ASSESSMENT OF FACTORS INFLUENCING THE IMPLEMENTATION OF COMPETENCY BASED CURRICULUM PROGRAMME IN PUBLIC PRIMARY SCHOOLS IN YATTA SUB-COUNTY, MACHAKOS COUNTY, KENYA

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DECLARATION

This thesis report is my original work, and it has not been presented for award of degree or diploma in this or any other university.

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This Research has been conducted under our supervision and is submitted with our approval as University supervisors.

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DEDICATION

This Research is dedicated to my wife Jane Mutindi, my children Eric Mumo and Maryann Ndindi for their great encouragement to pursue higher education.

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LIST OF ABBREVIATIONS AND ACRONYMS

CATS - Continuous Assessment Tests

CBC - Competency-Based Curriculum

CBE - Competency-Based Education

EAC - East African Community

ECDE - Early Childhood Development and Education

EFA - Education for All

ESSPIN - Education Sector Support Programme in Nigeria

GoK - Government of Kenya

H_0 - Hypothesis

ICT- Knowledge and Communications Technology

INSET - In-Service Education and Training

KCPE - Kenya Certificate of Primary Education

KICD= Kenya Institute of Curriculum Development

NESP - National Education Sector Plan

NESSP - National Education Sector Support Programme

PIS - Program for International Student Assessment

SPSS - Statistical Package for Social Sciences

TSC - Teacher Service Commission

UBE - Universal Basic Education

UNESCO - United Nations Education Scientific and Cultural Organization

UPE - Universal Primary Education

ABSTRACT

The Competency-Based Curriculum (CBC) is a framework that focuses more on what the learner is supposed to do rather than what to know. The introduction of CBC informed the change of education system from 8-4-4 to 2-6-3-3. As noted by different scholars, several factors influenced an effective transition from 8-4-4 to CBC. The study assessed factors influencing the implementation of the Competency-Based Curriculum in public primary schools in Kenya. The research was guided by the following objectives: to assess the influence of teacher development programs on CBC implementation, to assess learning resource availability on CBC implementation, and to evaluate teachers' perceptions on CBC implementation in Yatta Sub-County. Literature was reviewed based on these objectives. The study was anchored in the tenets of Constructivism theory and adopted a descriptive survey research design. Data was collected from teachers and head teachers within a target population of 863, comprising 760 teachers and 103 head teachers employed by the TSC in 103 public schools. A sample size of 273 respondents was determined using Fisher's formula. Data collection tools included questionnaires for head teachers and teachers. A pilot exercise was conducted in three schools outside the sample area ensured validity and reliability through test-retest procedures and expert guidance. Data was analyzed using descriptive and inferential statistics, with frequencies, means, and standard deviations summarizing data, while multiple regression analysis tested hypotheses. Findings were presented in figures and tables, organized by themes derived from the objectives. The study revealed that teachers possessed basic CBC knowledge (M= 3.23, SD= 25.05) and attended training (M= 4.05, SD= 4.64), but gaps in digital literacy (M= 2.20, SD= 52.73) and learner assessment techniques (M= 2.82, SD= 28.83) were evident. Essential resources like textbooks (M= 4.06, SD= 1.15) and teaching aids (M= 4.06, SD= 0.97) were generally adequate, though shortages in reference books (M= 2.50, SD=1.22) and ICT integration (M= 3.79, SD= 1.03) posed challenges, especially in rural areas. Teachers expressed mixed perceptions about transitioning to CBC (M= 2.27, SD= 1.19), acknowledging its potential economic benefits (M= 3.52, SD= 0.97) and inclusivity (M= 3.52, SD= 0.92) while highlighting increased workloads (M= 4.07, SD= 0.91) and skepticism about fostering lifelong learning (M= 3.04, SD= 1.07). The findings underscored the need for enhanced ICT training, resource allocation, and professional development for teachers. The study recommends that the Ministry of Education implement regular training programs on digital literacy, ICT integration, and assessment techniques, while ensuring equitable distribution of resources, especially in rural areas. Education stakeholders should establish continuous professional development frameworks to support teachers' adaptation to CBC. School administrators should provide resources to manage workloads from individualized learning programs.

OPERATIONAL DEFINITION OF TERMS

Belief: Trust, faith or confidence in something.

Competency: Refers to the capabilities needed to act in particular contexts, including cognitive skills, knowledge, attitudes, values, and practical skills and motivation needed to perform a given task**.**

Competency-based curriculum: Refers to a program of study which places emphasis on equipping learners with knowledge, skills and attitudes to be applied by learners and not merely what students are expected to learn about**.**

Competency-based education: Refers to a system of teaching, assessment, and grading whose main focus is ensuring learners demonstrate that they have gained the intended knowledge and skills in the course of their interaction with the schooling process.

Constraints: Refers to any factors that limit or restrict the success of schools in implementing the competency based curriculum.

Curriculum implementation: Refers to the phase of the curriculum process in which the student, under the guidance of a teacher, engages in learning activities that maximize learning with a view to develop, in the learner, new behavior or new approach to issues.

Curriculum: Refers to all the learning which is planned and guided by the school, whether such learning takes place in group or individual settings, and whether the learning takes place outside or inside the school**.**

Learning Resources: Materials that faculty use to assist students in meeting the expectations for learning defined by the Curriculum.

Teacher's professional development: Induction programs carried out on effective implementation of the CBC framework and designs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Competency-Based Curriculum (CBC) will allow students to learn at their own pace where they will be able to achieve their competence of practice at disciplines within their fields of expertise (Gruber, 2018). Gold standard in education the competency-based education is based on quantifiable outcomes, and the standards in education are determined by the ability to prove the level of competence instead of meeting the expected time frames (KICD, 2016). Among CBC's advantages are increased learner engagement, personalized instruction tailored to diverse learning styles, and fostering lifelong learning across formal and unofficial settings (Menéndez & Morales-Menéndez, 2016; Amutabi & Oketch, 2009).

In the United States, CBE has been utilized since the 1980s, although its origins trace back to the 1920s, linked to reform ideas inspired by business models (Williamson, 2000). The CBE model operates on principles such as competency-based progression, well-defined objectives, meaningful assessments, individualized support, and emphasis on critical thinking and skills development (Sturgis, 2016).

Finland's education system exemplifies excellence in competency-based approaches, with reforms since the 1970s decentralizing curricula and empowering educators (Darling-Hammond & McCloskey, 2008). Finnish educators have autonomy to design curricula within national standards, promoting accountability and tailored instruction (Sahlberg, 2012). This has be achieved by equipping the Educators with competences in such areas as psychological science, info technological skills and analysis to such level that they can become accountable in scheming their own curriculum suitable

to the environment while maintaining overall context of national goals. The Finland curriculum is highly reputed as the one on top in terms of quality when measurement of performances are determined through the Programme of International Student Assessment (PISA), which is an organization tasked with the responsibility of rolling out curriculum programmes within the Organisation Economic and Co-operation and Development. Consequently, the Curriculum of Finland is considered as a pattern which can be emulated by supporters of the Competency-Based Education (CBE) in other European countries (Bristow & Patrick, 2014).

In Africa, CBC implementation is often adapted from frameworks of developed nations, influenced by government mandates or external support. However, challenges such as scarcity of resources and inadequate teacher preparedness compromise its success. For example, South Africa abandoned outcome-based education in 2010 due to implementation challenges. Similarly, having introduced CBC in the 2005, Tanzania couldn't overcome teething problems and faced obstacles, related to ineffective professional training, insufficient materials, and negative attitude towards change (Makunja, 2016). Despite having one of the best professional teacher development programs in CBC in Rwanda, teachers were resistance and couldn't adapted to learner centered approaches and instead continued exploiting their ancient ways (Ndayambaje, 2018).

Kenya saw the need of adopting education to conform to its Vision 2030 and global standards and introduced CBC in 2017. The CBC shifts from the 8-4-4 system to a 2-6-3-3-3 structure, emphasizing skill acquisition over examination-driven learning. The system

solves problems such as unemployment because it uses learners and equips them with skills to understand different industries (Kaviti, 2018).

With the introduction of Competency-Based Curriculum (CBC), the educational system is changing to the system 2-6-3-3-3 whereby 2 years of pre-primary school, 6years primary school, 6 years secondary school will be in place. Instead of the examination based one, the new system (CBC) was said to be established to satisfy with the current tendency and the following are the common problems of the old system. CBC will relies on the abilities of the learners as opposed to sitting for exams in each level that would confirm the fate of the learner. CBC would be tested through formative assessment of skill and abilities during the learning process as opposed to previous assessment in 8-4-4 system which tested knowledge of content.

This system has dilapidated the needs of special needs and ICT in the tiniest degree levels of learning. CBC is not destined to profile the graduates to white collar unlike 8-4-4 which was accused of separating fields that accelerate economic development of a Country such as business enterprise and farming. This gave rise to promotion of white collar job since the number of graduates and with weak skills has been so high and this has equated to a high index of unemployment of youths in the job market Kaviti (2018).

1.2 Statement of the Problem

In the shift to a new curriculum, educators will be obliged to fit into approaches that focus on learners. Even though CBC has its advantages, among which are flexibility and inclusivity, it is also fraught with issues. Referring to the earlier research by such individuals like Haki Elimu (2017), Ndayambaje (2018) and Mulenga & Kabombwe (2019) who have conducted a research on the preparing of Kenya to adopt CBC, there are

various concerns raised regarding the lack of teacher preparation, shortage of resources, and change resistance. These challenges can also affect implementation in the Yatta Sub-County, and thus there is a need to do this study to understand their effects and prescribe remedies.

The other counties also conducted a survey that indicates that it has some challenges when they make the switch to the Competency-Based Curriculum (CBC). Kenya National Union of Teachers (KNUT), Parents Associations and Ministry of Education (MoE) have reported deficiency of information regarding the curriculum such as teacher training in relation to CBC, availability of learning/ instructions, inclusion of society and the understanding of the government and the teachers. The same issues are experienced in the Yatta Sub-County. Having adjusted CBC based on the international models such as Finland model, the researcher took the strategy to reduce the assessment to the input variables which he perceived to have performed well in the successful CBC implementation in western world such as teacher development, learning resources and teacher attitude. It is on this basis that the research paper has tried to analyze the following questions (with the first question relating to implementation of CBC in other counties, and not the Yatta Sub-County). The issues of other stakeholders which were uncovered would have remained unattended since there were no such kind of studies to take care of them.

1.3 Purpose of the Study

The aim of the study undertaken was to evaluate the different factors that have an impact on the adoption of the competency-based curriculum in public primary schools in Yatta Sub-County, Machakos County, Kenya.

1.4 Objectives of the research

The objectives that guided the study were as follows:

1. To examine the role of teacher professional development projects towards the adoption of the Competency-based Curriculum (CBC) in Yatta Sub-County.
2. To explore the role of learning resources in facilitating the implementation of the CBC in Yatta Sub-County.
3. To examine the effects of attitudes and beliefs teachers have on the implementation of the CBC in Yatta Sub-County.

1.5 Hypotheses

1. **H_{01}:** Teacher professional development initiatives do not significantly influence the implementation of the CBC in Yatta Sub-County.
2. **H_{02}:** The availability of learning resources does not have significant influence on CBC implementation in Yatta Sub-County.
3. **H_{03}:** Teachers' attitudes and beliefs do not have significant influence on the implementation of the CBC in Yatta Sub-County.

1.6 Significance of the Study

It is essential to recognize that the CBC introduced changes in methodologies and instructional approaches, differing from previous educational systems in handling the current grades. Teachers are straining to get along with the new system due to the modification and alterations. Favorable outcome in CBC relies on how ready teachers are to handle both learners and resources.

Therefore the study seeks to inform in a scholarly manner policymakers, school leaders, and educators how to overcome CBC implementation challenges. Its recommendations could contribute to the body of knowledge in areas such as teacher training, resource allocation, and curriculum design, benefiting educators facing similar circumstances.

1.7 Scope of the Study

Research studies have limited scopes and that being the case a research study cannot be in a position to cover all the sites of interest. In this respect, this study had the following limitations. The researcher narrowed down the research objectives to three objectives and they are as follows; to establish how teacher professional development interventions can shape CBC implementation process, to determine how learning materials can influence CBC implementations and how the attitudes and beliefs held by the teachers may influence the CBC implementations in Yatta Sub-County. Views in the public primary schools were generated through 760 teacher and 103 head teacher sample taken in Yatta Sub County. The issue with the existence of private schools was rejected because their teachers have never had a good orientation of CBC training by TSC. The community factors and the government support were also not found in the Study. The researcher was supposed to carry out a study within 6 months.

1.8 Delimitations of the study

Studies that help in research are limited, and hence they cannot capture all important issues. Given the multitude of the variables affecting CBC, the researcher isolated specific areas on which he had to carry out his research; Teacher professional development, Instructional Resources, Monitoring and supervision and the perspectives of

the teacher. The sample of the research did not cover subjects who were chosen to test Data Collecting instruments.

1.9 Limitations of the study

The performance of a few schools in Yatta Sub-County was used in this study. Some of the economic issues threatening the region include climate changes in which the area is at times very hot as dictated by its geographical location. Accessibility to school would have been hindered considering the extremely hot climatic conditions particularly in areas whereby, one had to walk as the only means of reaching some schools. To prevent the inhospitable weather the data collection was conducted during the month of May which is normally cold. Self-assessment questionnaires were used to collect the responses and this could be subject to the phenomenon of social desirability. These limitations were met by measures taken that included confidentiality assurements.

1.10 Assumptions of the study

The main assumptions in the study were that CBC was being implemented; and that implementation depended heavily upon teacher development, availability of resources, and teacher attitudes. The research also made an assumption that the people interviewed could deliver truthful and faithful information.

1.11 Theoretical Framework

This section presents the theory which provided the meaning, nature and challenges associated with this study. The study was drawn from constructivist theories, particularly Dewey's Social Constructivism, which emphasizes active learning and inquiry-based approaches.

As indicated by Dewey, the educator ought to just give foundation data and have the learners cooperate in bunches on the idea. This ought to begin discussion and conversation, and gives ascend to important cooperation (Saylor and Alexander, 1974).

Though the composed test would in any case assume an essential part, presentations, projects and other assessment strategies are crucial to monitor the advancement. Students have the chance to choose and arrange their learning way, thus can go with an individual or directed decision in regards to the disciplines and the instructive exercises that relate to their abilities and interests, and this is fundamental for long lasting acquiring abilities (Saylor and Alexander, 1974). In this way, an educational plan configuration advances a learning grouping that is coordinated by the learner and not a learning meeting that others put together for the learner. Moreover, the preparation arrangement becomes customized and consequently important and inherently rousing for the student. Dewey felt that the educational plan ought to eventually create students who might be prepared to manage the stylish world. In this way, educational programs ought not to be introduced as completed deliberations, however ought to incorporate the youngster's assumptions and ought to join how the kid sees their own reality.

Though Dewey's educational theory has played a significant role in modelling education, academic sources sight some common criticisms such as its focus which seems to be more inclined to social interaction which might undermine the importance of individual differences and motivations in learning. The emphasis on group learning and social interaction might not adequately address the needs of a heterogamous class with diverse learning styles or those who require individualized attention. Additionally, some critics questions Dewey's perception of growth, particularly the view of social growth as

the primary indicator of individual development. Despite of the criticism Dewey theory advocates for education model that oppose predominantly verbal teaching and encourage student-centered teaching. It advocates for integrated and thematic curriculum which suits the characteristic of CBC.

