TEACHERS' PERCEPTIONS ON THE IMPLEMENTATION OF COMPETENCY-BASED EDUCATION IN JUNIOR SCHOOLS, TRANS-NZOIA WEST SUB COUNTY-KENYA

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DECLARATION

Declaration by the student

This thesis is my original work and has never been presented for the award of an academic degree in any other university and should not be copied, or reproduced in any format without written authority from the author and/or University of Eldoret.

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I dedicate this thesis to my wife Esther, my daughters Joyjanelle and Jasmine who have been a source of inspiration in my study; my parents and siblings whose motivation and encouragement has been a pillar during my study. I appreciate your support.

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ABSTRACT

This study explored teacher perception on the implementation of Competence Based Education (CBE) in Junior public secondary schools in Trans-nzoia west sub- county. Despite the introduction of competence-based education reform in Kenya, the implementation remains a challenge. Teachers play vital roles in the implementation of any education reform. They interpret the framework and adapt it to fit students' needs. Teacher professional development, training, self-efficacy, available resources for teaching and learning, teaching workload greatly influence teacher perception on the implementation and success of CBE. This study was based on the following objectives, namely; to assess teacher's preparedness for implementation of CBE, to evaluate the availability and adequacy of instructional resources, to investigate teacher workload and to identify challenges faced during the implementation of CBE.

The study was anchored on constructivism learning theory which posits that learners can actively build their own knowledge rather than being passive recipients of information. However, the major criticism of the theory is its inefficiency for teaching foundational knowledge. The study's sample comprised of 79 participants, including 64 teachers from selected schools and 15 head teachers from the sampled schools. The researcher made use of mixed method concurrent research design. This design was useful in collecting both qualitative and quantitative data. Data was collected using teachers' questionnaire, interview schedule for heads of institutions and observation schedule for the researcher to gather first-hand information. Through the guidance of supervisors, the researcher was able to determine instrument validity. A pilot study was conducted in 5 schools in Kiminini sub county, a neighboring sub county to Trans-nzoia west sub-county. Cronbach's alpha reliability was computed to determine the extent to which the research instruments are reliable. A reliability coefficient of above 0.7 was obtained from the pilot study, this guaranteed that the research instruments are reliable, hence suitable for use in the main study.

Qualitative data was obtained by interviewing headteachers and quantitative data from the teachers' questionnaire. Besides this, observation schedule was used to collect first hand data from sampled schools. Qualitative data from interviews with headteachers and questionnaire items was analyzed thematically by grouping the data into major themes as per the research objectives. For descriptive statistics, frequencies alongside mean and standard deviation were used. Inferential statistics, Pearson Chi-Square analysis was carried out to determine the two categorical variables; teacher perception and the implementation of CBE had an association. The study findings showed that all research variables had $P<0.05$, implying that CBE implementation was not independent of teacher perception. The study recommended that the government through the ministry of education should provide adequate infrastructure and instructional facilities for effective implementation of CBE. From the study findings a majority of the teachers reported that institutional and stakeholders' support was not sufficient. Therefore, a recommendation was made that effective communication be done to bring on board all the stakeholders. The study recommended that in-service training be provided for effective implementation of CBE.

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ABBREVIATION AND ACRONYMS

CBC	Competency-Based Curriculum
CBE	Competency-Based Education
CDE	County Director of Education
CEO	County Education Officer
CLA	Conventional Learning Approach
HOI	Head of Institution
ICT	Information and Communication Technology
JS	Junior School
KICD	Kenya Institute of Curriculum Development
KNEC	Kenya National Examination Council
KNUT	Kenya National Union of Teacher
MoE	Ministry of Education
NACOSTI	National Commission for Science Technology and Innovations
PWPER	Presidential Working Party on Education Reforms
S.E	Standard Error
SPSS	Statistical Package for Social Sciences
S.D	Standard Deviation
TSC	Teacher's Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Teacher perceptions are the mental images teachers form about their students, level of preparedness, availability and adequacy of instructional resources, teacher to student level and professional training, self-efficacy and teaching experiences. These experiences may involve their education, work experience, education and community involvement. Teacher perception greatly impacts teaching effectiveness and learning outcomes (Tanyi, 2016). A teacher's perception influences their teaching and classroom practices, classroom interaction and collaboration and how they assess learner progress. Teachers' perception regarding the effectiveness of their own teaching is closely linked to their knowledge, preparedness, availability of instructional resources, teaching workload and stakeholder support among other factors. Teachers with strong sense of teaching effectiveness are more tolerant toward students' mistakes and strive to fight for student success (Gitahi, 2019).

Perception plays a crucial role in shaping students learning, retention and application of acquired knowledge (Taboro, 2018). Existing literature suggests that perception is a significant determinant of student motivation and the success of curriculum reform. Despite the existence of numerous studies globally examining teacher perceptions on CBE implementation, in Kenya there is no sufficient documented research that shows the level at which teacher perception impact CBE implementation in Junior schools. Given that teacher perceptions have been linked to teacher preparedness, teaching workload, instructional resources and self-efficacy; this may have an impact on implementation in

junior secondary schools. To improve teacher perception, in-service training, adequate resource allocation and adequate teacher workload should be provided by MoE for effective CBE implementation.

Education plays a vital role in societal change and economic development, necessitating a curriculum review that aligns with the emerging needs and dynamics of the society (Awuonda et al., 2023). Education being one of the most powerful tools that can be used to transform communities, the introduction and integration of competence-based education (CBE) become inevitable in order to meet the demands of the society. Numerous studies advocate for the implementation of CBE as a viable solution in the current complex economy, emphasizing the need for learners to possess essential skills for productivity (Pluff & Weiss, 2022; Ondimu, 2018). To bring the best out of students, teaching should aim to a high degree of autonomy to students.

Teaching involves imparting knowledge, skills, and values to others. It entails exchange of information and ideas in order to facilitate learning and understanding. According to Chauban (2021), teaching is the act of disseminating knowledge in form of skills from one person to another. Effective teaching enhances critical thinking promotes student proactiveness, creativity and problem-solving skills. It is carried out by someone with specialty in that area who is called a teacher. It can be structured in a formal way, in-formal or semiformal way. Therefore, teachers play a critical role in the success of an educational program.

Teachers should give students the autonomy to explore, investigate, manipulate and to produce tailored solutions to solve problems (Madani, 2019). The successful

implementation or failure of any education reform is contingent upon the teachers. If teachers become reluctant to modify and adapt their teaching approach to align with new reforms, even the most effective strategy is bound to fail and remain an aspiration (AlAbri, 2022). Therefore, this study examined teacher perception and the extent to which the implementation and use of CBE has become successful in junior schools in Trans-nzoia west sub-county.

Previous studies have shown that implementation of CBE leads to improvements in problem-solving, critical thinking, self-efficacy, and student engagement (Choi & Woo, 2020). The primary goal of CBE is to equip learners with attitudes, skills, and values required to solve real-life challenges and for thriving in a competitive global economy shaped by technological advancements (KICD, 2019). Recognizing the pivotal role of teachers in shaping the success of competence-based curriculum (CBC), it is imperative to highlight the significance of their mindset, since positive perception is deemed as being essential for the effective implementation of instructional approaches (Msamba, 2023). All over the world, education is considered as the best footing in advocating for an inclusive society (UNESCO, 2019).

Emphasizing the teacher's centrality, a number of sources have highlighted the critical responsibility that educators bear in curriculum development and implementation (Majani, 2023). This perception underscores the vital contributions that teachers make as key implementers who play a crucial role in shaping the learning process. Omboto (2022) emphasizes that educators who are open and receptive to change, particularly when actively involved and adequately prepared, tend to have positive perception. These positive

perceptions are in line with the higher levels of instructional content approach as compared to teachers who have negative perceptions (Najjuma, 2024; Wwango et al., 2024).

Globally, a number of countries are shifting from content-based education to competency-based education. CBE is expected to provide learners the practical skills, positive attitude, critical thinking and self-reliance that help learners identify their abilities and minimize school drop outs (Boateng et al., (2023), thus encouraging various career pathways; arts and sports science, social sciences, and science technology engineering and mathematics (STEM), after acquiring pre-requisite skills. Given the merits of CBE, the global north inclusive of countries such as United States of America, Finland, Germany, United Kingdom, Luxembourg, Netherlands have all adopted it through capacity building of teachers and the availability of excellent facilities that necessitate teaching and learning (Karani et al., 2021; Khanna and Mehrotra, 2019; Kiugu, 2020; Waswa and Kipkoech,2022; Simatwa and Ndolo, 2021).

In the global south (Africa), countries such as Rwanda, South Africa, Nigeria, Tanzania, Zambia and Ghana have equally embraced CBE and continue to make strides despite facing challenges (Benen, 2021; Wanjiku, 2022). These challenges include inadequate number of trained educators, lack of suitable instructional materials and inadequate classroom space. Teacher training becomes pivotal in ensuring that educators acquire the skills needed for effective CBE implementation. Ghana has implemented both CBE and Knowledge or theory-based education. In Ghana CBE was initiated in the year 2000 and formally introduced in 2004 through the Technical and Vocational Education and Training (TVET), (UNESCO, 2020). Ghana's Ministry of Education developed curricula for the competency-based education and harmonized the qualification/ certification framework (UNESCO,

2020). Its main aim was to address unemployment among the youth through entrepreneurial and employable skills (Walenkamp2011; Gyadu-Asiedu et al., 2017). The competence-based curriculum is now a progressive trend in Africa since it is focusing on competencies acquired rather than rote learning.

It remains apparent that the context within which competence-based education is delivered has serious implications on teacher-student motivation, teacher perception and the quality of its graduates. Generally, in Africa limited studies exist regarding CBE implementation and its influence in skill development. For instance, Bizimana et al., (2022) assessed the performance of CBE in Rwanda, Kanyonga et al. (2019), examined CBE in Tanzania, Lawyer (2021) undertook a systematic review of the context of competence-based education and teacher effectiveness in Cameroon, Dambudzo (2018), Zimbabwe Kamgalwe, (2019), Tanzania, Njura (2020) Kenya, Odewumi & Dekom, (2020) in Nigeria.

The adoption of competence-based curriculum (CBC) is a regional phenomenon. In the East Africa region, it is a requirement since 2013 for member states to adopt CBC (EAC, 2014; Kisulu, Muthoka and Mbirithi, 2025). In Tanzania, research suggests that competency-based curricula at various education levels is facing systemic challenges. Its implementation has remained a subject of policy discourse with low adoption in the classrooms.

In Kenya, according to the study of Wambua and Waweru (2019) shows that teachers were not only unprepared, but infrastructure and learning resources were also inadequate and unfriendly. It was also noted that the learning environments restricted them from implementing competency-based education reforms in formative years of education. These

studies suggest that although CBE has continued to attracted policy attention, the manner in which it is being implemented is significantly limited. This can be linked to lack of sustained CBE implementation due to shortage of resources and lack of knowledge and skills. Inadequate orientation and training of teachers also adversely affect its implementation. This study was aimed at examining the relationship between these factors and how they influence teacher perception. Ideally, the teachers' role in the CBE scheme, which is learner-centered, is that of an enabler rather than transmitters of knowledge. Teachers are obliged to demonstrate sufficient content mastery, skills and attitudes. A study conducted by Jelagat (2020) noted that insufficient teacher training affects the realization of the new curriculum objectives in North Rift and Western Kenya. This study is set to examine teacher perception and the implementation of CBE in Trans-nzoia west sub county, this is because teacher perception plays a critical role in the implementation process.

Teacher perception and preparedness significantly impact how effectively the curriculum and competence-based education is adopted (IBE-UNESCO, 2017; Benen, 2021). A thorough in-service training of educators is required for effective implementation of CBE. Gross (1971) clearly puts it that one cannot implement what he/she does not know. An attribute that greatly influences the teachers' perception. The study sought to unravel teachers' perception towards teaching work load. With reduced number of learning areas from 14 to 9, the study examined teacher perception towards the teaching workload and the extent to which workload affects teachers' decision to implement CBE. According to Ndambo et al., (2021) heavy teaching workload negatively influence sufficient time for preparation of the lesson plans and utilization of learning materials. This study examines

teacher perception towards teaching workload and its findings are instrumental for effective CBE implementation.

1.2 Statement of the Problem

The implementation of CBE in Kenya and in Africa appears to be problematic. This has been attributed to teacher's values, practices, believes and perception about CBE (Ruth & Ramadas, 2019). Kenya adopted the competence-based education in the year 2016 as part of the ongoing global reform. Since the inception of CBC in Kenya 9 years ago, there is no clear evidence from research in Trans-nzoia west subcounty which shows teacher perception on the implementation of this education framework. Further, there is no clear evidence indicating whether or not teachers are appropriately implementing this reform and their perception. According to KICD report (2018), only 3% of teachers perceive to be adequately prepared for its implementation.

Perception in teaching can help a teacher improve or reduce the chances of being successful in the classroom. The way teachers perceive teaching has a profound effect on how they teach students (Fennema & Romberg 1999 as cited by Ounis 2017). The study findings emphasized that teachers' perception is reasonably worthy since teacher perception may affect learning. Therefore, there was need to examine perceptions of teachers on CBE implementation in junior schools. According to Waweru (2018), 98.8% of teachers reported not being adequately prepared for CBE implementation. This greatly impacts on teacher perception on effective implementation. Consequently, overcrowded classes increase teacher workload leading to a strained workforce, this results to negative

perception leading to failed use of learner centered interactive teaching methods as CBE demands (Tejada, 2019).

As evidenced by reports of trial-and-error practices and lack of clarity among teachers (KNUT, 2019), implementation of CBE in JS is facing significant challenges. Unprepared teachers become an impediment to the successful implementation of CBE. Inadequacy of instructional resources, stakeholder involvement and teacher training are critical factors that affect teachers' perception and the teaching strategy they are likely to adopt. This study aims to address this gap by exploring and documenting the perceptions of teachers regarding teacher workload, teacher preparedness, infrastructural facilities and instructional resources and stakeholders' engagement in relation to CBE implementation. By understanding teachers' perceptions, the study aimed at contributing valuable insights that may inform policy adjustments and improve on the overall quality of education in JS within Trans-nzoia west sub-county.

1.3.Purpose of the study

The purpose of this study was to examine teacher perception on the adoption of competence-based education in junior schools in Trans-nzoia west sub-county, Trans-nzoia county, Kenya.

1.4. Research objectives

Research objectives act as a guide upon which the study will be conducted. The following were the research objectives.

i. Assessment of teachers' preparedness on implementation of CBE in Trans-Nzoia west subcounty.
ii. Evaluating the availability and adequacy of instructional and infrastructural resources in Trans-Nzoia west subcounty.
iii. Examining teacher workload in relation to CBE implementation in Trans-Nzoia west subcounty
iv. To identify challenges faced during the implementation of CBE in in Trans-nzoia west subcounty.

1.5.Research Questions

Research questions were drawn from research objectives and they included the following:

i. What is the level of teacher preparedness for implementation of CBE?
ii. How adequate is the infrastructure and instructional resources for CBE implementation?
iii. What is the teachers' workload in relation to CBE?
iv. What are the challenges faced during CBE implementation?

1.6 Justification of the Study

Teacher perception directly impacts the success and the effectiveness of any education reform. By understanding teacher perception, education policy makers can develop a more focused and effective professional support programs and to provide adequate instructional resources. The main reason for conducting this study was to assess teacher perception on the implementation of CBE, to identify gaps and possible intervention measures for effective implementation of CBE. By examining teacher perception, the government

through MoE can enhance a culture of continuous improvement and adaptation of education reforms.

1.7 Significance of the Study

The findings of the study have significant implications for the education sector:

i. The findings of this study provide important information towards the improvement of the ongoing CBE in the country.
ii. Education stakeholders such as education officers at the sub-county and national level may use the findings of the study to monitor and evaluate teacher perception on CBE implementation in junior schools across the country.
iii. The study findings may also guide curriculum designers and developers on the gaps within the CBE framework.

1.8 Assumptions of the Study

Assumptions are principles that are accepted as being correct based on logic or reasons but without any proof or without being subjected to scientific test. In this study the following assumptions were made:

i. Data collected was reliable and represents the correct position regarding teacher's perception on CBE.
ii. Respondents involved in the study gave honest responses and were cooperative.
iii. Teacher perception regarding implementation of competence-based education continues to influence teaching and learning.

1.9 Scope of study

The scope of this study was based on the perceptions of teachers on CBE implementation in JS schools. It encompassed factors such as perception on teacher preparedness, perception on teaching workload, perception on instructional resources and challenges faced in CBE implementation. The target respondents were teachers and school headteachers who were directly involved in teaching and CBE implementation. The study examined teacher perception and level of implementation of CBE in junior secondary schools in Trans-nzoia west sub county, Trans-nzoia county Kenya.

1.10 Limitations of the study

Study limitations entail constraints that a researcher was likely to encounter and they could potentially affect the study's validity, generalizability and the interpretation of study findings. The following were the limitations of this study:

i. The study was restricted to public junior schools where CBE was in the last phase of implementation.
ii. This study mainly focused on teacher aspects of perception on implementation of CBE.

1.11 Theoretical framework

A theoretical framework is a fundamental review of the existing theories that often serves as a roadmap that guided the development of study arguments. It served as a blueprint for the entire study. The study was anchored on constructivism learning theory. The theory posits that learners actively build their own knowledge and understanding of the world, rather than passively receiving information. Jean Piaget (1896-1980), often regarded as the father of constructivism, viewed learning as an active process shaped through interaction

with the environment. He argued that knowledge is not a direct copy of reality but is built through action, modeling and transformation (Waite-Stupiansky, 2022). According to Piaget (1964), learning involves a continuous cycle between stimulus and response, where each influences the other. He introduced the concept of cognitive schemas, mental structures that are updated through assimilation, where new information fits into existing ideas, or accommodation, where schemas are modified o incorporate new experiences. These processes work together throughout -life to shape understanding.

Despite its widespread influence, constructivism is not without its critics. One major criticism is that it can be inefficient, particularly for teaching basic facts and foundational knowledge. Critics argue that while it is effective for complex problem-solving, a purely constructivist approach can be time-consuming and may leave gaps in a learners' foundational knowledge base (Esmaiel, 2006). Some researchers contend that direct instruction and guided practice, which are downplayed in constructivism, are more effective for certain subjects, especially in early stages of learning. Another key criticism is that constructivism places a high demand on both the teacher and the learning environment. Teachers must be highly skilled facilitators who can manage a dynamic classroom and provide individualized support. The theory also assumes the availability of diverse and adequate resources, an assumption that may not hold true in under-resourced schools in developing countries.

