide solution to real life problems. The curriculum should not only focus on the learner's expected knowledge but also what the learner is anticipated to do. According to SDG No.4, there is much need of curriculum that can foster innovation and facilitate environmental, economic and social development (<https://sustainabledevelopment.un.org>)

Due to the changing societal needs globally; different countries have adopted new curriculum content, pedagogical and educational skills in order to make learners to be initiative and innovative in solving real world problem. The importance of this alter is to create the educational modules more successful and responsive to the societal needs by giving the desired competencies which include skills, attitudes knowledge and values. Due to globalization, different countries were compelled to re-examine their education to cater for new knowledge, skills and attitudes which are highly needed due to competition and diversification in world economy. For instance: -

Thinking Schools Learning Nation ((TSLN) was introduced by Ministry of Education (MOE) in 2005 in Singapore in a new phase of lifelong learning and nurturing critical thinking used to improve the Singapore education system (Goh, 1997). Another innovation was included in the TSLN vision, this was, "Teach less, Learn more," to enhance quality engagement among learners and teachers for acquisition of life skills(MOE, 2007). The teachers main role is that of curriculum developer charged with responsibility of decision making on what learners will learn (Law, Galton, & Wan,2007). There is need for teachers to have significant openings for proficient learning based on practice and particular curricular changes

(Cohen, D.K & Hill, 2001). Although this raises a lot of questions from experts on teacher competence, ideals, autonomy, sense of ownership and professional confidence in curriculum implementation.

In 1990 the Competence Based Training was introduced in Australia by the Australian government (Smith, 1996). The CBT for work force was introduced due to economic and technological changes in work place which resulted in re-examination of training methods in Australia in order to improve skills and create international competitiveness. Therefore, it is evident that educational reforms in Australia was triggered by inadequate workers' skills and this led to implementation of CBT in all training provisions in Australia in order to make learners competitive locally and internationally (Smith,1996). As a result of Australian work force weakness in skills due to the changing economy and technology; there was need for trainees to acquire the necessary knowledge and skills through Competence Based Training (CBT)

The implementation of CBE in USA started in 1950s'. It was based on two models; the Competence-Based Teacher Education [CBTE] and Performance Based Teacher Education [PBTE]. CBTE focused on competence based on knowledge which involves cognitive teacher's perceptive in concert which involves assessing behavior of the teacher by examining the learners' ability. The PBTE focused on teaching behavior and performance of the teacher. The teacher is assessed on performance of the expected roles, behaviors and competencies (Burton, 1977:31). Therefore, it is clearly evident that for victorious implementation of CBC, the teacher had to possess certain values and attitude as well as skills and knowledge.

In United Kingdom (UK), there was high rate of unemployment for young people which resulted from economic recession in mid-1970. The education system was criticized for making school leavers' unemployable since the standards for attainment of basic skills were too low (Wiener, 1981). In 1980s' and 1990s', to achieve vocational relevance a policy on vocational education was set (Weigel, T., Mulder, M. & Collins, K. 2007). Bates (1997) argue that the competency-based vocational qualification policy was used to enable learners mobilize resources; this involves knowledge which will enable them to master complex situations. He also notes that the "Competency-Based Education and Training" (CBET) emerged due to increasing rate of youth unemployment (Bates, 2002). In UK, there was high regard on education since it played a key role in global and economic growth and thus (CBE) was presented so as to decrease youth unemployment and to supply them with fitting abilities relevant to the job market. The success of CBE in UK has been attributed to teacher sufficient instruction prior to the execution of the student-centered learning.

In Zambia, CBC was introduced in 2013 so as to help learners in the country to acquire knowledge, attitudes and values to ensure there are ready for the job market. MOGE, (2013) argue that the Zambian curriculum was changed purposely to equip learners to face forthcoming difficulties in the dynamic universe. Zulu, (2015) argues that CBC is aimed at producing learners who are self-motivated, confident, productive, holistic and independent with skills and values to succeed in school and in day-to-day life. The teachers undertaking the CBC should take effective and innovative approaches in teaching (MOGE, 2013). Due to different social, economic, and political environment in the Zambia, there has been a decreasing

budgetary allocation to education sector since 2015(20.2%), 2016(17.2%), 2017(16.5%) and 2018(16.1%). This has negatively affected effective implementation of CBC due to lack of adequate resources for in-service of teachers for CBC implementation. There are approximately 98,000 teachers in need of in-service training for proper implementation of CBC but are limited by insufficient budgetary allocation (UNICEF, 2016).

The CBC was introduced in Tanzania in 2005 to better the quality of education in teaching institutions which posed a challenge amongst earners (Ogondieck, 2005). This was mainly meant to address on the current and existing needs of job markets which the graduates did not exhibit. The learning outcome was expecting to deliver learners who would illustrate and apply obtained knowledge, skills and attitudes in problem solving situations so as to meet up the local, regional and global needs of the changing society. CBC has failed in Tanzania due to teachers' insufficient training. Komba and Mwandaji (2015) study on implementation of CBC in Tanzania among secondary schools established that teachers (86%) were not well trained and lacked adequate knowledge on CBC. Teachers were also not able to involve students in classroom activities.

Paulo (2014) noted that trained government teachers still continued to teach students using traditional mode of teaching centered approach which is very much opposed to competence-based approach that emphasis on learner centered approach. Haki Elimu (2012) research established that Tanzania's national examinations were poorly performed since the implementation of CBC was poor because teachers had not conceptualized the CBC. However, a study by (Titya & Mafumiko, 2010) on compatibility of teaching methods and CBC established that teachers, book writers

and curriculum developers were unaware and did not possess understanding on effective CBC implementation.

In Rwanda, in July, 2013, pedagogical material and curriculum department started the process of reviewing the curriculum. CBC was launched in April 2015 and it became functional in the beginning of 2016. There was thorough research done on CBC in USA, UK, South Korea, Singapore and the neighboring East African countries so as to come up with the best practices to produce the best results for effective and quality education for Rwandese. The new curriculum advocated for more practical, oriented and skill-based knowledge relevant to working environment so as to produce effective results amongst the trained learners. Although teachers received training on the new curriculum, they applied existing methodologies and strategies in teaching the Competency Based Curriculum. Gatun, (2009) state that in Competency Based Curriculum delivery, teacher competence is a priority. To ensure curriculum change effectiveness; teachers should act as facilitators so as to engage and interact with learners under minimum supervision (kavyalulo, 2012).

In Kenya, Professor Douglas Odhiambo in 2011 chaired the Realignment of the Education Sector to the New Constitution task force. It was aimed at reviewing the education system to bring it into line with vision2030 and constitution 2010. This was to ensure development of skilled learners to respond to the vision 2030 aspiration. The commission found it important to recommend a more comprehensive and flexible structure at every level of learning to enhance curriculum reform for Kenya's education system in particular expected competencies. It recommended the structure (2-6-3-3-3) 2 years of pre-primary (pp1 and pp2), 6 years of primary, 6 years of secondary (3 yrs. junior and 3 yrs. senior), and 3 years of university. The

aim was to reform content-based curriculum (8-4-4) to Competency Based Curriculum (2-6-3-3-3) (Republic of Kenya, 2012)

KICD launched CBC in Kenya in 2017 and its implementation started in 2018. The CBC puts emphasis to development of seven key competencies; that is: (i) Digital literacy (ii) Citizenship (iii) Learning to learn (iv) Imagination and Creativity (v) Collaboration and Communication (vi) Problem solving and Critical thinking (vii) Self-efficacy. It will also emphasize on acquisition of essential values; these are: social justice, integrity, peace, love, patriotism, responsibility, respect and unity. The CBC has three levels which are: (i) Early Years Education (pre-school, (pp1/pp2), G-1,2,3) (ii) Middle school (G-4,5,6) (G- 7,8,9) (iii) Senior school (G-10,11,12). This is indicated in the figure 1.1

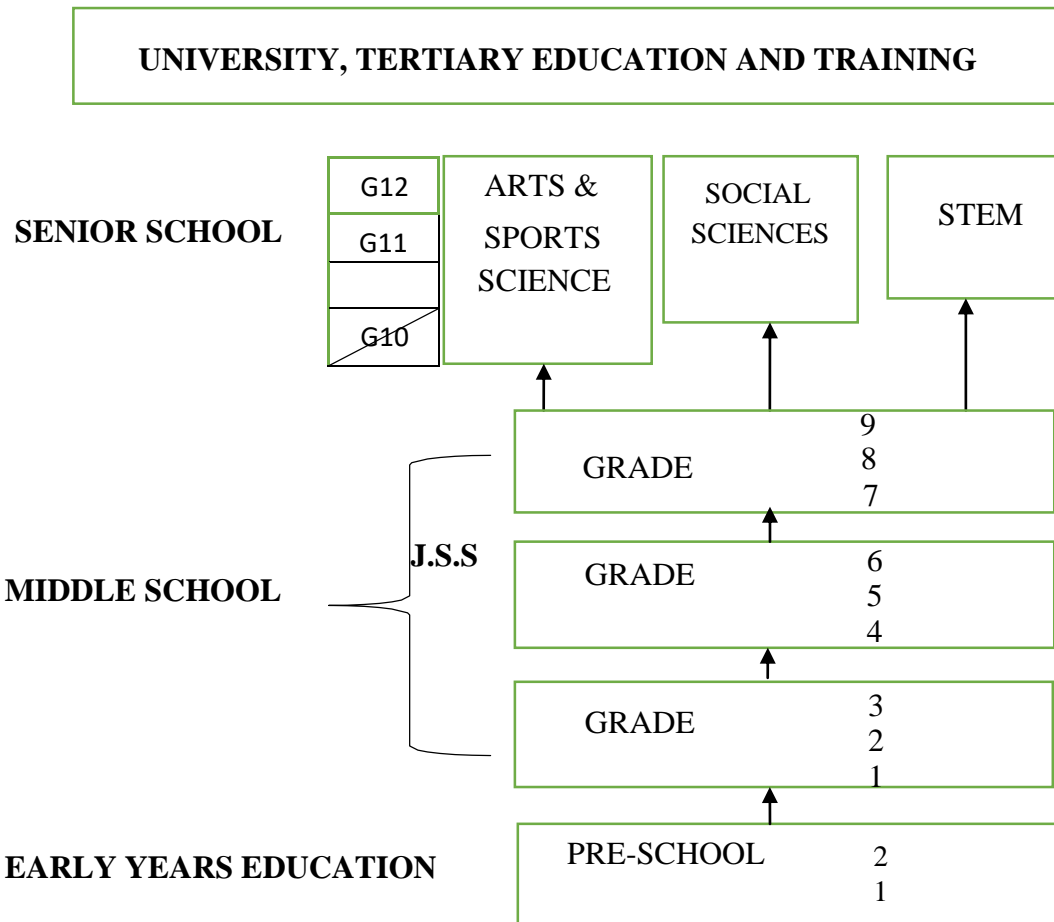


Figure 1.1: Basic Education Structure

SOURCE: KICD, 2017

The indicators of effective implementation of CBC are: learners are active and engaged in classroom and learning is learner centered, learners are able to demonstrate the seven key learning competencies, schools provide a good learning environment for learners to practice and experiment their full potential and make informed decisions, teacher is able to establish a balance between formative and summative assessment, learners are prepared with skills, knowledge, and states of mind that can assist them to viably bargain with openings and challenges which they encounter every day, digital-based learning is supported by availability of resources in the school, learners take part in high quality community-based service before

completing primary school level and learning process of the pupil involves teachers, parents and community.

Although CBC was introduced in Kenya in 2017, there have been complaints among the stakeholders on the implementation of CBC. Parents, teachers and teachers' unions such as KNUT have raised their concern on teacher preparedness prior to its implementation. This was a matter of concern and the researcher sought to investigate teachers' competence and its influence on effective CBC implementation in Matungulu Sub-County, Kenya.

1.2 Statement of Problem

Due to disconnect between school content and world of work, there was a need to embrace the Competency Based Curriculum. The 21st century rapid changing demands in the job market require graduates who are equipped with relevant competencies for work and for life. It emphasizes on development of knowledge, skills, values, and attitudes and applying the competencies to successfully perform a real-life task.

The implementation of CBC has resulted to contrasting views amongst the education stakeholders such as parents, KNUT, MOE and TSC. Parents have been complaining about CBC by expressing concerns about much work their children are given which require their immediate attention. In addition, they are required to provide learning materials to accomplish these task which are expensive and they have expressed their complaints in social media platforms.

Moreover, KNUT holds the opinion that CBC implementation was done hurriedly without equipping teachers sufficiently with the current teaching methods and

curriculum content. The union argued that it is not opposed to the new curriculum but it should be implemented after proper preparation of teachers and stakeholders.

On the other hand, TSC and MOE have dismissed KNUT claims and they insist that teachers have been adequately prepared. This created a knowledge gap on the current state of teachers' competence for implementation of CBC in Kenya, therefore, this research was meant to investigate teachers' competence and its influence on effective CBC implementation of in Kenya specifically in Matungulu, Machakos County.

1.3 Purpose of the Study

The purpose of this study was to investigate the competence of public primary school teachers and its influence on effective CBC implementation in Matungulu sub-county, Machakos County.

1.4 Research Objectives

Objectives were:

- i. To establish the extent to which teachers have been trained on CBC
- ii. To find out the extent of implementation of CBC in Matungulu.
- iii. To establish the constraints facing effective CBC implementation in Matungulu.
- iv. Establish the attitude of teachers towards CBC implementation in Matungulu.

1.5 Research Questions

- i. To what extent are teachers trained on the CBC implementation in Matungulu Sub-County?
- ii. What is the extent of CBC implementation in Matungulu Sub-County?