Therefore, in view of this theory, the study put into consideration some of the initial factors which are variables that would influence the execution of the CBC. This theory recommend that positive change result would come from changes in abilities, thinking, serious activities, and the abrogating issue of ownership. In the execution CBC therefore; effective result will depend on an accentuation of the pragmatic part of the essential instruction educational program in the educational plan changes. If anyone or more variables are working against implementation, the process will be less effective. Professional development for teacher should therefore be geared towards training them on practical approach in lesson delivery which will involve the effective use learning resources and incorporation of modern technologies such as ICT. Also important is the aspect of monitoring and evaluation in implementation of CBC. Therefore effective CBC implementation depends on teacher training, resource availability, and modern technologies like ICT to foster practical and personalized learning.

Another theory related to the area of study is the visible learning theory. John Hattie formulated the visible learning theory in 2008 which paid more attention on the influencers of results in learning institutions. This model was basically formulated to aid in implementation of CBC. It emphasized on creating an independent mind where teacher would act as facilitators to lead learners in studying on their own with prompts where necessary. John argued that learning becomes meaningful when learners are made to

understand teaching as a key to their learning outcome. By giving precedence to learners more than the content, teachers are able to point out areas where they need to improve their strategies. This model clearly defines how students will learn and how they will demonstrate their understanding.

The theory underscores the need of continuously equipping teachers with new strategies and ideas. The model emphasize the need for teachers be trained to be able to design age appropriate learning experiences that align with curricular needs, highlighting that understanding teachers' roles in curriculum development is essential for addressing implementation challenges. The model highlights the importance of teachers being facilitated with relevant evaluating skills to improve their ability to frequently monitor their student's progress and extend their teaching strategies based on the analysis. Another factor elaborated by this model is the ability of teachers to encourage the students to become more self-driven individual who can take ownership of their learning (Metacognitive). This strategy involves hand-on activities and extensive use of variate of learning aids. The integration of sufficient learning aids is crucial for effective CBC implementation. Teachers need access to technological tools and educational materials to improve their delivery techniques and support students' learning goals (Njeru & Itegi, 2018).

Visible Learning theory puts more emphasis on what teachers think as more important than what they say. This bring out the issue of attitude which often act as either a driving force or a barrier to accepting ideas or objectives. A deep familiarization of teachers' attitude, which influence their willingness to implement new strategies and ideas in the classroom, can aid in professional development efforts that address teachers' concerns and barriers related to school systems and specific teaching strategies, such as

learner-centered teaching (Fishbein & Ajzen, 2010). For example, if a teacher doesn't hold that certain classroom practices will benefit student learning, they are unlikely to adopt these practices. Generally, beliefs strongly influence actions.

John Hattie's Visible Learning theory critics raises concerns about the theory's which reduces complex educational processes to simplistic list of factors with associated factors which can ignore the importance of context, individual differences and the dynamic interplay of various factors in the learning process. Some critics argue that the theory is more an evaluation model than skill based thus prioritize evaluation over deeper educational concepts. However the strengths of this model as it concerns the area of study makes a strong foundation and provides the nature of variables such as professional training, learning resources and teachers attitude.

1.12 Conceptual Framework

Identification of the association between teacher development, learning resources, teacher attitudes, and the consequence of the realization of CBC implementation is the result of the use of the conceptual framework. This is a model that provides an analytic paradigm of reviewing the problems affecting the success of CBC.

Interrelations of the different independent variables affecting implementation of Competence Based Curriculum.

This research study developed a conceptual framework, in an effort to reflect the relationship that exist among the various independent variables that influence the implementation of the Comp-based curriculum (the dependent variable) in the primary schools in the Yatta Sub-County. The study employed the following model to undertake

study as indicated in figure 1.1. The theory was based on the perspectives of teachers, observation and control, the contents of the teaching as well as the growth of the teacher in the profession.

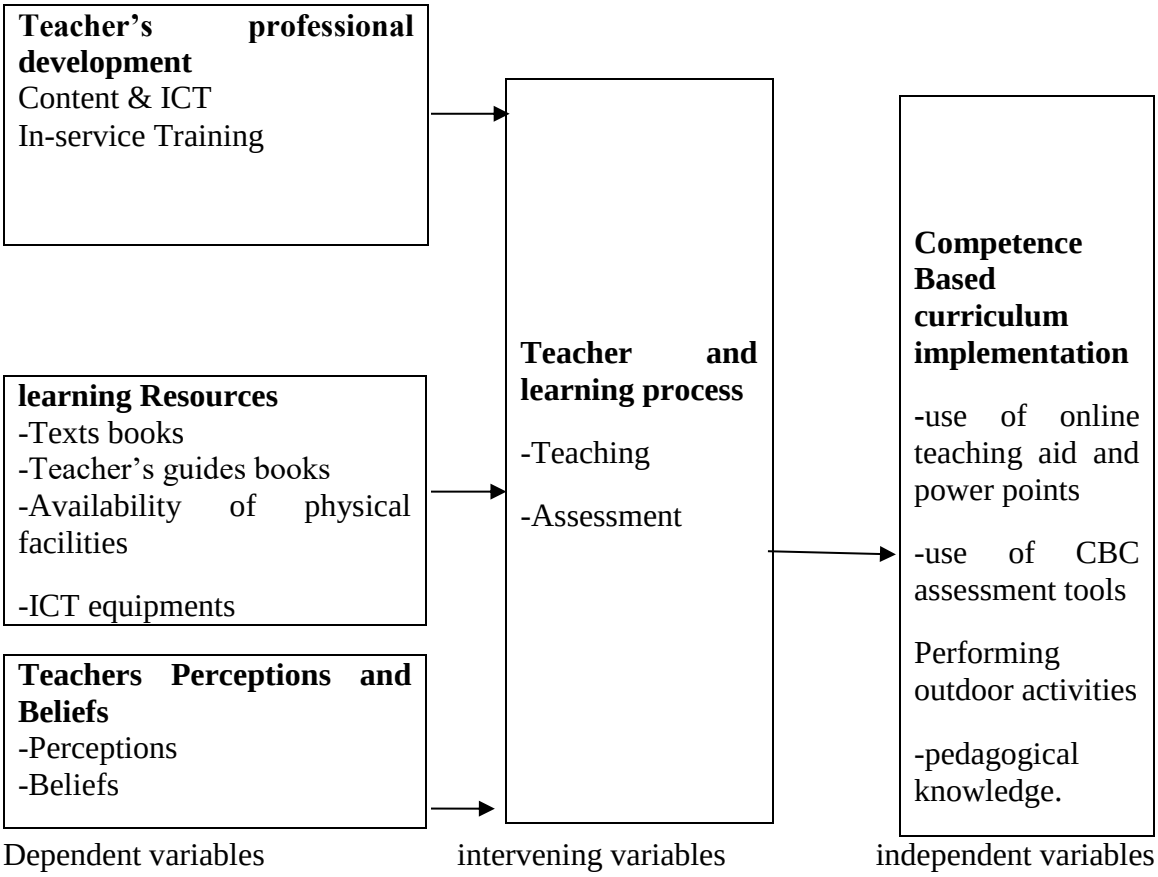


Figure 1.1 Conceptual Framework

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The section brings to the fore the summary of different reviews done on the variables that influence the implementation of the Competency-based curriculum (CBC) in Kenyan primary schools, which were conducted using available sources. It focuses on empirical analysis of literature and follows with a conclusion as well as research gaps on the subject of research.

2.2 Empirical Literature Review

The section is dedicated to knowing the area of study as it starts with the contextual review of the same, followed by the literature review related to the area of interest, which is teacher professional development, including education level, experience, in-service training and instructional resources like textbooks, teachers guides, ICT tools and teachers opinion.

2.2.1 Literature context

Competency-based curriculum (CBC) is an academic program which is geared towards developing pragmatic knowledge, skills and what a student should learn yet it does not concern how he will bring the same to the world student should learn what the world expects him to be - competent by the Commonwealth of Nations Web site, 2010 In CBC, graduation and assessment is done on what the student is able to actualize in the knowledge and skills achieved. The stage in which the aforementioned help can be availed of is the curriculum implementation stage where under the supervision of a teacher the students are

engaged in learning exercises in order to memorise and create new behaviours or way to handle new challenges.

2.2.2 Teacher Professional Development and CBC Implementation

Professional development (PD) is essential for tutors to succeed in new educational reforms (Smit & du Toit, 2016). PD enhances teachers' confidence and competence in implementing new curricula. As indicated by Dewey, the tutor ought to act as a mediator by just give foundation data. Likewise effective PD builds on this principle by giving teachers' confidence and understanding, making it more likely that they will achieve positive learner based outcomes (Lia, 2016). PD that aligns with teachers' needs, concerns, and experiences tends to foster growth (Lia, 2016). According to Coldwell (2017), professional development (PD) increases teachers' knowledge, which in turn increases their confidence and job happiness. According to Jess et al. (2016), effective teacher training is crucial for curriculum implementation. Their study emphasized the need for teachers to plan age appropriate learning activities that align with curricular needs, highlighting that understanding teachers' roles in curriculum development is essential for addressing implementation challenges. Jess et al. (2016) study and their outcome where carried out using ecological approach, which has its own limitations, such as potential biases in generalizing findings from aggregate data to individual cases. To mitigate this, the current research used a survey approach to gather individual-level data that could be generalized.

Finland's education system's success can be attributed to substantial investments in teacher training, with educators chosen from the elite 10% of secondary school graduates and receiving government-sponsored training up to the graduate level (Bristow & Patrick, 2014). In Asia, Japan emphasizes teacher collaboration through methods like lesson study

and peer coaching, where teachers work together to improve their practices (Arslan, 2018). While government-funded PD can attract a large number of teacher trainees, its effectiveness in implementing CBC may vary. No studies have been conducted in Yatta Sub-County to investigate whether PD gaps affect CBC implementation. Therefore, extended inquiry is needed to assess the influence of PD programs in Kenya on CBC implementation. This literature review helps the researcher better understand teacher preparedness for CBC implementation.

India has also been struggling in teacher PD by establishing programs like District Institutes of Education and Training (DIET) which offers them pre and in-services training (Gandhe, 2010). Similarly, teacher PD in Nigeria is continuous and the national policy on education mandates that all teachers get lifelong learning (Akpan & Ita, 2015). The implementation of the Universal Basic Education in Nigeria also featured teacher development in 1999. A report on Rwanda points out questions about the quality of indoctrination in the CBC implementation process, poor teacher preparation, unavailable learning materials, and poor school facilities (Mugabo, Ozawa, and Nkundabakura 2021).

When Universal Basic Education came to West Africa in 1999 in Nigeria, there was a belief that its goals should be merely implemented in the direction of the specialist enhancement of teachers (Akpan & Ita, 2015). Indeed, the Nigerian National Policy on Education stipulates that teacher preparation shall be a continuum upon preliminary instructor training and throughout the tenure of his or her teaching career, providing priority in procedure and educational program that have described the eleven tutoring machines (Ushie, 2009). The public clamor at the 'falling norms' of tutoring in the country furthermore culminated in the Government specialists coordinating the National Teachers

Institute (NTI) to retrain tutors through of formal training like workshops and seminars, using the cascade version of sharing knowledge (Ajani, 2018).

Mugabo, Ozawa and Nkundabakura (2021) did a dissertation review in Rwanda in which they evaluated the relationship between the organization of the school and their capacity to implement CBC. Findings of the review revealed that problems associated with CBC implementation among teachers had been as a result of the different instructor improvement, inadequate review on CBC, unavailability of instructional resources and infrastructural deficiency of the schools. Considering the new information, the researchers advocated for enough instructive resources, well planned and typical in-service learning courses to help educators understand the best approach to set the groundbreaking insights into exercise. However the study as gaps because the Mugabo, Ozawa and Nkundabakura (2021) used multiple case study approach involving 12 teachers in three schools as demonstrated. Its findings cannot be replicated to the wider population because the data collected can not necessarily be generalized and therefore cannot be collaborated because the data is only valid for the 12 teachers only. This research intended to carry out the study using a more scientific approach by adapting descriptive survey design. Survey design allows space for the researcher to collect data from a large sample of people.

Kenya adopted teacher's long life PD similar to that of India and Nigeria but restricted to selected universities. As per the CEO of TSC, Mrs. Nancy Macharia, the PD which was planned to cost teachers a sum of 30,000Ksh for the six sessions was to address gaps analyzed during evaluation; (Daily Nation, Feb, 16th 2020). On the other hand the then, Secretary general KNUT Wilson Sosion argued that TSC should fully sponsor teacher in PD pogrammes and asked teachers to boycott such programmes. This confrontation of

TSC with the teachers Union creates a gap worthy studying. It is also worthy to note the self-sponsored element of the PD in Kenya as compared to India and Nigeria which creates another gap. For that reason it was important to bring about a research and figure out whether the teachers were being trained under the self-sponsored PD programme or they had hinted to the call of KNUT.

Another of the biggest pleasures in the implementation process of the new educational program is that the Kenyan authorities succeeded in gaining training of the workers in the implementation of the CBC at several levels by means of trans-sectoral approach. The same appraisal is made by Ondimu (2018) in his line about in-service training of practising head teachers in the application of skill-based educational plan in the resulting class and who are all prepared to apply the skill-based educational program. The research carried out by Ondimu (2018) was performed in the system of private primary schools, whose system of control and training is completely unlike that of public primary schools. This has created a gap to be filled by the research. 91 000 teachers hired in all public and private schools had been trained through the holidays so that they could temporarily understand what the educational plan required, develop the knowledge, skills, and perceptions that are the focal point of the successful execution of ability-based educational plan (Amunga et al., 2020).

INSET, regardless of whether subsidizing or funding currently not being an issue. These studies carried out by different researchers in Kenya concerning PD pragramme created a gap because their results were contradicting. This may have been as a result of geographic placement of the research site. Therefore the findings of the studies may not have been generalized to suit Yatta Sub County due to geographical placement with

different social economical activities. The researcher therefore found it convenient to conduct a research to ascertain whether the same constrains existed in Yatta.

Deficiency in ICT abilities among most of instructors is one of the difficulties confronting the accomplishment of the skill based educational plan and a large portion of the educators can't coordinate ICT in the learning and instructing inside CBE classroom (Ondimu, 2018). Whenever innovation is utilized as an accomplice then it helps the students and educators to foster admittance to groundbreaking thoughts and assignments and it likewise helps them to track down a better approach for taking care of the past known undertakings and to investigate further viewpoints of knowledge (Goos, 2010). Consequently, on the off chance that instructors actually don't have these ICT abilities then it is difficult for them to carry out the educational program during this innovative headway time.

2.2.3 Learning Resources and CBC Implementation

Textbooks, media, software, and ICT tools are forms of educational resources that greatly impact the quality of the students' teaching (Farombi, 1998). According to the study by Mugabo et al. (2021) and Ndayambaje (2018), in Rwanda, the implementation of CBC was accompanied by difficulties because there were not enough teaching materials and poor infrastructure. The problems were similar in Kenya, and a lack of ICT skills among the teachers, as well as the limited teaching tools, especially regarding such subjects as music and Digital literacy, challenged the implementation of CBC (Momanyi & Rop, 2019; Ondimu, 2018).