The core tenets of constructivism provide the foundational framework for Kenya's competence-based curriculum (CBC). The CBC is a learner centered, activity-based model that aligns directly with this theory's principles. Since CBC focuses on developing practical skills and competencies like problem-solving and critical thinking. It requires learners to

actively engage with their environment and construct their own understanding. This study, therefore is directly relevant to constructivism because it examines whether teacher believe they have the necessary resources to create a truly constructivist learning environment. If teachers perceive a lack of resources such as labs for hands-on experiments or digital devices for collaborative projects, they may be forced to revert to a traditional, teacher centered approach, thereby undermining the very philosophy of CBC.

Under CBE teachers perceive their role as facilitators, guiding students in active knowledge construction. This encourages independent inquiry, critical thinking, and problem-solving skills. It is expected that teachers help learners in building their understanding and knowledge by empowering them to grow (Toharudin, 2017). The teachers' perception of constructivist learning theory and its application have a significant contribution in facilitating or deterring students' deep engagement in learning. constructivism is based on the premise that cognition or learning is as a result of mental construction; students learn by fitting new information with what they already know, they check new information against the old and revise rules when they no longer do not apply.

Teachers' beliefs influence their teaching attitudes and behaviors, (Roose et al., 2019). In line with this study, teacher perception was an essential factor that could likely affect the implementation of CBE. Constructivist theory encourages students to use their imagination by fostering creative thinking (Sum & Kwon, 2020). Teacher perception can either positively or negatively affect the willingness to adopt certain teaching approaches, (Schunk & DiBenedetto, 2020). From a social context, teachers are likely to adapt their teaching strategy according to the socio-cultural context. Teachers with more constructivist

teaching belief are likely to engage in active and interactive teaching activities (Senthamarai, 2018).

1.12 Conceptual Framework

A conceptual framework provides the concept that supports the basis or foundation of a research area. It was used to clarify concepts, organize thought pattern and identify relationships with which the study was framed. It created a conceptual model for possible strategies or course of action identified as important for researching a particular problem or topic. Figure 1.1 below shows how the independent variable (teacher's perception), influence the dependent variable (implementation of CBE); the teachers' perception implies their expertise, competence and resources necessary for appropriate implementation of CBE. This can be enhanced if teachers undergo through adequate training and provision of adequate resources to enable them achieve the expected outcome. With the right resources, a well-trained teacher is able to adequately implement CBE. On the other hand, an inadequately trained teacher with negative attitude and perception finds it challenging to implement CBE in relation to dependent variable.

The intervening variables comprised of dynamics such as work experience, academic qualification and work environment that could possibly sway independent variables on the dependent variable in terms of offsetting the outcome.

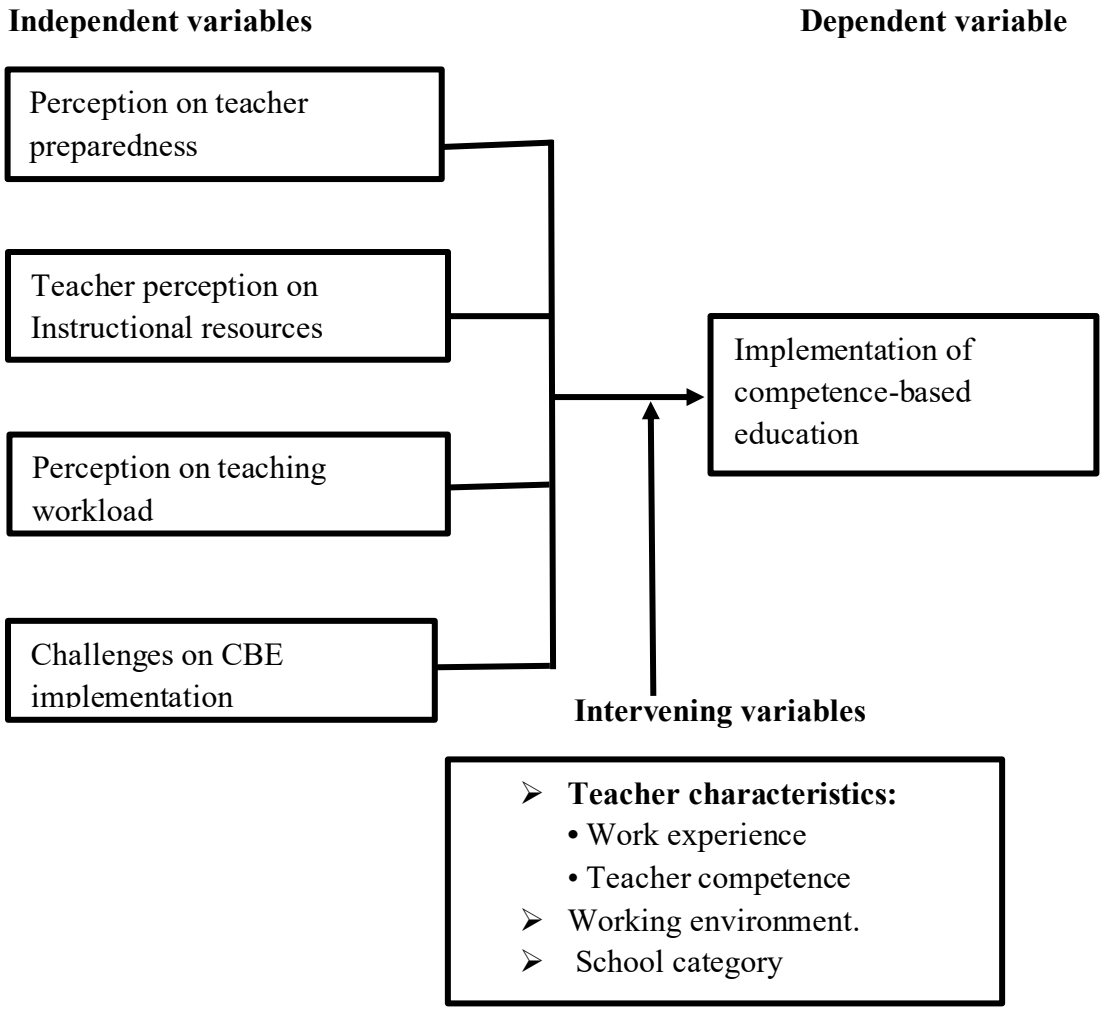

Figure 1.1: Conceptual framework

(Source: Author, 2025)

1.13 Operational Definitions of terms

Cognitive ability. This refers to intellectual and academic capability of an individual student.

Competence. Competence constitutes the integration of knowledge, skills and attitudes required to perform specific tasks.

Competency-based curriculum. A program of study with clearly defined, concrete and measurable objectives of which every student participating in the program must demonstrate mastery upon program completion.

Competence-Based Education. This is an educational framework for teaching that is designed to implement competence-based approach. CBE focuses on demonstrating mastery of skills and knowledge through assessments and evaluation.

Constructivism. This is a theory of knowledge which argues that humans can generate knowledge and meaning in various contexts from an interaction between their earlier experiences and their ideas. In this study, constructivism refers to the idea that a learner can construct meaning in his/her learning either individually or socially within the classroom.

Formative assessment. This refers to assessment that used to determine the learners' level of understanding, skills, knowledge and attitudes during the teaching-learning process.

Measurement tool. These refers to instruments which are used by teachers to collect information about a learner's academic achievement

Perception- Refers to beliefs, views and opinion and outlooks possessed by an individual as a result of experience and interaction with the environment.

Questionnaire- it is a research instrument with either open or closed-ended question used by a researcher in order to collect data.

CHAPTER TWO

LITERATURE REVIEW

2.1.Introduction

In this chapter, the current research on teacher perception regarding implementation of the competence-based education was reviewed. The chapter analyzes the implementation of CBE; the teachers' preparedness for effective implementation of CBE, the availability and adequacy of instructional resources, teacher workload, and challenges faced during CBE implementation phase. To attain these objectives, this study was guided by the following research questions: what is the level of teacher preparedness for CBE implementation? How adequate is infrastructure and instructional resources for CBE implementation? What is the teachers' workload under CBE? What are the challenges faced during CBE implementation?

2.2.Concept of Competence-Based Education (CBE)

Competence-based education is an outcomes-based approach to education, whereby curricula are designed around competencies and students' progression is based on their demonstration of competencies not on sit time or the amount of time spent the learning materials. According to Wongnaa & Boachie (2018), competence based-education is an education that provides students with knowledge and skills acquired through demonstrations and practice that emphasizes on practical hands-on skills and knowledge acquisition. In a competence-based system, learners are only allowed to progress upon demonstrating mastery of set competencies. In Kenya, CBE was introduced with the aim of producing school graduates with skills useful in solving real-life challenges manifest in

the society. CBE is perceived to be desirable for realigning education provided to the dynamic economic and societal demands.

Every country pursues education reforms due to its potential to impact on political, economic, cultural and social development (Sele & Wanjiku, 2024). To that extent, competence-based education is a current global educational reform whose implementation cuts across all levels of education. CBE puts more emphasis on equipping learners with skills and competencies which can be defined as one's capability to perform a particular task to a predetermined level in solving imbedding societal challenges. KICD has also defined competency as a student's ability to apply diverse teaching and learning resources and outcomes (knowledge, skills, values and attitudes) (Kabita & Lili,2017). Competence-based education (CBE) has been based on a students' demonstration of both knowledge and skills that they are expected to acquire in the process of learning. This research examined teacher perception on implementation of competency-based education in junior schools in line with adequacy of teacher preparedness, infrastructure and instructional resources, workload and challenges that teachers face in classroom set-up. Competency-based education has emphasized on the urgency for educators to revise and enhance their teaching methodologies.

According to a study by Senthamarai (2018), the most notable challenge in a learning process is the selection of suitable, appropriate and effective educational model that strives to make learning useful and to adequately develop students' critical thinking and problem-solving skills. Teachers may require to make use of highly and interactive teaching methods such as problem solving and discovery which have been proved to be very useful in CBE framework. The traditional teacher-centered approach is no longer appropriate if

students are to demonstrate mastery of the skills they learn. In a study by Mosha (2012), it was reported that when competency-based education program is not effectively implemented, there is often the preference for teachers to slide back to the traditional teacher-centered approaches.

In Kenya, the competency-based education reform was designed around seven competencies which were envisaged to make the learner fit within the work environment and to positively contribute to societal development. These competencies include; communication and collaboration, critical thinking and problem-solving skills, imagination and creativity, citizenship, digital literacy, learning to learn, and self-efficacy. This is according to (KICD, 2017). The adoption of suitable instructional pedagogy is considered as one of the vital vehicles through which the CBE competencies will be developed and experienced by learners. Instructional strategies envisaged convert the curriculum into actionable learner behavior.

One of the major strengths of CBE is that learning is based on acquisition of real-life skills and competency development. Under this educational model, learners are equipped with skills and expertise that gives them direct entry to a successful career. A thorough, systematic, sustained and integrated approach becomes necessary in order to improve on student learning outcome. According to Irvine & Kevan (2017), one of the most outstanding benefits of CBE is the increased level of student active participation. More often, students take ownership of the learning exercise when they engage with the learning material. However, this pedagogy has been found to be time consuming. Thus, teachers often complain that there is too much to teach within a limited period of time (Tilya et al., 2010).

CBE emphasizes on the use of formative assessment that is focused on the prescribed competencies. Under this framework, teachers are expected to evaluate students using methods such as classroom or field observations, projects, oral presentations, interviews and peer assessment among others. This is due to the fact that these methods provide an opportunity for learners to demonstrate gained competencies to solve real-life challenges or in similar situations. Authentic assessments also offer opportunity to engage students in tasks similar in form to the tasks in which students in events outside the classroom enhancing critical thinking and problem-solving skills (Solovyeva et al., 2023).

In the Kenyan context, a number of studies have been conducted to examine teacher involvement and participation with CBE reforms. An emphasis has been put on the need to acquire new skills and provide resources that are crucial for effective implementation. However, little information has been documented showing the degree to which teachers and other stakeholders perceive roles in the new reform process. The current research examines teacher perception in relation to CBE implementation. The study findings inform on recommendations for meaningful teacher engagement in CBE reforms.

2.3.The concept of Teacher Perception

According to Tanyi (2016), perception is identification, organization and interpretation that is given to a sensation. In an educational set up, some educators may experience the sensation of seeing CBE as a challenge while others may view it as an opportunity to bring positive change. Therefore, perception may be defined as a way of understanding or thinking about something. Perception is shaped by an individuals' learning, memory expectation or experience. Differences in understanding bring differences in perceptions

between persons (Taboro, 2018). Teacher perception is the response of a professional about what are the experiences in teaching, guiding, training, assessing or evaluating students in an educational set up. Difference in understanding among teachers about a similar situation or different situations causes different judgements of each educator.

The approach that a teacher adopts in teaching directly impact on the professional competencies of learners (Sanchez-Gracia and Hernaidez, 2021). The content-based teaching enhances the acquisition of more facts and less practical skills, while CBE puts emphasis on the acquisition of practical skills (Mulder et al., 2017).

Different perceptions may influence an educators' behavior and affect judgement they are likely to make. Teacher perception can be divided into two: positive teacher perception and negative teacher perception. Positive perceptions form a basis for good response in relation to curriculum implementation, including teachers' readiness to implement curriculum. On the contrary, negative teacher perception becomes a hindrance and a barrier relating to curriculum implementation (Taboro, 2018). When a teacher interprets sensation to CBE to be a difficult undertaking, he may perceive it as an opportunity or a challenge and may likely develop a mechanism to resolve it. Learning or prior experience affects perception and perception in turn affects our behavior and response to situations (Tanyi, 2016). What students learn and how they learn is a function of perception. Equally, the teaching strategy that a teacher is likely to apply is a function of perception.

The successful implementation of CBE largely depends on the classroom teacher who serves as a facilitator and mediator in the teaching-learning process and the involvement of parents and other stakeholders. This is because parents have an obligation in ensuring

that students acquire set competencies and become successful. This can be achieved by providing a conducive learning environment and resources required for curriculum implementation. This becomes important in enabling students to be fully engaged and in tapping their ability by completing assigned tasks, providing required assistance and materials for hands-on activities and providing feedback of learners completing tasks given by teachers (Gitahi, 2019). Despite the affordance of competency-based education, the implementation and usage of this reform still appear problematic in Africa due to teacher's beliefs, perceptions and practices (Ruth & Ramadas, 2019).

Waigera, et al., (2020) carried out a study on the relationship between teacher perception and the utilization of instructional resources and materials in pre-primary schools in Kenya. The results of the study indicated that teachers with positive perception achieved higher levels of instructional content and implementation of CBE in relation to their peers with negative perception. This study found out that positive teacher-perception is an important aspect in teaching. Therefore, there is need to cultivate positive attitude and positive perception towards teaching-learning material and the instructional approach to be used. Another study conducted by Alabu et al., (2020) on the influence of principal's conflict management styles on teacher job satisfaction, showed that the ministry of education (MoE) should come up with policies and guidelines necessary for successful school management.

According to a study carried out by Olema et al., (2021) in Uganda, shifting from content-based to competency-based education reform necessitates continuous professional training for educators. This shift aims to equip teachers with necessary knowledge, skills, attitudes and values that are critical for both the school learning environment and for various

professional fields. The main goal is to enhance teacher's perceptions and the understanding thereby promoting effective CBE implementation. This underscores the pivotal roles that teacher's perception plays in CBE implementation with negative perceptions potentially impeding its success (Kikwei, 2023). Alida (2021) stressed on the need to identify factors that facilitate or hinder effective CBE reform.

2.4.Strategies for Enhancing Teacher Perception on CBE Implementation

Involving teachers in decision making process affecting their work environment enhances a sense of program ownership. Shared decision making is critical for successful implementation of CBE. This guarantees that decision making is done collaboratively by involving the stakeholders; teachers, students, heads of institutions and parents. This is fundamental since it enhances teacher perception and a sense of ownership to educational programs. In the long run, this enhances the effectiveness of CBE implementation. Through shared decision making, roles and responsibilities of every member in the decision-making chain is made clear. This gets rid of confusion by promoting sense of member accountability. By incorporating the virtue of shared decision making, the implementation of CBE becomes more effective, inclusive and student centeredness approach to education.

Teacher perception impacts significantly how they are likely to carry out implementation in the classroom. This potentially affects student behavior and learning. By inculcating positive perception and curiosity, teachers empower children to handle challenges confidently. How a teacher perceives learners can potentially affect the treatment they are likely to give them. This may arise from biases that a teacher may or may not be aware of. Further, teacher perception has been found to affect students' social life. Wisize, C (2025)

in his study reported that students who are perceived as being good by their teachers and have a cordial relationship with them, their peers also received them positively. On the contrary, learners who are perceived as bad kids by their teachers are also not received well by their peers and as such they struggle socially and academically.

Reflective practice is another fundamental aspect that helps shape teacher perception. It entails teachers evaluating individual classroom activities, the learning environment, student level of engagement in classroom activities and strategies for enhancing student mastery of CBE competencies and learning outcome. Reflective practices advocate for practical as well as technical knowledge that is aimed at developing teaching competency in real world scenarios. As descried by Brookfield (2017), reflection can help teachers to stay balanced amid evolving learning environment. Through reflective practices teachers would be able to focus on what motivates them to teach through guiding principles that prescribes the way they should engage with learners and their colleagues.

An additional component of reflection regards gathering student and peer feedback to enable develop a holistic view of one's teaching practices. When trusted peers provide feedback, the information will help align ones' perception to the needs of the learning environment. When differences arise based on teacher perception and the students' learning needs, reflection helps in moderating their reasoning. Through reflection, teachers are able to consider past teaching experiences, prior knowledge, beliefs and perceptions that lead to such actions. As a result, reflective teachers tend to form honest and informed discussions with their peers, and students who could be having a different opinion.

Teacher engagement plays a critical role in the implementation of CBE. Engagement is crucial since it influences every aspect of education. Teachers who feel engaged find professional fulfilment in teaching boosting their confidence and enthusiasm. When teachers get engaged, they get committed to their student's academic success and personal growth. Educators being intimately connected with their learners and communities they live in, have invaluable insights in what is considered relevant and beneficial to students. This context requires that the curriculum positively impacts student's lives thus making education engaging and able to meet societal needs. Teacher engagement encourages incorporation of critical thinking and problem-solving skills in CBE implementation. Since teachers have first-hand knowledge of different learner capabilities, this knowledge enables them to design lessons and assessment programs that encourage students to think critically and solve real-life challenges.