- iii. What are the constraints facing effective CBC implementation in Matungulu?
- iv. What is the attitude of teachers towards CBC implementation in Matungulu? Sub-County?

1.6 Significance of the Study

The findings of the study may be helpful to various stakeholders in the sector of education such as curriculum specialists, administrators, and parents in understanding the importance of teachers' competence and its influence on effective execution of CBC. Study findings may be useful to KICD, MOE and TSC in order to organize in-service programmes such as workshops or seminars to sufficiently equip teachers to implement CBC.

1.7 Limitations of the Study

The schools utilized to conduct the study were the public primary due to the researcher's limited financial resources and time constraints. The study was carried out in public primary schools although the private schools are also implementing CBC. Therefore, the findings of this study cannot be generalized to private primary schools but they may be used as a basis for further studies in other areas.

1.8 Delimitation of the Study

The study was limited to Matungulu Sub-County. The study specifically focused on primary schools since CBC has been recently introduced in Kenya and its implementation is at primary school level. Therefore, the findings of this study cannot be generalized in other places since the population is not similar. However similar researches elsewhere can be conducted on the basis of this study.

1.9 Assumptions of the Study

These were the study assumptions:

- i. All teachers in public primary schools in Matungulu Sub-County have been sufficiently trained for effective implementation of CBC.
- ii. The respondents were honest and provided accurate and reliable information.

1.10 Theoretical Framework

Gross, (1971) Curriculum Implementation theory was used in this study. This theory puts emphasis on four key elements related to curriculum implementation. The first element state that a teacher should be competent since he/she is the implementer of the curriculum and ought to be well equipped with the content to be implemented thus teacher training is very essential. The second element is teachers' capacity as the implementer which entails teachers' awareness and clarity of the curriculum to be implemented. In-service training through seminars and workshops can aid the teachers in acquisition of desired skills, behaviors and knowledge for implementing the curriculum effectively.

Adequate provision of teaching and learning material is essential in effective implementation of either new or existing curriculum which is the third element. The resources should be relevant for the specific task and available for use by the learners and teacher to achieve the desired outcome. The fourth element entails support from the management and teacher's classroom management as well as learners' involvement in the learning process whereby the support from the head of the institution is important to facilitate teacher classroom organization and management as they work together in harmony for smooth curriculum implementation.

Sitinei, (2020) study in Kenya is based on Gross, (1971) curriculum implementation theory since it points out on issues related to teacher' inadequate training on the new curriculum, large classes and inadequate instructional material for CBC implementation.

She argues that the implementation of CBC requires skilled teachers on content and adequate resources. She recommended more in-service training to prepare teachers by the Ministry of Education, government ought to build more classes and provide instructional materials for successful CBC implementation.

There exists a relationship between this theory and this study because it is in line with the variables of this study. It emphasizes on teacher competence for effective implementation of curriculum which can be achieved through thorough training of teachers. Gross, (1971) argues that completion of a teacher training course makes one become an effective teacher. He further states that teachers without prior training demoralize the learners. It also focuses on provision of adequate resources which relate to the variable on constraints facing CBC implementation in relation to learning and teaching resources which are important for effective curriculum implementation. Furthermore, the variable of teacher attitude is elaborated since teachers ought to possess a positive attitude for effective curriculum implementation. Therefore, this theory proved its suitability in this study since it focused on curriculum implementation and the CBC implementation requires teachers' competence for its effective implementation

1.11 Conceptual Framework

This study investigated teachers' competence and its influence on effective implementation of CBC in Matungulu sub-county, Kenya. The figure 1.1 represents the study conceptual framework. The study independent variables are: Teacher competence, the extent of implementation of CBC, constraints facing CBC implementation and teachers attitudes towards implementation of CBC. The dependent variable is effective implementation of CBC while the intervening variables are parental involvement in learning process and government policy.

1.12 Conceptual Framework

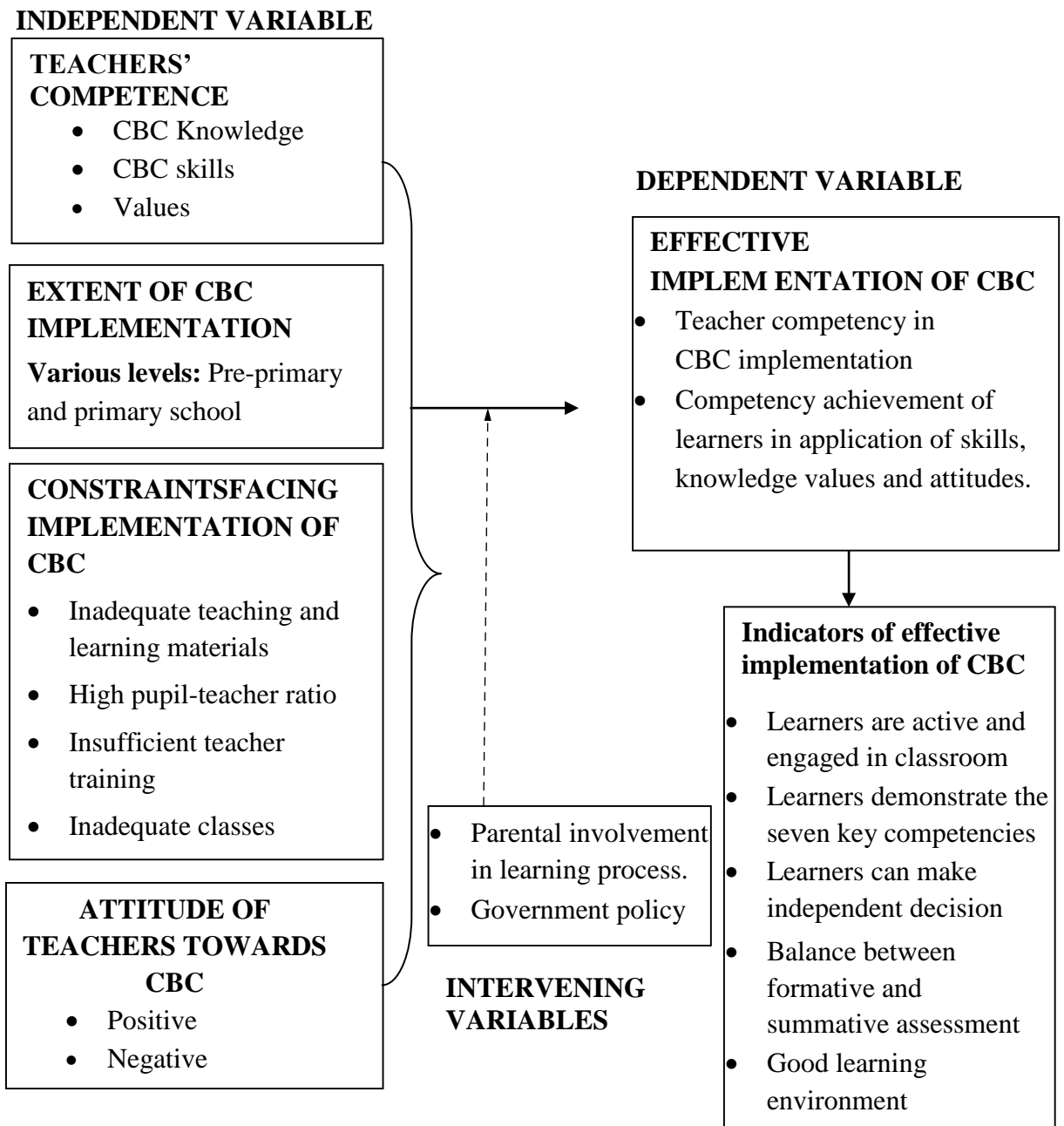


Figure 1.2: Conceptual Framework on Teachers' Competence influence on Effective Competency-Based Curriculum Implementation.

SOURCE: Researcher (2022)

The conceptual framework 1.2 suggests that effective implementation of CBC in Matungulu sub-county such as; CBC skills, knowledge and values. For successful implementation of CBC, teachers must be thoroughly trained in order to implement the new curriculum appropriately. The constraints which will be identified will hinder effective implementation of CBC. Without proper resolution to these challenges, CBC implementation may not be effective. Positive or negative teacher's attitude towards CBC can influence its effective implementation. The support given to implementation of a curriculum is determined by teachers' perception, attitudes and beliefs (Shriner, Schlee and Libler, 2010)

The study dependent variable is effective CBC implementation in Matungulu sub-county which will be indicated by the teachers and learners' competency in utilization of skills, attitudes, knowledge and values. The study intervening variables are parental involvement in learning process and government policy. It expected that parents being part and parcel of CBC should be involved in learning process and they need training on the role they should play. This training will influence their effectiveness and attitude towards CBC.

Effective implementation of CBC indicators include: The learner are active and engaged in classroom and learning is learner centered, learner are able to demonstrate the seven key learning competencies, schools provides a good learning environment for learners to practice and experiment their full potential and make informed decision, teacher is able to establish a balance between formative and summative assessment, learners are prepared with abilities, information and attitudes that assist them to identify challenges which they encounter every day and effectively deal with opportunities.

1.13 Operational Definition of Terms

The definition of the terms given was guided by this study

Competence refers to the acquisition of skills, attitudes, knowledge and values relevant for work and for life.

Competency Based curriculum (CBC) refers to curriculum that focuses on development of skills, values, attitudes, knowledge application and states of mind, that is necessary for life and for work.

Curriculum refers to what is planned to empower the learners to acquire desired values, skills, attitudes and knowledge.

Implementation refers to the classroom processes and practices of the teacher in effective execution of the Competence Based Curriculum

Public primary schools refer to the schools run by the state beneath the Ministry of Education and whose source of income is the government and learners participate in high quality based community service

Teacher attitudes refers to feelings, opinions, perception, understanding and views of instructors in supporting the implementation of the CBC.

Teacher competence refers to teacher's acquired knowledge, skills, attitudes, perception and values through learning approach paradigm shift of a new curriculum.

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1 Introduction

Literature relevant to investigation of teachers' competence influence on effective competency-based curriculum implementation was reviewed. The review is structured according to objectives of study as follows: Competence based curriculum concept and implementation, teacher competence, the extent of implementation of CBC, constraints facing the CBC effective implementation and teachers' attitude towards implementation of CBC. The chapter was marked by outlined summary of the literature review.

2.2 Competency Based Curriculum Concept and Implementation

According to Doll (1978) a school curriculum is viewed in terms of informal and formal system in which learners pick up information, create abilities, states of mind, values and appreciations to empower them adjust and create their environment. Kouwenhoven (2003) characterizes competence as the capacity to select and utilize cohesive coordinate combination of information, aptitudes and demeanors with the point of fulfilling a given errand. Competencies incorporate all related states of mind, aptitudes, capacities, information that frame a person's work (Jengere, 2017)

In USA, there was a close link between CBC and "behavioral objectives movement of the 1950's," such as Benjamin Bloom which emanated from educators focusing on the intended learning outcomes. There were concerns about poor quality teacher training as well as low learners' achievement which contributed the need to structure learning outcomes so as to empower teachers to express their instructing goals in shape of discernible learners' behavior. To develop programmes in teacher

education the intention was meant to ensure effectiveness of educators such as teachers and schools in order to improve on performance (Burton 1977:31).

The move to CBC from content-based curriculum was done to progress quality of instructions which will enable teachers for acquisition of competencies necessary and with relevance in different spheres of life. Globally, the Competence Based Curriculum has received a lot of support as it is aimed at enabling learners acquire skills necessary for economic development. The competence-based approach focus is on innovation and it emphasizes on practical knowledge and skills required in labour market and in real life (Edward, T. & Arnold, J., 2009).

To meet growing demands for key competencies achievement for personal and social development in line with the 21st century, there is need for Competence Based Curriculum (Pamier, 2017). The CBC is vital in addressing the technological change, societal, and social-economical needs of a country. Its emphasis is in acquiring knowledge, attitudes, skills, values and behaviors so as to address the issues of unemployment among the youths (Maodwa-Taruvunga & Cross, 2012).

There has been a move from conventional input driven instruction which was characterized by advancement of content knowledge to competence-based learning (Young, 2009). For proper implementation of CBC there is need for master and know how facilitators who can take after reasonable strategies of instructing like mentoring, facilitation, and education (Abuya, 2017).

The CBC implementation in developing countries has been borrowed from developed countries and thus there exist a number of challenges in adopting it (Muaranaza, Mtshali, Mukamananza, (2017). The CBC discourages the mere

acquisition of understanding but lays more importance on development of skills. This has resulted to curriculum change to competency-based curriculum from content-based curriculum (MOE, 2005). Furthermore, it is necessary to develop abilities that are pertinent in fathoming the genuine life issues rather than applying rote memorization in teaching and learning (Wood, 2008). For successful CBC implementation, adequate teachers training is important in order to enable them develop professionally and become efficient in doing their duties (Kelly, 2018). Hence, efficient implementation of CBC requires consistent retraining of teachers (Edebile, 2009).

2.3 Teacher Competence (Teacher CBC Knowledge, Skills and Values)

Teachers need significant knowledge, skills and values as they perform their duties. They should be able to interact well with the students, choose the instructional materials appropriate which learners utilize at various levels of learning and set measurable standards (Zeinger, 2018). Teacher training is considered a priority in actualization of education reforms (Gatlin, 2009). According to Bandura (1990), competence involves both use of knowledge and skills. Learners use the attitudes, values; skills and knowledge in solving daily problems that are encountered in daily life (Ineke, M., Mireilla, K. & Sibine, K.S, 2018).

In Singapore, studies carried on the education system emphasize on critical thinking, social and cultural values, communication and collaboration and creativity which form the 21st Century skills whereby core values need to be cultivated (Vougt & Roblin (2012). The level of teacher competence influences the CBC implementation. The move to CBC from the Content Based Curriculum was pointed at progressing the quality of instruction (Komba, 2016).