The lack of teaching aids has caused teachers in Kenya to improvise learning resources, including utilizing something locally available (Kahenda & Kiplagat, 2019).

Although, on the one hand, improvisation can help cultivate creativity, on the other hand, it cannot substitute the necessity to have access to real resources that can help students acquire necessary competencies (Koskei & Chepchumba, 2020; Njeng- er e, 2017).

Another study by Marion (2020) in Laikipia East Sub-County revealed that large class sizes and inadequate teaching materials were also very big obstacles to the implementation of CBC. On the same note, KNUT (2019) reports suggested the late provision of textbooks and lack of equipment to provide digital learning. Such difficulties can be witnessed in most schools and should be addressed to enhance the accessibility of good teaching based on materials as well as ICT means (Mutisya, 2019).

To sum up, enough learning resources are essential to the successful implementation of CBC. About the Visible Learning theory, as observed by John Hattie, educators ought to be furnished with varieties of learning materials. To enhance teaching methods and ensure better academic achievements of learners, teachers should gain access to teaching technology and educational resources (Njeru & Itegi, 2018). In light of this, it is crucial to have sufficient resources for a successful CBC in primary schools.

2.2.4 Teachers' Perception and Beliefs in Implementing CBC

The belief is a tugging or pulling factor towards the acceptance of ideas or goals. Professional development could be based on the requirements of the teachers and barriers to the new school system and individual instructional methods such learner-based teaching strategies and could be achieved by a detailed understanding of the beliefs of the teachers which codes how the teachers are most likely to fare in the adoption of new strategy in the classroom (Fishbein & Ajzen, 2010). To pick on one instance, when a teacher fails to feel that certain processes in the classroom will be beneficial towards the learning of students,

he/she would not get into such tributaries. Beliefs bring about much influence on actions in most cases.

According to another study by Nadelson et al. (2013), teachers were saying that they were using learner-centred methods, although their classroom behaviour betrayed their use of teacher-centred methods. According to Chen (2008), when teaching proved to be difficult, teachers were compelled to teach in a manner that conformed to their views. Although teachers might have given some of the beliefs, this research paper was an indication that the classroom environment is, however, the main factor that influences the actions of the teachers.

On the other hand, most teachers are of the view that constructivist practices are worthy, and in endeavouring to practice these in schools, they are mostly not supported by the executive offices (Haney & McArthur, 2002). Most school leaders fail to give priority to both the facilities and the time required to change their curricula to accommodate constructivist approaches. Also, most head teachers guard a constructivist learning environment as a chaotic run and one that is hard to control.

Other analysts believe that even the fundamental ingredients of efficacious constructivism approaches remain opaque. Moreover, some of the teachers, in particular veterans, oppose the constructivist approaches and view them as practices that are disruptive and inappropriate to the classroom. This has made many teachers lose faith in the success of constructivist strategies, and they will not practice them. A survey by Abbott and Fout (2003), which involved 669 classroom visits in 34 schools, showed that only 17 per cent of the visits exhibited good constructivist instruction. In this study, the researcher attempted to evaluate the extent to which the teachers used student-centred methodology.

As an illustration, Ndayambaje (2018) concluded that despite every teacher in Rwanda's primary schools having been trained to apply new knowledge methods, some of them remained conservative and still applied the traditional teaching material and methods. Maimela (2015) examined the problem of curriculum change in the primary schools of Limpopo, South Africa and revealed the fact that although teacher attitudes were crucial in terms of motivating teachers to work with the curriculum, there were other aspects that played a critical role in the performance of the curriculum. Incentives and appraisals also played a major part in improving learning in institutions.

Of course research has revealed that attitudes have great effects in performance. Under Terrorist Attitude in Children and Adolescents, Ndifor and Ngeche (2017) establish that the performance of students in mathematics studies in Cameroon is positively correlated with their attitude whereby students with positive attitude showed higher performance. Similarly, Makunja (2016) found out that the implementation of the competency-based curriculum faced the challenge of Tanzanian teachers due to their attitudes towards teaching. The study had requested that curriculum development and revision should have involved more teachers. As all other studies conducted in Africa have found out that there is a close relationship between the attitude and performance, there was need to conduct research to determine the same in Kenya and more specifically in Yatta Sub-County.

A study conducted by Waigera, Mweru, and Ngige (2020) focused on a path in the relationship between teacher attitudes and instructional resources in Kenyan pre-primary schools. What they learned during their research was that positive attitude teachers produced instructional materials in an improved way rather than the negative attitude

teachers. It stated that there is a necessity to instil the positive attitude towards teachers especially in pre-primary school. The study highlighted the need of pre-service and in-service training to boost positive attitude towards the use of instructional resources.

Current research suggests that many teachers hold negative attitudes toward teaching. Many teachers do not take advantage of professional development opportunities, despite funding no longer being a significant barrier. Most professional development programs have been limited to workshops and short courses, which some teachers feel are ineffective (Gathumbi et al., 2013; Kiige, 2019). Momanyi and Rop (2019) observed that curriculum change failures were not solely due to a lack of content knowledge but also resulted from educators' opposition to modifications they did not comprehend or believed would be advantageous (Park & Sung, 2013). Some educators believed that changing the curriculum would only result in more work and no real advantages.

2.3 Summary and Research Gaps

This section analysed the literature on challenges of implementing competency-based education. The shift in teaching that started with the old system of teaching that was subject based, to competency based teaching was necessitated by the need to create learning that was meant to enhance skills that would help people prosper within realms of the academia and the new knowledge based economy. The literatures revealed that though competency-based education had the potential of enhancing the density of education focusing on skills instead of contents, issues like teacher development like knowledge, training and ICT, access to resources like textbooks, facilities, community support and government support, still acted as barriers.

Research on the difficulties in implementing the competency-based curriculum in Kenya, especially in primary schools, is lacking, which emphasizes the need for studies to help schools and the Ministry of Education deal with these problems. The execution of the curriculum in Yatta Sub-County, Machakos County, was the primary focus of this study, which sought to identify obstacles and offer suggestions for enhancements to support the curriculum's goals.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, as it is presented, the methods that were utilized to study the problems experienced by teaching staff in the adoption of the performance contracts within the educational establishments of the Yatta Sub-county in Kenya are illustrated. Legal and ethical considerations, research design, site, target population, sample size, sampling, method of data collection, research instruments, data processing and analysis and determination of the instrument validity and reliability also constitutes the area of focus.

3.2 Research Design

According to research design, Wiesma and Jurs (2009), it is presented as a method or a procedure or blueprint which is used in responding to research questions. The study was concerned with using descriptive survey in obtaining information on a large sample within a small duration as a cost effective mechanism. Among the numerous advantages of such design is the fact that it gathers the data at some specific time; hence, one can use it to depict the state of things at this current moment and identify some things to compare and/or some relationships between the events. In conducting the research, the quantitative research method has been used.

3.3 Research Site

This research was conducted in government-owned primary schools distributed all over the Yatta Sub-county in Kenya, which is found in semi-arid areas. The area was selected as no research on the said variables had previously been done on the said variables by the time of the research conduction. Yatta Sub-county has a total of 133 primary schools,

which also have governmental status as public schools, and they have been incorporated into the study. The night economic issue that the region is exposed to is the changes in climatic conditions since, in some instances, the region is extraordinarily hot because of its geographical location. The hot weather conditions would have caused impediments to the accessibility of school, particularly in places where walking could only be used to reach some schools. To evade the unfavourable climate, the collection of data was done in the month of May, which is normally cold.

3.4 Target Population

As it can be confirmed, Mugenda & Mugenda (2012) define the latter of the people whose information you are going to collect as what is called a target population. The specifics of the research were put upon the number of teachers and the head teachers in Yatta Sub-county which was government elementary school. Presenting the literature gaps on objective of the research, there was a sampling of teachers and head teachers since they constitute the necessary segment in the implementation of the competency based curriculum (CBC) in the primary schools. The target population was the number of teachers who are serving in 103 number of schools under teachers service commission (TSC) and the head teachers who are employed by the commission in total service that is 103 in number and comprise 836 people in such schools. The sample size of 273 teachers was availed using the formula of fisher. The research involved all the head teachers involved in the sampled schools. A description of population is undertaken to present the image of the types of population.

Table 3.1: Number of Public Primary Schools and Teachers in Yatta Sub-County

Target Population S. NO	ZONES.	NO. of public primary schools	NO. of teachers
1	Kithimani	20	184
2	Matuu	18	167
3	Ndalani	13	104
4	Mavoloni	12	92
5	Katangi	12	90
6	Ikombe	15	124
7	Kinyaata	13	102
Total		**103**	**863**

Source; Education Office of Kithimani Sub County, 2022

3.5 Sampling Methods and Sample Size

Zohrabi (2013) defined a sample size as a group reduced out of a bigger populace and which is expected to be used to illustrate the characteristics of the total populace. According to Cooper & Schilder (2003) where sample size is more than 10%; a sample size of this magnitude is taken to be adequate in social science research. In the research, schools within each zone were draw at random and only half of the schools were considered. Stratified sampling differentiated the sub-county into seven zones which were crossed based on strata into a section in the schools. Simple random samples were then taken by selecting 50 percent of the schools in each of the strata, hence the total number of primary schools was 52. The research counted on the formula of Fisher to calculate the teacher size of the sample. Thus,

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

n represents desired sample size

N represents population size

e represent precision error (0.05)

Therefore,

n= 863/1+863(0.0025)

n= 273

The study involved the participation of head teachers from all 52 sampled schools, while the remaining sample of 221 teachers was distributed across the schools in proportion to their size. A straightforward random selection technique was used to choose these educators. Table 3.2 provides an overview of the sample size for the population and schools.

Table 3.2 : Sample Size of Schools and Population

Target Population S. NO	**ZONE (stratus)**	**Population of schools**	**Sample of schools**	**Sample size of population**
1	Kithimani	20	10	53
2	Matuu	18	9	47
3	Ndalani	13	7	36
4	Mavoloni	12	6	32
5	Katangi	12	6	33
6	Ikombe	15	7	36
7	Kinyaata	13	7	36
Total		103	**52**	**273**

Table 3.3 represents a Sample Frame Category of Respondents and Sampling Procedures

Table 3.3: Sample Frame Category of Respondents and Sampling Procedures

Category of Respondents	Population	Sample	Percentage	Sampling Procedures
Head Teachers	103	52	50.49%	Census from sample
Teachers	760	221	29.08%	Proportion/ simple random
Total	**863**	**273**	31.63%	

The sample size was 273 respondents of which 221 were teachers and 52 were head teachers.

3.6 Tools for Gathering Data

The study utilized questionnaires directed at both head teachers and teachers to gather data.

3.6.1 Teachers' Questionnaire

Questionnaire is a kind of research tool which takes a collection of questions formulated to elicit data by participants. Information among the contracted teachers was collected in this way. The questionnaire consisted of four parts: Section A collected general demographic data, Section B concerned professional development of teachers, Section C included the data about instructional resources, and Section D reflected the opinion of teachers.

3.6.2 Head Teachers' Questionnaire

Self-administered questionnaires were used for head teachers, as they are simple to analyze and quantify. They are effective in capturing opinions, attitudes, perceptions, and feelings of respondents. Like the teachers' questionnaires, this tool included Sections A, B, C, and D: Section A for general information, Section B for teachers' professional development, Section C for instructional resources, and Section D for perspectives of teachers.

3.7 Pilot Testing

The concept of pilot testing in research implies that a data collection instrument is initially tried in order to provide a list of possible errors. The instruments were tested three times in three schools under Yatta Sub-County before the main study. The four teachers of each of the selected schools were involved together with the three head teachers. These schools were not included in the primary study. This pre-testing was done to bring improvement in the validity of the instruments by detecting and correcting the ambiguous items. It also assisted in determining the good qualities of sampling frame and method.

3.8 Research Instruments Validity

Validity is the extent to which research instrument measures what it purports to measure. Field properties and variations are echoed in a valid research method. According to Mutai (2000), high validity mean that the results actually depict the problem under investigation. To ensure the content validity, the researcher was advised by his supervisor and consulted medical research experts so that the instruments were made to measure all the variables that had been intended to measure.

3.9 Reliability of Instrument

The reliability of an instrument according to how it is defined by Mugenda and Mugenda (2003) is the level to which a given research instrument will produce similar findings when there are numerous attempts made. The instrument that could not measure any variable and their findings that could not be constant at a long period of time would be valid. However, the reliability may be impaired by random errors. A test-retest design of the reliability test was employed by which the data collection instrument was administered twice on the pilot sample participants with an intervening period of one week. The responses of the two tests were then cross examined using Pearson product-Moment Correlation formula.

3.10 Procedures of Data Collection

So as to obtain approval by the National Council for Science and Technology (NACOSTI), the researcher sought to have an introductory letter signed by the Department of Education at the African Nazarene University. Subsequently, the researcher contacted the Yatta sub county officer of education and requested the head teachers in the selected schools to allow the instruments of data collection to be distributed. At this point, the researcher provided the responders with an explanation on the goal of the study. The surveys were also collected after completion.

3.11 Data Analysis

Both descriptive and inferential statistics were used in the quantitative analysis of the study's data. After being checked for accuracy and completeness, the gathered data was compiled, arranged, and coded for further examination. For additional analysis, the coded data was imported into the Statistical Package for Social Sciences (SPSS). Frequencies,

percentages, and modes of demographic data were analyzed using descriptive statistics. The study's hypotheses were tested using multiple regression analysis and Anova, and the results are shown in tables and figures.

3.12 Ethical Considerations

The researcher sort approval from the university to enable collection of data for this study. Permission to collected data was granted by NACOSTI and cleared by MOE. By securing participants' voluntary, informed agreement and guaranteeing their freedom to join or discontinue participation at any moment, the study complied with ethical guidelines. In accordance with Punch (2003), who highlights the significance of anonymity, participants were assigned numbers to preserve their confidentiality and anonymity. Beforehand, the respondents were taken through a good induction of what data collection is meant to achieve. Before the participants joined in the research, they were assured that their details would be considered confidential and used in the study alone. In the process of data collection, the researcher referenced all the sources of information, such as research papers and textbooks.

CHAPTER FOUR

ANALYSIS AND RESULTS

4.1 Introduction

In this part, the different data analyses undertaken by the researcher is presented together with the research findings. The question, which guided the research, was to understand what would make the competency based curriculum (CBC) to become successful in the implementation of the Kenyan public primary schools curriculum. The main purpose of the study was to evaluate the effect of teacher development on implementation of the CBC, determination of effects of requesting learning materials and evaluation of the effect of the teacher attitude towards implementation of the CBC at Sub-County of Yatta. The collection of data was through the questionnaire; the data collected was the one of both the heads and the one of teachers; quantitative and qualitative data were collected. Since the analysis of the data was based on the objectives of the research, the three null hypotheses have been tested based on multiple regression analysis at a level of significance of 0.05.