2.5. Factors Influencing the Implementation of CBE in JS

These factors significantly influence the teachers' decision to implement CBE and the perception they develop towards CBE. These factors include:

2.5.1. Teacher Preparedness

The extent to which teachers are prepared significantly dictates how effective they will be in curriculum implementation and their perception towards teaching. For the successful implementation of CBE, in-depth, thorough research and study of curriculum adaptation is critical. According to findings of the study carried out by Cheptoo and Ramadas (2019), teacher perception among other factors is necessary for effective implementation and use of competency-based teaching approaches. In the Kenyan context, the Kenya Institute of

Curriculum Development (KICD) is entrusted with the responsibility of developing the curriculum, initiating curriculum changes and in evaluating its implementation at different stages. One of its major tasks; is to ensure that stakeholder participation in the process at every stage in its development and implementation (Nyamai, 2021). Teachers being key stakeholders, the whole process should have their place clearly defined in the process of curriculum reforms for effective implementation. This study sought to examine the level of teacher involvement and their perception towards; level of teacher preparedness and the factors that influence the implementation of competency-based education in JS in Trans-nzoia west sub county.

In the earlier stages of any curriculum reform, challenges are bound to arise during its implementation. Given that it is complex and requires a lot of brainstorming and research, stakeholder involvement becomes vital in its success. An attribute which this study sought to establish whether teachers were adequately involved and their perception. Documented studies have reported that CBE was a hurried curriculum reform which never involved adequate stakeholder consultation (Sifuna and Obonyo, 2019; Amunga et al., 2020; Akala, 2021 and Okeyo and Kanake, 2021). Similarly, in Kenya the teachers' role has not been adequately defined for effective implementation of CBE. This has resulted to early teething problems in its implementation right from its inception. This is because teachers were only brought on board during the implementation phase of the curriculum development process. Teachers have raised concern over their lack of involvement, the poorly rolled out training program, inadequate resources, and lack of understanding of the new curriculum reforms. This has hindered its effective implementation and sustainability since it is resource intensive. Mulongo (2017) in his study illustrated the role of educators in the roll out and

implementation of CBE in Tanzania. They reported that when teachers are ignored, they continue to use conventional teaching instead of CBE.

Teacher preparedness is a critical aspect for the success and effective implementation of CBE. By acting as linchpins, they serve to bridge the educational policy and effective classroom practice (Shedrack, 2021). Teachers who are adequately prepared and armed with adequate training together with requisite skills in line with CBC principles can meaningfully engage learners in competency development, fostering critical thinking, problem-solving and collaboration skills. Furthermore, teacher preparedness instills a culture of improvement and enhances the necessary support from students and other stakeholders, thus ensuring the long-term viability and success of CBC as an innovative and progressive educational framework (Rege, 2021). This calls for the need to examine the role of teacher preparedness on CBE implementation in junior secondary schools within Trans-nzoia west subcounty, Trans-nzoia county Kenya.

With the implementation of CBE facing various challenges (Orange et al., 2022); this made it necessary to undertake this study with the ultimate aim of assessing the impact of teacher perception and teacher preparedness in the implementation of CBE in junior schools in Trans-nzoia west sub-county. According to a study conducted by Akello et al., (2022) which investigated the impact of teacher unpreparedness on end-user language efficacy among pupils, the findings indicate that teacher unpreparedness distort the usefulness of the CBC curriculum. Therefore, it was important to undertake this study to determine whether junior school teachers in Trans-nzoia west sub-county are adequately prepared to implement competence-based education framework and their perception.

Teacher perception has a significant influence on how they approach teaching and on how competent students' belief they are; since teachers provide them with opportunities for success (Wenhui & Mansor, 2024). Therefore, teacher competence and preparedness play a vital role in helping students develop a sense of self-efficacy and how it greatly affects their motivation, performance and general well-being (Ose, 2021). According to Fani & Hagen (2021), teachers with high levels of competence are better equipped to facilitate learning and enhance positive self-efficacy beliefs. This is also supported by Tattnall (2022) who underscores the position of a teachers support and guidance in enhancing student self-efficacy. Competent teachers play a critical role in shaping learners' attitude, beliefs and self-efficacy towards learning.

The shift towards competence-based education not only requires restructuring of the curriculum but also a significant focus on the development of the human capital to effectively integrate new pedagogical approaches (Isaboke et al., 2021). Training of teachers remains central in the successful adoption of competence-based education model to learning (Kaskens et al., 2020). By investing in the competence of teachers, the educational landscape in Kenya will significantly be enriched; thereby, empowering learners to thrive in a competence-based education system. Previous studies in junior secondary schools in Kenya has highlighted the importance of fostering self-efficacy. Teacher competence has been found to significantly impact on learners' beliefs in their ability to succeed academically and face challenges effectively (Mungasia et al.,2022).

2.5.2. Teacher Training on CBE Implementation

The implementation of competence-based curriculum in Kenya is occurring in stages. Its roll out began in pre-primary in January 2018. According to Wambua (2019) during the implementation of a curriculum, frequent evaluation is required to help identify any challenges encountered and the adjustment of implementation strategies as may be required. According to Tambwe (2017), the absence of adequately prepared instructors is one of the significant difficulties thwarting successful execution of CBE. Educators are anxious to actualize CBC, yet the huge challenge which most educators face is the absence of training. The vast majority of them do not unmistakenly see the skill-based approaches since they could not get any preparation. According to Ferreira (2023), a decisive commitment to teachers' continuous training is essential, through reinforcement of knowledge based on empirical evidence that values diversity and differentiated instruction (Ferreira, 2023).

The absence of in-training preparation for educators ruined the viable usage of a capability-based educational plan in schools. According to Makunja (2016, educators are faced with difficulties when it comes to actualizing CBC since current training is required in most African nations. Thus, educators neglect to actualize CBE because they come up short on the required instructive and specialized abilities required to manage student's difficult learning problems which in turn impact on student competence and acquisition of skills required in the job market.

According to Obiekwe & Obiekwe (2021), teacher training and student performance has a close link. Training has a positive implication on productivity of teachers as a way of

enhancing service delivery. Training of teachers allows them to update teaching skills and acquire information on new strategies for teaching. Ngeno (2023) noted that teacher training plays significant role for the successful execution of CBE. According to Wamuyu (2020), role modelling and programmed instruction are key enablers for CBE implementation. The researcher in this study examined the role that teachers play while modelling students and their perception in implementing CBE to equip them with required competencies in various learning areas. In Congo, Yangambi (2021) determined the link between teacher professional development and how effective teachers become while in the process of content delivery. The study indicated the existence of relationship between development of teachers professionally while training students on critical thinking and problem-solving skills. According to Kiptoo & Kitainge (2020); effective implementation of CBE requires that teachers successfully undergo capacity building sessions. Therefore, it was necessary to carry out this research to ascertain whether teachers in Trans-nzoia west sub-county have been adequately trained and their perception on adoption of CBE.

A study conducted in Tanzania by Komba & Mwandanji, (2015), cited by Isaboke et al., (2021), which explored whether teachers were using CBE guidelines, established that less than 50% of teachers used formative evaluation successfully. This highlights the significance of training teachers to equip them with skills and competencies needed for effective implementation. The competence-based education requires that teachers adopt learner-centered approaches, engage students on practical activities, and to frequently evaluate competencies (Anthony, Kazaara et al., 2023). While CBE advocates for an engaged and well skilled learner, it places significant demands on the educators' approach to teaching and the assessment techniques (Godfrey et al., 2023). The successful

implementation of CBE depends on teacher competence and the possession of adequate skills such as formative assessment strategies and differentiated form of instruction to meet diverse student needs (Julius, 2024).

In a study conducted by Njiru & Odundo (2023), it highlights the significance of training teachers and taking into consideration the school dynamics before launching and implementing a new education reform. Teachers require key competencies such as instructional diversity, classroom supervision and teamwork, attributes that greatly influence teacher perception. This study examined teacher training, competence and perception and its effect in the adoption of CBE. According to Amutabi (2019), learners' interest is taken into consideration when teachers plan for learning experiences that are activity oriented and where teachers act as facilitators of knowledge. In Kenya, where students are likely to face obstacles in their educational journey, teacher support plays a vital role in nurturing resilience and determination among students.

2.5.3. Adequacy of Infrastructural Facilities

School infrastructure plays a critical role in the successful implementation of CBE in Kenya. Since its adoption, it has continued to emphasize personalized learning and a supportive environment which takes care of diverse learning needs. In the Kenyan context, the ministry of education has initiated programs to supply text and reference books in a ratio of one to one, (KICD, 2018) to accommodate the number of students in schools; although the available books do not exactly mirror the current educational plan and need clarity on the best way to instruct according to CBE necessities (KNUT, 2019).

On the account of the state of existing classrooms, library space and computer laboratories, the circumstances are even more appalling. According to a study carried out by Ndirangu (2025), it was reported that deficient educational and learning facilities inhibit the adequate execution of CBE and students may not be able to develop necessary independent learning capabilities, problem-solving, critical thinking minds which might deny them opportunity to be equipped skillfully. With the state of resources in schools, it is imperative to improve the quality and quantity of learning resources since it impacts either positively or negatively on teacher perception and their decision to adopt CBE.

Smaller classroom space and insufficient sanitation facilities were among the critical infrastructural challenges faced by many schools, particularly in rural and underserved areas. Recent studies have shown that investing in educational infrastructure enhances the quality of instruction and supports the successful adoption of innovative CBE approaches, (Smith & Lee, 2023; Komba & Mwandanji, 2015). According to a study conducted by Charles, (2023) on factors affecting the implementation of CBE in junior schools, in the study it was reported that the success of implementation largely depends on available resources, adequate training of teachers and effective policy implementation. When the MoE provides adequate infrastructure such as digital technology, modern classrooms, flexible space for collaborative learning and individualized instruction, schools can effectively implement CBE. Recent studies have shown that investment in educational facilities enhances how suitable an instruction is and supports the successful adoption of innovative curriculum framework (Smith & Lee, 2023.

A similar study by Nsubuga & Mulindwa (2023) sought to assess the influence of infrastructure within Uganda primary schools, findings indicated that a majority of schools

were struggling with inadequate infrastructure, such as poorly maintained classrooms, lack of science laboratories and insufficient educational technology. These shortcomings directly influence their perception and the effectiveness of CBE implementation, which emphasizes practical and interactive learning strategies. Schools with better standards of infrastructure were found to be more successful in the implementation of CBE. This indicates a strong link between physical resources and the teachers' decision to adopt CBE framework. This study examined the availability of facilities in JS schools and whether they were adequate for effective CBE implementation. For successful implementation of CBE, there is need to improve on school infrastructure, upgrade facilities and provide adequate teaching-learning resources.

ICT integration into teaching and learning enhances teachers' and learners' ability to develop new tasks and ideas, thereby facilitating a deeper acquisition of competencies. For instance, digital tools and resources are vital for assessing learners' progress, adapting instructional and in acquisition of digital literacy skills. According to a study by Okello (2022), study findings highlighted the need for in-service and pre-service teacher training programs which have become short of adequately preparing teachers with necessary information communication technology (ICT) skills. This has negatively impacted the ability to utilize the technological tools necessary for integrating technology into classroom instruction. In order to effectively implement CBE, teaching requires various teaching aids, laboratories and practical tools to facilitate learner experiential learning (Emmanuel et al., 2023) as envisaged in CBE framework. However, in Trans-nzoia west sub county, many junior secondary schools face acute shortage of key infrastructural facilities and financial resources which hinder their capability to effectively implement CBE as envisioned. The

inadequacy of the required instructional resources and facilities has constrained teachers, a critical aspect that this study sought to examine and its effect on teacher perception on CBE.

According to a study conducted by Nsubuga & Mulindwa (2023), which aimed to assess the effectiveness of infrastructure and its influence in the implementation of CBE, the study findings show that many schools with inadequate infrastructure are struggling to implement CBE framework. Schools with better resources are successful in the adoption of CBE, indicating a strong link between physical facilities and the educational outcome (Wanjiku, 2023). Recent studies in Kenya have highlighted the critical role of infrastructure in educational effectiveness (Mugambi & Ndewa, 2022).

2.5.4. Effect of Class Size on CBE Implementation

Class size is considered as a critical aspect in a teaching-learning exercise. This is because class size affects the choice of classroom activities. Class size, student-teacher ratio are some of the factors found to affect the quality of education and the academic success of students. The lesser the ratio of student and teacher in the classroom, the greater the chances of student improvement. The concept of class size relates to the total number of students allocated to a class or teacher for all or some of his/her teaching timetable, Wilson (2002). Since the inception of free basic education and the all-learner transition policy in Kenya, class size has been increasing over time. In many African countries, the issue of large class is often a common phenomenon. This situation has created difficulties for both teachers and learners when engaging in teaching and learning in the classroom. In South Africa, Marais (2016) observed that some schools experienced overcrowded classrooms;

unfortunately, this situation may remain for a long time in the future. According to a study conducted by Ruffina, Esther & Anastecia (2018); Yusuf, et al., (2016) on the impact of class size on students' performance, the study findings point that large class size has negative effect on students' performance while students in smaller class sizes performed better.

Woessmann (2016) also gave his perspective and emphasized on the contextual nature of class-size effects. The study made a conclusion that while reducing class size can lead to improved performance, the quality of instruction remains a critical factor in an educational program. As a result, policy formulation and decision making should consider both class size and teacher training programs. Both class size and the level of teacher training influence perception and the choice of teaching methodology to be employed. However, in according to a study conducted in Sub-Saharan Africa by Bennel (2022), findings revealed that there is no relationship between teaching workload and class size and the quality of educational services. These were also key attributes that this study sought to examine in Trans-nzoia west sub-county, Trans-nzoia county-Kenya.

In conclusion, research work touching on class size and teacher perception is characterized by varied findings and perspectives. Class size effect on student's academic achievement becomes critical since it is interwoven with a number of factors including teacher perception and practices, infrastructure, teacher training among others. While inconsistencies exist among different researchers, there is need for further research on class size and teacher perception regarding the handling of large and smaller class sizes. This study sought to examine the impact of class size on teacher perception and decision to implement CBE.

All teacher training institutions ought to provide appropriate training programs, to help upcoming student teachers in handling the critical challenge of teaching in overcrowded classrooms. Students in smaller classes are found to have greater advantages and benefits students in over overcrowded classrooms. Smaller classes have been advocated because of their ability to reduce achievement gaps, decrease dropout rates and appear to improve on student performance. Research findings indicate that students in smaller class sizes experience better teacher-student interactions and enhances individualized form of instruction. It can be concluded that overcrowded classrooms tend to affect classroom teacher-students and student-student interactions during group discussions and collaborative activities. For instance, it has been reported that teachers do fail to attend to individual students with learning difficulties (Marais, 2016; Muthusamy, 2015; Tejada, 2019). Overcrowded classes have also been found to increase the workload of teachers (Muthusamy, 2015). Consequently, this contributes to teachers' inability to effectively use learner-centered approaches as envisaged under CBE framework.

Small class sizes have been found to be efficient for effective CBE implementation. This boosts teachers' morale, perception and their level of job satisfaction. However, some researchers have argued that class size reduction amounts to inefficient use of funds which might be better spent elsewhere in a school system. It's upon this premise that this research examines teacher perception regarding class size and its influence on the implementation of CBE. According to Russell (2019), small size does not directly impact achievement but works through the many ongoing difficult decisions teachers have to make about how best to manage and teach learners during collaborative class work.

The perception of teachers is important in students' learning; their teaching and learning conceptions influence the planning and the implementation of pedagogical practices. According to Maisaroh et al., (2023), teacher involvement in class management plays a vital role in achieving success in education. The teachers' level of involvement is critical in determining the choice of a learning approach that is to be adopted. Mardiha and Alibakhshi, (2020) indicated that teachers' perception plays an important role in classroom decisions and teaching activities.

The recognition of the teachers' beliefs helps to predict their conduct and behavior in the classroom and the teaching-learning process (Lujan, 2021). The current demands of being an educator requires that educator perceives himself as a professional in constant learning and development. Therefore, the two-fold goals for conducting the study were to examine teacher perception, level of preparedness on CBE.

While conducting the study, the researcher explored the teacher perception in a situation where the teacher encounters large class sizes and the manner in which they are likely to handle the situation in comparison to teacher approach to CBE when handling a relatively smaller class size. Effort was also made to investigate teacher contact with the groups as they carry out group activities. In the context of this study there was a gap since there is lack of studies examining teacher perception on class size and its potential impact on CBE implementation. Therefore, this study is crucial since it seeks to bridge this gap.

2.5.5. Teachers' Workload

Teaching workload is the amount of work that is allocated to an employee in a given time frame (Inegbedion et al., 2020). In an educational context workload is a teacher's perceived

pace, volume and difficulty of work. According to Jalal & Zaheer (2017), workload is defined as the number of activities that require professional expertise and must be accomplished within the provided time frame in a physical and psychological form. Teaching workload plays a critical role in influencing teacher perception and decision to adopt CBE framework. Teacher workload ranges from lesson period, number of students in a given classroom, the number of subjects to be taught by a teacher and the amount of time allocated to each period.

Teachers' perception to these factors affects the manner in which they implement CBE since it potentially affects the quality of their work. Due to student diverse learning needs that teachers are expected to address, integration of new innovations to teaching and learning activities are required to make learning livelier and more exciting. For instance, the integration of technology in data presentation potentially reduces teaching workload thus making learning more interesting. In an effort to manage workload, teachers can assign less work aimed at producing valuable results from learners. Effective management of workload requires that teachers adequately plan for their lessons based on competencies that students are expected to master, as opposed to what students should to go through in a conventional classroom. The management of teacher workload can also be done by working collaboratively and by delegating responsibilities to students that makes them more proactive, independent, creative and innovative.

To avoid potentially undesirable learning outcomes and counterproductive learning behaviors, the relationship between teacher workload, time allocation, teacher perception and self-efficacy need to well managed. Teachers spend most of their time directly with students, yet the percentage of working time outside the classroom is significant (Barbera

& Reimann, 2014). This form of working when not directly in touch with students is called invisible work; such as carrying out assigned supervision, preparation time, assessment time and meeting with parents (Wilson, 2016), greatly influence teacher perception on CBE implementation.

Previous studies have shown that excessive workload contribute to significant gaps in CBE implementation. Teachers more often lack adequate time to prepare engaging and innovative lessons due to administrative duties leading to overreliance on outdated teaching approaches and materials (Abdullah et al., 2024). The situation does not only compromise the quality of learning but also exacerbates learning challenges in many countries since overburdened teachers struggle to provide quality individualized attention necessary for student success (Fermin, 2022). It's against this background that this study was conducted to examine perception of teachers' workload and its effect in CBE implementation. When addressing workload issues, it is important to formulate comprehensive policy reforms that are geared towards the reduction of teacher workload and in enhancing support system. This can be achieved through the promotion of stakeholder collaboration within the educational framework.

In order to bridge this gap, clear policy interventions guidelines are required. The study findings useful in identifying barriers to effective CBE implementation; advocate for actionable strategies that may inform policies and intervention measures that promotes positive teacher perception. This is critical for effective CBE implementation and in enhancing teacher well-being and in ensuring better educational achievement among students in JS. By comprehensively understanding teacher workload, necessary reforms can be initiated that give priority to teacher welfare and effective CBE implementation.