Paulo (2014) study in Tanzania on teacher preparedness in pre-service to implement CBC in secondary schools, teachers continued using traditional teacher-centered instructional methods despite being well informed of the teaching methods and assessment laid on for the newly adopted CBC which is opposed to teacher centered approach and recommends learner centered approach.

Makunja, (2016) study confirmed that the major challenge facing implementation of CBC in Tanzania was inadequate in-service training of teachers. Teachers have positive intention and the willingness to implement the curriculum but they do lack knowledge of the CBC. Haki Elimu (2012) research established that in Tanzania, national examinations were performed poorly by the learners since the implementation of CBC was poor because instructors had not conceptualized the CBC. They recommended for a professional teacher continuous development to familiarize them with implementation of the CBC (Haki Elimu, 2012).

Competency Based Curriculum implementation as a result of adequate funding and thorough training of teachers has turned out to be very successful in countries like Scotland, Canada and Finland (Saram & Susan, 2014). Teacher knowledge on subject matter is crucial in learning and teaching process. Instructors need to be ready for a curriculum approach that emphasis on competence so as to implement the CBC appropriately in learning and teaching process (Blomoke & Delaney, 2012). However, in South Africa Competency Based Curriculum was not successfully implemented due to teacher's incompetence, insufficient development and teacher's attitudes (Cheptoo & Ramadasi, 2019).

Brian (2004) defines values as chosen priorities which reflect on significant ideals that enhance lives and they are indicated by consistency and repetition of chosen deeds. CBC emphasizes on acquisition of values and attitudes which the students are required to acquire by the end of education cycle (Halstead, 2000). As a result of over emphasis to vision 2030, there is a lot of emphasis on attaining technology and innovation in science than in acquiring moral and ethical values which are relatively important in the development of holistic human being. Therefore, for education system to be effective, the curriculum should foster values which the teacher should apply in CBC. The core values are: Responsibility, patriotism, love, peace, respect, unity, integrity and social justice.

Enhancing the competence of Kenyan teacher is crucial in order to cope with intensive, rapid and fundamental nature of current day technology, cultural, economic, political and societal changes (Wanzere, 2002). Sturgis (2010) argue that there is need for a change from teachers' instructional programme monopoly to become a facilitator, a guide and the main task should be guiding the learning process for learners. Due to the various changes within the curriculum, the teacher is supposed to nurture learning abilities of the learner and this is the way reforms are implemented (Gatt, 2009). According to Kafyulilo (2012) teachers should be highly knowledgeable and have a good choice of pedagogy in application of teaching strategies which are important in effective teaching.

Komba & Mwandaji, (2015) study on reflections on CBC implementation in Tanzania showed that majority of qualified teachers lacked sufficient training on the subject content in CBC. They were not also aware of the objectives of CBC. They also found out that there was a contrast between the way teachers were oriented and

the real instructional method they used in the implementation of CBC in classrooms.

Teachers' convictions, information and demeanors play a vital part in successful usage of a modern educational programme. For appropriate educational programs usage, instructors are basic operators of alter amid the execution of educational modules (Gerrand & Farrel, 2014). Mosha (2012) argue that there is need of qualified teachers with adequate knowledge and skills. There is need to change the instructional approaches through pre-service and in-service training with an aim of acquisition of the desired competencies for handling teaching paradigms (Wood, 2008)

Gerrand & Farrel (2014) attribute the failure of Competence Based Curriculum implementation to teacher's inadequate content knowledge and poor classroom practices. Competence Based Curriculum successful implementation depends on teachers who are both trainers and facilitators. Hence, in-service of teachers for implementation of CBC is very important (Sudsombon, 2010). To actualize reforms in education, teachers' training has to be a priority (Gatlin, 2009). Zeiger (2018) study emphasizes on the teacher need for setting standards, essential skills and knowledge, students' cooperation and instructional material selection for learners at different levels.

Momanyi & Rop (2019) carried a research study in Bomet County on teachers' challenges in implementation of CBC in Kenya; the research findings indicated lack of adequate skills and knowledge on the new curriculum implementation. Sifuna & Oboyo (2019) conducted a study based on challenges hindering effective Competency Based Curriculum implementation in Kenya. The final findings of the study showed that CBC implementation was not systematically done due to minimal

training of instructors on teaching method and curriculum content, inadequate instructional material and insufficient classroom. The aim of the study was to establish the existence of challenges which are similar to these in Matungulu Sub-County in order to advise the MOE for effective implementation of CBC.

Ondimu (2018) carried a research study on preparedness of teachers for competence-based curriculum implementation in private pre-schools in Dagoretti North Sub-County, Nairobi. Findings of the study indicated that teachers were not adequately equipped with ICT competence; there was high teacher pupil ratio, instructional materials were inadequate and these factors hindered effective implementation of CBC. The researcher made recommendations to MOE to organize for more teachers' in-service training for acquisition of ICT competence for proper implementation of CBC, the government should provide adequate instructional materials in schools and it should employ more teachers to facilitate proper CBC implementation.

Sitienei, (2020) investigation on factors which influence the implementation of Competence Based Curriculum in Kibera sub-county, Kenya found out that insufficient teacher training (81.6%) had completed one week's training while few (18.4%) attended a two weeks training. The recommendations of the study were: The MOE should organize for more in-service training for teacher on CBC, the government ought to guarantee satisfactory arrangement of guideline assets such as reading material for successful execution of CBC, instructor sought to be given more time for planning of lessons and the government ought to construct more classes to cater for increased enrolment in schools which are public primary for viable execution of CBC. Findings of the study were used to establish the existence of same challenges in Matungulu Sub-county as those reported by Sitienei, (2020)

For proper implementation of CBC, the teacher should be well trained to ensure efficiency and viability. To guarantee viability within the usage of the curriculum, the facilitators need to be professional and knowledgeable in applying appropriate methodologies of teaching such as mentoring (Abuya, 2017). The acquisition of knowledge and understanding for teachers is key in implementation of CBC so as to enhance student academic attainment (Weddle, 2006). CBC requires teachers who are knowledgeable, professional on their work and competent especially in the implementation of curriculum.

2.4 The Extent of CBC Implementation in Kenya

Curriculum change is a process that leads to implantation of unused thoughts which are social or political, financial or innovative which leads to inner and outside reinforced school handle (Alibi & Okemakindo, 2010). It could be a lively process because it reacts to changing needs within the society. As the ancient educational programme loses pertinence in managing the current issues in the society, the need to reform the curriculum arises (Igbokwe, Mezieobi & Eke, 2014).

Putting into practice formally endorsed courses in consideration, subjects and syllabuses is referred to as curriculum implementation (Chikumbi & Makamure, 2000). Curriculum implementation process alludes to how the course plan of thinking is approximately deciphered into syllabuses, plans of work and lesson plans. Curriculum implementation process requires an implementation agent who is the teacher. When the teacher constructs syllabus, teaching materials, has a good personality and learning environment is conducive then curriculum implementation is said to have taken place.

The indicators of effective curriculum implementation are attainment of the set goals. Bishop (1985) noted that the teacher involvement in education innovation is very important since instructors' make decisions for any curriculum in the classroom. The teacher must be consulted during curriculum implementation process because they are the implementers instead of being told what to do.

They should also know the reason behind the innovation and change and should appreciate the underlying philosophy of innovation. Unless the teacher understands and accepts the change in curriculum, proper curriculum implementation cannot be realized (Bishop, 1985). Curriculum implementation is measured by learners' ability to acquire desired ideas, skills that allow them to be productive in the society. Learning revolves around the learner who becomes the central figure in curriculum implementation process. Teachers ought to directly participate in formulation and evaluation of curriculum development process for effective curriculum implementation. To implement curriculum, the teachers need to know the purpose for reform, curriculum change and innovation (Muita, 2012).

Historically, CBE implementation can be dated back in 1950s in USA (Morcke, Dorman & Eika, 2013). CBE main focus is demonstration of mastery of competencies through personalized approach to learning. Learners are awarded credits based on practical skills they have acquired as opposed to the length of time they have taken in school (Surr & Rasmussen, 2015). Learners have an obligation for coming up with learning objectives (competencies) which enables them to acquire increased desire for learning in a model which is competence-based (Le, Wolfe and Steinberg, 2014). Therefore, learners progress at their own pace and educator personalizes learning activities for different learners by allowing learners to study at

different places and time and this brings success in learning process since each learner is assessed when ready and able to meet the desired target.

In Africa, curriculum reforms in many countries, the role of the teacher in curriculum implementation process has been ignored and this has resulted to failure in the outcome (Shiundu & Omulando, 1992). In Kenya, the implementation of curriculum is centrally –based and is done in the central office. They argue that this approach has limited the teacher role to classroom teaching and they are not involved in making recommendations on the goal of education, objectives and the broad content of curriculum.

Due to the increasing number of unemployed people in Kenya, the Kenya government set off a review of curriculum so as to curb the problem. There was a need to align the curriculum to meet basic needs of the job market. There should be a great emphasis on education and training for Kenya to become a middle-income economy (Vision 2030). This resulted from the growing realization globally on the potential of CBE which builds learners essential competencies vital for victory in information-based economy. The learners develop appropriate values, knowledge and skills which is applicable in real life situations (Darling-Hammond, 2012).

Sessional paper no.2 "Training and Reforming education in Kenya," of 2015 recommendations were: establishment of a national learning assessment system, reforming education to Competency Based Curriculum, early identification, introduction of national values, and nurturing of talents, integration in the curriculum and national cohesion. To meet the demand for skilled labour in a country, there is need of an education system which will focus on technical skills,

vocational and innovative skills necessary for effective Competency Based Curriculum implementation.

According to KICD, (2016) a report by Need Assessment Research Curriculum Reform in Kenya (NARCK) there is need for a curriculum which integrates and equips individuals with desired competencies and skills which aid them to fit in the society and also compete internationally (Republic of Kenya, (2017). Review to the curriculum was aimed in enabling learners acquire and develop their talents which will be useful in senior secondary school.

The 8-4-4 replacement in Kenya to CBC was launched in 2017. Its implementation which was guided by KICD started in 2018. It has 2-6-3-3-3 structure (pre-school 2 years, primary-6years, secondary-3years and university/tertiary-3years). The CBC puts emphasis on the seven key competencies to be developed: These are: digital literacy, learning to learn, collaboration and communication, Self-efficacy, creativity and imagination, critical thinking and problem solving and citizenship (KICD Need Assessment Report, 2016). It also emphasizes on acquisition of core values such: unity, respect, responsibility, love, integrity, peace, patriotism and social justice.

Currently, CBC implementation in Kenya is done in phases. Which includes pre-primary (PP1 & PP2), lower primary (G1, 2, 3) and upper primary school (G4, 5, 6). The grade six learners sat for Kenya Primary School Education Assessment (KPSEA) in December, 2022. Learners have proceeded to Junior Secondary School (JSS) in 2023 therefore CBC implementation has continued to Middle school (Grade 7, 8 and 9). Those who will proceed to Senior school (Grade 10, 11 and 12) will specialize on either social sciences, arts and sports science, or STEM. Then from

senior school the learners will proceed to university, training and tertiary education and later onto the field of work. This was a matter of concern on the teachers' extent in training for successful CBC implementation in Junior secondary schools and the study findings may guide the MOE for effective implementation of CBC by adequately preparing teachers through in-service training.

2.5 Constraints Facing the Effective Implementation of CBC

The implementation of CBC has faced several challenges; in Tanzania, since CBC introduction in 2006 in both secondary and primary schools. Human commitment and financial challenges have been encountered in re-training and supporting teachers as well as professionals in education sector for effective implementation of CBC (Wood, 2008)

Makunja's (2016) study on teachers' challenges faced in implementation of CBC in Tanzania observed that there was no properly orientation through in-service workshops or programmes for teachers. According to Wangejela (2009) & Kalungula (2000) studies, for proper implementation of CBC, teachers should have understanding of content and pedagogy although teachers are not properly implementing the CBC because of lack proper clarity among implementers which include curriculum implementers, book writers and teachers. Teachers who are key players in implementing the CBC lack proper understanding, knowledge and skills for proper implementation of CBC.

Although education officials claim educators had been trained, Moshi (2012) study point out on in adequate teacher training in implementation of CBC. This study sought to establish whether these similar challenges are being experienced in Kenya

as those identified by Makunja, (2016) in Tanzania in order to advice MOE and TSC for effective implementation of CBC.

In Kenya, free primary and secondary school has resulted to overcrowded classes which hinder effective implementation of CBC. This makes it difficult for competence-based strategies instructors to use successfully. The teacher cannot move with ease to assist learners with studying difficulties. The Ministry of Education, Kenya recommends a single trainer for 35-40 learners which poses a challenge since teachers are insufficient. This brings about declining instructors morale and inadequacies in training the learners (Kigotho, 2004).

In Kenya, free primary and secondary school has resulted to overcrowded classes which hinder effective implementation of CBC. This makes it difficult for competence-based strategies for instructors to use successfully. The teacher cannot move with ease to assist learners with studying difficulties. Kenyan Ministry of Education recommends a single trainer for 35 to 40 learners which poses a challenge since teachers are insufficient. This brings about declining instructors morale and inadequacies in training the learners (Kigotho, 2004).

Waweru, J.W (2018) research study on influence of teacher preparedness on CBC implementation in Nyandarua Sub-County, Kenya indicated insufficient teachers' in-service training. For effective implementation of CBC and teachers still needed more training for effective implementation of CBC.