4.2 Response Rate

The percentage of respondents who answered the questionnaires issued by the researcher during the administration is referred to as the response rate. The sample consisted of all the 52 schools head teachers or in other words 52 head teachers of 52 schools plus 221 teachers sampled randomly using a simple random sampling algorithm. Further there were 48 head teachers of the 50 who had filled the questionnaire and 212 teachers out of the total 220 teachers had filled the questionnaire thus resulting in a response rate of 96 per cent among the head teachers and 95.9 per cent among the teachers.

Table 4.1: Response Rate

Respondents	Male	Female	Total
Head teachers	52.40%	43.60%	96.00%
Teachers	43.60%	51.30%	95.90%

Source: Field Data (2024)

4.3 Demographic Information of the Respondents

The research sought to receive general demographic information from the respondents. Relevant demographic data helps an organization to come up with valuable information that can be used to make organizational decisions (O'Leary & Hunt, 2016). The study examined the gender, qualifications, and years of experience of the respondents in teaching. Based on the figures 4.1, 4.2, 4.3 and 4.4, we see the results.

Table 4.2: Respondents' Gender

Respondents	Male	Female
Head teachers	56.30%	43.70%
Teachers	47.60%	52.40%

Source: Field Data (2024)

The study findings on the gender of the participants indicated an outcome of 56.3 per cent males and 43.7 per cent, who were females among the head teachers. Out of the teachers, 47.6 per cent of them were male, and 52.4 per cent were females. These results indicate that men and women adequately represented the sample so that they could give their reflections on the research questions.

Table 4.3: Respondents' Age Bracket

Respondents	21-30 yrs.	31-49yrs.	Over 41yrs.
Head teachers	0%	10.70%	89.30%
Teachers	12.30%	38.20%	49.50%

Source: Field Data (2024)

Table 4.3 indicates that the sample contained the highest number of teachers among 41-60-year-olds (49.5 per cent). These were followed by teachers aged 31-40 years, comprising 38.2 percent and those in the 19-30 years category, which incorporated 12.3 percent. Comparatively, 89.3 percent of the head teachers fell in 41-60 years, and neither did 31-40 years, which made up 12.3 percent. This implies that the head teachers were older relative to the class teachers, meaning that it took more years to acquire the experience in order to be a head teacher. The results indicate that the study was able to get input from all the various groups of age, such that the opinions used reflect the idea of age as a whole in the school.

Table 4.4: Years in School of Respondents

Respondents	0-10yrs.	11-20yrs.	Over 30yrs
Head teachers	0%	37.30%	62.70%
teachers	14.60%	45.30%	40.10%

Source: Field Data (2024)

The results conducted from the study on the number of years that the respondents had spent in school have indicated that 14.6 percentage of the teachers had spent between 1 and 10 years of experience, 37.3 percentage had 11 to 20 years, and the highest percentage had is 40.1 has more than 20 years' experience. The sample contained only

head teachers who had over 11 years of experience, and 62.7 of them had experience longer than 20 years. These findings show that the data were taken somewhere in the wide scope of the level of teaching experience. This implies that the research has managed to collect varied perceptions of the respondents so as to give a true picture of the school scenarios.

Table 4.5: Level of Education of the Respondents

Respondents	Masters	Degree	Diploma	P1
Head teachers	10.70%	25.00%	17.00%	50.00%
Teachers	0.90%	16.00%	14.30%	66.10%

Source: Field Data (2024)

As Figure 4.5 clearly shows, all the sampled teachers are professionally trained however to a higher or lower degree. 66.1 per cent of them and 17 per cent of the majority had a P1 certificate which is the highest level of training they could have achieved followed by the diploma that had 17 per cent. Of the teachers about 16 per cent had got a Bachelor Degree, a small category of 0.9 per cent having a post graduate degree. On the qualification of the head teachers, 10.7 percent of the head teachers had Masters Degree, 25 percent of the head teachers had Bachelor's Degree, 14.3 percent had a diploma and 50 percent were P1 certificate holders. This shows that all the respondents had an education background and thus, the researcher was able to collect information on respondents with different educational backgrounds. It was thus a representative of all levels of education so that no bias was accorded on the level of education. It can hence be established that the respondents were well informed and they comprehended what the study aimed at doing, giving valid and just information to the research questions.

4.4 Teacher's professional development in the Competency-Based Curriculum.

The first objective of the study was to assess the influence of the teacher development programme in the implementation of the competency based curriculum in Yatta Sub-County. Where SA-Strongly, A-Agree, U-Not sure, D-Disagree and SD-Strongly Disagree. The study results were as tabulated in Table 4.1 for teachers and 4.2 for head teachers. All the respondents had attended a CBC training session.

Table 4.6: Teacher's professional development

Statements	**SA**	**A**	**U**	**D**	**SD**	**Mean**	**Std. Dev**
I have basic knowledge in CBC subjects	42	82	16	27	45	3.23	25.05
I have attended Competency based curriculum training	68	116	4	18	6	4.05	4.65
I have attended computer training	6	29	5	133	39	2.20	52.73
I regularly use internet to integrate learning	4	25	2	148	33	2.15	60.52
I have training on learner assessment	24	73	3	64	48	2.82	28.83
I can use a wide range of teaching approach to teach learners	57	96	7	35	17	3.67	35.49
I can prepare my teaching content based on my current understanding of core competencies to be achieved in specific learning areas	54	98	3	42	15	3.63	37.18
Average						**3.11**	**41.21**

Source; Field Data (2024)

The results from the study on teachers' professional development, shown in Table 4.6, provide valuable insights into teachers' views and experiences regarding their professional skills and growth in the context of the Competency-Based Curriculum (CBC).

To begin with, the statement, I have attended Competency-Based Curriculum training, recorded the highest average of 4.05 (SD =4.65); thus, people were in agreement that they had already undergone Competency-Based Curriculum training. This indicates that the degree of readiness towards CBC implementation is comparatively high, and most of the teachers have received training regarding the same. This standard deviation of 4.65 signifies the existence of a little fluctuation in the answer results; however, the predominant propensity is towards a positive attitude toward the received training.

Conversely, I attended computer training and had the lowest mean score of 2.20(SD =52.72), the result showing a high degree of disagreement or dissatisfaction by teachers on the availability or accessibility of computer training. The standard deviation of 52.73 goes in line with this finding by showing great variation in the responses. It indicates that, although specific teachers might have received training on computer usage, there has been a lack of such training in many teachers, indicating that there is a huge gulf in digital literacy and integration of technology.

By the same token, the item, I frequently use the web to incorporate learning also disclosed a mean score of 2.15(SD =60.52), which is very low to show that the respondents strongly disagree with the item and demonstrates again the challenge of ever integrating technology in a teaching activity. The result with the standard deviation of 60.52 indicates that there exists a lot of variance in the responses, possibly because of the lack of sufficient internet access, training, or technological set-up in some schools.

The phrase, I have training on learner assessment recorded a mean of 2.82(SD =28.83), which is a moderate agreement score. However, the standard deviation of 28.83 shows a difference in the perception of the teachers towards their training in learner

assessment. This means that there are a number of teachers who have gained confidence in their assessment skills, whereas there are teachers who have not been trained in this vital design.

The capability of teachers to apply different teaching methods (M = 3.67 SD =35.49) and design teaching materials depending on their knowledge of core competencies (M = 3.63 SD =37.18) were, on the contrary, fairly positive. All these findings indicate that teachers are fairly confident in altering their manner of teaching and developing the content with regard to CBC competencies, but there is some variation in answers, which is reflected in the standard deviations of 35.49 and 37.18, respectively.

Overall, the average mean score of 3.11(SD =41.21) shows moderate agreement across the statements, indicating that while professional development is recognized in several areas, significant gaps remain, especially in technology integration and learner assessment training. The high standard deviations across most variables point to considerable variation in teachers' experiences, suggesting that professional development opportunities are not consistently available or equally impactful for all teachers. These findings highlight the need for more focused professional development programs, particularly in digital literacy and assessment training, to ensure all teachers are equipped with the necessary skills to implement CBC effectively.

Table 4.7: Head teacher views on Teacher's professional development

Statements	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev
My teachers have basic knowledge in CBC subjects	7.1	67.9	0	21.4	3.6	3.54	0.78
My teachers have attended Competency based curriculum training	7.1	75.0	0	10.8	7.1	3.64	0.81
My teachers have attended computer training	7.1	3.6	3.6	71.4	14.3	2.17	1.04
My teachers regularly use internet to integrate learning	7.1	14.3	0	75.0	3.6	2.46	0.92
My teachers have training on learner assessment	17.9	35.5	3.6	39.2	10.8	3.03	1.14
My teachers can use a wide range of teaching approach to teach learners	14.3	57.0	7.1	10.8	10.8	3.53	1.03
My teachers can prepare teaching content based on current understanding of core competencies to be achieved in specific learning areas	7.1	50.0	3.6	21.4	17.9	3.08	1.09
Average						3.21	0.97

n= 48 **Source; Field Data (2024)**

The information below on Table 4.7 throws light on the outlook of head teachers regarding professional development of their teachers in regard to Competency-Based Curriculum (CBC). The general mean score of 3.21(SD =0.97) shows that there is a general agreement between the head teachers involved in the study on the professional development of their teachers although there is some variation between various areas.

To begin with, the basic understanding of the CBC contents by teachers was well rated with a mean of 3.54 (SD =0.78), indicating that most of the head teachers have a good understanding that their staff has good understanding of the contents of CBC. The involvement of the teachers in CBC training was also reported to be more or less the same with a mean of 3.64 (SD0.81) reflecting the fact that most of their head teachers are optimistic in that their teachers have not been shortchanged in terms of exposure to the CBC framework.

Nevertheless, difficulties were found to be of great concern in the domains like computer training and continuous use of the internet to integrate learning. Even the mean score of a teacher who went to computer training was rather low (M=2.17 SD =1.04) and the application of the internet to combine the learning was also given a moderate score (M=2.46 SD =0.92). These results suggest that digital literacy and the efficient use of technology as a teaching method have significant gaps that can possibly hinder the potential provisions of CBC, especially in a more technology-oriented learning environment.

In the area of assessment training, the head teachers also revealed that they find moderate verification of a statement that their teachers receive training in assessment of learners (M = 3.03 SD =1.14), but it is possible to agree that further improvement of this field is possible. The capability of teachers to use a range of teaching methods was

perceived positively (\M = 3.53 SD =1.03) as this represents the idea held by the head teachers that they have adaptable and diversified teachers.

Lastly, when it comes to preparing teaching materials aligned with core competencies, head teachers expressed moderate agreement (M= 3.08 SD =1.09), indicating that while teachers have a basic understanding of how to design content based on current educational objectives, there is still potential for growth in this area.

In summary, while head teachers acknowledge the foundational knowledge and training their teachers have in relation to CBC, significant gaps remain in areas such as digital integration and assessment training.

4.5 Learning Resources Influencing Implementation of CBC

The second objective of the study was to establish the influence of the availability of learning resources on the implementation of the competency-based curriculum in Yatta Sub-County. The respondents were provided with Likert scale to select one option where SA-Strongly, A-Agree, U-Not sure, D-Disagree and SD-Strongly Disagree. The study results were as tabulated in Table 4. 3 for teachers and 4.4 for head teachers.

Table 4.8: Teachers Views on learning Resources

Statements	SA	A	U	D	SD	Mean	Std. Dev
There are enough textbooks for learners for all learning areas	54	124	5	19	10	3.85	1.15
There are enough teachers guidebooks for teachers	50	132	3	20	7	3.83	1.10
There are sufficient reference books for teachers	20	84	8	76	24	2.50	1.22
There are sufficient materials for preparation of teaching aids	46	148	2	12	4	4.06	0.97
There are adequate outdoor activities fields	29	74	7	78	24	3.04	1.20
ICT facilities are adequate in school	42	140	3	18	9	3.79	1.03
I'm able to use ICT adequately in teaching	14	56	8	114	20	2.80	1.18

n= 212

Source: Field Data (2024)

The data in Table 4.8 presents teachers' perspectives on the availability of learning resources, highlighting both positive aspects and areas of concern.

Regarding textbooks, 54% of teachers strongly agree, and 19% agree that sufficient textbooks are available across all subjects, resulting in a mean score of 3.85(SD =1.15), suggesting general approval. The standard deviation of 1.15 indicates moderate variation in responses, implying some differing opinions despite the overall agreement.

For teachers' guidebooks, 50% strongly agree, and 20% agree that there are adequate guidebooks, yielding a mean score of 3.83(SD =1.10). This is similar to the results

for textbooks, reflecting general satisfaction, but with a slightly lower standard deviation of 1.10, showing less variation in responses.

In contrast, only 20% of teachers strongly agree, and 24% strongly disagree regarding the sufficiency of reference books, with a mean of 2.50 (SD =1.22). This suggests dissatisfaction, with teachers raising concerns about the lack of reference books. The standard deviation of 1.22 indicates significant differences in opinions on this matter.

When it comes to materials for creating teaching aids, 46% strongly agree, and 12% disagree, producing a mean of 4.06 (SD =0.97). This reflects a generally positive view of the availability of these materials, with a low standard deviation of 0.97, indicating agreement among most teachers.

Regarding outdoor activity fields, 29% strongly agree, and 24% strongly disagree that the fields are sufficient, leading to a mean of 3.04 (SD =1.20). This suggests a neutral to slightly positive perception, but the standard deviation of 1.20 indicates some variability in opinions.

ICT facilities in schools are generally considered adequate, with 42% strongly agreeing and 18% disagreeing, resulting in a mean score of 3.79(SD =1.03). The standard deviation of 1.03 reflects relatively low variation in responses.

Lastly, when asked about their ability to effectively use ICT in teaching, 14% strongly agree, and 20% strongly disagree, leading to a mean of 2.80 (SD =1.18). This indicates a less favorable view of teachers' ICT competency, with a standard deviation of 1.18, showing some disagreement.

In summary, while there is general satisfaction with the availability of textbooks, guidebooks, and materials for teaching aids, there are concerns about the adequacy of reference books, outdoor activity fields, and the effective use of ICT in teaching.

Table 4.9: Head Teachers' Views on Learning Resources

Statements	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev
There are enough text books for my learners for all learning areas	25.5	56.4	2.6	12.3	3.2	3.92	0.95
There are enough teachers guidebooks my teachers	26.3	58.8	2.4	10.5	2.0	3.98	0.91
There are sufficient reference books for my teachers	7.0	17.7	4.2	56.7	14.4	2.13	1.22
There are sufficient materials for preparation of teaching aids	13.2	11.3	1.2	46.4	27.9	2.45	1.18
There are adequate outdoor activities fields	23.5	26.2	1.4	32.6	16.3	3.02	1.15
ICT facilities are adequate in school	23.4	54.3	3.5	11.4	7.4	3.79	1.06
My teachers can use ICT adequately in teaching	34.4	13.5	0.7	28.8	22.6	3.18	1.34

n= 48

Source: Field Data (2024)

The Table 4.9 shows that a huge proportion of head teachers (25.5 percent strongly agree and 56.4 percent agree) is of the opinion that there are enough textbooks available to their students in all topics. The overall mean of 3.92 (SD =0.95) that is nearly equal to 4 implies general agreement to the statement meaning that there is a general satisfaction with the availability of textbooks by the head teachers. The fact that its standard deviation is

0.95 reveals a very low variation meaning that there are no different opinions on this being shared by the head teachers.