The impact of negative perception on teacher workload outweighs the benefits. According to study findings by Farmer (2020), high workloads reduce the ability of educators in delivering high-quality instruction. This leads to ineffective teaching and challenges in meeting diverse student learning needs. As teachers strive to manage excessive workload, they resort to using outdated teaching approaches. Inadequate teaching resources, further compound these challenges by compromising the quality of teaching (Hojo, 2021; Magalong & Torreon, 2021)

2.5.6. Stakeholders' Support

A stakeholder is any person or individual perceived to have an interest in an institution or organization. A stakeholder has the potential to influence or be influenced by the decisions and operations of an institution (Chen, 2019a). In an educational setup, they include parents, government officials, school administrators and teachers. Provision of quality education in any learning institution cannot be monopolized but rather dependent on concerted effort from various well-meaning individuals. These individuals are expected to complement and supplement each other in order to achieve sustainable development goals. Stakeholders being critical pillars, they greatly influence the success of any education reform. They significantly contribute in personality development and student careers. In most African schools, insufficient institutional support is a demanding situation which is a hinderance in the effective implementation of CBE. According to study findings by David et al., (2019), lack of sufficient institutional support can exacerbate a feeling of isolation among teachers. This leads to negative perception and increased attrition rates. Tambwe (2017) documented that inadequate institutional help limits the effective implementation

of CBE in schools. Reluctance to change among educators, parents and students poses a critical challenge that may threaten CBE implementation.

The current global trend in shift from content-based education to competency-based education has caused a departure in the educational philosophy and practice. CBE shifts learning from teacher centered to student centered learning. The new system lays emphasis on competence over rote learning in traditional learning. However, some stakeholders are skeptical about the efficacy of such framework, highlighting concerns over implementation, feasibility and its influence on student competence. Stakeholders are parties which are either directly or indirectly affected by the success or failure of an institution.

This resistance and reluctance often stem from low understanding and familiarity with the new model and objectives. In order to address these apprehensions, communication and stakeholders' engagement become essential in building support for CBE (Republic of Kenya, 2017). Therefore, a thorough communication has to be made to stakeholders such as teachers, parents and students; since every institution requires effective utilization and management of communication in passing information to improve positive relationship among its employees. The manner in which information is relayed in organizations is considered an indispensable tool and a bridge through which ideas are channeled from one person to another and for the harmonious co-existence among employees.

In relation to this study, the researcher informed teachers on the significance of taking part in the study; this was geared towards bringing out honest teacher perception regarding status of CBE implementation in JS. According to Aiwuyo et al., (2020), since management

of institutions is dependent on effective communication that equally impacts all facets of life, it is vital that stakeholders pay attention on flow of information. In pursuit for the effective implementation of CBE, effective communication either verbally or non-verbally should exist among all the stakeholders.

The study was carried out against the backdrop of recognizing the complexity CBE and its importance in effectively implementing educational changes; with effective stakeholder engagement through effective participatory communication. According to Presidential working party on education reforms (PWPER 2023), proponents advocate that effective communication is essential to in order to get stakeholders acceptance and support of the proposed changes. Parental involvement is another essential aspect of CBE implementation. Parent involvement is a significant factor that impacts on CBE implementation (Kazaara & Nelson, 2024). It is an essential component since learning extends beyond the classroom and helps learners to put into practice the acquired skills in solving real-life challenges.

However, a majority of parents in Kenya have limited knowledge on CBE, which affects their support and potentially contributing to teacher perception. From previous researches it has been shown that parental awareness and other stakeholders involvement impacts on student progress and attitude towards learning (Brighton et al.,2023). Additionally, when parents understand CBE, they are more likely to encourage and support their children to engage with practical skills at home (Ronalds et al., 2023).

Stakeholders' involvement in an institution is underpinned by the ideals of democracy which advocate for fair representation in any system of governance in order to advance

quality education. Teachers perform key roles in educating students. They have a great deal of control over what and how students learn in classrooms. Teachers also engage closely with other stakeholders in order to formulate best practices to educate each learner. According to Nakiyaga (2021), the participation of stakeholders is of utmost importance. For instance, teachers serve as a link between the school and the parents; therefore, their involvement has an impact in determining the success of any education system. Teachers bridge the gap between schools and the community, leading to increased support for schools and better understanding of the challenges faced by educators.

2.5.7. Teachers' Self-Efficacy

According to Adila et al., (2023), teachers carry out classroom activities that aim at enhancing students' learning and achieving desired learning outcomes. Therefore, it is desirable to carry out investigation on teachers' knowledge, comprehension, attitude and perception towards any educational practice. Content knowledge and teaching skills relate to teachers' feelings of self-esteem as a key variable in the teachers' perception of their competence. In the educational context, self-efficacy is a teachers' belief or confidence in their capability to organize and implement actions necessary to accomplish a certain instructional task (Alnahdi & Schwab, 2021). Ose (2021), defines self-efficacy as an individual assessment of one's ability to start and finish tasks. Teachers with a high level of self-efficacy have a greater variety of teaching methods and techniques in comparison to those with low self-efficacy. Teachers with high efficacy are able to adjust their actions and thoughts processes to mitigate emotional exhaustion (Ali et al., 2017). On the other hand, teachers with perceived low self-efficacy tend to have low emotional intelligence. This may make them develop a feeling of being powerless, unable to identify and to assist

struggling students (Rodriguez & Armellini, 2017). According to Perera et al., (2019), the study findings show that novice teachers' self-efficacy was much lower than that of experienced teachers. This compromises on the quality of teaching, lowering skill development and their ability to acquire problem-solving skills.

The concept of self-efficacy depends on the context and on an individuals' belief. Self-efficacy boosts the confidence in an individual and it plays a key role in enabling people to accomplish a goal. Self-efficacy has a great influence on a teachers' perception and their capability to adopt student centered practices. According to Bandura, vicarious learning and mental states are important sources of self-efficacy. Vicarious experiences aid in the process of self-efficacy in individuals who have little or no expertise and are unsure of their abilities. Self-efficacy beliefs help people to refine their feeling, way of thinking and in shaping their behavior through psychological processes (Bandura, 1994). The teachers' self-efficacy impacts significantly the teaching method they are likely to adopt. Teachers' professional training affects confidence and the ability to lead students to success. The teachers' ability to implement CBE transcends student grades and classroom activities. The level of a teachers' creativity, adaptability to situations the teachers' belief in growth of their students, potentially enhances the learning process and skill development.

In examining the implementation of the new curriculum in Kenya, teacher competence plays a vital role in shaping student self-efficacy in an educational context. It is also believed that developing learners is an essential intervention measure that promotes their capability to work towards success (Dong, 2023). Teachers work collaboratively to assist learners develop their sense of self-efficacy through counselling sessions in classrooms. In the context of junior schools in Trans-nzoia west sub county, understanding factors that

influence self-efficacy is critical for teachers and policymakers in order to design effective interventions and promote students' confidence and motivation (Nyongesa & Njoroge, 2023). This study aims to provide useful insights into underlying factors that shape teacher perception, self-believes on the implementation of CBE.

The challenges that face JS schools in Trans-nzoia west sub county and in Kenya with regard to CBE implementation and its effect in competency development requires continued research to provide evidence that may be used to mitigate the situation. For instance, stakeholders' involvement and teacher preparedness may influence teacher perception. By examining the relationship between stakeholders' involvement, teacher competence and self-efficacy in JS schools, the study aims to contribute to the enhancement of teaching practices tailored to a school setting. Moreover, the study findings may inform intervention measures aimed at bolstering teacher efficacy for improved educational outcomes.

2.5.8. Teacher Collaboration

In a school context, collaboration can imply that two or more teachers are working as a team with other specialists in order to design a conducive learning environment and support learners in their personal and social development (Finkelstein et al., 2019). Interactions between teachers are actions of collaboration, communication plays a major role in developing mutual understanding and in shaping teacher perception. Teacher-teacher interaction is influenced by organizational culture. In a conventional classroom, learning is a competitive practice where individual effort dominates and sharing regarded as a way of giving one's competence; in this case little collaboration does exist among learners. CBE

marks a departure from competitive learning environments. In this case, collaboration is highly necessary since it supports individual schools, learners and teachers (Vangrieken et al., 2015; Ronfeldt et al., 2015) to build their ability to reflect, gain new skills and knowledge. Earlier studies have identified factors that can foster or hinder collaboration and consequently influence perception. Such factors include age, gender, learning environment and subjective experiences.

According to Mora-Ruano et al., (2018), teacher collaboration is generally more practiced by younger and female teachers. According to (Tallman, 2021; Tobias, 2016), when compared to primary school teachers, secondary school teachers collaborate less frequently with their colleagues. While recognizing the significance of teacher collaboration, for effective CBE implementation, other factors need to be considered. Teacher-related factors include self-efficacy, attitude, age, gender, and teaching experience. Haddock & Maio (2014) defined attitude as an expression of an individuals' opinion of a given attitude object and is strongly related to an individuals' actions. Therefore, attitude has been found to play a crucial role in shaping teachers' perception in CBE implementation.

Equally, collaboration has been found to have a significant influence on educators' instructional approaches, educational success and in enhancing student engagement (Vescio et al., 2008). As such, working together becomes vital in developing a culture that is supportive of professionals and supports professional growth. Further, research has shown that collaborative teaching practices like co-teaching, team-teaching or pear mentorship have favourable effect on students' learning compared to conventional approaches. It has been established that collaborative teaching has the potential to improve on instructional ability of teachers and can also assist learners who have different learning

needs and create a conducive learning environment for all. In a nutshell, teacher collaboration in teaching may have a positive influence on teacher perception and improve on professional development and student grades. It is for this reason that this study sought to examine teacher perception on collaborative activities and CBE implementation.

Evidence from research Owino, (2023) shows that effective teaching strategies are student-centered and they make use of pedagogical strategies that promote learner collaboration, inquiry by learners, analytical and reflective thinking, creativity and problem-solving skills. Through the help of teachers, students develop these skills so that they can analyze information. When teachers help students with critical thinking and problem-solving skills, learners develop a deeper understanding of the content and will acquire CBE competencies needed to compete in dynamic 21st century to be responsible citizens (Katiba & Ji, 2017).

2.5.9. Critical Thinking and Problem-Solving in the Context of CBE

Scriven & Paul (2007) have defined critical thinking as the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and evaluating information that has been gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. Akramova (2017) defines critical thinking as the sum of skills and dispositions that facilitate the contrast to achieve reliable information and the orientation to judgement that an individual is likely to make. As envisaged in CBE framework, critical thinking transcends memorization and rote learning; it advocates for student interaction with content in an active and constructive manner. It encourages student probing, evident evaluation

and concrete logical conclusions in various contexts. In this study, a teachers' ability to critically think helps transfer skills and in shaping learners' perception.

When teachers help students to solve real life challenges, they immensely contribute in the development of positive perception and in the transfer of the same skills to their learners. Critical thinking is at the core of teaching-learning activities within the CBE model; it lays emphasis on nurturing of learners' ability to critically think and analyze learning tasks under different contexts. It triggers student curiosity and enhances independent inquiry and in skill development. In the context of CBE, critical thinking encourages inquiry-based learning, where students exercise control over what they intend to learn and how they will learn. This gives them autonomy on concept development and competency mastery, thereby promoting active learning. this entrenches a deeper understanding of content area. In the process, it enhances critical thinking and problem thinking skills.

Through peer interactions, sharing perspectives on learning activities, and by defending their views, learners develop positive perception on essential communication skills, critical thinking and problem-solving skills. Further, this helps shape their perception to challenging tasks. Through these skills, students are able to construct well-reasoned arguments and interpretations while they consider multiple viewpoints. By providing opportunities for student autonomy and self-directed activities, CBE inculcates a sense of agency and independence, thereby enabling learners to develop and apply critical thinking and problem-solving skills in authentic contexts. Since the world is becoming increasingly modernized and interconnected, the ability to critically think and to be innovative becomes a valuable asset. These skills are crucial in order for students to navigate uncertainties and

in adapting to new changes for them to thrive in various academic and professional contexts.

The aim of CBE is not only to equip learners with transferable knowledge and skills but to also empower them become team players, critical thinkers, problem solvers and life-long learners. By entrenching the aspect of critical thinking in the fabric of teaching and learning, CBE prepares learners to navigate the complexities of the 21st century with confidence and clarity of mind. Teachers being pillars in the successful implementation of CBE, they play vital roles in successful transfer of knowledge into the next generation of critical thinkers, innovators and problem-solvers who shapes the future of a country and the globe at large. Since sustainable education reforms do not come from fixed blueprints but dependent on perpetual improvement, it calls on continuous growth of our educational systems.

2.5.10 Perception and Critical Thinking

Perception plays a key role in critical thinking since it shapes the way individuals interpret and make sense of their environment. Since information processing and evaluation relies on one's perception, having the right perception is essential for critical thinking in order to make correct interpretations. There is a close association between perception and critical thinking. Understanding this association is crucial for effective decision making, problem-solving and communication. People make use of the five senses to perceive and understand the world around them. Therefore, all our senses are crucial for observing, understanding and in determining the judgement people are likely to make. Perception in the preserve of critical thinking can be defined as the way in which individuals interpret and make sense

of the world around them. While focusing on perception in logical and critical thinking in this study, it is worth noting that perceived information is the main source of data upon which people base their conclusions. A students' perception is a result of direct and subjective experiences with the information about which it can be accurately interpreted and applied for critical thinking. One of the major qualities of perception that is used for critical thinking is selectiveness (White, et al., 2010). Accurate perception increases the chances for successful critical thinking. For instance, if a person has challenges with perception, accurate data evaluation cannot be realized.

Majawa et al., (2024) found that teachers who may not know how to incorporate critical thinking into their lessons find it challenging to teach students critical thinking skills. For such teachers, occasionally it becomes difficult for them to factor in their lesson aspects of critical thinking. Under CBE it is important that educators perceive themselves as mediators as opposed to disseminators of knowledge. This is because a mediator empowers a learner to learn by teaching the relevant skills and strategies to learn. A learner is also considered as an active participant in a teaching-learning process. On the contrary, if educators perceive themselves as disseminators of knowledge, there is little regard for student contribution and learning feedback. In this case, students are perceived as passive recipients of information. Teaching becomes teacher centered as the teacher solely exercises control of the teaching situation and meaningful learning by students is questionable.

2.6.Strategies for Effective CBE Implementation

Curriculum implementation requires careful planning and execution. It entails a network and chain of activities that involve translating the curriculum design into classroom activities and changing learners' attitude to accept and participate in the planned for activities. In recent years, there has been concerted effort on CBE integration into classroom teaching and learning processes. A number of studies have been conducted to investigate this issue. For instance, Radkowitsch et al., (2022) emphasized the importance of repeatedly engaging learners with practices such as problem-based learning through simulations, and focusing the learners on practices such as deliberate practice that are particularly difficult to master. Simulation-based learning is suggested as a powerful competency-based educational tool that mimics real-life contexts. According to Chernikova et al., (2020) simulations provide a chance for students to interact with authentic objects or models and alter some aspects of reality, facilitate learning and practice high order skills. simulations involve critical thinking and problem solving which requires students to be involved actively in the skill development process. Simulations can make use of technology aids to present reality more accurately, but the focus is on reconstruction of realistic circumstances and genuine interactions that learners can engage in.

In other studies, Kahila et al. (2020) noted that project-based learning (PBL) environments are suggested to promote emotional and social skills to face negative emotions and collaborate with other students to attain a common goal. Project-based learning, wherein learners actively explore authentic problems, might promote critical thinking and collaboration among learners. It may also trigger students' creativity, adaptability, curiosity, sense of responsibility, and perseverance, Sistermans (2020). These learning

activities may spur competence development, involve students in making decisions likely to affect learning progress and enhance a sense of agency through self-reflection, (Weerakoon, 2023). Project-based learning plays a central role in CBE given that one of the core areas of CBC is community service learning. This requires that students come up with projects that may solve real-life society challenges.

CBE has been advanced as an effective model that equips students with practical skills required for successful learning program. However, Nehring et al. (2019) contended that the limited implementation of competency-based education can be attributed to the prevalence of summative assessment methods. These methods, primarily associated with test-based accountability have been proven to impede in-depth learning but also fails to accurately measure complex skills that students require in order to navigate real-life challenges. Thus, a shift towards a more comprehensive assessment practice becomes inevitable in order to support the effective implementation of CBE framework. According to Ronalds et al., (2023), teachers' perception and beliefs about new education reform affects curriculum implementation. Teachers play a pivotal role in curriculum implementation; however, they can also be major impediments due to their traditional beliefs and attitudes (Prosmala et al.,2024). According to Hazel & Roel, (2025), teachers exert significant influence on the quality of learning in the classroom. This creates a need to examine how teacher perception can be optimized to enhance student educational outcome.

Currently, competency-based education is becoming popular among many stakeholders globally. However, documented research has shown that many countries which have adopted competency-based education have experienced various challenges thereby

hindering its smooth and effective roll out. In Ghana for instance, research conducted by Acquah, Frampong & Kwame (2017) documented the challenges facing implementation of Competency Based education programs in learning institutions. The study indicated that effective roll out of competency-based education had immensely contributed to the training of skilled graduates who readily meet market demands. Further, the study indicated that irrespective of the realized positive learning outcomes, still curriculum rollout had not been adequately carried out in some of the learning institutions. This was attributed to inadequate funding of learning institutions, negatively impacting infrastructural development and lack of policy guidelines in schools. The implication of the study findings was that CBE implementation is facing challenges in schools due to a number of factors. However, the findings may not apply in the Kenyan context due to policy measures put in place for CBE roll out. Thus, conducting studies in Kenya to unravel any challenge that may hinder implementation of competency-based education in junior schools became a necessity.

A study conducted by Muneja (2015) in Tanzania also outlined challenges that secondary school teachers face while implementing CBE. The study indicated that teachers encountered significant challenges that obstructed implementation of CBE. Teachers in Tanzania also face challenges such as; teachers' lack of adequate knowledge on teaching and assessment methods, lack of adequate text books and poor-quality instructional materials. In addition, the study reported inadequate ICT tools for teaching, and teachers lack of motivation. From the study a recommendation was made that the ministry of education should carry out in-service training session for teachers to realign skills towards effective implementation of CBE framework. The schools should be provided with

adequate instructional materials and infrastructural facilities. Since the study was carried out in Tanzania, the study findings don't reflect the situation in Kenya and thus not applicable in Kenya context. Hence, there is need to conduct research in Kenya to establish how competency-based education can be applied in junior secondary schools.