Kahera, (2010) study in Kakamega South District on factors influencing the implementation of secondary curriculum identified various challenges such as: understaffing in schools, uneven distribution of teachers, in adequate teachers' in-

service training, teachers' unsupportive parents and local community, inadequate learning and teaching facilities together with infrastructure insufficiency. The researcher made recommendations that TSC should ensure schools are well staffed together within-service training for teachers.

Muasya (2019) conducted research study on constraints facing Competence-Based Curriculum implementation in all public primary schools in Machakos County. Randomly sampled population respondents were used for the study which included 83 head teachers, 367 teachers. Collection of data utilized questionnaires together with interview guides. MOE received recommendations to involve teachers in curriculum reform and enhance teacher training in order to acquire a positive attitude towards curriculum change for effective CBC implementation.

Sitienie, (2020) study findings identified the several challenges such as: inadequate training of teachers on new curriculum, large classes, and inadequate instructional materials for executing the educational modules. The proposals to be considered were: The MOE ought to prepare teachers adequately through in-service training for instructors on educational programs which are competency based. The government ought to construct more classes in primary schools to cater for increased enrolment in schools and satisfactory provision of required learning materials has to be guaranteed and instructors to be given more time to prepare the lessons for viable educational programs implementation.

Marion (2020), research study on teachers' challenges in the implementation of CBC raised various challenges. These include: large classes, insufficient teaching materials/ resources for specific learning which includes digital literacy and music.

The recommendations of the study were: government to build more classes, provide instructional material and adequately train the teachers for proper implementation of CBC.

For victorious implementation of curriculum, instructors ought to be accepted and prepared on the modern educational modules. Countries which support trainers' in-service preparation through continuous proficient improvement and include instructors in educational programs illustrate high level of learner' achievement in schools (Darling-Hammond and Andre, 2010).

2.6 Teachers' Attitude towards CBC Implementation

Attitude refers to negative or positive evaluation of events, people, object and activities or around anything within the environment (Zimbardo & Reading, 1999). They are based on people judgment since they affect their behavior and cognition. The motivation and effectiveness to teach in a given subject is greatly influenced by the teachers' attitude. (Shiundu and Omulando, 1992) State that the attitude held by head teachers, teachers, pupils, parents and other education stakeholders about a new curriculum is very key in successful implementation of curriculum.

Teachers' recognitions or attitude are crucial for compelling education since they profoundly impact the learners' performance (Eggen and Sahak, 2001). For any educational reform to be effectively carried out, all instructors must be called upon and involved step by step in the process of curriculum change. The teachers being crucial and influential stakeholders in the process of curriculum implementation need to determine the policies to b implemented (Porter, 2015).

Effectiveness in the new curriculum implementation is dependent on the implementer's interpretation. Kasapoglu (2010) argues that the implementer who is the teacher is ignored during curriculum review and design in Kenya but he/she is expected to implement the curriculum without questioning. Teachers feel ignored amid educational programs survey and they stand up to change and this brings negative attitude towards the new curriculum which hinders effectiveness in its implementation.

Luhambati (2013) study in Tanzania on change to Competency Based Curriculum from Content Based Curriculum in secondary schools established a negative perception by teachers on the new textbooks and regarded them as being irrelevant, impractical and complex for learners. Msuya (2016) research findings on facilitator's perception on CBET indicate that the facilitators were not well equipped on the concept of education based on competency and application of the teaching methods and approaches as used in CBET was not done.

Abdullahi (2019) study in Garissa on school-based factors in public primary schools influencing CBC implementation established that 61% of teachers indicated positive attitude while nearly 40% had negative attitude towards CBC. The study established the need to sort teachers' views, interest and attitude so as to ensure effective curriculum change. This is essential since teachers decide on teaching and learning activities based on their interest, views and opinions. Therefore, it is evident that the teachers' beliefs, experiences and perception about their roles and duties influence their teaching activities.

A study between the attitudes of teachers and utilization of instructional material relationship was done by Waigera, Mweru & Ngige (2020) indicated that positive teacher attitude was essential in using instructional materials and techniques in pre-school teaching. The study established higher level of instructional content for teachers with positive attitude achievement in classes as compared with their counterparts with attitude portrayed as negative. Teachers' attitudes are critical for effective curriculum implementation. All head teachers and teachers should accept change and have a positive attitude to achieve effectiveness in implementation of the curriculum. They ought to embrace positive attitude towards it for it will not only enable them in curriculum implementation but also influence learners' learning willingness (Hawes, 1979).

Teacher attitude is crucial in curriculum implementation (Gakuu, 2006). Teachers ought to be well trained so as to have a positive state of mind in order for them to execute the competency-based curriculum effectively. Teacher's attitude towards CBC implementation is vital for its effective implementation; therefore, this study was aimed at establishing the teachers' attitude towards the CBC implementation in Matungulu Sub-County, Machakos County, Kenya.

2.7 Literature Review Summary

Reviewed literature shows the move to CBC (2.6.3.3) from content-based curriculum (8.4.4) is triggered by acquisition of applicable values, knowledge, attitudes and skills which are applicable in modern job market. Literature reviewed covered teachers' competence, the extent of CBC implementation, constraints facing implementation of CBC and teacher attitudes towards implementation of CBC. This is attributed by the need to acquire desired competencies that are important for

success in modern knowledge-based economy. Gross (1971) study established that the implementer's capability is key in the implementation of curriculum. For effective curriculum implementation, teachers being key implementers of curriculum should demonstrate understanding of the curriculum. The teachers should undergo in-service training for them to acquire information, capabilities and behaviors applicable in implementation of CBC. Since CBC was recently introduced in Kenya, several researchers have developed an interest on its implementation and they have conducted some studies. These studies have focused on challenges facing its implementation. For instance, Sitienei, (2020) study investigated school-based factors influencing implementation of CBC in public primary schools in Kibra Sub-County but it did not specifically focus on teachers' competence which is essential in the implementation of CBC. Yet, this research was necessary to address the concerns of KNUT, teachers and parents on the extent of teacher training and advice the MOE, KICD and TSC on the current state of teachers' competence in order to aid in organizing for more in-service training for teachers through seminars and workshops. This presented a gap in knowledge which the researcher sought to fill by carrying a research on teachers' competence and its influence on effective CBC implementation in Matungulu, Machakos, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

An overview of the strategies and procedures in conducting the study was discussed in this chapter. These are: study locale, pilot study, data collection procedure, research designs, target population, research instruments, sample size and sampling technique, validity and reliability, data analysis and ethical considerations.

3.2 Research Designs

Descriptive survey was adopted in generation of quantitative and qualitative data. Descriptive survey design is habitually utilized in collection of information/data on people's attitudes, opinions, habits, social and educational issues (Orodho, 2009). Its suitability was shown through its involvement in collection of information, opinions and habits of all public primary school teachers, deputy head teachers and head teachers in Matungulu Sub-County, Kenya.

3.3 Locale of the Study

Matungulu Sub-County in Machakos County was chosen as the locale of the study since Machakos was one of the counties where piloting of CBC took place. It was therefore assumed that implementation of CBC was better placed in this county than other counties. However, just like other counties the county has been experiencing challenges in CBC implementation such teachers' in adequate training as noted by Muasya, (2019). Therefore, this prompted the researcher to carry out the study in Machakos, County.

3.4 Target Population

Creswell (2012) define population as people in a group who possess characteristics which are similar. All 79 public primary schools in Matungulu were considered since piloting of CBC was done in public primary schools of various categories such as; mixed, single sex, day or boarding schools, therefore, it was important to conduct this research in schools of similar kind. The target population comprised all 941 TSC teachers, 79 deputy head teachers and 79 head teachers. The teachers were chosen for the study since they are the curriculum implementers in the classroom. The deputy head teachers and head teachers were chosen since they are school administrators who oversee the implementation of CBC in schools. TSC teachers were specifically chosen because they are professional teachers who are well versed with the importance of teachers' training for proper implementation of CBC.

3.5 Sampling Procedure and Sample Size

Kothari (2004) define sampling technique as a positive plan of getting a sample from a given population. Random sampling allows participants to have an unbiased chance and equal opportunities' of occurring in the sample. Schools from Matungulu Sub-County were selected using stratified random sampling. 16 schools were chosen for the study which is 20% of the target population. For educational research, a sample size of 10-20% is adequate (Gay, 2003)

Sample size refers to little portions of a specific population which normally represents similar characteristics to that of the larger population (Orodho, 2010). According to Gay (1999), a good representation of a population is slightly an average of a sample size of 20% when dealing with a small population. The researcher through the use of random sampling picked 20% of the target population

which was 188 TSC teachers, 16 deputy head teachers and 16 head teachers to be the respondents in this study. This is represented in table 3.1

Table 3.1: Sample distribution and Target Population of teachers, deputy head teachers and head teachers of 79 public primary schools in Matungulu

Respondents	Population Target	20% of Sample Size
Head teachers	79	16
Deputy Head teachers	79	16
Teachers	941	188
Total	1099	220

Source: Ministry of Education, Matungulu Sub-County, Machakos, County

3.6 Research Instruments

Data collection exercise utilized the following instruments: interviews schedules, observation checklist and questionnaires.

3.6.1 Questionnaires for Deputy Head Teachers and Teachers

Orodho (2006) argue that questionnaires help researchers to collect a relative wide information range in span of time which is brief. They are meant to be a pointer to respondents in a prescribed sequence and they are questions inset form (Mugenda and Mugenda, 1999). Data from teachers and deputy head teachers in this study was collected using questionnaires which had open-ended as well as closed-ended questions. They had a section on personal details and objective related questions. The respondents ticked from a list of choices from the rest of the questions involving a Likert scale. A questionnaire was an appropriate instrument for collection of data in this study because within a short span of time the researcher gathered a large amount of data.

3.6.2 Interview Schedule for Head Teachers

Many people willingly communicate orally and will hence give information more promptly in an interview (Kerlinger, 1973). They are suitable in data collection from a population of a small sample size. Interviews using face-face with the sampled schools' heads was utilized in this study. The researcher asked the interviewee personal and objective related questions and the respondent's words were recorded. The researcher acquired detailed data on the subject by getting in-depth information about personal perceptions, attitudes, opinions and feelings (Muasya, 2019).

3.6.3 Observation Checklist

Questions set and utilized to assess the ampleness of assets accessible in an instructive institution is referred to as an observation checklist. In viewing provision of physical, learning and teaching materials an observation checklist proved necessary. The researcher observed the indicators of CBC implementation in schools. Learners' participation in groups indicated acquisition of communication and collaboration. Critical and problem solving was indicated by application of knowledge and skills in solving problems while creativity and imagination was demonstrated by giving learners creative tasks and displaying their work on classroom walls. The researcher was also able to distinguish asset disparities in order to improve learning resources such as: In adequate classrooms, desks, playground, laboratories, libraries, kitchens, computer rooms and lavatories which are key for effective CBC implementation.

3.7 Pilot Study

Piloting is done to test for researcher's biasness, check ambiguity and ensure good measurement (Kombo and Tromp, 2006). The instruments were piloted in three

schools before carrying out the actual study so as to ensure relevance of the tools. The respondents were three deputy head teachers, three head teachers and nine teachers an accumulation of fifteen respondents. This was done to ensure clarity of content and objectives coverage. The researcher analyzed the results from the piloted schools and made necessary corrections and amendment before establishing the fitness of the tools for study.

3.7.1 Validity of the Instruments

A researcher tool is said to be substantial in measuring the assumed measures (Orodho, 2009). Researcher ensured the instruments of research that is; questionnaires and interview guide covered the content areas that are completely aligned to the objectives of the study with the assistance of the university supervisor whose expert guidance was helpful in improving the instruments' validity.

3.7.2 Reliability of Instruments

The instruments consistency in provision of reliable results is referred to as reliability (Orodho, 2009). To verify the instrument's reliability the application of a test-retest method was used. Questionnaires administration to teachers, deputy head teachers and teaching staff randomly sampled during pilot study. After two weeks, it was re-administered to the same group. In testing the reliability of the instrument, Pearson product-moment correlation formula was put in use to indicate correlation between the two tests. The reliability coefficient obtained was 0.803 which showed that the study was reliable.

3.8 Data Collection Procedure

The procedure of gathering particular information pointed at sealing or negating a few truths is alluded as data collection (Orodho, 2004). An introduction letter was obtained by the researcher from Graduate school, Kenyatta University. National Commission for Science, Technology and Innovation (NACOSTI) research permit was sought. Upon getting permit, consent from both County Educational Officer and County Commissioner, Machakos County was sought to aid researcher in accessing primary schools in Matungulu Sub-County.

Booking appointments with respondents by researcher through the head teachers was done and she administered questionnaires personally to deputy head teacher, teachers and had a face –face interview with the head teachers. The respondents were given a time frame of fifteen minutes to respond to the questions. Each respondent was given an introductory letter which specified the assurance of confidentiality. Respondents were requested to give as much information as possible to enable the researcher to generate a comprehensive and inclusive report. The researcher urged the respondents to complete the questionnaires independently and she collected questionnaires for data analysis upon completion. The respondents were appreciated for accepting to take part in the study by the researcher.

3.9 Data Analysis

Both methods of data analysis which include qualitative and quantitative were used. Regarding accuracy and speed, Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyze questionnaires quantitative data. Its yield was descriptive statistics which includes; the percentage, mean, frequency distribution and standard deviation. Summarized data were reported using: Contingency tables, pie charts, bar graphs and frequency tables.

Qualitative data derived from interview schedule and observation check list were analyzed using discourse analysis, content analysis and framework analysis. Interviewees verbal data were classified, summarized, tabulated and analyzed using analysis of content. Discourse analysis was useful in summarizing verbal information derived from talk or written text obtained from the observation checklist. Framework analysis was used to identify a thematic framework, code, chart, map and interpret all qualitative data systematically.