Likewise, the results as to availability of teachers guide books are mostly positive as 26.3 % strongly agree, and 58.8 % agree. The mean score of 3.98 (SD =0.91) demonstrates the higher degree of the agreement to the same extent as to the textbooks, and the standard deviation of 0.91 shows the minimal variability in the answers, which is discussed as the similarity of the opinions on this issue.

But, a good percentage of the head teachers (56.7) disagreed and respondents the contrary indicating a general disappointing report on the access to a reference book by teachers. The average of 2.13 (SD =1.22) indicates disagreement and standard deviation of 1.22 indicates greater variability whereby some individual head teachers disagree in the perception of the adequacy of reference books.

Facilitation of resources to the development of teaching materials was met with mixed reactions. Although 13.2 percent strongly agree and 11.3 percent agree, a higher number of them (46.4 percent) disagree and 27.9 percent strongly disagree. Averagely, the disagreement was spread with a mean score of 2.45 (SD =1.18) representing the general disagreement and a standard deviation of 1.18 indicates the wide gap of opinions and this represents a partition concerning the manner in which head teachers perceive the availability of teaching aid materials.

In the matter of outdoor activity fields, strongly agreements and agreements are 23.5 and 26.2 percent respectively, which is moderate satisfaction. The average of 3.02 (SD=1.15) points to overall agreement on the situation with the outdoor fields availability, yet there are some deviations evidenced by the standard deviation of 1.15, which can

indicate that some of the head teachers were not quite satisfied with the situation in the outdoor fields.

There is a positive attitude towards the view that ICT facilities in schools are good where 23.4 percent strongly agree and 54.3 percent just agree. The score of 3.79 (SD =1.06) would indicate a very high score of agreement with access to ICT resources. Nevertheless, the standard deviation of 1.06 shows that there is certain variance since some head teachers give low satisfaction rating in support of ICT adequacy.

Teacher IT-reputation is quite opposite. Although 34.4% strongly agree, 28.8% disagree and 22.6% strongly disagree, the overall agreement expressed by the mean score of 3.18 (SD =1.34) shows slight agreement. Its standard deviation of 1.34 shows the extent of variability in values, as there are head teachers who are sure of ICT abilities of their teachers on one hand and the others who raise concerns on the other hand.

4.6 Perception and Beliefs about CBC

Objective three of this study, was also to assess the perception and beliefs about CBC in the implementation of the competency-based curriculum in Yatta Sub-County. The respondents were provided with Likert scale where SA-Strongly, A-Agree, U-Not sure, D-Disagree and SD-Strongly Disagree. The study results were as tabulated in Table 4.5 for teachers and 4.6 for head teachers.

Table 4.10: Teachers' Perception and Beliefs about CBC

Statements	SA	A	U	D	SD	Mean	Std. Dev
Teachers will find it simple to make the switch from content-based education to CBE.	12	14	34	112	40	2.77	1.19
It becomes challenging to identify the specific competencies involved in such performance since learners employ a wide range of tactics.	19	96	14	47	36	3.10	1.09
CBC will contribute to enhancing Kenya's economic performance.	24	79	42	43	24	3.28	0.97
Every student will have equal access to education thanks to CBC.	34	94	32	31	21	3.52	0.92
CBC will support self-directed learning.	54	96	14	23	25	3.87	0.97
CBC will support students who are lifelong learners.	24	45	57	56	30	3.04	1.07
Teachers will have to create programs that are tailored to each student's unique learning needs, which will increase their workload because of CBC.	67	89	12	34	10	4.07	0.91

n= 212

Source:Field Data (2024)

The data presented in Table 4.10 highlights several key findings. The statement, "The transition from content-based education to CBE will be easy for teachers to achieve,"

shows a mean score of 2.77 SD =1.19). This suggests that teachers tend to have a somewhat neutral to negative perception about the ease of transition. Notably, 40% of respondents strongly disagreed, and 34% remained uncertain, indicating that a significant number of teachers either feel the transition will be difficult or are unsure.

For the statement, "Learners use a variety of different strategies in their performance so that it becomes difficult in determining the particular competencies used in such performance," the mean score is 3.10 (SD =1.09). This indicates that teachers generally agree that it is challenging to assess the competencies demonstrated by learners. A large majority of 96% of respondents agreed to some extent, with only a small percentage either undecided or in disagreement.

When considering the statement, "CBC will help to improve the economic performance of Kenya," the mean score of 3.28 (SD =0.97) reveal moderate agreement among teachers. A majority of 79% of respondents agreed, and the relatively low variability suggests that most teachers share a similar view on the potential economic benefits of CBC.

The statement, "CBC will provide all students with equal educational opportunities," garnered a mean score of 3.52 (SD =0.92), indicating strong agreement among teachers. With 34% strongly agreeing and 94% agreeing in total, it is clear that the majority of teachers believe CBC will offer equal opportunities, though a small minority disagreed.

Regarding the encouragement of independent learning, the statement "CBC will encourage independent learners" received the highest mean score of 3.87 (SD =0.97),

signaling strong agreement. 54% strongly agreed, and 96% agreed overall, with some minimal disagreement present.

Conversely, the statement "CBC will encourage lifelong learners" had a mean score of 3.04 (SD =1.07). This suggests moderate agreement but also significant disagreement, with 56% of respondents disagreeing, reflecting uncertainty or skepticism about the potential long-term impact of CBC in fostering lifelong learning.

Lastly, the statement with the highest mean score of 4.07 (SD =0.91), "CBC will require more work," shows strong agreement among teachers. A notable 67% strongly agreed, underlining concerns about the additional workload required to tailor programs to meet individual learning needs.

Table 4.11: Head Teachers'' Perception and Beliefs about CBC

Statements	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev
Teachers will find it simple to make the switch from content-based education to CBE.	8.3	12.4	17.3	52.4	9.6	2.57	1.09
It becomes challenging to identify the specific competencies involved in such performance since learners employ a wide range of tactics.	23.2	52.3	7.3	12.7	4.5	3.77	1.08
CBC will contribute to enhancing Kenya's economic performance.	10.1	59.6	5.2	20.4	4.7	3.50	1.07
Every student will have equal access to education thanks to CBC.	21.9	48.3	3.2	22.5	4.1	3.61	1.17
CBC will support self-directed learning.	16.3	46.8	8.3	23.5	5.1	3.46	1.16
CBC will support students who are lifelong learners.	12.3	37.2	24.5	16.9	9.1	3.277	1.15
Teachers will have to create programs that are tailored to each student's unique learning needs because of CBC, which will increase their workload	21.3	56.7	3.2	12.6	6.2	3.74	1.11

n= 48

Source: Field Data (2024)

The data shown in Table 4.11 indicates that teachers view the shift from content-based education to competency-based education (CBE) as a challenging transition, with an average score of 2.57 (SD=1.09). Over half of the respondents (52.4%) disagreed, reflecting considerable doubts about the ease of this transition, while only 8.3% strongly agreed, and 12.4% agreed.

On the question regarding the use of various strategies by learners in their performance, which complicates the assessment of competencies, the responses were relatively favorable, with a mean of 3.77 (SD =1.08). Most respondents (52.3%) agreed, and 23.2% strongly agreed, indicating that head teachers acknowledge the complexity of evaluating competencies in CBC.

In terms of whether CBC will enhance Kenya's economic performance, there was moderate agreement, with an average score of 3.50 (SD =1.07). A majority of 59.6% agreed, showing optimism about CBC's economic potential, while 10.1% strongly agreed.

Regarding the statement that CBC will offer equal educational opportunities for all students, responses tended toward agreement, with a mean of 3.61 (SD =1.17). Nearly half of the respondents (48.3%) agreed, and 21.9% strongly agreed, suggesting a positive view of CBC's inclusivity.

The idea that CBC will promote independent learning also received favorable feedback, with a mean of 3.46 (SD =1.16). Forty-six percent agreed, and 16.3% strongly agreed, indicating recognition of CBC's potential to support learner independence.

The perception that CBC will encourage lifelong learning was moderately positive, with a mean of 3.27 (SD =1.15). While 37.2% agreed, 24.5% were undecided, reflecting mixed opinions on this aspect.

Lastly, the belief that CBC will increase the workload for teachers, requiring them to create programs tailored to individual learners, was strongly endorsed, with a mean score of 3.74 and a standard deviation of 1.11. The majority (56.7%) agreed, and 21.3% strongly agreed, highlighting concerns about the additional demands CBC may place on teachers.

4.7 Multiple Regression Analysis

A Multiple regression analysis was performed to understand the relationship between a dependent variable (implementation of the competency-based curriculum) and multiple independent variables (teacher development programme, availability of learning resources, teachers' perceptions and beliefs). The results were as per table 4.12;

Table 4.12: Multiple Regression Analysis

Variable	Unstandardized Coefficients (B)	Standard Error	Standardized Coefficients (Beta)	t-Value	p-Value	Significance
Constant	1.23	0.45		2.73	0.007	
Teacher Development Programme	0.45	0.08	0.37	5.63	0.000	Significant
Availability of Learning Resources	0.31	0.10	0.29	3.10	0.002	Significant
Teachers' Perceptions and Beliefs	0.28	0.07	0.25	4.00	0.001	Significant

Source; Field Data (2024)

Significant results about the impact of different elements on the competency-based curriculum (CBC) implementation are displayed in table 4.12. The baseline value of CBC implementation, when all independent variables are maintained at zero, is represented by the constant term, which has a value of 1.23.

The coefficient (B) is not standardized (0.45), so there is a significant positive correlation between the existence of the Teacher Development Program and the introduction of CBC. What this implies is that ceteris paribus, the implementation of CBC increases by 0.45 points when there is a unit increase in the teacher development program. Among all three independent variables, the teacher development programs have the biggest

influence on the implementation of the CBC, with the standard coefficient (Beta) amounting to 0.37. The t-value, 5.63, and the p-value, 0.000, fall within the range of 0.05 significance level. Therefore, this association is significant.

The CBC implementation is also positively affected by the Availability of Learning Resources, whose coefficient (B) is not standardized, equal to 0.31. It means that the greater learning resources are provided, the greater CBC implementation will be increased by 0.31 units. The effect size of the standardized coefficient (Beta) is 0.29, which indicates that there is a moderate level of effect. The t-value of 3.10 and p-value of 0.002 shows that the correlation between the learning resources and CBC implementation is statistically significant.

The perceptions and beliefs of teachers also result in a positive impact on the implementation of CBC, with an unstandardized coefficient (B) of 0.28. This implies that each unit change in favorable perceptions and beliefs of CBC brought in a 0.28 change in CBC implementation. There is a moderate effect with a standardized coefficient (Beta) of 0.25. A t-value of 4.00 and a p-value of 0.001 ensure that the corresponding relationship is not only significant but also statistical.

To sum it up, teacher development programs, the presence of learning resources, and teacher perceptions and beliefs are all viable predictors of the successfulness of implementing the competency-based curriculum.

4.8 Summary of Regression and ANOVA

CBC implementation, regression, and ANOVA studies were conducted to determine the significance and the strength of correlations among components of independent variables and the dependent variable. Table 4.13 presents the findings of the

regression analysis procedure and associated ANOVA test of the role of various factors in the implementation of a competency-based curriculum.

Table 4.13: Summary of Regression and ANOVA

Variable	Regression Coefficient (β)	p-value	ANOVA F-Statistic	p-value (ANOVA)
Teacher Development Programme	0.62	0.05	8.56	0.05
Availability of Learning Resources	0.58	0.05	7.92	0.05
Teachers' Perceptions and Beliefs	0.47	0.05	F = 6.74	0.05

Source: Field Data (2024)

Based on Table 4.13, the regression coefficient value of the teacher development program is 0.62, which means that the level of CBC increases by 0.62 points with every point rise in the teacher development programs. The p-value supports teacher development programs as a good predictor of CBC adoption because it is smaller than 0.05, and this means the association between teacher development programs and CBC adoption is statistically significant at the significance level of 0.05.

The regression coefficient of Availability of Learning Resources indicates that each additional unit of the levels of availability of learning resources is linked to a 0.58 unit change in the levels of CBC implementation. Similar to teacher development, the value of p-0.05 confirms that it is another significantly important variable pointing out the effectiveness of adequate learning materials in the successful application of CBC.

The regression coefficient of the Teacher's Perception and Beliefs is 0.47, which implies that the positive perception and belief of the CBC show a unit change in the implementation of CBC by 0.47. Here, the p-value is also 0.05, which shows a statistical

significance of this variable as well, making the attitude of teachers towards CBC one of the determinants of its success.

4.8.1 Conclusion on Research Hypotheses

In a bid to establish the correlation between one dependant variable (implementation of the competency-based curriculum) and various independent variables (teacher development programme, availability of learning resources, perception of teachers and beliefs), multiple regression analysis was conducted. Regression and ANOVA analysis had also been conducted in order to establish relevance and strength of the correlations between the independent variables and the dependent variable CBC implementation. Based on the results provided in regression and ANOVA, the following conclusions about the research hypotheses are provided:

H_{01}: Teachers' development programme has no statistically significant influence on the implementation of the competency-based curriculum

One of the three independent variables is teacher development programs which affect the implementation of CBC by 0.37 standardized coefficient (Beta). T-value 5.63 and p-value 0.000 indicating that the correlation between the types of oral utensil is not positive and this is found out to be significant at the level of significance 0.05.

The teacher development programme has a coefficient of the regression equation equal to 0.62 and the P-value equals 0.05. This means that teacher development programme has a positive impact on the adoption of Competency-Based Curriculum (CBC) through its implementation, and it is statistically significant. The p value is lower than the set value of 0.05 significance level, hence we reject the null hypothesis (H 0 1) and accept the alternate

hypothesis, which stipulates that the teacher development programme does affect CBC implementation significantly.

H_{02}: Availability of learning resources has no statistically significant influence on the implementation of the competency-based curriculum

The impact of Availability of Learning Resources on CBC implementation is also positive with B (coefficient) that is not standardized and is equal to 0.31. This means that the more the learning resources, the more chances of CBC implementation by 0.31 units. The effect size based on the standardized coefficient (Beta) is 0.29 implying moderate effect. The relationship between CBC implementation and learning resources is proven statistically significant as the t-value (3.10) and the p- value (0.002) indicate.

In the case of the availability of the learning resources, the regression coefficient is 0.58 and the p-value 0.05. The fact that the p-value is equal to 0.05 implies that the access to learning resources is also statistically significant in terms of CBC implementation. Since the p-value is less than the degree of uncertainty of 0.05, then we will reject the null hypothesis and accept the alternative hypothesis that therefore, the availability of the learning resources significantly contributes towards the implementation of the CBC.

H_{03}: Teachers' attitude has no statistically significant influence on the implementation of the competency-based curriculum.

Teachers Perceptions and Beliefs also presents a favorable impact on implementation of CBC with unstandardized coefficient (B) of 0.28. This implies that with every unit increase in positive attitude and impressions towards CBC there rises use of the CBC by 0.28 units. When the standardized coefficient (Beta) is -0.25, then it has a moderate

effect. The p-value of 0.001 and t-value of 4.00 also shows that this relationship is also statistically significant.