Komba & Mwandanji (2015) researched on pertinent issues highlighting the implementation of CBE in Tanzania secondary schools. The results of the study indicated that 86% of the teachers lacked adequate knowledge on the curriculum. The study outcomes showed that the overall active learner participation in classroom activities was not adequately done. Less than 50% of teachers reported to having carried out formative assessment as envisaged under CBE model. Based on the study findings, the researcher made a conclusion that CBE was not appropriately implemented in the sampled schools. It was suggested that regular in-service training and retooling be offered to equip teachers with up- to date skills on effective implementation of competency- based education.

In Rwanda, Mugabo et al., (2021) carried out a case study to explore the level of association between a school's profile and its capacity to adequately implement CBE. Findings from the study indicated that variations in implementation of CBE between teachers was caused by differences in; professional development, inadequate training on CBE, inadequate teaching and learning resources and lack of infrastructural capacity in schools. These factors have a significant impact on teacher perception and consequently CBE implementation.

A report by Ndayambaje (2018) outlined challenges facing effective implementation of CBE in Rwandan schools. The report shows that despite training teachers on CBE

implementation; some teachers were resistance to change due to inadequacy of instructional resources and school infrastructural facilities. As a result, teachers continued using old teaching materials and conventional methods. Ndambaye (2018) further indicated that inadequate teaching-learning resources were recorded as another issue hindering effective implementation of CBE in Rwanda. The implication is that by providing adequate instructional materials and constant training of teachers, they are equipped with necessary skills that help acquire positive perception about the importance of CBE and benefits of effective implementation.

In Kenya, Momanyi & Rop (2019) carried out a survey in Bomet East Sub County. The study sought to establish challenges faced by teachers in pursuit for effective CBE implementation. The result showed that teacher's lack of adequate knowledge and skills was a major hindrance to effective implementation of CBE. The study made a recommendation that the ministry of education and KICD should provide in-service training and retooling programs through workshop sessions. This is critical in helping bridge these pedagogical gaps, preparation of teaching materials and in learner assessment. When teachers do not possess adequate knowledge and skills on CBE, they are likely to experience challenges in its' implementation and may opt to employ teacher centered methods of content delivery. Recently, most African countries have incorporated CBE into the education system. However, its' rollout has not been adequately conducted or implemented in many classrooms due to systemic educational challenges facing African countries (Ruth & Ramadas, 2019).

2.6.1 Teacher's Perception on CBE Assessment

Assessment of students' achievement is an integral part in a learning process. According to Edmund (2011) if teaching lacks the component assessment, it cannot continue nor can it be adequately understood. A number of scholars have endeavored to define competence-based assessment. According to Kenya National Examination Council (2021); Lamprianous & Atharianous (2009), competence-based assessment is defined as a purposeful systematic continuous process of collecting information from many sources to help in decision making on what already students have skills on, what they give priority to learn, and on what they can do with skills acquired.

Competence-based assessment has significantly contributed in shaping the quality and effectiveness of educational programs and reforms. Under CBE, the type of assessment used is diagnostic, formative and summative. Formative assessment involves collection of information on a student's progress in a learning process by use of assessment tools. The main objective is to provide timely feedback to educators to improve the teaching techniques during the instructional process. Formative assessment involves assessment of students prior to learning, during learning and after the instructional process. Assessment being a deliberate exercise, it sends signal concerning the status of affair in relation to classroom practices.

The teacher should plan lessons and learning experiences in advance depending on learner's needs within the classroom identified by diagnostic assessment (Desinguraj and Ebenezer, (2021). However, it was noted that rarely it is carried because it consumes and additionally, a greater level of pedagogical knowledge is needed. This study was carried

out against this background to examine teacher perception towards implementation of competence-based assessment. Assessment being a critical aspect, the study explored the teachers' perception and factors that influence the teacher's perception to adopt competence-based assessment in Trans nzoia west sub county. Whether teachers are utilizing competence assessment tools in Trans-nzoia west sub county can only be determined through curriculum evaluation.

According to Nhor et al., (2022), a study conducted on teacher's perception of formative assessment, research shows that teachers are more likely to employ formative evaluation in their classes. However, in Kenya some teachers not using formative assessment in their classroom as required of them complained of limited time noting that they have a big workload that constrains them within the allocated and limited time.

Ambei et al., (2020) opines that the competence-based assessment assesses students based on their ability to apply knowledge and skills in real life situation not recalling what they have been memorized. Furthermore, competence-based assessment should be used whereby students are exposed to real-life challenges that require them to use essentially acquired knowledge and skills (Mueller, 2018). The teachers' perception is critical since it influences how teachers evaluate student competence and the acquisition of set competencies. This study examined the level of teacher preparedness in implementing competence-based education model and whether they are using competence-based assessment approaches in student assessment.

2.6.2 CBE Lesson Plan

Enama (2021) defines a lesson plan as a model that contains well organized activities within a standard stipulated time frame. It describes how students' progress from stage to the next in the process of attaining specific learning objectives. For effective implementation of CBE, planning, designing and reflecting on instructional processes becomes an integral component. A teachers' knowledge of lesson planning is the back-borne of teacher training since it is a pre requisite for effective implementation of any curriculum reforms. Teachers are required to effectively plan for their lessons in order to initiate and support meaningful learning. There is need for them to take action for teaching-learning processes to run smoothly while allocating sufficient time on each task (Doyle, 2006). Before formulating lesson objectives, first teachers need to determine subject matter content, plan for learning tasks, and the relevant teaching-learning materials. Thus, educators use their discipline knowledge in preparing the content to be covered accordingly.

In preparing a good lesson, teachers may require to put into consideration the learners (age range, education background, the level of language development and learning styles), lesson goals, objectives and outcomes, area content knowledge, availability of teaching-learning materials, the sequencing and timing of learning activities and assessment procedures. Lesson planning involves two main stages; an informal stage whereby teachers assess learners prior learning experiences on the content and figure out their lesson activities and the sequencing of these activities in the classroom, and a more formal stage where teachers write down the various components of the lesson plan while following specific and recommended format.

Therefore, teacher training, perception and content knowledge play an important in the implementation of CBE. In a study by (Enama, 2021), findings show that although there are many available materials providing information on teacher training, there is not enough documented evidence about teacher lesson planning competency. It is upon this background that this study was established in order to examine teacher preparedness and perception in lesson planning in line to effective implementation of CBE.

Enama, (2021) notes that lesson planning largely depends on a practical and ideological context. Therefore, the need to offer training to teachers on CBE lesson planning has even a more heightened relevance in the Kenyan context today. The adoption of CBE has raised stakes in teaching-learning standards. This has resulted to increased demands on teachers. Consequently, this reform in teacher education has triggered program changes in order to adapt to the new requirements of innovation so as to produce educators ready to implement it in their classrooms (KNUT, 2019). Pedagogical guides for effective CBE implementation were distributed across the country in order to familiarize teachers with new reform educational practices. The knowledge of lesson planning has become a yardstick in determining in-service teachers' professionalism and their readiness to adequately implement CBE.

Collaborative lesson planning among colleagues has the potential to create a culture of continuous improvement when they brainstorm together and deliberate on educational practices to student learning need (Cheng & Mendoza, 2025). Gutierez (2019) also found that lessons jointly prepared with colleagues were better in terms of instructional quality than those prepared by individual teachers. Collaboration among colleagues in lesson preparation results in development of mutual leadership skills, increased feeling of

effectiveness and enhanced professional identity. Collaboration and teamwork among peers in lesson planning provides them with opportunities to improve their classroom practices and identify their strengths and weaknesses.

2.7 Challenges Facing CBE Implementation

Competency-based education as a new education reform has fiscal demands in terms of the cost of teaching-learning materials, cost of professional development and training, and cost of monitoring and evaluation. The successful implementation of CBE is dependent on a country's economy (Sifuna & Obonyo, 2019). According to Shah (2019), Kenya as an agriculture-based economy has not fully experienced a steady economic growth, which is attributed to unpredictable weather patterns. The implication is that CBE being resource intense becomes difficult to implement. Given that this educational model advocates for digital literacy as one of the core competencies, there are valid and logical reasons to procure digital infrastructure to enhance innovativeness and creativity. This will make CBE a reality to students. For successful implementation of CBE, there is need to address technical challenges by initiating programs such as individualized platforms, assessment tools and appropriate data management systems. This requires adequate resource allocation for procurement of digital tools and in meeting maintenance costs.

Since CBE does not advocate for time-based learning, sufficient time is required for implementation for students to master set competencies. This is in contrast to knowledge-based pedagogy. In this model, time is fixed in terms of school terms or semesters and the content to be covered within the specified period of time. Under CBE, the learning outcomes are fixed in terms of competencies and values whereas the time of competency

mastery remains diverse. The new model (CBE) advocates for self-paced learning as learners progress at different rates depending on how fast they demonstrate competency mastery. However, this poses serious challenges in addressing individual learning needs (Dahal & Bhat, 2023), since competency mastery requires more time. To overcome this eminent challenge of time constraint, educators need to distinguish pedagogy and differentiated instruction.

Another challenge is on CBE assessment model. A model that has to reliably determine learners' competency. This requires that effective and reliable assessment models are developed to measure student mastery of set competencies. Assessment models should be designed in a manner that mirrors real-world applications of knowledge and skills to be learnt. On the other hand, Nakawuki et al., (2025) reported that formative assessment on competency acquisition needs to be done using well defined indicators that students are aware of. Further, this is compounded by the fact that all learners are unique, with inherent capabilities and pre-existing and subjective learning experiences. Joint effort is required in order to develop assessment required to overcome this challenge. While standardizing different assessment forms, it is vital that consistency and fairness are carefully taken into consideration among different educators and courses they offer. Equally, there is need to differentiate and individualize the assessment process due to diversity and assessment environment.

As educators engage in designing assessment models, there is need to consider contextual learning whereby assessments are aligned with the curriculum that is also aligned with teaching-learning standards. Teaching standards should be designed in a way that they measure knowledge and skill acquisition in terms of how students are able to perform using

simulations and real-world situations. This can only be achieved by carefully designing and developing appropriate instructional materials that can support and complement learning activities. Additionally, to adequately achieve this goal, there is need to provide in-service training on how to use CBE materials since CBE is a student-centered approach. The aspect of professional development is a pivotal component since it equips teachers with skills required to provide quality education in the process of disseminating competencies as envisaged in CBE framework.

Teachers being products of content-based education reform, they tend to teach CBE model the way they were taught. Therefore, for effective CBE implementation, there is need for a paradigm -shift in their instructional approach. The educators themselves need to be 21st century learners. They need to acquire competencies for creating a psychosocial environment that is conducive to learning and one that provides opportunities for active learner participation (Kimario & Otieno, 2022).

Another critical issue regarding CBE implementation lies on precise and accurate definition of competencies to suit industrial standards, workforce needs and societal expectations. This calls for a concerted effort in expert collaboration on subject-based issues and for the employers to provide guidelines that ensures that the outlined competencies are relevant to industrial needs and are well updated. Tailoring different learning paths to suit individual learning needs can be challenging especially when handling large class sizes. Educators need to device ways of providing differentiated learning and guidance while managing diverse learning needs among students.

Competency-based education also requires that students take ownership of the learning programs. However, because some students struggle with a sense of self-direction, motivation and responsibility; teachers need to come up with strategies aimed at keeping learners involved and motivated when conducting classroom activities. This may demand that teachers vary their instructional practices to be student centered.

2.8 Summary and Research Gap

Despite the affordance of CBE preparing learners for future challenges of the 21st century, its implementation in Africa still appears to be problematic due to teacher's perception, values, practices and beliefs (Ruth & Ramadas, 2019). In most of the countries in Africa, the existing secondary education system is assumed to be focused on traditional learning approaches, covering more content, but at the expense of in-depth understanding and skill development (Ruth & Ramadas, 2019).

Although CBE is focused on outcomes, teaching and assessments, future research directions on the influence of teacher perception on competency-based education (CBE) implementation in Kenya should focus on addressing some of the gaps identified in the current study. This can eventually reveal gray areas on, stakeholder participation, policy, resource allocation, teacher workload and preparedness for effective implementation. This may require attention in in order to improve students learning outcomes. By exploring stakeholder perception and experiences towards CBE implementation, collaboration will be enhanced. Since CBE does emphasize on role of learner-centered methods in curriculum delivery, this study looked at the extent to which teachers are ready to adopt

such CBE approaches that actively engages learners and in meeting learner's diverse learning needs.

CBC and CBE terms are used to advance an approach in designing curricula that describes education focusing on student demonstration of competencies to solve real-life challenges. The concept of CBE is career oriented with practical focus than the conventional approach to teaching. This shift in educational philosophy from what teachers believe leaners should know to what learners should master to be able to apply in varying and complex situations. However, since its inception in Kenya, its' benefits have not yet been fully explored.

In the 21st century, CBE is gaining support in many countries. This new system of education enables learners to master skills and competencies that addresses the industrial demands of the society. CBE advocates the analogy that majority of students can achieve set competencies in the specific content area when given opportunity and freedom to progress at their own pace. Educators need to organize and present learning experiences according to student interests and learning needs (Sturgis & Casey, 2018). According to CBE tenets, time is a variable, while performance is a constant (Mutai et al., 2024). Therefore, there is need to accord every student opportunity to progress according to competency-mastery and learning pace. However, using time-based model, learning is perceived as not able to meet industrial needs. When combined and integrated with the content-based education, CBE has been found to equip students with skills their future employers expect. Mutai et al., (2024) indicate that CBE is a program of study with clearly defined, concrete and measurable learning objectives where every student participating in the program must demonstrate mastery upon program completion.

CBE educational reforms are aimed at reducing systemic inequalities in an education system and performance gaps among students Mutai et al., (2024). It also aims to identify and cultivate unique intellectual, emotional and physical abilities of all learners. In recent times, CBE has gained prominence in the world. With its introduction in institutions of learning, it is mandatory that learners are given tasks that requires them to be creative in getting solutions. Through this education, learners are not only equipped with knowledge and skills but also uses them in meaningful ways in real-life situations. In adopting CBE model of education, the teacher has become a true central figure and mediator between the learner and knowledge. To achieve this competency objective, schools need to follow the CBE path. This switch is important as it raises a crucial concern on whether or not teachers are adequately trained to adjust to demands of the new dispensation. It is on this basis of this puzzle that this research was designed to explore the various ways by which teachers and learners apply knowledge and skills associated with CBE and challenges they face during implementation.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter covered research design, study area, target population, sample size and sampling procedure. The chapter further explained about research instrumentation, their validity and reliability, procedures for data collection exercise, analysis of data and research ethical considerations.

3.2 Research Design

Research design is a broad framework that explains the entire plan of carrying out research work. According to Pawar (2020); to test study findings a research design serves as the back-borne structure that responds to research questions. Research design played a significant role in achieving and channeling reliable and valid research findings. Research design enabled researcher to make correct decisions in every step of research. Through research design, a researcher plans for the study within a given period of time and conveniently obtain results for research questions (Akhtar, 2016). The researcher was able to realize all the research work in a better way consistently and more accurately; thereby enhancing study legitimacy.

This study made use of mixed approach research design. Through this design, the researcher was able to collect both qualitative and quantitative data simultaneously; however, analysis of qualitative and quantitative data was done separately. The use of concurrent mixed research design is very useful since it gives a better understanding of

research problems that lead to better results in the course of solving research problem more accurately (Creswell et al., 2018). The qualitative aspect of the study was done through the use of descriptive survey which deeply delved into teachers' experiences in the course of CBE implementation. This made it possible to ascertain challenges and perceived benefits associated with CBE. This qualitative approach was useful in providing rich and detailed insights regarding the teachers' perceptions. Equally, this made it possible to thoroughly understand CBE and its influence on teaching-learning processes. Quantitative data was useful to the researcher in the identification of correlations between teachers' perceptions on CBE implementation. By incorporating quantitative methods in data collection, numerical data complemented and strengthened qualitative research findings. Since the qualitative data and quantitative data was concurrent, it strengthened research validity findings by generating insights that were complete and actionable than those advanced by a single methodological approach.

Study findings were also triangulated by use of mixed method research design. This enhances the validity and reliability of the study findings. This provided a richer and enhanced perspective on teacher perception on the implementation of CBE.

3.3 Study Area

Trans-nzoia county is to the north rift of Kenya. The county borders Bungoma to the west, Uasin-Gishu and Kakamega to the south, Elgeyo Marakwet to the east, West Pokot to the north and republic of Uganda to the north west. The county covers approximately 2496 square kilometers land mass. The county is generally an agricultural centre, commonly referred to food basket of Kenya, because of large scale maize farming in the region.

According to census report 2019, the county has a population of about 990,341. Currently the county has a population of about 1 million people according to city population statistic 2023.

3.4.Target population

The target population is the population that was studied. This study targeted junior secondary school teachers and school heads teachers in public schools. Junior schools were chosen since CBC roll out is in the last phase of implementation. Teacher perception impacts on decisions teachers make while implementing CBE. Therefore, this study examined the role teachers play since they determine how successful or unsuccessful an education reform will be. Trans-nzoia west sub-county has a total of 60 Junior schools with a total enrolment of 16,132 students, Ministry of Education (2025). Each junior school has an average of four teachers translating to 288 teachers, and 60 heads of institutions making a total of 348 teachers. This translates to a teacher-student ratio of 1:56. This study targeted all teachers in respective schools.

3.5. Sample Size and Sampling Procedure

Sampling is a statistical technique used to efficiently analyze large datasets through careful selection of a representative sample. Instead of analyzing an entire population, which could be impossible in some studies, sampling helps to analyze a small percentage to enable researchers make predictions and inferences about a larger population. This necessitates informed decision-making without spending more resources for exhaustive data collection.

3.5.1. Sample Size

Sample size is defined as the number of units, subjects or individuals that a researcher selects from a population to study. Sample size for this study was drawn from public junior secondary schools. Smaller sample sizes lead to biased estimates, low statistical power and increased sampling error while very large sample size may waste resources, increase ethical risks and lower its practical significance. The robustness of a sample relies more on the careful selection of respondents rather than to its size (Boreham et al., 2020). Gamarra & Prada (2025) also opines that the aim for sampling is to generalize the traits being studied over the entire larger population. In research, the way data is collected has more significance than investing effort and resources into blindly collecting more data for the sake of increasing sample size.

Mugenda & Mugenda (2013), recommends that if the accessible population is less than 10000; a sample size of 10 percent to 30 percent of the targeted population is adequate for mixed methods research design. Therefore, in sampling the schools, head teachers and teachers, the researcher considered 25 percent of targeted population for the study because the population was not very large. Therefore, in this study, sample size of 25% of the target population was considered appropriate and adequate for the study. 25% of this translated to a sample size of 15 schools, 15 headteachers and 64 JS teachers.