3.10 Logistical and Ethical Considerations

The researcher before embarking on data collection sought for clearance from Graduate School, Kenyatta University to aid in enabling her in obtaining a permit of research from National Commission for Science, Technology and Innovation (NACOSTI) to conduct her study. The researcher upon getting a research permit, she sought County Director of Education and County Commissioner Machakos County permission to conduct research. After receiving the written authorizations, she requested sampled schools head teachers for permission to hold interviews with them and also allow deputy head teachers and teachers in their school to fill in their questionnaires.

Respondents were individually guaranteed private and anonymous reaction treatment of their response. Awareness was emphasized to the respondents since collected data were meant for academic utilization purpose. The participation with reference to respondents was voluntary since they freely chose to reject or accept to take part in the study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND FINDINGS

4.1 Introduction

A representation of data analysis, interpretation and discussion of study findings is found in this chapter. The study main objective was to investigate teachers' competence and its influence on effective competence-based curriculum implementation in Matungulu sub-county, Kenya. The chapter comprises of six sections. Questionnaire return rate is presented in the section one. Respondents' background information is represented in section two while the other sections outline the study findings arising from the research objectives:

- i. To establish the extent to which teachers have been trained on CBC in Matungulu Sub-County.
- ii. To find out the extent of CBC implementation in various levels such as pre-primary, primary and Junior Secondary School in Matungulu Sub-County
- iii. To establish the constraints facing effective CBC implementation in Matungulu Sub-County.
- iv. To establish the attitude of teachers towards CBC implementation in Matungulu Sub-County.

4.2 Questionnaire Return Rate

To aid in collection of data for the study, questionnaires were administered by the researcher to 188 teachers and 16 deputy head teachers in selected primary schools in Machakos County. The total number of 197 respondents completely filled and returned their questionnaires. They comprised of 14 deputy head teachers and 183 teachers. The questionnaire return rate proportion was equivalent to 93%. Mugenda

and Mugenda (2003) argue that in data collection and reporting the response of 50% is adequate, 60% is rated as good and 70% and above is considered excellent. Interviews were further conducted with 15 head teachers on issues relating to teachers' competence and its influence on effective implementation of CBC in Matungulu Sub-County, Machakos County. The table below represents the questionnaire return rate as indicated.

Table 4.1: Questionnaire Return Rate

Category	Sample	Returned	(%)
Deputy Head Teachers	16	14	88
Teachers	188	183	98
Total	204	197	93

The table 4.1 above represents the response rate for the teachers and deputy head teacher's questionnaires. An indicator which is considered important in determining survey quality in a research is referred to as a response rate (Aday & Cornelius, 2006). To acquire quality survey, a sample which is more than 80% is appropriate (Bram, 2015).

4.3 Respondents Background Information

This section captures information which includes gender of respondents, working experience, age, highest academic qualifications and length of stay in an institution for teachers, deputy head teachers and teachers.

4.3.1 Gender of Respondents Distribution

The researcher in the questionnaires requested the respondents to indicate their gender. Among the 14 deputy head teachers 10 (71%) were male while 4 (29%) were female. Amongst the 183 teachers, 73 (40%) were male and 110 (60%) were female. Study findings established that in the deputy head teacher's position, the males take the higher percentage of (71%) while the females take the smaller percentage of (30%). Most of the classroom teachers were female with the higher percentage of (60%) while the male took the smaller percentage of (40%). The researcher through interviews found out that among the 15 head teachers, 9 (60%) were male and 6 (40.0%) were female. The figure below presents the study findings.

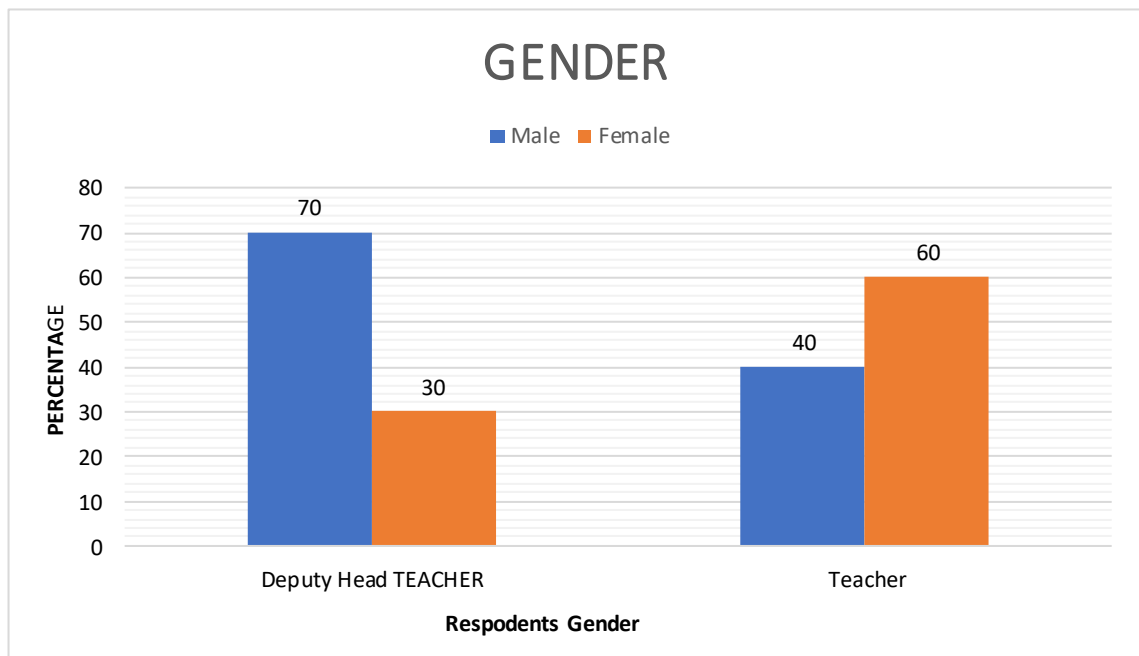


Figure 4.1: Respondents' Gender

Figure 4.1 indicated that majority of the male participants were head teachers together with deputy head teachers while majority of females were classroom

teachers. This shows that males take the higher percentage of leadership position compared to their female counterparts in the position of deputy head teacher.

Despite majority of classroom teachers being female, the male teachers dominate the position of leadership. The pace of CBC implementation may be influenced by gender disparity among the teachers and school leadership. For instance, proper curriculum implementation, employee's professional performance, pupil's quality performance is better managed in schools headed by female head teachers than those headed by male teachers (Growe and Montgomery (2000).

The gender parity for teachers in primary school is key since both genders play important roles in child's early development. The female teachers symbolize provision of love and nurture young learners while strength, security and authority are symbolized by the male teachers (Mynard, 1976). The result findings indicate that Matungulu Sub-County is highly affected by imbalanced gender parity since a large number of learners are not getting the benefit of male teachers. Due to lack of proportional gender parity index in Matungulu Sub-County, most learners do not acquire desired emotional, social and academic development. This shows lack of gender parity achievement in primary schools of public category in Matungulu Sub-County, Kenya.

4.3.2 Teachers and Deputy Head teachers Age Brackets

The administered instruments of research included an item on age in order to link the curriculum implementer's age with their understanding for shift in paradigm to competency-based curriculum from content-based curriculum. This is shown in table 4.2

Table 4.2: Teachers and Deputy Head Teachers Age

AGE (YEARS)	DEPUTY HEAD TEACHER		TEACHER	
	F	%	F	%
20-30	0	0	20	11
31-40	0	0	90	49.2
41-50	8	57.1	50	27.3
51-60	6	42.9	23	13
TOTAL	14	100	183	100

Table 4.2 above indicates that most teachers (49.2%) are in the age bracket of years 31-40 whereas majority of teachers in deputy's position (57.1%) had 41-50years. Research findings reveal that majority of teachers who are handling learners are young. The younger generation has a better chance of preparing learners to meet new challenges and the changing society (Pont, 2015). Through interviews the researcher established that majority of head teachers (66.7%) were aged 51-60 years. The head teachers have more experience and this agrees with Leithwood (2006) argues that experienced head teachers in the practice of physical and human resource management contributed to improved and consisted learners' outcome. In this study, the more experienced head teachers are essential in effective implementation of CBC.

4.3.3 Deputy Head Teachers and Teachers Academic Qualifications

The academic qualifications of teachers and deputy head teachers were sought to find out their impact on effective CBC implementation. The table 4.3 indicates findings of the study.

Table 4.3: Deputy Head Teachers and Teachers Academic Qualification

Respondents' education qualification	Deputy Head Teacher		Teachers	
	F	%	F	%
PhD	0	0	0	0
Masters	2	14.2	2	1.1
Degree	3	21.4	21	11.5
Diploma	6	43	66	36.1
PI	3	21.4	94	51.4
TOTAL	14	100	183	100

The table above 4.3 gave an indication that none of the deputy head teachers in Matungulu Sub-County had PhD qualification, (14.2%) had Masters, (21.4%) had Bachelor of Education degree, (43%) had Diploma and (21.4%) had P1. The teachers' qualifications were: None had PhD, (1.1%) had Masters, (11.5%) had Bachelor of Education degree, (36.1%) had Diploma and (51.4%) had PI. Findings obtained from this study indicated (51.4%) of teachers in public primary schools in Matungulu Sub-County have PI certificate and Diploma with (36.1%). Through head teachers' interviews, the researcher established and none of them had PHD, (20%) showed acquisition of Masters of Education Degree, (21.4%) had Bachelor of Education degree, (40%) had Diploma and (13.3%) had certificates. The ability to impart knowledge to learners depends on the level of teacher's academic qualification. Findings of this study indicated that most teachers have the minimum qualification of P1 certificate necessary for CBC implementation. A good number of head teachers had attained higher education qualification of Masters and Bachelor of Education degree which is important for them to oversee effective implementation of CBC.

4.3.4 Experience of Teaching for Teachers and Deputy Head Teachers

Respondents teaching experience was sought by the researcher to find out from them the period they had taught. It was established (100%) respondents' deputy head teachers taught for more than ten years and none had served for less than 10 years. (54.5%) of the respondents' teachers had taught for more than 10 years, (27.3%) had taught for between (6-10yrs), (18%) had taught for between (1-5yrs) and (2.2%) had taught for less than a year. The study findings showed duration of more than five years for most of the teachers. Through interviews with the head teachers, the researcher established they had been in the profession of teaching for more than 10 years. More experienced teachers are more effective than the less experienced ones (Clot Felter, Ladd and Vigdor, 2006). The respondent's information was reliable according to the researcher consideration. The table below gives a presentation.

Table 4.4: Distribution of Teachers by Experience

Teaching Experience	Deputy Head Teachers		Teachers	
	F	P (100%)	F	P (100%)
Below 1 year	0	0	4	2.2
1-5 years	0	0	33	18
6-10 years	0	0	50	27.3
Above 10 years	14	100	96	54.5
Total	14	100	183	100

4.3.5 Length of Stay in the Institution

The respondents' length of stay in the same institution was sought by the researcher in order to relate their experience to learners' cognitive growth and physical

understanding. The researcher found out that (50%) of the respondent deputy head teachers had stayed in the same institution for more than 10 years, (28.6%) for (6-10yrs), (14.2%) for (1-5 yrs) and (7.1%) for less than a year. The teachers who had served in the same institution for more than 10 years were (69.4%), (19.7%) had stayed for (6-10yrs), (7.7%) had stayed for (1-5yrs) and (3.3%) had stayed for less than a year. This is presented in the table below.

Table 4.5: Length of Stay in the Institution

Length of Stay in The School	Deputy Head Teacher		Teacher	
	F	P (%)	F	P (%)
Less than a year	1	7.1	6	3.3
1-5yrs	2	14.2	14	7.7
6-10yrs	4	28.6	36	19.7
More than 10 years	7	50	127	69.4
Total	14	100	183	100

The table 4.5 above indicates most deputy head teachers and teachers had stayed in same institution for more than 10 years. These teachers prior to proper understanding of the individual learners' ability and physical environment are flexible and are able to adjust themselves according to learners' ability for effective implementation of CBC. The interviews conducted with head teachers indicated that most head teachers had stayed in the same institution for more than 10 years. These study findings agree with Millinger (2018) study that attributes the vast years of teachers experience to the acquisition of essential qualities such as patience, understanding, humour and different learners needs in a class.

4.4 Teacher Competence on Competency Based Curriculum Implementation (Teacher Knowledge, Values and Skills)

The study first objective was to investigate teachers' training for effective CBC implementation in Matungulu Sub-County. The research interest was to find out the following: Extent of training of teachers for CBC, training duration, training frequency and acquisition of core competencies.

4.4.1 Training of Teachers for CBC

The study was aimed at investigating impact of training of teachers to ensure effective CBC implementation. This was measured in terms of attendance to in-service training. The figure 4.2 presents the findings.