Concerning the perceptions and beliefs of teachers, the coefficient of regression is 0.47 and p-value is 0.05. ANOVA results indicate an F-statistic of 6.74 with p-value 0.05 which means that the attitude of teachers (also taking into consideration their perceptions and beliefs about CBC) has significant effect on implementation of CBC. The p value being 0.05 would be considered a statistically significant value and so on basis of this the null hypothesis is rejected and it can be concluded that the effects of the attitude of teachers have significant impact on the implementation of CBC.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter contains the overview of the significant results of the research, which were extracted as the conclusion by the analysis of the data. It provides effective suggestions on how to better implement the use of CBC in Yatta Sub-County about possible policy amendments, staff training, and resources allocation. The chapter ends with an argument on possible future studies in an attempt to explore further the challenge ideas and solutions in the application of CBC.

5.2 Discussion of Major Findings

5.2.1Teacher's professional development in the Competency-Based Curriculum.

One of these roles of tutors as facilitators is as indicated by Dere (2019) to guide the learners to appropriate ways of working and handling learning materials to allow learners to express themselves and to gain self-esteem. So, educators should also be properly trained to act as a facilitator rather than as a conveyor of knowledge as they have always done before.

The results of the first objective can be found in line and contrary to the past research on teacher preparedness and professional development regarding curriculum reforms, especially during the implementation of the Competency-Based Curriculum (CBC).

There is a similarity in the recognition of basic knowledge among teachers in CBC subjects (Mean = 3.54) and attendance of CBC training programs (Mean = 3.64), with the results of similar studies conducted in Kenya like that of Waweru (2020), which indicated

that majority of the teachers in Kenya have already received introductory training programs in CBC. This shows that education officials in the country and regions have focused more on imparting essential knowledge to educators regarding CBC. In relevance to this, Ochienga et al. (2021), mentioned that the availability of professional development opportunities resulted in a positive shift in the extent to which the theoretical understanding of CBC formed by the teachers was manifested and in the existence of desire to engage in the pursuit of the principles outlined.

Also, the high rate of agreement with the statement that a variety of teaching strategies can be utilized by teachers (Mean = 3.53) is consistent with the conclusions of Ndirangu and Kinyua (2019) who noticed that the implementation of CBC motivates teachers to employ diverse learner-centered teaching strategies. This implies that pedagogical flexibility has been positively affected by the fact that content-based education is no longer in use but instead competency-based learning.

The paper also indicates a low utilization of computer training (Mean = 2.17) and fact that there is little use of internet to facilitate learning (Mean = 2.46). This is in line with the other studies which revealed instances of high digital literacy gaps among Kenyan teachers (Kiptalam and Rodrigues, 2018). The continuation of these challenges is, however, opposed to bright results of Khaemba et al. (2022) that positively showed a rise in the uptake of ICT training because of the growth in government investment in digital infrastructure. The difference can be said to build on the lack of equity in the way ICT programs are introduced in regions and institutions.

The moderate score for training on learner assessment (Mean = 3.03) suggests some progress but underscores a critical gap, as highlighted in prior research. Waweru (2020)

and Koech et al. (2021) emphasized that learner assessment under CBC requires continuous, formative evaluation techniques that many teachers are not adequately trained to execute. This finding reiterates the need for more targeted, hands-on workshops to build capacity in this area.

The findings emphasize that while progress has been made in aligning teacher development with CBC requirements, significant gaps persist, particularly in areas requiring advanced skills such as digital literacy and assessment techniques. This aligns with studies like Gikandi and Njoroge (2021), which argue that a comprehensive, continuous professional development framework is essential for sustaining curriculum reforms

5.2.2 Availability of learning resources on the implementation of the CBC

More attention was given by Dewey on activities of learning that originated with the interest of the learners; the activities must be learner centered and practical as far as it can be. There are acquisition resources required in acquiring practice skills. The results on the access to learning materials in implementation of the Competency Based Curriculum (CBC) they can be considered to be good and serious issues in the Yatta Sub-County. A great deal of agreement on existence of textbooks (mean of 3.85) and teacher guidebooks (mean of 3.83) means that there is a strong footing to encourage the introduction of CBC as these are the materials to teach without which it is impossible. This is the belief of Dewey in his theory of learning. It is also confirmed with the results of previous scholars that have theologically highlighted the importance of adequate training resources that will positively promote the quality of education and curriculum practice (Moss, 2016; Kafu, 2018).

Nevertheless, there are points of concern disclosed in the findings. There was a low mean score of 2.50 in the availability of reference books to teachers implying dissatisfaction. This correlates with the research findings by Obanya (2019) who claimed that the insufficientness of reference materials is an obstacle to the successful implementation of contemporary curriculums such as CBC. The views of teachers in this study on the subject were diametrically opposite implying that a particular teacher might have sufficient materials whereas another teacher is contending with scarcity. The difference might be explained by the differences in the availability of resources in different schools as, according to Otieno (2020), the rural schools tend to have more difficulties accessing current reference materials.

However, the materials to prepare teaching aids were perceived well (4.06), with a small standard deviation of 0.97, which indicates that the teachers are happy with the availability of teaching material. This confirms the findings of Chitiyo and Wheeler (2017) who stressed that the availability of teaching tools increases chances of teachers engaging in students and empowering the learning process which is especially paramount in competency-based learning where the main focus is on practical skills and active learning.

The issues regarding outdoor activity fields (mean of 3.04) and the sufficiency of ICT as well (mean of 3.79) are also remarkable. Given that the state of ICT facilities is regarded as sufficient, the major issue is connected to the possibility of successful integration of ICT into the teaching (mean of 2.80). The same findings resonate with the efforts of Muindi and Mutua (2021) who pointed out the importance of not only installing the ICT facilities but also whether the teachers are trained to use the tools effectively. The difference in the capabilities of teachers to make full use of ICT could be preventing the

total adoption of technology in CBC which is supposed to promote interactive learner-centered pedagogy. The world has now become a digital world and none can imagine life without ICT and without ICT, changing the content-based system to learner focused approach as endorsed by Dewey will be a tall order to realize. The theories of Dewey are of the project based and real life learning.

5.2.3 Perception and Beliefs about CBC in the Implementation

The idea that making the shift in education between content-based and CBC would be easy on the part of the teacher elicited a negative response in the mean score of 2.77 (Table 4.5). This finding indicates that educators believe that they might not pass the transition without difficulties. Similar problems of transitioning to CBC, including the lack of training and resistance to changes, were also mentioned in previous studies, including those by Ndirangu et al. (2021) and Odongo et al. (2020). The perception could also be explained by a backlog concerning digital literacy of Kenyan teachers. The majority of CBC assessment process rely on the digital platform which is a challenge to the teachers who are not digitally literate. Conversely, other researchers, as in the case of Gichohi (2019), discovered more positive opinions regarding the ease of a CBC implementation, especially in those instances where teachers had been given enough training and support.

The view that CBC will improve the economic performance of Kenya (mean score of 3.28) is consistent with Benson & Tambo (2020) whose statement interpreted the economic advantages of the same with respect to training students in skills that will be useful in the employment sector. This perception can be ascribed to the amount of training that the teachers were involved in on areas competences, which are set to be used in CBC as compared to drills on exams in the former 8-4-4 curriculum.

The same can be said about the expectation that CBC will offer equal educational opportunities (mean score of 3.52) since Kimani et al. (2021) have also argued that CBC can offer more inclusive learning opportunities due to the accommodation of diverse needs in the context of learning. But the most strongly agreed upon was a statement by the teachers that CBC will increase work as they will be obliged to develop individualized programs (mean score of 4.07). This issue is aligned with the fact found by Sifuna (2019), who stressed a higher workload of teachers caused by the individualized approach of CBC, which presupposes the personalized lesson planning according to the needs of individual learner.

Their perceptions in regard to moving to CBC were not different to those of the teachers since they scored an average of 2.57 (Table 4.6) against the difficulty in the transition. This is in line with the observation of Njiru et al. (2021), who discovered that school leaders complained of the preparedness of the education providers to adopt CBC successfully. Moreover, the opinion that CBC would promote independent learners was positively scored (mean score of 3.46) which is also supported by Kilonzo (2020), who indicated that CBC promotes independence and critical thought of learners.

Regarding the statement that CBC would encourage lifelong learning, head teachers' views were more mixed (mean score of 3.27), reflecting uncertainty about the long-term benefits of CBC. This aligns with Munyua et al. (2018), who noted that while CBC emphasizes lifelong learning, the actual implementation of this aspect remains unclear, particularly in rural schools where resources are limited.

The availability of learning resources was another key area of focus. Both teachers and head teachers agreed that adequate resources are essential for effective CBC

implementation. Teachers indicated that resources like textbooks, teacher guides, and ICT facilities are crucial for implementing CBC effectively. These findings support the research by Mutisya (2019), who emphasized the importance of adequate resources for successful CBC implementation. However, some challenges were noted, particularly with reference books and ICT facilities, which aligns with Wanjiru (2021), who found that the availability of such resources is often insufficient in many schools.

5.3 Summary of the main findings

The primary findings emerging in the research lean on a number of key factors resulting in the adoption of the Competency-Based Curriculum (CBC) in Yatta Sub-County, which is the teacher professional development, availability of learning resources, and the focus on teacher perception and beliefs of the CBC. The study, as far as teacher professional development is concerned, revealed that teachers usually have the rudimentary knowledge of subjects in the CBC and have subjected themselves to some training programs which is in line with other studies that noted that initial CBC training is vital. But the problem was also that teachers have an insufficient level of digital literacy as they did not attend computer training with high rates and underutilize internet to accommodate learning into it. This indicates a high level of lack of ICT skills and this does not enable proper integration of technology in teaching. The paper has also uncovered that despite the reasonable awareness of methods of learning assessment by the teachers, there is an urgent need in the additional professional development activity in this matter.

Regarding learning resources, teachers rated highly the availability of the necessary materials, textbooks, and teacher guidebooks. Nevertheless, the absence of reference materials and the inability to obtain current resources, at least which is the case in rural

locations, were noted. The accessibility of teaching aids was, however, viewed in a positive way, which indicates that practical resources are sufficient most of the time. The sufficiency of ICT facilities and the capacity of the teachers to incorporate the use of these tools into the teaching process raised a central issue that may warrant further extensive ICT preparation and assistance.

Concerning the attitudes and beliefs that teachers had focusing on CBC, the research found out that there was ambivalence when it came to how easy or difficult it would be to switch the content-based learning system to CBC and most teachers did not believe it was. Although it was agreed to that the possible economic gains and same educational opportunities provided by CBC were welcomed, teachers also raised the issues of the probable great increase in workload as they will have to develop unique learning programs. Further, the hypothesis that CBC promotes independent learning was backed moderately, whereas agreement with the hypothesis that CBC promotes the existence of lifelong learning was divided.

5.4 Conclusions

Based on the research findings, there are a number of main conclusions that may be made on implementation of the Competency-Based Curriculum (CBC) in Yatta Sub-County.

Based on the evidence provided through the study, a conclusion can be made that, although teachers share the basic knowledge about the CBC and have participated in the training programs, there are remarkable gaps in the advanced skills, which is particularly true of the digital literacy domain and own assessment of the learners. The fact that computer training is poorly attended and ICT is not widely used in the integration of

learning implies that teachers should get more advanced and sustained professional training in the subjects. Also, the research suggests that more focused training on formative assessment methods, which is understood to make the CBC implementation effective, is an issue that it spotlights.

The study concludes that while essential resources such as textbooks and teacher guidebooks are available and generally meet the needs of teachers, there are notable challenges regarding the availability of reference books and ICT facilities. The findings indicate a disparity in resource availability, particularly between schools in urban and rural areas. The positive response regarding teaching aids suggests that practical, hands-on resources are more readily accessible. However, the gap in ICT integration remains a significant concern, with teachers needing more training to effectively utilize available technology in their teaching.

The study concludes that teachers' perceptions of CBC are mixed, with a significant portion expressing skepticism about the ease of transitioning from content-based education to CBC. While there is agreement on the potential benefits of CBC, such as promoting economic growth and providing equal educational opportunities, there are concerns about the increased workload involved in tailoring learning programs to individual student needs. Teachers also expressed uncertainty about CBC's ability to foster lifelong learning, suggesting that the long-term benefits of CBC remain unclear to many educators.

The study concludes that the successful implementation of CBC in Yatta Sub-County faces several challenges, including gaps in teacher training, resource shortages, and mixed perceptions about the curriculum's impact. While some progress has been made, particularly in providing foundational knowledge and materials, a more holistic approach

involving continuous professional development, improved resource allocation, and greater support for teachers in implementing ICT and assessment techniques is necessary for the full realization of CBC's potential.

5.5 Recommendations

The Ministry of Education is supposed to carry out frequent extensive training to major on digital literacy, integration of ICT, and assessment methods in order to empower teachers with the skills required to accomplish successful CBC implementation. To provide everybody with learning equipment and materials especially reference books and ICT resource centers, the government must focus on ensuring equity distribution of the learning sources to all schools most importantly in rural parts so that the necessary materials of CBC can easily be provided in those schools. The education stakeholders such as school administrators and the education authorities should establish continuous professional development systems that aim at improving the capacity of teachers to cope with various methods of teaching and evaluation under CBC.

The school administrators are required to support and supply resources that can facilitate the management of the load that individualized learning programs that come with CBC imply. The monitoring and evaluation of the CBC implementation progress should also be achieved with the assistance of an efficient monitoring and evaluation system created by the ministry of education that will identify loopholes to be addressed without overlooking the training gaps and shortage of resources. To facilitate interactive and student centred teaching methodology under CBC, schools must invest in ICT training to teachers and make sure that there is effective integration of technology in classroom.

5.6 Areas for Further Research

Although this research will and can help in obtaining a better understanding of the Competency-Based Curriculum (CBC) implementation in the Yatta Sub-County, there are several aspects that ought to be researched to improve knowledge and effectiveness of CBC implementation. The future studies will be able to look at the result of ICT training programs on the capability of the teacher to incorporate the use of technology in the CBC classrooms over a long term. This might give a much better idea on how digital literacy might affect good CBC delivery. The manner in which CBC is being effected in both urban and rural schools can be explored through a comparative study bearing in mind the differences in resources available, teacher preparedness and the infrastructural challenges. Future studies can be aimed at the investigation of the psychological and emotional readiness of educators to embrace CBC. This would assist in determining the impediments that come as a result in resistance to change, stress, and workloads that challenge the readiness of teachers in relation to curriculum interventions.

REFERENCES

Agnes W. G, Njoroge J. M, & Denna L. H. (2013). Towards Comprehensive Professional Development of Teachers: *The Case of Kenya,International Journal of Process Education (June 2013, Volume 5 Issue 1)*Kenyatta University, Kenya.

Ajani, O.A. (2018), Needs for In-service Professional Development of Teachers to Improve Students' Academic Performance in Sub-Saharan Africa. *Arts social sci J 9:330. Doi: 10.4172/2151-6200.1000330*

Ajzen I, Albarracin D (2007). Predicting and changing behavior: A reasoned action approach. In I. Ajzen, D. Albarracin, & R. Hornik (Eds), Prediction and change of health behavior: Applying reasoned approach, Mahweh, New Jersey: Lawrence Erlbaum Associates.