3.5.2. Sampling Procedure

Simple random sampling was used to select schools for the study. This sampling technique was appropriate for this study since the population was homogeneous and the study population was uniformly distributed. It is asserted that simple random sampling is efficient

when the population is homogeneous and the list of the population is readily available (Cohen et al., 2018). Simple random sampling involves random selection of participants unit by unit for the study, each unit has equal chances of selection as a respondent at each draw (Bhardwaj, 2019; Thomas, 2020). This technique accords every individual the same chance to be selected as part of the sample (Stockemer et al., 2019). It also eliminates biasness and an impartial selection approach (Sharma, 2017). Simple random sampling techniques permit generalization of study findings from the accessible population to target population. Stockemer et al., (2019) opines that randomization helps to minimize the confounding effects by randomly selecting cases.

In this method, the researcher developed numeric list of all 60 JS schools in Trans-nzoia west sub-county and generated numbers 1to 60 to represent each school. The researcher then shuffled the list of numbers and randomly pick 15 pieces from the list of 60. This represented 25% of all the schools in Trans-nzoia west. A new list of picked number was then prepared and matched with schools bearing the number, these schools formed the study sample. All teachers in sampled schools became respondents for the study.

Table 3.1: Sample Framework

Target population	Population size	Sample size	Percent
Public junior secondary schools	60	15	25%
Head teachers	60	15	25%
Number of teachers in junior schools	288	60	21%
Total	348	79	22.7%

3.6. Research Instruments.

The researcher designed questionnaire that was distributed to respondents during the study. The questionnaire was given to all teachers in sampled junior secondary schools since CBE implementation is fully in place in grade 7-9. The teachers' questionnaire collected information related to all variables of the study as informed by research questions and conceptual framework.

The questionnaire had six sections. Section A collected information on teacher perception on concept of CBE, section B collected information on teacher workload, section C gathered information on teacher preparedness, section D collected information on stakeholders' support, Section E collected data on teacher perception concerning infrastructure and resources and section F collected information on teachers' perception to professional training. The questionnaire was a five-point Likert scale.

Structured interviews were conducted using interview guide with the intention of obtaining informative responses from the head teachers regarding various aspects of CBE implementation. The interview guide covered areas such as knowledge about CBE, challenges faced, the perceived benefits, availability of resources, teacher readiness and intervention measures for effective CBE implementation.

Headteachers were interviewed by use of interview schedule. The interviews were conducted face-face in the headteachers office. The first section of the interview guide collected demographic information of the headteachers the school. The second section sought information on factors that influence implementation of competence-based education. The instrument was structured in nature to guide the researcher on the key concepts to interrogate while allowing freedom to direct the conversation in areas of interest when necessary, during the discussion.

The researcher also made use of an observation schedule for data collection. An observation is a data collection tool which is used by a researcher for collecting live and first-hand information with the help of his/her senses in natural or controlled events. Observation is one of the most suitable and natural methods used inquiry and investigation. During introspection it can be used to explore the minds of respondents. This study made use of observation as a data collection tool since it provided more reliable and valid data to the researcher because there are many things in the behavior and environment of people that can only be ascertained by the researcher through observation. In this study, observation schedule was used to collect data on available instructional resources. The research tools used were adopted from Prokes et al., (2021). The researcher made modifications for the tool to conform to the current study's concurrent research design.

A checklist was prepared by the researcher upon which the level of compliance was marked as either being poor, good, very good or excellent. While conducting the study, the researcher played a passive and non-intrusive role and did not participate with the subjects but only observe things from a distance. In the process of establishing reliability, the researcher went through findings of other observers observing and recording similar event or phenomena. The researcher also referred to the previous studies on same event. A comparison was made based on the premise that the greater the amount of inter-observer agreement, the greater the amount of reliability.

3.7. Pilot Study

A pilot study or feasibility study is a preliminary investigation. It is meant to test the feasibility and design of a larger and more comprehensive study (Kunselman, 2024). It is more often conducted on a smaller scale aimed at identifying any potential issues and to make adjustments before conducting the main study (Marinas et al., 2014). It served to refine research questions, methods and the practical aspect of data collection. This being a preliminary study, a sample size of 25% was considered appropriate for feasibility study and to pave way for further research (Cresswell & Creswell, 2022). In this study, a pilot test was conducted in five JS schools in Kiminini a neighboring sub-county to Trans-nzoia west sub-county. The pilot study included five head teachers of the selected schools and a total of 20 teachers, that is 25% of the target sample size. Mugenda & Mugenda (2013) claim that a pilot study with a homogeneous tenth of the target population is suitable for research. The aim of piloting the study was to test the research instruments for reliability in collecting data for purposes of analysis.

After collecting data, the Cronbach's alpha reliability coefficient was computed using SPSS to determine the internal consistence of research items. The data collection tools were structured to investigate teacher perception on CBE implementation, teacher workload, effectiveness of teaching resources, and intervention measures for effective CBE implementation. A reliability coefficient of above 0.73 is generally acceptable (Tobon & Luna,2021) and that below 0.6 is generally problematic as indicated by (Ashcraft & Parker, 2009) while a reliability coefficient of more than 0.9 may not be good since it could indicate some form of redundance as they could be testing same questions but in a different guise.

Results from the pilot study on first variable showed that on concept of competence-based education, the items had reliability coefficient of 0.770; on second variable regarding teacher perception on workload and class size, the test items had a reliability coefficient of 0.768; the third variable on teacher preparedness, the test items had a reliability coefficient of 0.778; results on fourth variable, teacher perception on institutional and stakeholders support, the test items had a reliability coefficient of 0.825; the fifth variable on infrastructure and instructional resources, the test items had a reliability coefficient of 0.832 and the last variable on professional training, the test items had a reliability coefficient of 0.781. Overall, Cronbach's Alpha values for all the variables indicated the suitability of test items for the study. Table 3.2 below shows summary of pilot study analysis.

Table 3.2: Results of Reliability Analysis

Variable	No. of items	Respondents	Cronbach Alpha (α)	Comment
The concept of competency-based education	4	20	0.770	Reliable
Perception on workload and class size	4	20	0.764	Reliable
Teacher preparedness on the implementation of CBE	6	20	0.778	Reliable
Perception on institutional and stakeholders support	4	20	0.825	Reliable
Infrastructure and instructional resources	4	20	0.832	Reliable
Perception on professional training	4	20	0.781	Reliable
Overall				**Reliable**

3.8. Validity and Reliability

Both reliability and validity are fundamental domains in the assessment of any measuring methodology for data-collection in good research. Reliability is crucial since it measures the quality of research findings. For findings to be true and accurate, the measurement instrument should be reliable.

3.8.1 Validity of Research Instrument

The validity of an instrument is a fundamental consideration in promising the quality of results and is vital to examine (Wang et al., 2023). Validity represents the extent to which specific research items on a tool accurately measure the construct under consideration to

guarantee that research items permit valid inferences (Anggraini et al., 2023). Content validity is an essential aspect in research, it guarantees that measuring items for use are appropriate, relevant and represents the construct it is intended to be measured. Content validity helps reflect the extent to which a measurement describes the specific intended domain of content (Nikolopoulou, 2023). Prior to carrying out this study, the researcher ascertained content validity by tapping into the expertise of members in the department of educational psychology before embarking on data collection exercise. Syaiful & Roebianto (2020) define an expert as an active resourceful individual participating in the development of a discipline.

The overall picture and accuracy of research items subjectivity can be described by use of face validity (Elongovan & Sundaravel, 2021). In the current study, face validity was used to assess the clarity and objective of a construct used in evaluation. According to Khidhiri & Rassul, (2023), face validity is not accepted in proving the validity of a construct, but is recommended that it is done together with content validity; as a result, the advice of departmental experts was sought to ascertain the suitability and presentability of research tools and items. In addition, data collection instruments were subjected to pilot testing to determine their suitability and relevance.

3.8.2. Reliability of Research Instruments

In research, reliability is a concept that can be used to describe how repeatable or replicable a study is. Reliability is useful when measuring consistency of research variables. A measuring tool can be said to be of good quality if it is reliable (Devi & Sudaryanto, 2020; Puspasari & Puspita, 2022). Reliability measures replicability, accuracy of findings, and

worthiness of research. It shows the extent to which findings are without any form of bias. If a respondent's results on the same or similar test administered multiple times are found to be comparable, then the measure can be regarded as being reliable. In the study, Cronbach's alpha was used to evaluate internal consistency and reliability for questionnaire items. A measure of the relationship between research items and variables is referred as internal consistency.

Good reliability is said to have a score of +0.70 (Tobon & Luna,2021), more than 0.7 denotes sufficient reliability. A co-efficient of (0.7-0.8) is good reliability and above 0.81 very good reliability (Menescardi et al., 2022). This suggests that different sections and test items are measuring the same underlying construct consistently. Correlation coefficient ranging from 0.00-0.25 indicates poor reliability, 0.26-0.50, moderate reliability, and above 0.75 good reliability (Paraskevopoulos et al., 2023). Weak reliability could suggest that the test items lack internal consistency, with each section measuring different constructs. The researcher used probing questions as opposed to leading questions while seeking to achieve internal consistency. The researcher gave explicit guidelines to respondents to avoid biasness.

3.9. Data Collection Procedures

The researcher obtained an authorization letter from University of Eldoret and presented it to NACOSTI to obtain research permit. Upon obtaining research permit the researcher sought permission from County Director of Education, Trans-nzoia county; the County commissioner Trans-nzoia county; the county government of Trans-nzoia, and the heads of institutions who in turn introduced him to respondents. In this study, data was gathered

from primary data sources. Data collection was done by means of a five-point Likert scale questionnaire on teachers' perception on implementation of competence-based education. Respondents were then requested to indicate their opinion on statement of study variables using a five-point Likert scale. The researcher emphasized on need to score test items accurately, to ensure validity of results. Items 1 to 22: (1) strongly disagree; (2) disagree; (3) undecided; (4) agree; (5) strongly agree. Items 23 to 26: (1) very low; (2) low; (3) undecided; (4) high; (5) very high.

The researcher delivered questionnaire to teachers in the sampled schools in person. The researcher gave guidelines and sensitized teachers on the need to take part in the study. Clear directions and instructions were provided on how to handle the instruments. The questionnaires were collected from the respondents one day after administration. The headteachers were interviewed face to face in the headteacher's office on their opinion regarding CBE implementation and teacher perception when using competence-based practices. The respondents were assured of confidentiality and privacy of the data that was provided.

3.10. Data Analysis

After collection of questionnaires, the researcher embarked on data scrutiny for inappropriate, inadequate irrelevant responses. Participant responses were cleaned by removing extreme values and setting aside incomplete questionnaires. The researcher then assessed the return rate and started data editing and coding. According to Sataloff & Vontela (2021), a response rate of 60% and above is considered sufficient and can adequately represent the target population and supports the validity of research findings.

In this study a return rate of 60 (97%) questionnaires was considered sufficient for analysis. Data analysis entailed providing summaries, looking for data patterns before applying statistical analysis techniques.

Qualitative data was analyzed by classifying and coding of responses into common themes. Excerpts from headteachers were analyzed and summarized to support specific themes. Quantitative data was coded and keyed in to SPSS spreadsheet. Analysis was done using descriptive statistics and inferential statistics. Descriptive statistics including mean, standard deviation, skewness and kurtosis were computed. Skewness measured the asymmetry of the distribution while Kurtosis measured the peakedness. Inferential statistics Chi-Square test was analyzed. The interpretation of study findings was done in relation to research objectives, and conceptual framework.

3.11. Ethical Considerations

Ethical considerations are a set of principles put in place to guide research design and practices. During data collection exercise, the researcher adhered to these guidelines. These principles guaranteed that respondent participation in the studies was voluntary. Adhering to research ethics helps raise the authenticity and credibility of research work. Other researchers can easily trust the data collected if the methods used are not questionable. Before conducting the study, the researcher obtained a letter of authorization from the university. This permit was then presented to NACOSTI in order to obtain research permit. The county director of education in Trans nzoia west subcounty, the county commissioner and the county government of trans-nzoia were also informed and their permission sought

before conducting the study. The researcher also obtained authorization from heads of institutions of sampled schools before collecting data from teachers.

According to Christen et al. (2020), it is worthy to note that misusing confidential information by researchers breaches ethical and some legal standards of research procedures. Therefore, in this study the researcher adhered to all ethical standards relating to anonymity and confidentiality when conducting the study. The quality of research is determined by the level of lack of bias and favoritism. This can be effectively achieved when anonymity and confidentiality standards are used in research (Kang & Hwang, 2023). Respondents' confidential information was kept private and protected since both the researcher and participants gain positive outcomes from a research process. While obtaining information, the researcher guaranteed respondents' protection from physical or psychological harm. Participants responded to items without coercion and were at liberty to withdraw participation from the study. Respondents were asked to sign consent form before participating in the study. After completion of the current study, the researcher would share information regarding the study outcome upon request by respondents.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

Data analysis is a method for gathering and organizing data to extract useful information from it. Without a doubt, the most important aspect of research is on data analysis. Poor data analysis produces incorrect result and inaccurate interpretations, which do not only curtail research's legitimacy but also deem the study's conclusions irrelevant. To guarantee that findings are useful and helpful, careful selection of data analysis methodologies is required, Humans of Data (2018).

This chapter covers presentations on data analysis, presenting, and interpreting data gathered by questionnaire, interviews and observation schedule, concerning teacher perception on the implementation of competence-based education in Trans-nzoia west sub county. Descriptive as well as inferential statistics were used in data analysis. The statistics used include mean, standard deviation and Chi-Square test. Tables and graphs were used to present the research findings. According to the study objectives, this chapter shows the findings of the data collected and analyzed presented in tables and graphs. Results of the study was discussed in this section in line with research objectives which were: To assess teacher's preparedness on implementation of CBE; to evaluate the availability and adequacy of instructional resources; to investigate teacher workload in relation to CBE implementation and to identify challenges faced during the implementation of CBE.

4.2 Questionnaire Return Rate

A total of 64 self-administered questionnaires was administered to teachers in 15 schools and 15 interview schedules were administered to 15 heads of institutions. The 15 heads of institutions were booked for an interview. This brought on board a total of 79 respondents. The respondents were arrived at through simple random sampling. This was based on the sampled schools. The obtained responses were presented in form of tables, graphs and figures. Overall, the response rate was 97%, which is an acceptable rate; according to minimum requirement of 50% in research (Mugenda & Mugenda, 2003). Two questionnaires were not fully filled. Therefore, they were discarded by the researcher since they could not be objectively used in the study. Two teachers did not return their questionnaires. This was attributed to teacher's withdrawal from the study or teachers' non-committal to complete the questionnaire. The resulting complete questionnaires were taken as the new sample size for analysis and interpretation of findings. Out of 15 heads of institutions, the researcher managed to reach 8 heads. Due to administrative responsibilities the heads of institutions cancelled the interviews. Since the researcher had limited time for data collection, the researcher decided to make use of data provided by the 8 heads of institutions. Table 4.1 below shows the return rate for the study.

Table 4.1: Questionnaire Return Rate

	Issued questionnaires	**Returned questionnaires**	**Return rate (%)**
Heads of institutions	15	8	60%
Teachers	64	62	96.88%
Total	79	71	89.87%

4.3 Adequacy of Teacher Preparedness

The first research question sought to examine the level of teacher preparedness in the implementation of CBE. Teachers were given a list of four items measuring the level of awareness of the concept of CBE. Research items were placed on a Five-point Likert Scale of Strongly Disagree (SD=1), Disagree (D=2), Moderate (M=3), Agree (A=4), and Strongly Agree (SA=5). Respondents were requested to rate their agreement on various test items. The frequency, percentage of each item, the mean and standard deviation for all the test items measuring the level of teacher's awareness of the concept of CBE were summarized as shown on Table 4.2 below.

The mean scores of test items were interpreted as follows; a mean score of <1.5 suggested strongly disagree, 1.5-2.4 disagree, 2.5-3.4 moderate, 3.5-4.5 agree and >4.5 strongly agree. A standard deviation of <1.5 shows consensus in the responses while >1.5 indicate significant variance showing none consensus in responses (Lindner and Lindner, 2024). A skewness value of between -0.5 to +0.5 shows a symmetrical distribution while values of -1 to +1 shows a moderate distribution. Skewness statistic value below -1.0, and above

+1.0 shows a negatively skewed distribution and positively skewed distribution respectively. A kurtosis statistic value of 3 indicates a normal distribution. Values greater than 3 suggests a distribution with heavier tails and a sharper peak, while values less than 3 indicates lighter tails and flatter peak.

Results indicated that a majority of teachers having mean of 4.27 and SD of 0.607 agreed with the statement that competency-based education reform was necessary. This implies that most of the teachers are knowledgeable on the concept of CBE and what it entails. The study findings are in concurrence with the findings of Grace. W. K et al., (2025) which found out that a majority of teachers have an idea on the tenets of CBE.

The study also found that the majority of teachers with mean of 3.52 and standard deviation of 0.676 shows that they apply different teaching styles to enhance student creativity and innovativeness. This implies that a high proportion of the teachers had gained knowledge of various competencies students were required to acquire in the new education framework. However, a majority of teachers with a mean of 3.28 and SD=0.691 moderately agreed that their teaching strategy was in line with CBE requirements. The findings show that teachers did not adequately use learner centered instructional strategies. On the contrary, a majority of teachers with mean of 3.75, SD=0.600 agreed that they were developing tasks that took into account CBE skills. Therefore, it was likely that teachers were implementing competencies as envision Generally, on this variable a majority of teachers with mean 3.704 with SD=0.497 reported that the new education reform was necessary since it equips students with skills and competencies that enables them solve real-life challenges. Table 4.2 below shows summary of study findings.

Table 4.2: Adequacy of Teacher Preparedness

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
CBE reform was necessary.	60	4.27	.607	-.198	.309	-.515	.608
Task development is in line with CBE skill	60	3.75	.600	-.335	.309	.410	.608
My Teaching strategy is in line with CBE requirements.	60	3.28	.691	-.761	.309	.728	.608
I apply different teaching styles to enhance creativity	60	3.52	.676	-.402	.309	-.093	.608
Summary	**60**	**3.70**	**.497**	**-.341**	**.309**	**-.251**	**.608**

Teacher perception and CBE implementation being categorical variables, Chi-square test was used to analyze and present research findings. The relationship between teacher perception and CBE implementation as shown in table 4.3 below.

Table 4.3. Chi-Square Test Statistics

	Value	d.f	Asymp. Sig (2-tailed)
Chi-Square	24.900	8	0.002
Valid cases	60		

The P-value demonstrates that research categorical variables, teacher perception and the implementation of CBE are not independent of one another and they portray a statistically significant association. The study findings indicated a statistical significance of factor (χ^2=24.9, P=0.002<0.05) which implies CBE implementation is dependent upon teacher perception which greatly impacts learning and the acquisition of CBE competencies. implementation of CBE.