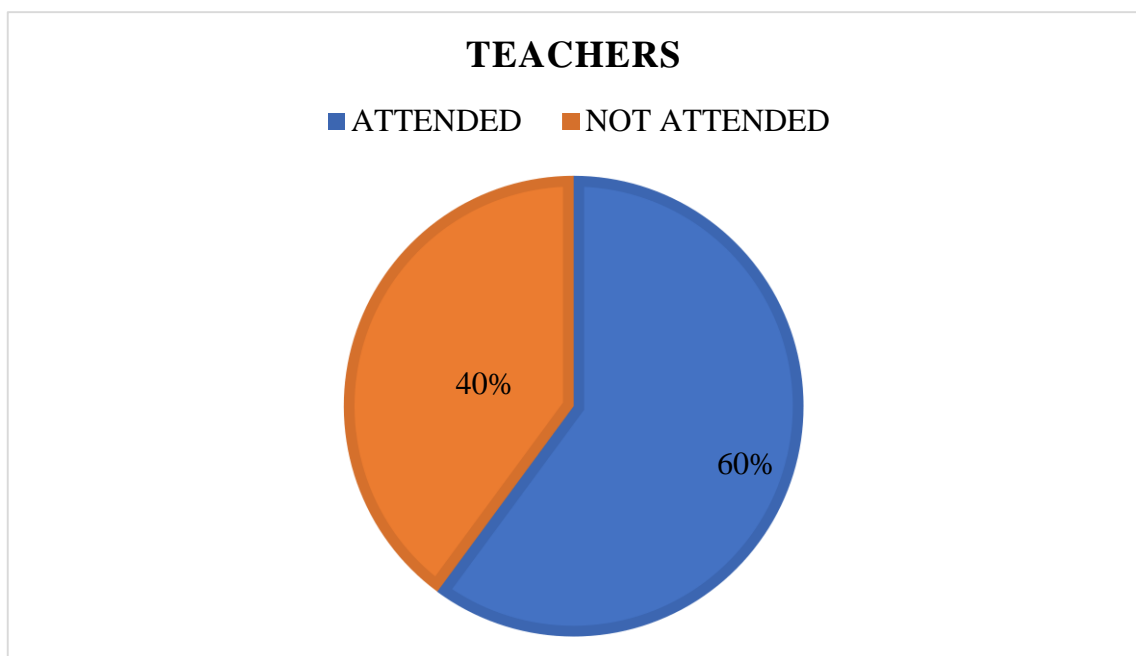


Figure 4.2: Responses of Teachers on In-Service Training Attendance

Figure 4.2 above indicates most teachers attended in-service training, as represented: 60% of teachers attended while 40% did not attend the in-service training. Although the 40% represents a smaller percentage, they should also go through in-service

training to acquire desired competencies for effective implementation of CBC. According to Stronge (2011), there is need for teachers training in order to internalize their role in ensuring learners get an opportunity to develop and realize their potential fully in learning process

4.4.2 Deputy Head teachers' Response on Attendance to In-Service Training

The researcher aimed at investigating the impact of training of teachers for effective CBC implementation. This was measured according to attendance to in-service training. The findings representation is in figure 4.3

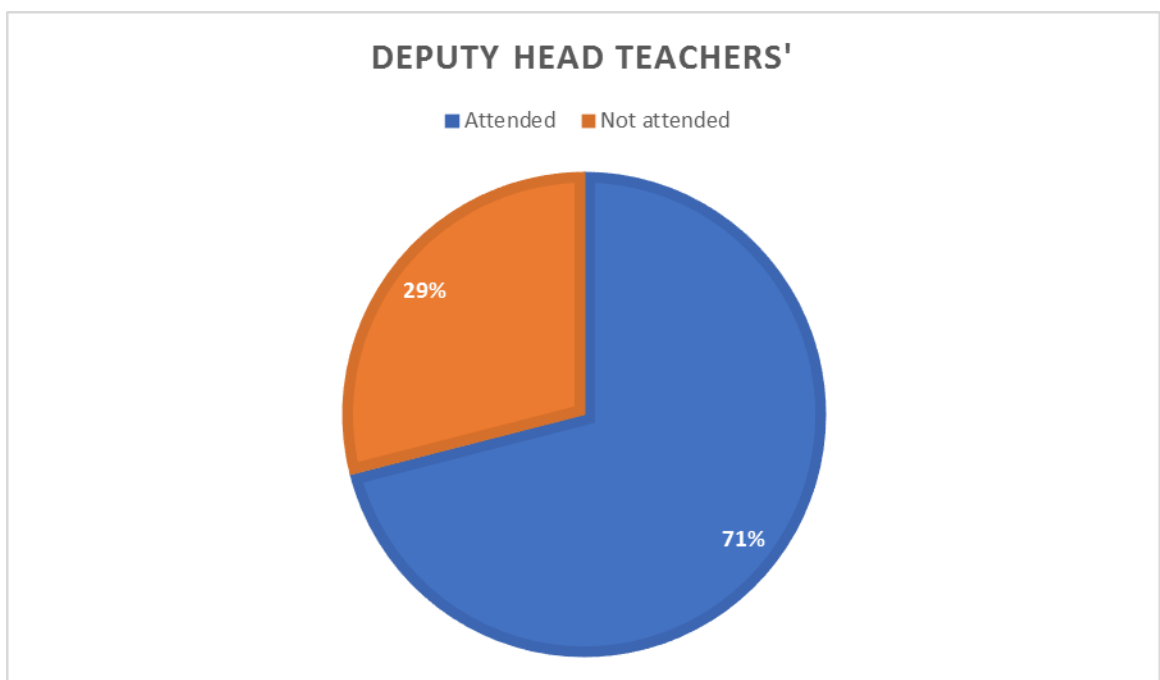


Figure 4.3: Deputy Head Teachers' Response on Attendance to In-Service Training

Figure 4.3 shows the study findings which indicates that 71% of deputy head teachers were present while 29% did not avail themselves for in-service training. For the teaching force to adapt to an evolutionary, complex and responsive approach on education reform, there is need for context knowledge-based economy (Gatt, 2009)

4.4.3 Duration of Training of CBC

The questionnaires had an item on the teachers training duration in order to create an information link on teacher training with the aim of acquisition of teachers' competence for effective CBC implementation. Table 4.6 indicates the findings

Table 4.6: Training Duration on CBC

Duration	Deputy Head teacher		Teacher	
	f	(%)	f	(%)
One week	0	71.4	110	60.1
Two weeks	0	0	0	0

The table 4.6 above shows that 71.4% deputy head teachers and 60.1% teachers attended a one week's training. This representation shows that most teachers and deputy head teachers attended one week's training. The interview schedule for head teachers indicated that 100% attended the one week's training. This duration is insufficient since a competent teacher is key in promoting learner's achievement and they should be adequately trained. A teacher should undergo continuous training for two years in order to acquire the desired competencies that is needed in classroom teaching (Kelly, 2018)

4.4.4 Training of Teachers Frequency on CBC

The researcher focused on finding out the frequency of teacher training in order to establish how often the in-service training had been attended by teachers. This is shown in table 4.7 in the next page.

Table 4.7: Training of Teachers Frequency on Competency Based Curriculum

Training	Deputy Head Teachers'		Teacher	
	F	%	F	%
Termly	0	0	0	0
Yearly	10	71.4	110	60.1

Table 4.7 shows majority of deputy head teachers (71.4%) and teachers (60.1%) attendance was once a year to in-service training in order to acquire desired knowledge on CBC. Therefore, it is necessary for teachers to frequently attend in-service training since acquisition of pedagogical approaches which are learner centered are necessary for the implementation of CBC (Gross, 1971).

4.4.5 Inclusion of Core Competencies during Instructions

The researcher was interested in finding out teachers' extent of ability in inclusion of core competencies during learning and teaching process for effective Competency Based Curriculum implementation. The table 4.8 summarizes the study finding

Table 4.8: Inclusion of Core Competencies in Teaching and Learning Process

Competency	Very Good		Good		Developing		Needs Support	
	f	%	f	%	f	%	f	%
Communication and Collaboration	3	2	4	2	78	43	98	54
Critical thinking and problem solving	5	3	20	11	59	32	99	54
Creativity and Imagination	1	1	2	1	85	46	96	52
Digital Literacy	1	1	13	7	70	38	99	54
Citizenship	9	5	99	54	40	22	35	19
Learning to learn	13	7	95	52	70	38	15	8
Self-Efficacy	17	9	99	54	57	31	10	5

n=183

The table 4.8 indicates different levels of teachers' achievement in core competencies inclusion during instruction. The study findings from the teachers' response established that most learners did not demonstrate core competencies which include: digital literacy, creativity and imagination, critical thinking and problem solving, communication and collaboration. In digital literacy (54%) of learners were in need of support, (38%) developing, (7%) good and (1%) very good. Through the teachers' response, the researcher established that most learners did not demonstrate creativity and imagination in doing assigned tasks since they did not come up with varied unique ways of attempting different activities as represented by (52%) in need of support, (46%) developing, (1%) good and (1%) very good.

According to the teachers' respondents' the learners were not able to apply critical thinking and were unable to solve problems through application of learnt knowledge to solve world problems which affected most them. When faced with difficult situations, most learners could not provide a solution and would therefore seek the teachers' assistance to solve the problem as represented by (54%) in need of support, (32%) developing, (11%) good and (3%) very good. It was also noted by teachers that most learners were not competent in communication and collaboration. Most of them could not express themselves and did not collaborate with their classmates as represented by (54%) in need of support, (43%) developing, (2%) good and (2%) very good. This portrayed the need for teachers support in inclusion of the identified core competencies. The researcher findings through the teachers' response indicated that majority of learners had achieved good response in demonstrating citizenship at (54%), learning to learn at (52%) and self-efficacy at (54%).

4.4.6 Observation Checklist on CBC Implementation

The following indicators of competency-based curriculum were observed by the researcher as shown in the table 4.9

Table 4.9: Observation Checklist

CBC INDICATOR (Competence, teaching and learning resources)	IMPLEMENTED	NOT IMPLEMENTED
Learners' participation in group work and working on problems to get solution (Communication and Collaboration)		
Learners applying learnt knowledge through the use of words to answer questions (Critical thinking& problem solving)		
Display of learners work on classroom walls (Creativity and Imagination)		
Prompt learners' interest with key inquiry questions		
Digital devices use for learning		
Pupil ratio-Teacher Ratio		
Teacher's guide-pupil ratio		
Pupil ratio -Textbook ratio		
Pupil –Classroom ratio		
Lavatory-pupil ratio		
Kitchenette-pupil ratio		
Playground-pupil ratio		

Table 4.9 shows observation checklist from the researcher which indicated that most teachers (97.5%) ensured learners participation in class by grouping them and giving them tasks. This enabled learners in acquisition of key competencies such as

communication and collaboration and problem-solving skills because they were able to interact with their group mates hence, they enhanced team work and acquired leadership skills since each group had a chairperson. Teachers prompted learners' interest in class by use of key inquiry questions which promoted creativity and imagination. There were adequate text books in most schools which enhanced learning in classroom since the textbook-learner ratio was 1:1 and learners could do the task assigned from the textbooks with ease. However, the learners were not engaged in use of digital devices due to their unavailability and this hindered achievement of digital literacy which is one of the key competencies of CBC. The researcher also noted existence of inadequate essential instructional materials such as classrooms, lavatory, kitchenette and play ground. Insufficient instructional materials could delay the implementation of Competency-Based Curriculum. Moshia (2012) study is in agreement with this study since it noted that most schools lack adequate instructional materials which are the major challenges facing the implementation of CBC.

4.5 Extent of Implementation of Competency Based Curriculum

The second objective aimed at establishing the extent into which CBC implementation has been carried out in various levels such as Junior Secondary School (J S S), upper primary, lower primary and pre-primary. A Likert Scale consisting of 4 items was used and it had five items. The range of scale was from 1 to 5 with 5 strongly agree, 4 agree, 3 undecided, 2 disagree and 1 representing strongly disagree. Scores below 3 shows the respondents disagreement with items on the scale while the scores above 3 denoted the respondents' agreement with the scale items. Table 4.10 represents result findings.

Table 4.10: Extent of CBC Implementation

Extent of CBC Implementation	Teachers	
	Mean	Std. Dev
CBC has been well implemented in all levels of primary schools	3.10	.82
The government should do thorough training of teachers to equip them in implementing CBC in primary schools and Junior Secondary School.	4.30	.83
The government should post more teachers for smooth CBC implementation in Junior Secondary School	4.48	.60
The government has the mandate of ensuring availability of adequate resources to actualize CBC implementation in various levels	3.87	1.87

n=183

The table 4.10 above shows the extent of CBC implementation in terms of standard deviations and mean scores. The obtained teachers' mean was ranging from 3.10 to 4.48. The highest statement which was ranked was "government should post more teachers to ensure smooth CBC implementation in Junior Secondary School (4.48). Lowly ranked statement was "CBC has been well implemented in all levels of primary school (3.10)" Through interviews with the head teachers, it was ascertained that most schools sampled, implementation of CBC has been affected by inadequate resources such as inadequate teaching and learning resources, shortage of teachers among others as noted by one head teacher: -

"To actualize effective implementation of CBC, there is need for sufficient teachers' training and provision of adequate learning and teaching resources"

4.6 Constraints which Face Effective Competency Based Curriculum Implementation

This objective focused on identifying constraints faced by teachers when implementing competency-based curriculum. Some of the constraints raised by the respondents were: Inadequate learning and teaching material in reference to teachers guide, textbooks, ICT and audio-visual equipment.

The researcher through the use of observation checklist assessed provision necessary resources and facilities in the sampled schools. The findings showed inadequacy of desks, teachers, textbooks as well as sanitation facilities. This research agrees with Kavindi, 2014 who established several constraints for implementation of CBC: overcrowded classes, insufficient teaching staff and inadequate learning and teaching resources.

Major factors which affect curriculum implementation include uneven distribution of teachers, inadequate teachers' in-service training, understaffing in schools, inadequate learning and teaching facilities and lack of support from the local community and the parents (Kahera, 2010).

This agrees with Nyoni (2018) study that established that the teachers are facing challenges in CBC implementation for instance; lack of learning and teaching resources being the major one.