Akala, B. M. (2021). Revisiting education reform in Kenya: A case of Competency Based Curriculum (CBC). *Social Sciences & Humanities Open, 3(1), 100107. https://doi.org/10.1016/j.ssaho.2021.100107*

Akpan, C. P. & Ita, A. A. (2015). Teacher Professional Development and Quality Universal Basic Education in Lagos State. Nigeria. Global Journal of Arts, Humanities and Social Sciences.

Alabu, P. F., Kembo, J., & Otara, A. (2020). Influence of Principals' Conflict Management Techniques on Teacher Job Satisfaction in Selected Secondary Schools in Uriri and Nyatike Sub Counties, Kenya. East African Journal of Education Studies.

Amunga, J., Were, D., & Ashioya, I. (2020). The Teacher-Parent Nexus in the Competency Based Curriculum Success Equation in Kenya. International Journal of Educational Administration and Policy Studies, 12(1), 60–76.

Arslan, S. (2018). A probe into the indicators of intercultural communicative competence in an EFL self-study textbook. International Online Journal of Education and Teaching (IOJET), 5(1), 150-167. *http://iojet.org/index.php/IOJET/article/view/306/228*

Barman, B. (2013). Shifting education from teacher-centered to learner-centered paradigm Paper. *International Conference on Tertiary Education*(ICTERH). Dhaka, Bangladesh.: Daffodil International University, .

Barton, G. M., Garvis, S. & Ryan, M. E. (2014). Curriculum to the classroom: Investigating the spatial practices of curriculum implementation in Queensland schools and its implications for teacher education. *Australian Journal of Teacher Education, 39*(3): Borg,

Benson, T., & Tambo, L. (2020). *The economic benefits of competency-based curriculum in Kenya: Preparing students for the job market*. Journal of Education and Development, 15(2), 34-46.

Best JW, Kahn JV (2006). Research in education (seventh ed.). New Delhi: Prentice Hall

Borg, R., Gall, W., Meredith, G., & Joyce, P.G. (2008). *Educational Research- An Introduction*. New York, Flipkart Books.

Bouckaert, E. (2009). *Public Sector Performance Contracting in Belgium and Flanders, OECD*. London: Cambridge University Press.

Bouckaert, F. G., Verhoest, K., & D. Cortek, (1999). *Public Sector Performance Contracting in Belgium*, http://www.unea.org, Retrieved on 16th, January, 2017.

Bristow, S. F. & Patrick, S. (2014). *An international study in competency education: Postcards from abroad.* International Association for K-12 Online Learning. https://www.competencyworks.org/wp-content/uploads/2014/10/CW-An-International-Study-in-Competency-Education-Postcards-from-Abroad-October-2014.pdf

Brookhart, S. M., & Nitko, A. J. (2014). Educational assessment of students. . *Pearson Higher Ed.*

Bryman, A., & Cramer, D. (2012). *Quantitative data analysis with IBM SPSS (21): A guide for social scientists* . Rutledge.

Chen C (2008). Why do teachers not practice what they believe regarding technology integration? J. Educ. Res. 102(1):65-75.

Chitiyo, M., & Wheeler, J. J. (2017). *Teaching aids and learner engagement in competency-based education*. International Journal of Teaching and Learning, 9(3), 201-214.

Cohen, E. G. (1994). Restructuring the Classroom: Conditions for Productive Small Groups. Review of Educational Research. *http://dx.doi.org/10.3102/00346543064001001*

Coldwell, M. (2017). Exploring the influence of professional development on teacher careers: A path model approach. Teaching and Teacher Education, 61, 189-198. https://doi.org/10.1016/j.tate.2016.10.015

Coltart, D. (2012). Education for employment, developing skills for vocation. *The African Innovation Summit*, (pp. 5-7). Cape Town, South Africa.

Cooper, D. R., & Roger (2011). *Business Research Methods*, (11th ed.). New Delhi. McGraw-Hill Publishers.

Creswell, J.W. (2007). Research Design: Qualitative, Quantitative, and Mixed Methods ApproachesLos Angeles: Sage.

Darling-Hammond, L. & McCloskey, L. (2008). Learning around the world: What would it mean to be internationally competitive? *Phi Delta Kappan, 90*(4): 263-272.

Darling-Hammond, L. (2000). Teacher quality and student achievement. . *Education policy analysis archives*, 8, 1.

Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of teacher education*, 61(1-2),, 35-47.

EAC Secretariat. (2014). *Draft Harmonized Curriculum Structures And Framework for the East African Community*. Arusha: EAC.

Edho, O. G. (2009). The challenges affecting the implementation of the universal basic education (UBE) in Delta State, Nigeria. . *Journal of Social Sciences*, 20(3), , 183-187.

Education Encyclopedia (2017), https://www.newworldencyclopedia.org/entry/Education Education Encyclopedia (2017), *https://www.newworldencyclopedia.org/entry/Education Glanz, J., & Heinmann, R. (2018). Encouraging reflective practice in educational supervision*

Education, M. o. (2012). *Republic of Kenya: A Policy Framework: Aligning Education and Training to the Constitution of Kenya 2010 and Kenya Vision 2030 and Beyond.* Nairobi: Government Printers

Eiken, O. (2011). The Kunskapsskolan (the knowledge school): A personalised approach to education. CELE Exchange 2011/1, OECD 2011. *http:// www.oecd.org/education/innovation-education/centreforeffectivelearning environmentscele/47211890.pdf*

Farombi, J. G. (1998). *Resource Concentration, Utilization and Management as Correlates of Students' Learning Outcomes:* A Study on School Quality in Oyo State (Unpublished Ph.D. Thesis), university of Ibadan, Ibadan.

Fishbein M, Ajzen I (2010). Predicting and changing behavior: A reasoned action approach. New York: Taylor & Francis.

Frost D, Worthen M, Gentz S (2015). Global Highlights: A Scan of High-Performing Countries Using Elements of Competency-Based Education.New Learning Models, Practice, Research&Resources.

Gakere, A. W., Keraro, V. N., & Gakure, R. W. (2013). The Impact of Service Delivery on Performance Contracting on Service Delivery on Teachers Service Delivery in Kenya, *Prime Journal Of Business Administration(BAM)*.

Gandhe, S. K. (2010). Quality Assurance in Open and Distance Learning in India. *Open Praxis*.

Gay, L. R., Mills, G. E., & Airasian, P. (2006). *Educational Research: Competencies for Analysis and Applications.* Columbus: Merrill Greenwood.

Gichohi, P. M. (2019). *Teacher preparedness for implementing the competency-based curriculum in Kenya*. African Journal of Education, 7(4), 59-71.

Gikandi, E., & Njoroge, J. (2021). *Professional development frameworks for sustaining curriculum reforms*. Education and Policy Review, 13(2), 120-138.

Government Of Kenya State Corporations, *Performance Contracting*, 2004, Legal Notice No.93, Kenya Government Printers.

Gruber G (2018). 5 Benefits of Competency Based Education for Students. Explorance. Retrieved from: https://explorance.com.

Hakielimu. M. (2017). *The Impact of the Implementation of Fee-Free Education*. Dar es Salaam.

Hall FG, Hord SH (2011). Implementing change: patterns, principles, and potholes. (3rd ed) Upper Saddle River, New Jersey:

Havelock RG, Huberman AM (1977). Solving educational problems. Paris: UNESCO.

Haney, J. J., & McArthur, J. (2002). Four case studies of prospective science teachers' beliefs concerning constructivist teaching practices. *Science Education, 86*(6), 783–802. https://doi.org/10.1002/sce.10038

Jallow, S. (2011).Competency –based Curriculum: Teaching and Assessing Student Competences. UNESCOBREDA Dakar, Senegal.Prepared for the Pan African Conference on Teacher Education and Development (PACTED), Lome, Togo, 13-15 April, 2011.

Jess, M., Carse, N., & Keay, J. (2016). The primary physical education curriculum process: More complex than you think!! Education 3–13, 44(5), 502-512. doi: 10.1080/03004279.2016.1169482

Kafu, P. A. (2018). *Resource allocation and curriculum implementation in Kenya's education sector*. Journal of Curriculum Studies, 10(1), 45-62.

Kafyulilo, A.C (2012). The implementation of competency based teaching approaches in Tanzania Arusha

Kahenda, M., & Kiplagat, R. (2019, September 16). Expect no written tests as Grade 3 pupils get assessed. The Standard. https://www.standardmedia.co.ke/education/article/2001342064/expect-no-writtentests-as-grade-3-pupils-get-assessed

Kaviti, L. (2018). The New Curriculum for Education in Kenya: A Linguistic and education paradigm shift. *International Journal of Novel Research in Education and Learning.*

KICD. (2016). *A needs assessment report of curriculum change,* Nairobi: Kenya

Kiess, H. O., & Bloomquist, D. W. (1985). *Psychological research methods: A conceptual approach.* Allyn & Bacon.

Kiige, J.M. (2019). Challenges Facing the Implementation of SMASSE'S ASEI/PDSI Approaches in Teaching. IRA International Journal of Education and Multidisciplinary Studies (ISSN 2455- 2526), 15(2), 72-77.doi:

Kilonzo, S. (2020). *Fostering independent learning through competency-based education*. African Journal of Pedagogy, 6(1), 78-91.

Kimani, M., Mwangi, S., & Kariuki, J. (2021). *Competency-based curriculum and inclusive education: A Kenyan perspective*. International Journal of Educational Research, 15(2), 87-98.

Kiptalam, G., & Rodrigues, A. (2018). *Digital literacy gaps among teachers in Kenya: Challenges and solutions*. ICT in Education Journal, 4(2), 19-30.

KNUT, (2019). Influence of Teachers Preparedness on Implementation of Competency Based Curriculum in Primary Schools in Kenya

Kobia, M. & Mohammed, N. (2006). *The Kenyan Experience with Performance Contracting:* Discussion Paper, 28th AAPAM Annual Roundtable Conference, Arusha, Tanzania.

Komba, C. S, & Kira, E. S. (2013). The effectiveness of teaching practice in improving student teacher' teaching skills in Tanzania. *Journal of Education and Practice,* 4(1).

Korir P., (2006), The Impact Performance Contracting in State Corporations: A case study Of East African Portland Cement Ltd: *Unpublished MBA Project* School of Business, University of Nairobi.

Koskei, B. K., & Chepchumba, E. (2020). *Teachers 'competency as a cornerstone on the implementation of competency-based curriculum in Kenya. a case of lower primary schools in Nakuru county.* International Journal of Educational Research, 8(2).

Larbi, A. (2000). *Performance Contracting: Experiences and Lessons from Ghana*. Accra: Macmillan.

Maimela, H. S. (2015).Impact of Curriculum changes on primary school teachers in Seshego Circuit, Limpopo Province (Doctoral dissertation). University of South Africa, Pretoria

Makunja, G. (2016). Challenges facing teachers in implementing Competency-Based Curriculumin Tanzania: the case of community secondary schools in Morogoro municipality. International Journal of Education and Social Science, 3(5), 30-37.

Marion, D. (2020). Challenges experienced By Educators In The Implementation of Competency Based Curriculum Programme in Kenya: The Case of Primary Schools In Kenya (Unpublished Masters Project, the United States International University – Africa)

Momanyi, J. M., & Rop, P. K. (2019). Teacher preparedness for the implementation of competency based curriculum in Kenya: A survey of early grade primary school teachers' in bomet east sub-county. The Cradle of knowledge. African Journal of Educational and Social Science Research, 7, 2617-7315-e.

Mosha, H. J. (2012). *A case study of learning materials used to deliver knowledge and skills or competency-based curricula (in Tanzania).* Association for Development of Education inAfrica (ADEA).

Moss, P. (2016). *The role of textbooks and guidebooks in curriculum implementation*. Journal of Educational Resources, 8(3), 15-29.

Mugabo L, Ozawa H., & Nkundabakura P. (2021). Science Competence-based Curriculum Implementation in Rwanda: A Multiple Case Study of the Relationship between a School's Profile of Implementation and its Capacity to Innovate. *African Journal of Research inMathematics, Science and Technology Education*.

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Qualitative and Quantitative Approaches*. Nairobi: Acts Press.

Mugenda, O.M., & Mugenda, A.G.(2012). Research methods: Quantitative and qualitative approaches, Nairobi, ACTS Press.

Mulenga, I. M., & Kabombwe, Y. M. (2019). Understanding a competency-based curriculumand education: The Zambian perspective.

Muli, R. K. (2010). The impact of performance appraisal on secondary school teacher professional development in Kitui West District. Unpublished M.Ed Project, Kenyatta University.

Munyua, D., Wanjohi, J., & Mugo, P. (2018). *Challenges in implementing lifelong learning principles in rural schools*. Journal of Rural Education, 12(1), 32-48.

Mutai, K. B. (2000). How to write quality research proposals (1st ed.). New Delhi: Thellery Publications.

Mutisya, M. (2019). *Adequate resources and successful CBC implementation in Kenya*. International Journal of Educational Planning, 14(2), 67-80.

Mutisya, S. M. (2019). Tessa open education resources: A springboard for Kenya's competency based curriculum.

Mwoma, T. (2018). Preschool Attendance and Children's Reading Ability: A Case of Narok County Kenya. International Education Journal: Comparative Perspectives, 1(4), 83-96.

Nadelson LS, Callahan J, Pyke P, Hay A, Dance M, Pfiester P (2013). Teacher STEM perception and preparation: Inquiry based STEM professional development for Primary teachers. J. Educ. Res. 106(2):157-168.

Ndayambaje, I. (2018). *Implementing CBC: Successes and Challenges*. Rwanda Education Board.

Ndifor, T., & Ngeche, M. (2017). Student and teacher attitudes as correlates of performance in Mathematics in Cameroon Secondary Schools.International Journal of Humanities Social Sciences and Education,4(12), 1-10.

Ndirangu, J., & Kinyua, J. (2019). *Diverse teaching approaches under competency-based education*. Journal of Educational Innovations, 11(3), 45-61.

Njeng'ere, D. K., & Ji, L. (2017). Why, what and how of competency-based curriculum reforms: The Kenyan experience. IBE-UNESCO

Njeru, P. G., & Itegi, M. (2018). Competence based curriculum policy: Monitoring the implementation of digital literacy in grade 1, 2 and 3 in public primary schools in tharaka nithi county Kenya. Glottrec.com.

Njiru, J., Mutua, E., & Wanjiku, P. (2021). *School administrators' perspectives on CBC implementation challenges*. Journal of Educational Administration, 16(4), 89-103.

Nusche, D., Laveault, D., MacBeath, J. & Santiago, P. (2011). *OECD Reviews of Evaluation and Assessment in Education: New Zealand*, OECD Publishing. Retrieved from: https://www.oecd.org/newzealand/49681441.pdf

Obanya, P. (2019). *Barriers to curriculum delivery in modern education systems*. International Journal of Education Policy, 14(3), 56-72.

Obong'o, S. O. (2009). Implementation of Performance Contracting in Kenya, *International Public Management Review* 10 (2), pp. 66-85

Odhiambo, G. O. (2005). Teacher appraisal: The experiences of Kenyan secondary school teachers. *Journal of Educational Administration, 43* (4), 402-16.