4.4 Teacher's Perception on Teaching Workload

This section discusses the results and findings to answer the question on third research objective regarding the teachers work load in relation to CBE implementation. Teachers were required to give opinion on statements measuring their perception on workload and class size on implementation of CBE. The results of their responses were as summarized in Table 4.4 below. Results summarized indicate that majority of the teachers with a mean of 4.33, SD of 0.629 reported that workload involved in implementing CBE was in line with the benefits obtained. The finding implies that teachers had a positive perception on workload and they are using appropriate teaching methods that fit lesson contents.

Additionally, most of the teachers with a mean of 3.58, SD=0.696 agreed with the statement that they use limited teaching methods in large class size. This was interpreted to mean that in large classes teachers could not apply teaching methods that address student individual learning needs. This could potentially lead to challenges in promoting and nurturing students' creativity. The finding concurs with the findings of Kimario & Otieno (2022) who observed that teachers lacked appropriate CBE teaching and learning approaches that make learners more active and involved in different ways for effective learning and mastery of CBE competencies.

Table 4.4: Teacher Perception on Workload

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
Workload involved in CBE reform is in line with benefits obtained	60	4.33	.629	-.392	.309	-.629	.608
I use limited teaching methods in large class sizes	60	3.58	.696	-1.09	.309	.401	.608
Learners in relatively smaller class sizes perform better than students in large class sizes	60	3.77	.831	-1.18	.309	1.82	.608
I apply CBE in student assessment	60	3.65	1.01	-1.10	.309	.897	.608
Summary	**60**	**3.83**	**.654**	**-1.45**	**.309**	**1.39**	**.608**

However, it was noted that there was a contradiction on teacher workload. A majority of the teachers reported that they were comfortable with workload involved in CBE implementation and having reported that they were using limited teaching methods in large class sizes. The researcher attributed this to the fact that teachers wanted to portray a positive response. With a teacher-student ratio being 1:56, which was greater than the international recommended ratio of 1:35, it is apparent that the teaching workload was high. Further, a higher percentage of the teachers with mean 3.77, SD=0.831 reported that leaners in relatively smaller class sizes were performing better than students in large class sizes. This finding implies that teachers handling smaller class sizes were able to reach individual students; they make use learner centered teaching approaches that promote student

creativity and their ability to solve problems. A high proportion of teachers with mean 3.65, SD=1.005 reported that they apply CBE assessment in evaluating student performance. Generally, most of the teachers with mean of 3.833 and a standard deviation of 0.6537 concurred that the workload involved with CBE implementation was in line with the intended benefits. However, one prominent observation pertained to considerable challenges posed by the teacher-student ratio, reaching over 1:56. This high ratio resulted in substantial teacher workload, aligning with the study findings of Munyasia & Olel (2020) which found that heavy workloads impede the effective implementation of CBE. Further, the high teacher-student ratio strains the available classroom space, which was observed to be insufficient. According to table 4.5 below, a Chi-Square analysis test was done to establish whether there was an association between teacher perception and workload.

Table 4.5. Chi-Square Test: Teacher Perception on Workload and Class Size

	Value	Degrees of freedom	Asymp. Sig (2-tailed)
Chi-Square	80.067	10	0.000
Valid cases	60		

The P-value as shown in table 4.5 above, depicts that these categorical variables were not independent of one another and they exhibit a close link which implies that teacher perception greatly impacts on the implementation of CBE. The study findings indicated a statistical significance of factor (χ^2=80.067, P=0.000<0.05) which implies CBE

implementation is dependent upon teacher perception which in turn determine the acquisition of CBE competencies.

The following section presents and discusses teacher perception on level of preparedness on CBE implementation.

4.5 Perception of Teacher Preparedness on Implementation of CBE

Teachers were required to give opinion on statements that best matched the extent to which they were prepared on implementation of CBE using a five-point Likert scale of 1=SD, 2=D, 3=M, 4=A and 5=SA. A mean of <1.5 signified Strong disagreement with statement, 1.5-2.4 disagree, 2.5-3.4 moderate, 3.5-4.5 agree and >4.5 indicated strong agreement with test item (Lindner & Lindner, 2024). A standard deviation of <1.5 implied concurrence among teachers on particular test item while standard deviation >1.5 indicated significant variance among respondents, thus showing none consensus (Lindner & Lindner, 2024). Table 4.6 below shows summary of the results obtained.

From the results in Table 4.6, it was reported that a majority of interviewed teachers having mean of 4.05, SD= 0.769 were applying competency-based framework in teaching. A similar proportion of the teachers also consented that their lesson planning follows a competency-based model. The implication was that teachers were effectively implementing competency-based education framework, and they were also training students on creativity, critical thinking and problem-solving skills. Further, a higher number of teachers having a mean of 3.68 and SD of 0.930 also acknowledge that while designing tasks and teaching activities aimed at developing core competencies.

Table 4.6: Perception of Teacher Preparedness on CBE Implementation

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
I use competency-based model in my Teaching	60	4.05	.769	-1.03	.309	1.56	.608
My lesson planning follows competency-based model	60	3.53	.873	-1.45	.309	1.95	.608
I take into account CBE framework when designing tasks	60	3.65	1.06	-.859	.309	.347	.608
I design teaching activities which aim to develop core competencies	60	3.68	.930	-.757	.309	.304	.608
The teaching strategies I use are in line with the competence-based education framework	60	3.70	.766	-.595	.309	.254	.608
I evaluate my students' achievement of competencies when assessing their learning	60	4.07	.607	-.499	.309	1.69	.608
Summary	**60**	**3.78**	**.599**	**-1.17**	**.309**	**1.34**	**.608**

Additionally, most of the teachers with a mean of 3.70 and SD of 0.766 also reported that their teaching strategy were in line CBE requirements. They also reported that the evaluation mechanism they were using was in line with the tenets of CBE. The implication was that a high number of teachers have acquired skills required for effective implementation of CBE. On the overall scale, most of the teachers with a mean of 3.781 and SD of 0.5986 gave feedback that their level of preparedness was in line CBE requirements. This was interpreted to mean that they were using learner centered methods

when instructing students. This signifies that teachers were instilling learner creativity, innovativeness and critical thinking skills necessary in solving real-life challenges. Therefore, teachers had degree of self-efficacy in relation to CBE implementation. Table 4.7 below shows a Chi-Square analysis that was used to establish the link between perception on teacher preparedness on CBE implementation

Table 4.7. Chi-Square Test: Teacher Perception on Preparedness

	Value	Degrees of freedom	Asymp. Sig (2-tailed)
Chi-Square	41.867	15	0.000
Valid cases	60		

Given the relatively high value of Chi-Square (χ^2=41.867, P=0.000<0.05), the test was statistically significant. This means that the categorical variables (teacher perception and CBE implementation are not independent and therefore are related. This shows that for effective implementation to be achieved teacher preparedness should be adequately done to help improve teacher self-efficacy and perception.

4.6 Teacher perception Institutional and Stakeholders' Support

The teachers were provided a list of statements and they were asked to indicate the extent to which they received institutional and stakeholders support by filling a five-point Likert scale questionnaire where, 1=SD, 2=D, 3=M, 4=A and 5=SA. The mean scores of test items were interpreted as follows; less than 1.5 strongly disagree, 1.5-2.4 disagree, 2.5-3.4 moderate, 3.5-4.5 agree while above a mean above 4.5 signified a strong agreement. The

results of data collected was summarized as shown on Table 4.8 below.

Table 4.8: Institutional and Stakeholder's Support

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
The level of implementation of CBE to learning is similar across all teaching staff	60	2.02	.431	.098	.309	2.77	.608
The level of implementation of CBE to teaching is similar in all schools	60	1.88	.372	-1.37	.309	3.12	.608
The educational authorities set clear guidelines for developing a competence-based education reform	60	2.08	.462	1.39	.309	5.86	.608
When I am unsure about something related to competency-based teaching, I have access to appropriate advice	60	1.87	.536	-.124	.309	.394	.608
Summary	**60**	**1.96**	**.350**	**.468**	**.309**	**3.47**	**.608**

From the summery, a majority of teachers with a mean of 2.02, SD of 0.431 reported that the level of implementation of CBE was not similar across all teaching staff. This implied that the level of institutional support and support from stakeholders such as parents was not sufficient. Given that CBE requires concerted collaboration for its effective implementation, lack of adequate collaboration is a major hindrance to CBA implementation. On statement number two, most of the teacher with mean score of 1.88 and SD of 0.372 recorded that CBE implementation was not similar in all schools.

This signified that CBE implementation was at different levels based on the school. This was interpreted to mean that the level of institutional support in terms of resource provision for CBE implementation was accessible while in some, teachers could not access adequate institutional and stakeholders' support. Additionally, on the third item a majority of the teachers with a mean of 2.08, SD= 0.462 reported that authorities had not set clear guidelines when developing CBE reform. This was interpreted to mean that at the early stages of CBE development, teachers as key stakeholders did not adequately participate in developing CBE. This shows that their understanding of CBE was done later through in-service training and teacher workshops. Further, a majority of teachers with mean 1.87, SD=0.536 did not agreed that they had access to appropriate advice when seeking clarification. This was interpreted to mean that a higher proportion of teachers do not engage in teacher collaboration among teaching staff. This was also interpreted to mean that teachers could be handling teaching areas they did not have adequate and proper training on.

Consequently, in a school the teacher lacks an expert in the same area for teacher collaboration and for team teaching. This could also point to a likely of inadequate institutional and stakeholder's support. Table 4.9 below shows the Chi-Square test of the association between the two variables.

Table 4.9: Chi-Square Test: Institutional and Stakeholder's Support

	Value	Degrees of freedom	Asymp. Sig (2-tailed)
Chi-Square	148.200	8	0.000
Valid cases	60		

The p-value demonstrates that research variables are dependent of one another and they show a statistically significant association of factors (χ^2=148.200, P=0.000<0.05) with conclusion that teacher perception impacts teaching-learning process and the implementation of CBE framework.

4.7 Teacher perception on Infrastructure and Instructional Resources

The findings of this study sought to address the second research objective and question regarding infrastructure and instructional resources. Teachers were given statements upon which they could either agree or disagree with the statements. A five-point Likert Scale was used to gather teacher's responses. Responses were then analyzed as shown on Table 4.10 below.

The results shown revealed that a higher proportion of teacher with a mean of 1.90, SD=0.630 had a strong opinion that resources required to carry out CBE assessment were inadequate. Teachers expressed dissatisfaction on availability of resources for CBE assessment. The implication was that, however CBE was being implemented, teachers had negative perception on adequacy and availability of teaching-learning resources that can help them to fully assess the level of acquisition and mastery of CBE competencies.

Table 4.10: Infrastructure and Instructional Resources

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
Resources are adequate for me to carry out CBE assessment	60	1.90	.630	.918	.309	.302	.608
Available classroom materials are suitable for competency-based teaching	60	1.75	.508	-.350	.309	-.232	.608
Available economic resources are sufficient to implement CBE framework	60	1.87	.724	1.04	.309	2.07	.608
The facilities in my school are suitable for competency-based teaching	60	1.92	.850	1.19	.309	1.42	.608
Summary	**60**	**1.86**	**.551**	**1.33**	**.309**	**3.75**	**.608**

The study findings also show that majority of teachers with mean of 1.75, SD=0.508 were not in agreement with the statement that available classroom materials were suitable for competence-based teaching. This implied that teachers of science and technical subjects had challenges accessing materials that could enable them conduct practical assessment. This signifies that teachers were not adequately training students on psychomotor and creative aspects of CBE.

Additionally, on the aspect of economic resources; most of the teachers with a mean of 1.87, SD=0.724 reported that the available economic resources did not match CBE requirements for effective implementation. This signified that teachers did not have adequate infrastructural and technological facilities to enable them adequately implement

CBE. This also implies that teachers do not get services of specialists such as technicians who play vital role in a school ecosystem. On the wider scale, a majority of the teachers with a mean of 1.859, SD=0.551 indicated that infrastructure and instructional facilities were inadequate for effective CBE implementation. This implied that most of the teachers had challenges accessing infrastructure and instructional facilities that could enhance student creativity and innovativeness. This disparity in teacher perception aligns with a similar trend reported by Mokoro (2020) in the context of secondary schools in Tanzania, indicating that the issue of teacher perception transcends beyond regional boundaries. The prevalence of poor perception among teachers on instructional resources raises concerns about the effective implementation of

CBE as envisioned since teachers play an important role in its implementation.

The study findings were supported by the results of the Chi-square, which further helped illustrate the close linkage between teacher perception and CBE implementation. Research findings showed that the statistical significance of variables (χ^2=79.00, P=0.000<0.05) which can be concluded that teacher perception has an impact on CBE implementation in junior schools. Table 4.11 below shows summary of study findings.

The p-value being <0.05, demonstrates that study variables were not independent. Therefore, the success of CBE largely depends on teacher perception among other variables.

Table 4.11. Chi-Square Test: Infrastructure and Instructional Resources

	Value	Degrees of freedom	Asymp. Sig (2-tailed)
Chi-Square	79.00	9	0.000
Valid cases	60		

4.8 Teacher Perception on Professional Training.

The teachers were given statements and they were required to indicate the extent to which they were trained using a five-point Likert scale of 1=Very Low (VL), 2=Low (L), 3=Moderate (M), 4=High (H) and 5=Very High (VH). Interpretation of mean score of test items was done using the following scale; mean of <1.5 very low, 1.5-2.4 low, 2.5-3.4 moderate, 3.5-4.5 high, and over 4.5 very high. The results were summarized on Table 4.12 as shown below. The study findings indicate that a high proportion of teachers with a mean of 1.92, SD=0.561 reported that their need for lesson planning in order to develop key competencies was low. However, on the contrary a higher percentage of the teachers having a mean of 3.93, SD of 0.634 indicated that there was need for additional training in order to adequately link key CBE competencies to specific competencies of an area of knowledge. This meant that teachers could not adequately link core CBE competencies to specific competencies in an instructional process. In addition, a majority of teachers with a mean of 1.83, SD= 0.526 reported they did not require training to be able to develop tasks that were in line with core competencies. This implied that a high proportion of teachers were adequately implementing CBE since they were able to develop tasks that were geared

towards enhancing student creativity and problem-solving skills.

Table 4.12: Teacher Perception on Professional Training

Item	N Stat	Mean Stat	S.D Stat	Skewness Stat	Skewness S.E	Kurtosis Stat	Kurtosis S.E
My need for training in lesson planning for the development of key competencies is	60	1.92	.561	1.16	.309	5.56	.608
My need for training in lesson planning to link core competencies to specific competencies of an area of knowledge is	60	3.93	.634	-1.19	.309	3.19	.608
My need for training in the design of Tasks to develop key competencies is	60	1.83	.526	.535	.309	4.23	.608
My need for training in the designing of a model to assess the development of key competencies is	60	1.60	.558	.193	.309	-.868	.608
Summary	**60**	**2.32**	**.385**	**.653**	**.309**	**2.33**	**.608**

Further, most of the teachers with mean of 1.60, SD=.558 also reported that their need for training in designing a model for CBE assessment was low. This showed that the training that most of the teachers had received was adequate for effective implementation of CBE in junior schools. The study findings are in line with the findings of a study conducted by Getecha (2023) which indicated a positive correlation between rigorous professional development and positive teacher perception. The study findings acknowledged CBE's emphasis on critical thinking, creativity and innovation citing its realignment to the views of Charles et al., (2022). However, the researchers emphasized the need for comprehensive

in-service training among teachers and administrators to ensure CBE's effective implementation. Therefore, the teacher perception regarding CBE implementation was positive and consequently the teachers were making use of student-centered approaches as envisioned by CBE framework.

On the overall scale, a high proportion of teachers with mean of 2.321, SD= 0.3854, indicated that the training they were subjected to was adequate for effective CBE implementation. Data summary was presented in Figure 1. as shown below. Figure 4.1 shows that teacher perception on the need for further professional training was low. With a majority of the teachers reporting a moderate need for training to a low need for CBE training. This was interpreted to mean that the training most teachers had received was adequate for effective CBE implementation. The data collected also showed a normal distribution with a high proportion of teachers recording average need to below average need for training.

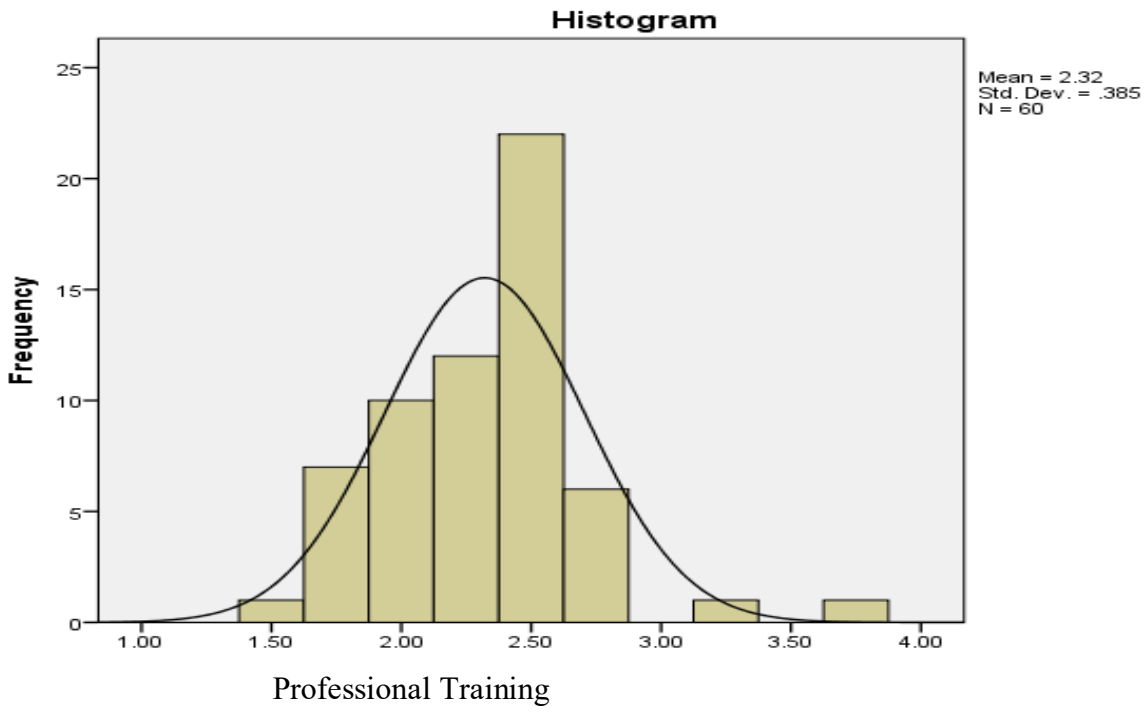

Figure 4.1. Professional Training on the Implementation of CBE in JS.