4.6.1 Teachers' Response on Learning and Teaching Resources Availability

The researcher sought to investigate how learning and teaching resources in public primary schools influenced the effective implementation of CBC. This is indicated

by strongly agree, agree, not sure and disagree. The table 4.11 below shows responses of teachers regarding availability of learning and teaching materials

Table 4.11: Teachers’ Response on Learning and Teaching Resources Availability

Learning and Teaching Resources	Strongly Agree		Agree		Not Sure		Disagree	
	f	%	f	%	f	%	f	%
Text books	54	30	80	44	26	14	24	13
Teachers Guide	50	27	75	41	28	15	30	16
ICT Equipment	-	-	11	6	89	49	93	51
Audio-Visual Equipment	-	-	13	7	70	38	100	55

n=183

The above table 4.11 showed that (30%) of teachers which form the majority strongly agreed that there was availability of textbooks, (44%) agreed while (14%) were undecided and (13%) did not agree. Teachers majorly showed agreed on availability of teacher’s guide (41%), (27%) strongly agreed while (15%) unsure and (16%) did not agree. On the contrary, majority of teachers disagreed on the availability of ICT equipment, (51%) disagreed, (49%) were not sure while (6%) agreed and none strongly agreed. Most teachers (55%) disagreed on availability of Audio-Visual equipment, (49%) were not sure and only (9%) agreed on its availability. The availability adequacy of learning and teaching resources has a direct relevance to quality of education (Bett, 2006). Based on the study findings, the schools in Matungulu Sub-County have available teaching and learning resources in terms of teacher guides and textbooks. However, the schools had

inadequate ICT and Audio-Visual equipment which are key in ensuring effective implementation of CBC.

4.6.2 Deputy Head Teachers' Response on Availability of Learning and Teaching Resources

The researchers sought to establish resources availability for learning and teaching process. Respondents rated resources availability by; available and adequate (A&A), available but in adequate (A&IA) and not available {N/A} .This is represented in table 4.12

Table 4.12: Deputy Head Teachers' Response on Availability of Learning and Teaching Resources

Learning and teaching resources	A & A		A & IA		N/A	
	F	%	F	%	F	%
Text books	7	50	5	36	2	14
Teachers guide	6	43	7	50	1	7
ICT equipment	-	-	5	36	9	64
Audio-visual equipment	-	-	6	43	8	57
n=14						

From the above table 4.12, the availability of resources in schools of public primary category in Matungulu Sub-County, majority of deputy head teachers (50%) showed available and adequate textbooks in their schools, (36%) indicate available but not adequate and (14%) indicated not adequate. The availability of teacher's guide in the schools was rated at (43%) adequate and available, (50%) indicated available but

inadequate and (7%) indicated not available. On the availability of ICT equipment, the result findings indicated that (64%) were not available, (36%) showed available but inadequate while none had adequate and available. On the availability of Audio-Visual equipment, (53%) indicated not available, (43%) showed available but inadequate while none indicated adequate and available. This clearly indicates that most schools in Matungulu Sub-County have insufficient ICT and Audio-Visual equipment. Lack of adequate resources hinders the teachers' effectiveness in use of appropriate instructional approaches (Orodho, 2006)

4.6.3 Deputy Head Teachers' Response on Staffing and Infrastructure

The researcher sought to establish how the availability and adequate staff and infrastructure influenced the effective implementation of CBC in Matungulu Sub-County. The responses were recorded using the ratings: Available and adequate (A & A), available and inadequate (A & IA) and not available (N/A). This is as indicated in the table 4.13

Table 4.13: Deputy Head Teachers' Response on Staffing and Infrastructure

Staffing & Infrastructure	A&A		A& IA		N/A	
	F	%	F	%	F	%
Teachers	4	29	6	43	4	29
Classes	3	21	7	50	4	29
Lavatories	2	14	9	64	3	21
Computer rooms	1	7	5	35	9	64
Laboratories	2	14	7	50	5	36
Kitchenettes	1	7	4	29	9	64
n=14						

The table above 4.13 indicates that in schools in Matungulu Sub-County (29%) of teachers were available and adequate, (43%) were available but inadequate and (29%) were not available. In regard to classes, it was rated (21%) available and adequate, 50% available and inadequate and 29% not adequate. The lavatories in schools were rated (14%) adequate and available, (64%) inadequate but available and (21%) in adequate. The rooms for computer were rated (7%) available and adequate, (35%) available and inadequate and (64%) not available. The laboratories were rated at (14%) available and adequate, (50%) available and inadequate and (36%) not available. The kitchenettes were rated (7%) available and adequate, (29%) available and inadequate and (64%) not available.

For effective implementation of CBC there is need to equip schools with adequate infrastructure in schools in Matungulu Sub-County, Machakos County.

4.6.4 Ratio of Teacher-Pupil on Effective CBC Implementation

Through observation, an investigation on teacher- pupil ratio as one of the many challenges facing effective CBC implementation was done by the researcher. The researcher noted that overcrowded classes which result from high enrolment due to free primary education was affecting learning and teaching process since the teacher is not able to meet individual learners' needs. This is shown in the table below.

Table 4.14: Ratio of Teacher -Pupil on Effective CBC Implementation

Teacher-pupil ratio	F	%
1:100	3	19
1:80	8	50
1:60	4	25
1:40	1	6
1:20	0	0
TOTAL	16	100

The table 4.14 above gives an indication of most schools 50% revealed a high teacher-pupil ratio which is 1: 80 and above. The Ministry of Education requirement is one teacher to 35-40 pupils in a class. Study findings indicated many pupils in a class as opposed to Ministry of Education expectation. This makes it difficult to implement the learner centered approach since the teacher is not able to access all learners. This will lead to ineffective curriculum implementation since there will be limited teaching and learning resources and teachers will face challenges in curbing pupil indiscipline because of the large number (Krener, Mouins, Namuyu & Myathh, 1977)

4.7 Teachers' Attitude towards CBC Implementation

The study fourth objective was aimed at establishing attitude of teachers towards the effective CBC implementation. According to Porter (2015), successful curriculum implementation is entirely depended on the teachers' attitudes. Respondents' responses are summarized as shown in table below and it shows responses of teachers on their attitude towards CBC which indicates whether they agree or disagree with scale items. The range of scale was from 1 to 5 with 5 Strongly agree, 4 agree, 3 Undecided ,2 disagree and 1 representing Strongly disagree. Midpoint of the scale was a score 3. Therefore, below 3 scores denoted disagreement of respondents with scale item while score above 3 signified that respondent's agreement with scale item. Table 4.15 represents the findings

Table 4.15: Teachers Attitude towards CBC Implementation

ATTITUDES	Mean	Std. Dev
My attitude toward the implementation of CBC is positive	3.36	1.36
I embrace CBC implementation in teaching and learning process	3.11	.83
My teaching skills will improve as a result of implementing CBC	2.70	1.37
Teachers have challenges in implementation of CBC	3.86	1.88
Teachers need more training on implementation of CBC	4.28	.83
The Kenya's Education System from content-based curriculum (8.4.4) to CBC (2-6-3-3-3) is not necessary	2.53	1.31
Teachers' workload as a result of CBC will increase due to the need for individual learner designed programs which are appropriate to Achievement	4.27	.77
To change from content-based curriculum (8.4.4) to CBC (2.6.3.3) there is need for highly competent teachers	4.12	1.03
Teachers and learners should have a common cultural background for proper CBC implementation.	4.47	.60
CBC will develop more fulfilled human beings than the content -based curriculum	3.37	1.98
Independent learners will be developed through CBC	3.98	1.61

n=183

Table 4.15 above shows that the teachers' mean score ranged between 2.53 to 4.47. Statements which were highly ranked from teachers stated "teachers and learners should have a common cultural background for proper CBC implementation (4.47)" and "teachers need more training on implementation of CBC (4.28)." "No existence of need to change System of Education in Kenya to CBC (2.6.3.3.3)" from Content-Based Curriculum (8.4.4) represented by (2.53) is lowly ranked statement by the teachers and "my teaching skills will improve as a result of implementing CBC

(2.7)”. Positive attitude towards CBC implementation was indicated by most teachers. However, there is agreement among teachers that CBC will increase the teachers work load since individual learner’s achievement are supposed to have appropriate designed programs.

Interviews were further conducted with the head teachers on teachers ’attitude towards implementation of CBC. Majority of head teachers’ response were:

“Most teachers attitude towards CBC implementation is portrayed as positive and majority of them are trying their level best to implement it effectively”

It was also noted that there existed a negative attitude of teachers regarding implementation of CBC which was quoted from one head teacher: -

“The change to CBC from content-based curriculum (8.4.4) is faced by the challenge of teachers’ rigidity to change and this shows the need for teachers’ change of attitude to embrace the new curriculum.

This study is in agreement with Muasya, (2019) study which stated that there is need for teachers’ positive change of attitude for proper implementation of competency-based curriculum.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A summary of the findings of the study, conclusions and recommendations are made in this chapter. Further research areas have been discussed.

5.2 Summary of Findings

The findings of the study were aimed at establishing teachers' competence for effective CBC implementation in Matungulu Sub-County, Machakos County, Kenya. The respondents of study comprised of 183 teachers, 14 deputy head teachers and 15 head teachers. In the respondents' representation, the head teachers who were male were (60%) whereas 40% comprised of female and deputy head teachers were (71%) male while (29%) female. Among the teachers' respondents, the male consisted of (40%) while the female comprised of (60%). The study findings indicated most head teachers and deputy head teachers were male while majority of the teachers were female. In reference to academic qualifications, the head teachers had attained higher education qualifications in comparison with the teachers. Most teachers had P1a and diploma qualifications whereas majority head teachers had Bachelor of Education and Master's degree. These are the study findings.

5.2.1 Teacher training in CBC Implementation

The study was aimed at establishing the extent teachers' training for effective CBC implementation in Matungulu Sub-County. Researcher's findings found out that (60%) of teachers, (71%) deputy head teachers and (100%) of head teachers attended in-service training. However, the data analysis results showed the need for

teachers' support in inclusion of digital literacy, communication and collaboration, creativity and imagination and critical thinking and problem solving. The researcher observed that majority of the learners faced difficulties in expressing themselves in both English and Swahili language. Most of them could not demonstrate new and unique methods of displaying results and applying the acquired knowledge in different context.

The findings of the study showed head teachers' high attendance to in-service training. This indicated that most head teachers were conversant with CBC implementation. Being the institutional managers, the head teachers ought to be well equipped with adequate knowledge of CBC to ensure smooth implementation of the curriculum in their schools. Gross (1971), Curriculum Implementation Theory is in agreement with this study since emphasis on implementer's capacity significance in CBC implementation. Although most teachers had been trained, (40%) of them did not attend the in-service training which is key for effective CBC implementation. Therefore, in-service training of teachers is key for successful implementation of CBC.

5.2.2 Extent of Implementation of Competency Based Curriculum

The aim of the objective was to establish extent of CBC implementation in various levels of primary school. The findings of the study indicated the need for government to ensure provision of adequate resources for its effective implementation to cater for the constraint of inadequate learning and teaching materials. Most of them saw the need for posting of teachers in primary schools in order to ensure smooth transition to Junior Secondary from primary School. Moreover, they emphasized on the importance of teachers training which is key for

effective CBC implementation. However, the head teachers through the interviews noted that in most schools CBC is not well implemented due to various factors such as inadequate teachers training, inadequate resources and teacher shortage.

5.2.3 Constraints facing Effective Competency Based Curriculum Implementation

This objective was aimed at establishing the constraints facing the effective implementation of CBC. Findings of the study established lack of adequate learning and teaching resources needed for effective competency-based curriculum implementation in the schools sampled. Although most schools indicated availability of textbooks and teachers guide, they faced some challenges which included: large number of pupils in classes, inadequate teachers, insufficient ICT and Audio-Visual equipment. In agreement with the study findings, the head teachers identified challenges such as understaffing which result from high pupil enrolment due to free primary education. Furthermore, the learning and teaching resources available in the schools did not meet the need of pupils due to inadequacy. Through observation, the researcher noted that there was lack of enough classes, lavatories, kitchenettes and playground to cater for the increased pupil enrolment due to free primary education introduction. Adequate learning and teaching materials availability are necessary for CBC successful implementation.

5.2.4 Teacher Attitude towards Competency Based Curriculum Implementation

This objective was aimed at establishing attitude of public primary school teachers towards effective competency-based curriculum implementation in Matungulu Sub-County. Positive attitude towards CBC was identified in majority of them but some

faced challenges in its implementation. Majority of them agreed that CBC will develop a more fulfilled human being than the content-based curriculum (8.4.4). However, majority of teachers were worried of CBC likelihood of increasing their work load since appropriate individual learner's achievement depended on designed programs. Moreover, most teachers did not embrace CBC methodology in teaching and learning process.

5.3 Conclusion

Based on the study findings, the following conclusions were made:

- i. Although majority of teachers have received in-service training; they have made efforts to implement: Creativity and Imagination, Communication and Collaboration and Critical thinking and problem solving, but it was not sufficient for effective CBC implementation.
- ii. The researcher established that ICT and Audio-Visual equipment were not adequate for CBC effective implementation. The study findings indicate enough learning as well as teaching resources in public primary schools such as teacher's guide and textbook but lacked Audio-Visual and ICT equipment.
- iii. Teachers due to insufficient training found it difficult to meet individual learner's needs. This indicated teachers' rigidity to change to competency-based curriculum from content- based curriculum. There is need for teacher training since teachers are the key curriculum implementers and they need acquisition of desired skill for the new curriculum implementation.
- iv. Infrastructure limitation hindered successful competency-based curriculum implementation since schools were faced with inadequate teaching and

learning materials such as ICT and Audio-Visual equipment necessary for effective CBC implementation.

5.4 Recommendations of the Study

These are recommendations for the study:

- i. More in-service training of teachers should be organized by the Ministry of Education through KICD for effective CBC implementation.
- ii. MOE should aim at ensuring learning and teaching resources such as textbooks, teachers guide books, Audio-Visual and ICT equipment are available and adequate.
- iii. TSC should employ more teachers to cater for high teacher-pupil ratio as a result of high enrolment due to free primary education.
- iv. To meet the demand of the increased enrolment rates in public primary schools, more classrooms should be built by the government for effective implementation of CBC.