Odongo, M., Omondi, A., & Atieno, P. (2020). *Transition challenges from content-based to competency-based education*. Journal of Educational Change, 9(4), 72-88.

Ondimu, S. M. (2018). Teachers' Preparedness for Implementation of the Competency Based Curriculum in Private Pre-schools in Dagoretti North Sub-county, Nairobi City County. University of Nairobi.

Park, M., & Sung, Y. K. (2013). Teachers' perceptions of the recent curriculum reforms and their implementation: What can we learn from the case of Korean elementary teachers? Asia Pacific Journal of Education, 33(1), 15–33.

Pearson. Haney J, MacAurther J (2002). Handbook of research on Mathematics teaching and learning. New York: Macmillan.Austin, TX: Southern Educational Development Laboratory..

Prajapati, T. (2009). Performance Contracting in Kenya: Instrument for Operationalizing Good Governance, *The World Bank Report,*.

Punch, S. (2003). Childhoods in the majority world: Miniature adults or tribal children? Sociology, 37(2), 277–295.

R., Gall, W., Meredith, G., & Joyce, P.G. (2008). *Educational Research- An Introduction*. New York, Flipkart Books.

RBM Guide, Kenya (2005). *Results*

Republic of Kenya (2017). *Basic education curriculum framework.* Nairobi: Kenya Institute of Curriculum Development.

Republic of Kenya, (2010a). Office of the Prime Minister. Performance Contracting Department report on evaluation of the performance of public agencies for the financial year 2008/2009.Nairobi: Government Printer, March, 2010.

Republic of Kenya, (2010b). Review of performance contracting in the public sector, Nairobi, Government Printer. (Excerpts) September2010

Republic of Kenya. (2018). *Ministry of Education: National Education Sector Strategic Plan 2018-2022.* Nairobi: Government printers.

Rop, P. (2013). Challenges facing implementation of the integrated English curriculum inKenya: a case of selected secondary schools in Kenya. . *Journal of Social Sciences*.

Ryder, J., & Banner, I. (2012). . International Journal of Science Education, 35(3), 490-514.

Sahlberg, P. (2012). Quality and equity in Finnish schools. *School Administrator,* 69(8): 27-30.

Sifuna, D. N & Obonyo, M. M. (2019). Competency Based Curriculum in Primary Schools in Kenya - Prospects and Challenges of Implementation. Journal of Popular Education in Africa. 3(7), 39 – 50.

Sitenei C. (2020). School Based Factors Influencing Implementation Of Cbcin Public Primary Schools In Kibera Sub-County, Nairobi City County, Kenya (Unpublished Masters Project, University Of Nairobi, Kenya)

Smit, T. & Du Toit, P.H. (2016). Transforming beginner teachers mentoring interventions

Sturgis, C. (2016). *Reaching the tipping point: Insights on advancing competency education in New England*. https://www.inacol.org/wp-content/uploads/ 2016/09/CompetencyWorks_ReachingTheTippingPoint_WhatIsCompetencyEducation.pdf

Waigera, J. K., Mweru, M., & Ngige, L. (2020). Relationship between Teachers' Attitudes and the Utilisation of Instructional Materials in Pre-Primary Schools in Kenya. East African Journal of Education Studies, 2(1), 92-104.

Walsh, A. K., & Dove, M. (2018). Preparing teachers for competency-based medical education: Fundamental teaching activities. . *Medical teacher, 40(1),* ., 80-85.

Wang, H. (2010). Translating Policies into Practice: The Role of Middle-level Administrators in Language Curriculum Implementation. *The Curriculum Journal, 21(2),* , 123-140.

Waweru, W. (2018). Influence of teacher preparedness on the implementation of competency Based curriculum in public primary schools in Nyandarua North Sub County. *Unpublished master's thesis, University of Nairobi*.

Wiersma, W., & Jurs, S. (2009). Research methods in education: An introduction. MA: Pearson

Williams, J. (. (2009). Embodied multi-modal communication from the perspective of activity theory. . *Educational studies in Mathematics, 70(2),* , 201-210.

Williamson, M. C. (2000). A comparative analysis of outcomes based education in Australia and South Africa. *Unpublished M.Ed Thesis*, University of South Africa. http://uir.unisa.ac.za/bitstream/handle/10500/17862/dissertation_ williamson _mc.pdf?sequence=1&isAllowed=y

World Bank . (2008). *World Bank / DFID Education Sector Public Expenditure Review. .* Abuja:

World Bank. World Education Forum. (2000). *The Dakar Framework for Action. Education for All: Meeting our Collective Commitments*. Dakar, Senegal.

Yusuf, M. O. (2005). An Investigation into teachers' self-efficacy in implementing computer education in Nigerian secondary schools. Meridian: A Middle School Computer Technologies Journal, 8(2)

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. Theory and Practice in Language Studies, 3, 254-262. http://dx.doi.org/10.4304/tpls.3.2.254-262

APPENDICES

APPENDIX A: HEAD TEACHERS' QUESTIONNAIRE

This questionnaire seeks knowledge on challenges faced by educators while implementing the CBC in primary schools, Yatta Sub- County. Complete and honest responses will assist in collecting valid data.

SECTION ONE: Background Information

1. What is your gender?

(a) Male ( ) (b) Female ( )

2. What is your age bracket?

(a) 21-30 ( ) (b) 31-40 ( ) (c) 41 and above ( )

3. How many years have you been a head teacher in primary school(s)?

(a) 0-5 ( ) (b) 6-10 ( ) (c) Over 10 years ( )

4. Level of education

(a) Masters [ ] (b) Bachelor's Degree [ ] (c) B. Ed [ ] (d) Diploma [ ]

SECTION TWO: Teacher's Professional Development on CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
My teachers have basic knowledge in CBC					
My teachers have attended Competency based curriculum training					
My teachers have attended computer training					
My teachers regularly use internet to integrate learning					
My teachers have training on learner assessment					
My teachers can use a wide range of teaching approach to teach					
My teachers can prepare teaching content based on current understanding of core competencies					

SECTION THREE: Learning Resources influencing Implementation of CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
There are enough text books for my learners for all learning areas					
There are enough teachers guide books my teachers					
There are sufficient reference books for my teachers					
There are sufficient material for preparation of teaching aids					
There are adequate outdoor activities fields					
ICT facilities are adequate in school					
My teachers are able to use ICT adequately in teaching					

SECTION FOUR: Perception and Beliefs about CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
The transition from content based education to CBE will be easy for teachers to achieve.					
Learners use a variety of different strategies in their performance so that it becomes difficult in determining the particular competencies used in such performance.					
CBC will help to improve the economic performance of Kenya.					
CBC will provide all students with equal opportunities.					
CBC will encourage independent learners.					
CBC will encourage lifelong learners.					
CBC will mean more work for teachers as they design programs appropriate to the individual learning needs of their students.					

THANK YOU

APPENDIX B: TEACHERS' QUESTIONNAIRE

This questionnaire seeks knowledge on challenges faced by educators while implementing the CBC in primary schools, Yatta Sub- County. Complete and honest responses will assist in collecting valid data.

SECTION ONE: Background Information

1. What is your gender?

(a) Male ( ) (b) Female ( )

2. What is your age bracket?

(a) 21-30 ( ) (b) 31-40 ( ) (c) 41 and above

3. How many years have you been a teacher in primary school(s)?

(a) 0-5 ( ) (b) 6-10 ( ) (c) Over 10 years ( )

4. Level of education

(a) Masters [ ] (b) Bachelor's Degree [ ] (c) B. Ed [ ] (d) Diploma [ ]

SECTION TWO: Teacher's Professional Development on CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
I have basic knowledge in CBC subjects					
I have attended Competency based curriculum training					
I have attended computer training					
I regularly use internet to integrate learning					
I have training on learner assessment					
I can use a wide range of teaching approach to teach learners					
I can prepare my teaching content based on my current understanding of core competencies to be achieved in specific learning areas					

SECTION THREE: Learning Resources influencing Implementation of CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
There are enough text books for learners for all learning areas					
There are enough teachers guide books for teachers					
There are sufficient reference books for teachers					
There are sufficient material for preparation of teaching aids					
There are adequate outdoor activities fields					
ICT facilities are adequate in school					
I I'm able to use ICT adequately in teaching					

SECTION FOUR: Perception and Beliefs about CBC

You are required to indicate the extent to which you agree or disagree with each of the statements presented. Use the scale below to respond.

SA -Strongly Agree; A – Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Statements	**SA**	**A**	**U**	**D**	**SD**
The transition from content based education to CBC will be easy for me to achieve.					
Learners use a variety of different strategies in their performance so that it becomes difficult in determining the particular competencies used in such performance.					
There is no need to transform Kenya's education to CBC.					
CBC will help to improve the economic performance of Kenya.					
CBC will provide all students with equal opportunities.					
CBC will encourage independent learners.					
CBC will encourage lifelong learners.					

THANK YOU

Appendix C: Introduction Letter from ANU

AFRICA NAZARENE
UNIVERSITY

P.O.Box: 53067 – 00200
Nairobi, Kenya.
Tel: 020 252 7170/1 – 5
Email: vc@anu.ac.ke
www.anu.ac.ke

31st March 2023

RE: TO WHOM IT MAY CONCERN

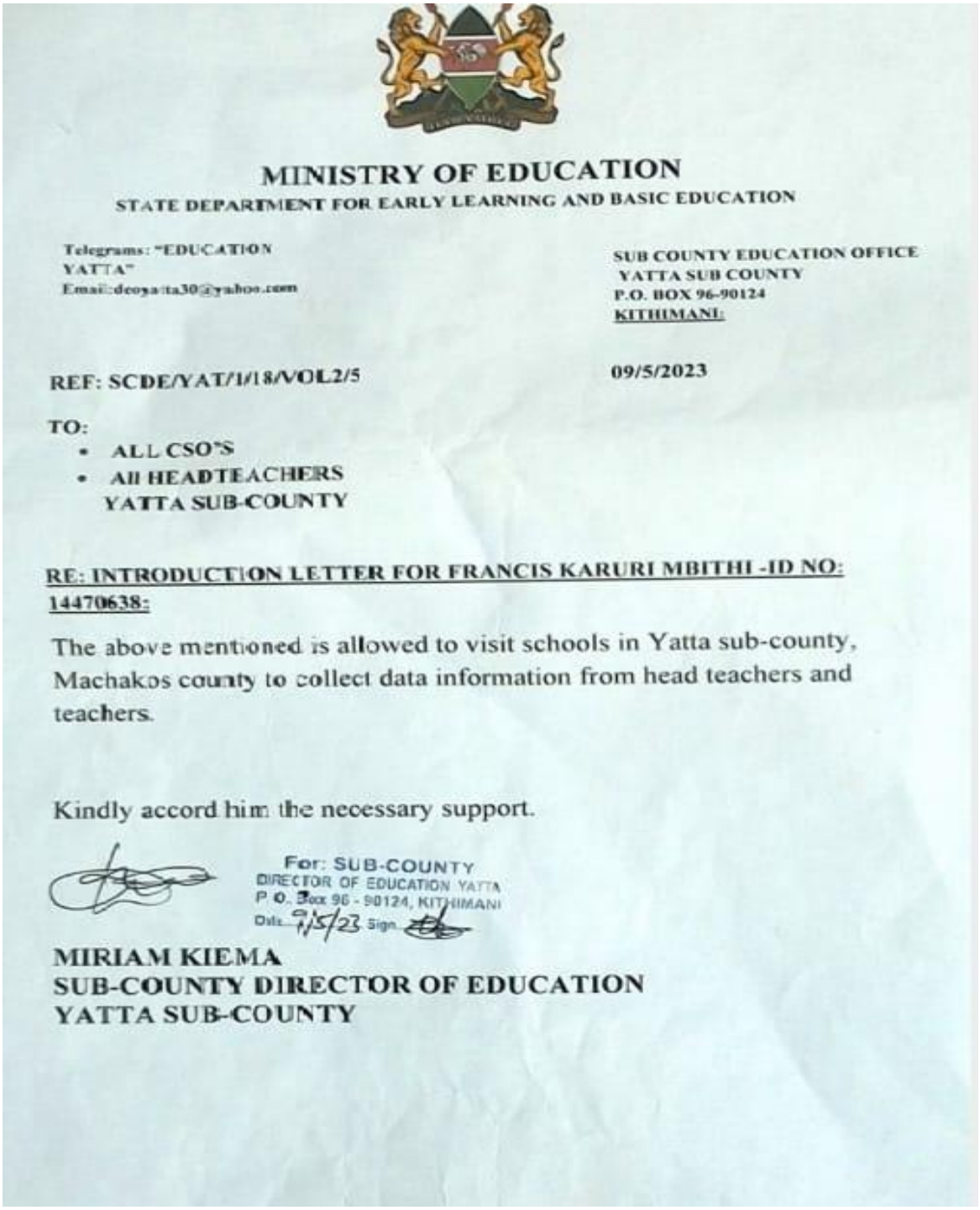
Karuri Francis Mbithi (15M05CMED007) is a bonafide student at Africa Nazarene University. He has finished his course work and has defended his thesis proposal entitled: -

"Factors Influencing the Implementation of Competency-Based Curriculum Programme in Public Primary Schools in Yatta Sub-County, Machakos County, Kenya".

Any assistance accorded to him to facilitate data collection and finish his thesis is highly welcomed.

Dr. Simon Obwatho
Ag. Deputy Vice Chancellor, Academic Affairs
Africa Nazarene University

Appendix D: Research Authorization from Yatta Sub County Education Office



MINISTRY OF EDUCATION

STATE DEPARTMENT FOR EARLY LEARNING AND BASIC EDUCATION

Telegrams: "EDUCATION YATTA"
Email:deoyatta30@yahoo.com

SUB COUNTY EDUCATION OFFICE
YATTA SUB COUNTY
P.O. BOX 96-90124
KITHIMANI

REF: SCDE/YAT/1/18/VOL2/5

09/5/2023

TO:

- ALL CSO'S
- All HEADTEACHERS

YATTA SUB-COUNTY

RE: INTRODUCTION LETTER FOR FRANCIS KARURI MBITHI -ID NO: 14470638:

The above mentioned is allowed to visit schools in Yatta sub-county, Machakos county to collect data information from head teachers and teachers.

Kindly accord him the necessary support.

For: SUB-COUNTY
DIRECTOR OF EDUCATION YATTA
P.O. Box 96 - 90124, KITHIMANI
Date 9/5/23 Sign

MIRIAM KIEMA
SUB-COUNTY DIRECTOR OF EDUCATION
YATTA SUB-COUNTY

Appendix E: Research Permit from NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **118465**

Date of Issue: **01/May/2023**

RESEARCH LICENSE

This is to Certify that Mr.. Francis Mbithi Karuri of Africa Nazarene 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: FACTORS INFLUENCING THE IMPLEMENTATION OF COMPETENCY BASED CURRICULUM PROGRAMME IN PUBLIC PRIMARY SCHOOLS IN YATTA SUB-COUNTY, MACHAKOS COUNTY, KENYA for the period ending : 01/May/2024.

License No: **NACOSTI/P/23/25643**

118465

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

Appendix F: Map Kenya Showing Machakos County

Appendix G: Map of Machakos County Showing Yatta Sub County