5.5 Further studies suggestions

The suggestions given are for research further studies:

- i. A study of similar nature should be conducted in other regions on teachers' competence and its influence on effective Competency Based Curriculum implementation in Kenya for comparison of findings.
- ii. Private primary schools should also carry the same study on teachers' competence and its influence on effective Competency Based Curriculum implementation.

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APPENDICES

APPENDIX A: LETTER OF INTRODUCTION

Department of Educational Management Policy and Curriculum Studies

Kenyatta University

P.O Box 43844

Nairobi.

Dear Sir/Madam,

Ref: Introduction Letter

I am Mary K. Mutua a Masters student from Kenyatta University conducting a research on “Influence of teachers’ competence on effective CBC implementation in Matungulu sub-county.

Your institution has been selected to participate and you are one of the respondents. The identity of the respondent will remain confidential and findings will be used only for academic purpose. I will be grateful for your assistance. Thank you for your cooperation.

Yours faithfully,

Mutua Mary Kalunde.

APPENDIX B: TEACHERS' QUESTIONNAIRE

The questionnaire purpose is for collection of information regarding teachers' competence influence on effective competence-based curriculum implementation. Information given is confidential. Kindly give an honest response to the questions asked.

RESPONDENTS BACKGROUND INFORMATION

(Tick one)

1. Gender: Female Male
2. Indicate your age bracket?
51-60yrs 41-50rs
31-40yrs 20-30yrs
3. Your highest level of your qualification? Please tick appropriately.
PHD Masters
Degree Diploma
Certificate
4. What is the length of your teaching profession?
1-5years 6-10 years
Less than a year Morethan10years
5. Your length of stay in this school?
1-5years 6-10years
More than 10years Less than a year

SECTIONB: TEACHER COMPETENCE (TEACHER SKILLS AND KNOWLEDGE)

Please tick appropriately.

1. Did you attend any in-service training on CBC?
No Yes
2. If yes, what was training duration?
Three weeks Two weeks
One week

3. How many times was the training conducted?

Termly

Yearly

4. To what extent did you infuse the following core competencies appropriately?

Core Competency	Very Good	Good	Developing	Needs support
Digital literacy				
Self-efficacy				
Creativity and imagination				
Citizenship				
Communication and collaboration				
Learning to learn				
Critical thinking and problem solving				

SECTION C: EXTENT OF CBC IMPLEMENTATION

Representation of table below indicates a number of statements on CBC implementation. Kindly indicate the extent of your agreement or disagreement with statements given. Refer to the scale given. (SD-strongly Disagree, D-disagree, U-Undecided, SA-strongly agree, A-agree)

(Please tick one)

Extent of CBC Implementation	SA	A	U	D	SD
CBC has been well implemented in all levels of primary Schools					
There is need for the government for equipping teachers with adequate skills needed CBC implementation					
The government should post more teachers to ensure smooth CBC implementation in Junior Secondary					
Government should ensure availability of adequate resources to actualize CBC implementation in various levels					

SECTION D: TO DETERMINE THE ATTITUDES OF TEACHERSTOWARDS CBC

The below table. Use the scale below to respond. (SD-strongly Disagree, D-disagree U-Undecided, SA-strongly agree, A-agree **(Please tick one)**)

ATTITUDES	SA	A	U	D	SD
I portray a positive attitude toward the implementation of CBC					
I embrace CBC implementation in learning and teaching process					
My skills in teaching will improve as a result of implementing CBC					
Teachers have challenges in implementation of CBC					
Teachers need more training on implementation of CBC					
Changing the Education System of Kenya from content-based curriculum (8.4.4) to CBC (2-6-3-3) is not needed					
CBC will increase teacher's workload to aid in designing programs which suitable for individual learner Achievement					
To change from content-based curriculum (8.4.4) to CBC (2.6.6.3) there is need for highly competent teachers					
Teachers and learners should have a common cultural background for proper CBC implementation.					
CBC will develop more fulfilled human beings than the content -based curriculum					
Independent learners will be developed through CBC					

SECTIOND: CONSTRAINTS EXPERIENCED.

Comment learning and teaching materials availability. (Use Strongly Disagree (SD), Disagree (D)), Strongly Agree (SA), Agree (A) Please tick

RESOURCES	SA	A	D	SD
ICT Equipment				
Textbooks				
Teachers' guide				
Audio-Visual equipment				

APPENDIX C: DEPUTY HEAD TEACHERS' QUESTIONNAIRE

INTRODUCTION

The study is carrying out an investigation on teachers' competence and its influence on effective implementation of CBC in Matungulu, Machakos. Request by use of a questionnaire form the basis of experience. The information given is confidential. Kindly give an honest response to the questions asked.

SECTION A: DEMOGRAPHIC INFORMATION (Please tick one)

1. Indicate your gender?

Female Male

2. What is the length of service in this as school Deputy Head?

Above 20yrs 16-20yrs

11-15yrs 6-10yrs

1-5yrs

3. What is your highest qualification?

PhD holder Master's Degree

Bachelor Degree Diploma

4. Teaching experience?

1-5 yrs 6-10yrs

11-15yrs 15- 20yrs

SECTION B: TEACHER COMPETENCE (KNOWLEDGE & SKILLS)

(Please tick \surd One)

1. Have you attended CBC training?

Yes No

2. How many times?

Once Twice

Thrice

3. In my view, the training is adequate?

Yes No

If no, give a reason

4. What percentages of teachers in your school have attended CBC training?

100% [] Above 50% []

Below 50% []

5. What is the rate of teachers' attendance to in- service training?

Below average [] Average []

Above Average []

6. Teachers in my school *are* adequately prepared to handle competency-based curriculum implementation

Strongly [] Agree []

Disagree []

Strongly Disagree []

7. Teachers in my school competency-based curriculum implementation is well done

Strongly Disagree [] Disagree []

Agree [] Strongly agree []

SECTIONC: CONSTRAINTS FOR IMPLEMENTATION OF CBC

1. Comment on the availability of the following: Available and adequate (AA), available but in adequate (AIA), not available (NA)

(Please tick one)

REQUIREMENTS (LEARNING RESOURCES)	A&A	A&IA	N/A
Textbooks			
Teachers guide			
ICT equipment			
Audio-Visual			

2. I have technological skills for implementation of CBC (Please tick)

Strongly Disagree [] Disagree []
 Agree [] Strongly agree []

STAFFING			
Well-staffed			
Under-staffed			
INFRASTRATURE			
Classes			
Lavatories			
Computer rooms			
Laboratories			
Kitchenette			

SECTIOND: ATTITUDE OF TEACHERS TOWARDS CBC

(Please tick \surd one)

1. Rate your CBC perception?

Excellent [] Good []
 Fair []

2. I feel motivated in performing my duties in line with CBC

No [] Yes []

If no, identify reasons for lack of motivation.....

APPENDIX D: INTERVIEW SCHEDULE FOR HEAD TEACHERS

This study is carrying out an investigation on teachers' competence and its influence on effective implementation of CBC, Machakos County. Based on experience, respond to the items in reference to the interviews. The information given is confidential. Kindly give an honest response to the questions asked.

1. What is your age?
2. Indicate your gender?
3. Identify your highest level of education?
4. What is your length of stay in the teaching profession?
5. How long have you been the head teachers in the institution?
6. Have you received training on CBC?
 - a) How many sessions did you attend?
 - b) In your view, was the training adequate?
 - c) If not, why?
7.
 - a) What percentage of teachers in your school have received training relating to Implementation of CBC?
 - b) How many sessions did they attend?
 - c) In your view, was the training adequate?
 - d) If not, why?
8. Has the ministry given your school necessary resources for effective CBC implementation?
9. Kindly identify the resources given to your school for effective CBC implementation?
10. Are there resources enough to ensure effective CBC implementation in your school?
11. What is the extent regarding CBC implementation in your school?
12. What are teachers' attitudes towards the implementation of CBC?
13. How do these attitudes influence effective implementation of CBC?
14. Are there constraints experienced in implementation of CBC in your school?
15. Kindly give examples of these constraints.

APPENDIX E: OBSERVATION CHECKLIST ON CBC

IMPLEMENTATION

Comment on whether the following are implemented or not implemented. (✓Tick appropriately)

CBC INDICATOR (Competence, teaching and learning resources)	IMPLEMENTED	NOT IMPLEMENTED
Learners' participation in group work and working on problems to get solution (Communication and Collaboration)		
Learners applying learnt knowledge through the use of words to answer questions (Critical thinking & problem solving)		
Display of learners work on classroom walls (Creativity and Imagination)		
Prompt learners' interest with key inquiry questions		
Digital devices use for learning		
Pupil ratio-Teacher Ratio		
Teacher's guide-pupil ratio		
Pupil ratio -Textbook ratio		
Pupil –Classroom ratio		
Lavatory-pupil ratio		
Kitchenette-pupil ratio		
Playground-pupil ratio		

**APPENDIX F: APPROVAL OF RESEARCH LETTER FROM KENYATTA
UNIVERSITY**



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA

Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 17th October, 2022

TO: Mutua Mary Kalunde
C/o Educational Management Policy
& Curriculum Studies Dept.

REF: E55/CE/28915/2015

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 14th September, 2022 entitled "Teachers Competence and Its Influence on Effective Implementation of Competency Base Curriculum in Public Primary School Sin Machakos County, Kenya".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

ELIJAH MUTUA
FOR: DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Educational Management, Policy and Curriculum Studies

Supervisors:

1. Dr. Samuel N. Waweru
C/o Department of Educational Management
Policy and Curriculum Studies,
Kenyatta University

EM/Inn

**APPENDIX G: RESEARCH AUTHORIZATION FROM KENYATTA
UNIVERSITY**



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Website: www.ku.ac.ke

Our Ref: E55/CE/28915/2015

DATE: 17th October, 2022

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MUTUA MARY KALUNDE – REG. NO. E55/CE/28915/2015.

I write to introduce Mutua Mary Kalunde who is a Postgraduate Student of this University. The student is registered for M.Ed degree programme in the Department of Educational Management, Policy and Curriculum Studies.

Mutua intends to conduct research for a M.Ed Project Proposal entitled, "Teachers Competence and Its Influence on Effective Implementation of Competency Base Curriculum in Public Primary School Sin Machakos County, Kenya".

Any assistance given will be highly appreciated.


Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Elishiba Kimani'.

f PROF. ELISHIBA KIMANI
AG. DEAN, GRADUATE SCHOOL

Em/Im

**APPENDIX H: RESEARCH AUTHORIZATION COUNTY DIRECTOR
MACHAKOS COUNTY**


REPUBLIC OF KENYA
MINISTRY OF EDUCATION
State Department of Early Learning and Basic Education

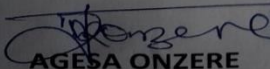
Telegrams: "SCHOOLING" Machakos
Telephone: Machakos
Fax: Machakos
Email – cdemachakos@yahoo.com
When replying please quote

OFFICE OF THE
COUNTY DIRECTOR OF EDUCATION
EDUCATION
P. O. BOX 2666 – 90100
MACHAKOS


MKS/ED/CDE/R/4/VOL.4/2 **Date: 7th November, 2022**

Ms. Mary Kalunde Mutua
Kenyatta University

RE: RESEARCH AUTHORIZATION
Reference is made to the letter from National Commission for Science,
Technology and Innovation Ref: **NACOSTI/P/22/21445** dated
1st November, 2022. You are hereby authorized to carry out your
research on **"Teachers' Competence and its influence on effective
implementation of competency-based curriculum in public
primary schools in Machakos County, Kenya"** for a period ending
1st November, 2023.


FOR COUNTY DIRECTOR
OF EDUCATION - MACHAKOS
Date: _____
MINISTRY OF EDUCATION
cdemachakos@yahoo.com

AGESA ONZERE
FOR: COUNTY DIRECTOR OF EDUCATION
MACHAKOS



**APPENDIX I: RESEARCH AUTHORIZATION FROM COUNTY
COMMISSIONER MACHAKOS COUNTY**



**OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT**

Telephone: 21009 and 21983 – 90100
Email Address: cc.machakos@interior.go.ke
Fax No. 044-21999
When replying please quote

OFFICE OF THE COUNTY COMMISSIONER
P.O. BOX 1 – 90100
MACHAKOS

REF: CC/ST/ ADM 5/9 VOL. IV /108

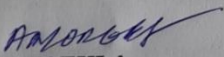
7th November, 2022

All Deputy County Commissioners
MACHAKOS COUNTY






RE: RESEARCH AUTHORIZATION – MS. MARY KALUNDE MUTUA

The National Commission for Science, Technology and Innovation has authorized the above named student to carry out a research on **“Teachers’ Competence and its Influence on Effective Implementation of Competency – Based Curriculum in Public Primary Schools”** in Machakos County for the period ending **1st November, 2023**.

Please be notified and accord her the necessary assistance.


**A.N. WAFULA
FOR: COUNTY COMMISSIONER
MACHAKOS COUNTY**

APPENDIX J: RESEARCH PERMIT

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 666835	Date of Issue: 01/November/2022
RESEARCH LICENSE	
	
<p>This is to Certify that Ms. Mary Kalunde Mutua of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Machakos on the topic: TEACHERS' COMPETENCE AND ITS INFLUENCE ON EFFECTIVE IMPLEMENTATION OF COMPETENCY-BASED CURRICULUM IN PUBLIC PRIMARY SCHOOLS IN MACHAKOS COUNTY, KENYA for the period ending : 01/November/2023.</p>	
License No: NACOSTI/P/22/21445	
666835	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code
	
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	
See overleaf for conditions	