4.9 Qualitative Data

In this study, a total of 8 head teachers were interviewed from the head teacher's office. They provided data on the duration they have been involved in CBE implementation. A high percentage of interviewed head teachers reported that as heads of institutions they have been involved in CBE implementation since its inception. Only two of the interviewed teachers narrated that under CBE they have served as school heads for a duration of at least three years. However, it is important to report that most of the head teachers do not teach in junior secondary. They only teach in grade 1-6, but serve as administrators in junior secondary. Therefore, information provided by head teachers only reflected the perspective of an administrator in junior school. The following are part of the excerpts from the head teacher's responses.

4.9.1 Implementation of CBE

Head teachers gave an account regarding the period that they have been involved on CBE implementation. They also narrated on what they considered to be strengths and challenges that emanate from the new education reform. The first respondent, HM1 commented the following;

> *"As a headteacher, I have been involved in CBE implementation since its introduction nine years ago. At its early stages, we had challenges understanding what CBE was all about. With regular in-service we had an understanding on what CBE is about and now I can confidently say, this is reform is an improvement on the previous education model. It is a student-centered model of education that emphasizes acquisition of practical skills over rote learning and memorization. However, its worthy noting that CBE requires more learning resources that stakeholders need to provide going forward for effective implementation"*

Thus, HM01 recognized that CBE was a necessary education reform that helps nurture student talent, as it emphasizes on acquisition of practical skills over rote learning and content memorization, this enhances critical thinking and problem-solving skills. HM12 also observed the following:

> *"Before assuming leadership position in the last three years, I had been involved in CBE implementation since it was introduced to replace 8-4-4 system. From my personal experience at the beginning there were pertinent issues that required attention during its roll out. Ranging from teacher training to level CBE content. Personally, I had challenges shifting from teacher centered teaching approach to student centered approaches. However, with continued training I got used to CBE requirements and I can confidently report that it is a good system of education if required resources are availed and proper implementation done"*

From HM12 perspective, at the beginning there were challenges that required to be addressed by TSC on teacher training and KICD on the level of content of CBE. However, HM12 also noted CBE is a good system of education, if the required resources are adequately provided. HM08 narrated on teacher-student ratio under the new education reform, he had the following to say:

> *"I will say that the teacher-student ratio in junior schools is high. At the start in grade 7 I had one teacher handling over 45 students. The teachers also had reservations that some of the subjects they were handling, they did not have training on the same. However, in the last two years the teachers service commission has employed more teachers and I can say that every subject now has a subject*

> *specialist. Still much needs to be done to employ more teaching staff to lower the teacher to student ratio. CBE being a student-centered pedagogy, teachers need to reach individual students and to help address individual learning needs as they instill in them self-efficacy, creativity, innovativeness and problem-solving skills".*

Thus, HM08 commented that the student-teacher ratio was high and there is need for TSC and ministry of education to employ more teachers to reduce this ratio. HM08 also narrated that at the beginning teachers were handling teaching areas that they were not well conversant with, did not have adequate training or knowledge. However, more teachers have been employed, still here is need to employ more teachers to bring in more subject specialists. This will improve on teacher collaboration and team teaching. This will immensely contribute to improved CBE implementation and enhanced student problem-solving skills. Respondents also recognized that there were impeding challenges on adequacy of economic resources. HM05, for instance narrated that the economic resources were insufficient for effective implementation especially for practical and technical subjects. HM05 noted that there were certain resources that teachers could request but were not readily available in school. For instance, most of the schools lacked digital literacy equipment such as computers. This denied students an opportunity to access digital content that could enable broaden their level creativity and innovativeness. HM05 shared experiences during interview as follows:

> *"In most of the areas, the challenges we were facing in the first phase of implementation have been addressed.*

> *However, one critical aspect that has not been resolved is the aspect of economic resources and instructional facilities. CBE is a resource intensive reform. To a large extent, resources available in school were not adequate for effective implementation. For instance, students require certain resources that are costly to provide, for instance ICT equipment and project-based learning require that learners carry out activities that require a lot of resources. On this, little support has been received from parents and other stakeholders. The government has an obligation to come in strongly to allocate resources for such activities"*

Based on HM05 views during the interview, economic resources were a major impediment in CBE implementation. He highlighted that head teachers faced challenges providing economic resources that were a key component that facilitates project-based learning. Further, he noted that a majority of the parents from local community could not facilitate their children to carry out projects that could instill in them creative and innovative skills. However, it was noted that educators could use locally available resources where possible to carry out project-based learning. On the aspect of ICT, the ministry of education should come up with a program of establishing ICT centers to facilitate acquisition of digital literacy skills.

Finally, during the interview respondents noted that in-service and teacher training had been caried out. However, there is still need to conduct more trainings for new teachers

and frequent workshops for teachers already in service. Respondent HM12 had the following to say;

> *"Before training, teachers had challenges in lesson planning and in carrying out student evaluation. Teachers more often were blending content-based method of instruction with CBE methods of instruction. This made it difficult to ascertain whether students were mastering the required competencies. However, after training teachers could adequately prepare lesson plans that were geared towards student-centered mode of delivery. Teachers, could put students in groups, guide them on the key learning areas as they assist groups that required teacher attention. "*

From the narration of respondent HM12, at the initial phase of CBE implementation, teachers were using a blended form of instruction, the content-based which was teacher-centered and the CBE approach which is student-centered. However, with regular training; teachers could prepare lesson plans to enable them apply CBE methods of instruction. This signified that teachers were adequately implementing CBE.

4.9.2 Analysis of Observation Checklist Data. Availability and Adequacy of Instructional Resources.

The researcher collected data on availability and adequacy of instructional resources from a total of 15 schools. The check list items were rated on a scale of 1-5. 1 signified poor,

2=fair, 3=good, 4= very good and 5=excellent. The mean of each item was interpreted as follows: <1.5 poor, 1.5-2.4 fair, 2.5-3.5 good, 3.5-4.5 very good and >4.5 excellent (Lindner and Lindner, 2024). Table 4.13 below shows summary and analysis of data collected. From table 4.13, in a scale of 1-5 the observation made indicate that in most schools with mean of 1.53, SD of 0.516 the availability and adequacy of facilities was fair. This is in line with report given by teachers which showed that a higher percentage of teachers disagreed that available resources were adequate for effective CBE implementation. The implication was that majority of schools require an upgrade of existing facilities to make them suitable for CBE implementation. In a majority of the schools mean of 2.67, SD=0.488, data shows that classroom materials were good for effective implementation of CBE; this showed that in most of the sampled schools, teachers had access to teaching-learning materials for CBE implementation. However, in regard to availability of economic resources, with mean of 1.20, SD=0.414, existing data shows most of the teachers had challenges accessing adequate materials.

This could affect the implementation of CBE and potentially impact on attainment of set competencies. For instance, in most schools it was reported that teachers could not adequately carry out project-based learning due to scarcity of economic resources. On the overall scale, with mean of 1.71, and standard deviation of 0.225 it was observed that available teaching-learning resources were insufficient for effective implementation of CBE. This is in line to early report provided by teachers which showed available resources were inadequate. School administrators and other education partners should allocate more funds to avail more resources for effective implementation.

Table 4.13: Observation Schedule Descriptives

Item	N	Mean	S.D	Skewness		Kurtosis	
	Stat	Stat	Stat	Stat	S.E	Stat	S.E
School facilities are suitable for CBE implementation	15	1.53	.516	-.149	.580	-2.30	1.12
Classroom materials are suitable for CBE implementation	15	2.67	.488	-.788	.580	-1.62	1.12
Availability of economic resources for effective implementation of CBE	15	1.20	.414	1.67	.580	.897	1.12
Use technology to make learning lively	15	1.30	.315	1.32	.580	.789	1.12
The size of the class is suitable for classroom group activities	15	2.00	.756	.000	.580	-1.08	1.12
Summary	**15**	**1.71**	**.225**	**.078**	**.580**	**-1.33**	**1.12**

Additionally, on the aspect of integration of technology in learning; most of the schools with mean of 1.3 on a scale of 1-5, SD=0.315, it shows that the integration of ICT was poor in a higher proportion of schools. This implied that on equipping learners with digital literacy skills according to CBE tenets, ICT integration remains an area of interest. Therefore, it is a recommendation that school administrators set a side resources that could help bridge this gap. Further, in most schools with mean of 2.00, SD= 0.756, it was reported that class sizes were fair in regard to CBE implementation. This was interpreted to mean that, teacher to student ratio was still high and as a result teachers have challenges reaching individual students to address their individual learning needs. This was in line to report

given by teachers which showed that although workload was high, it was in line to benefits attached to CBE. Figure 2 below shows a frequency histogram plotted against average mean of corresponding items.

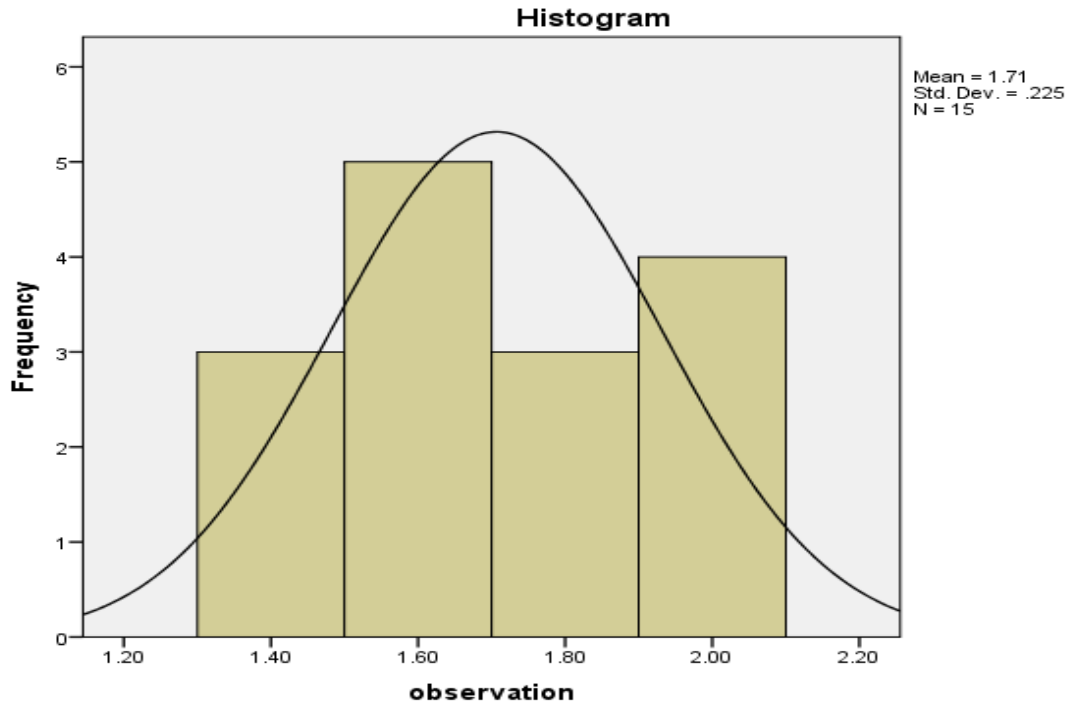

Figure 4.2: Plot of Frequency against mean on Adequacy of Infrastructure and Instructional Resources.

From figure 4.2 above, it was observed the highest number of schools with mean of 1.60 recorded a fair distribution of resources. Other schools with average mean of 1.80 and 2.00 also showed that a good proportion indicated that available resources were fair and adequate for CBE. Figure 4.2 also shows that data distribution followed a normal curve.

4.10 Chapter summary

The chapter has presented a detailed analysis of data collected from the population sample. The analysis was based on the research variables and was categorized into six themes. Research findings were presented in tabular form showing frequencies and percentages of the various variables. Descriptive statistics showing mean and standard deviation of responses was done through SPSS and provided in form of tables. Study findings indicated that a majority of teachers understand the concept of CBE and the implementation was in line with CBE requirements. However, a majority of teachers reported that they were facing challenges on infrastructure such as laboratories, technological equipment and instructional facilities. The study findings also indicated majority of teachers had challenges in lesson planning that links broad CBE competencies to specific lesson competencies. The next chapter presented the discussions of these findings upon which conclusions and recommendations were made.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the outcomes of research variables and objectives, summarizes the study findings. Inferences are drawn from the analyzed results upon which discussions and recommendations are based. The aim of this study was to examine teacher perception on implementation of CBE in JS schools in Trans-nzoia west subcounty; Trans-nzoia county, Kenya. The study was guided by the following objectives: to assess teacher preparedness on implementation of CBE; to evaluate availability and adequacy of instructional resources; to investigate teacher workload in relation to CBE implementation and to identify challenges faced during implementation phase. Questionnaires, interview schedules and observation schedules were used as data collection tools. Teachers were asked to fill the questionnaire while heads of institutions were interviewed through interview schedule. The researcher used an observation schedule to obtain data on school infrastructure and other instructional materials in respective schools. Through descriptive statistics, the researcher ascertained teacher perception on the implementation of CBE.

5.2 Summary of Study Findings

The study findings indicated that teachers were adequately prepared for effective CBE implementation. Majority of the teachers had an understanding on the concept of competence-based education. They also acknowledged that CBE reform was necessary. In task development, teachers reported that they were incorporating CBE skills. However, they indicated that they were facing challenges in applying different teaching styles to

enhance student creativity and innovativeness. On the contrary teachers agreed that their teaching was aligned with CBE requirements. Through descriptive statistics, a majority of teachers with average mean of 3.704, SD=0.497 concurred with the given statements on teacher understanding of the concept of CBE reform. A high percentage of teachers reported that CBE reform was necessary. Based on data analysis, a most of the teachers with mean of 3.28, SD=0.691 agreed that their teaching followed CBE framework. This implies that they were adequately implementing CBE. To a large extent, they were equipping students on critical thinking and problem-solving skills. A majority of teachers with mean of 1.859 reported having challenges in accessing quality and adequate infrastructural facilities necessary to adequately implement CBE. On a scale of 1-5, majority of teaches either strongly disagreed or disagreed with the provided statements that available resources were adequate and sufficient for effective implementation of CBE. This means that in a number of schools, teachers did not have adequate access to infrastructural facilities and instructional materials that could enable them adequately implement CBE. Further, on workload and class size, a majority of teachers with mean of 3.83, SD= 0.6537 reported that students in small class sizes were performing better than students in bigger class sizes. This implied that in a smaller class size, a teacher to student ratio was smaller. Therefore, a teacher could easily be able to reach individual students and offer individualized attention to each student. However, a high number of teachers indicated that class size does not limit the instructional approach they adopt in a learning session.

From research findings, a majority of teachers with mean of 1.963, SD=0.3500 reported that institutional support was not similar and adequate across all teaching staff and in all schools. This was attributed to scarcity of economic resources in a school and the

professional training received. Further, from research findings, it shows that majority of the respondents with mean of 1.88, SD=0.372, indicated that CBE implementation was not similar across all junior schools. This implied that the access to infrastructure and instructional facilities was not uniform in most of the schools. The level of staffing in different school could be another factor that brought a difference in CBE implementation and on teacher workload. Further, most of the teachers with mean of 1.87 reported not having adequate access to advice when in need. This meant that teacher collaboration was low. However, this was attributed to most schools having one specialist in each of the subjects; this limited the ability for teacher to collaborate among staff members. Regarding professional training, majority of teachers indicated that desire for training on lesson planning was low. On a scale 1-5, 1=very low, 2=low, 3=moderate, 4=high and 5=very high, a majority with mean of 2.321, SD=0.3854 indicated that need for training on lesson planning was low. This implied that a high proportion of teachers were able to plan for lessons that could enhance effective CBE implementation.

5.3 Conclusions

Teachers are key pillars in the successful implementation of any education reform. Teacher's perception is also critical because when not adequately prepared, material presentation to students could be improper and adversely affect acquisition of CBE competencies. Teacher perception on CBE has a great impact on how they will learn and train students. Consequently, it is essential that teachers' input be sought and put into consideration during the implementation phase. The following conclusions were made based on the findings of the study, which was guided by the four research objectives;

i. Teachers were adequately prepared for effective implementation of CBE. They had an understanding on CBE framework and acknowledged that the new reform was necessary.

ii. Infrastructure and instructional resources were not adequate for effective implementation of CBE.

iii. On teacher perception on workload, findings indicate that they were handling a higher number of lessons hindering effective implementation of CBE. Student to teacher ratio was also high. Therefore, teachers were not able to individual learning needs for every student within a lesson of forty minutes. Research findings also show that students in smaller class sizes tend to perform better than students in bigger class sizes.

iv) Regarding fourth objective on challenges faced during the implementation of CBE, findings show that teachers did not have adequate institutional and stakeholder. Notable were economic resources required, the human capital such as laboratory technicians who are critical for the success of CBE.

5.4 Recommendations

The study recommendations offered actionable suggestions for future studies, policymakers and ministry of education.

5.4.1 Recommendations for policy and practice

Based on research findings, the researcher recommends that:

i. Retooling be enhanced to prepare and strengthen teacher understanding of CBE tenets. Equipping them with necessary CBE skills facilitates effective

implementation of CBE and enhance creativity, innovativeness, critical thinking and problem-solving skills; this could also refresh their knowledge of competent pedagogical abilities in curriculum implementation.

ii. The government through MoE should provide adequate infrastructural facilities and instructional facilities such as laboratories to equip learners with practical, innovative and digital literacy skills.

iii. The Kenya Institute of Curriculum Development (KICD) to incorporate teachers in curriculum transformation procedures to enhance positive teacher perception in preparation for effective curriculum implementation.

iv. To promote teacher self-efficacy, headteachers and stakeholders should collaborate with teachers and offer advice when necessary.

v. More teachers should be employed to help address teacher work load and to lower teacher-student ratio in junior schools. This enables teachers to address individual learning needs.

vi. Establishment of robust communication channels to enhance feedback from teachers, students and parents regarding CBE challenges and successes. Regular forums between teachers, parents and administrators are vital for addressing concerns and on improving CBE implementation.

5.4.2 Recommendations for Further Research

i. This study had a limited scope, to examine teacher perception on CBE implementation in Junior Secondary schools in Trans-nzoia west subcounty, Trans-nzoia county-Kenya. Therefore, the researcher recommends further research on teacher perception on CBE implementation in other regions.

ii. While this research focused on teacher perception on implementation of CBE, future research should include challenges faced by learners, parents and other stakeholders.

iii. Since the study was conducted in public junior secondary schools, in the future research needs to be conducted on status of teacher perception on CBE implementation in private junior schools.

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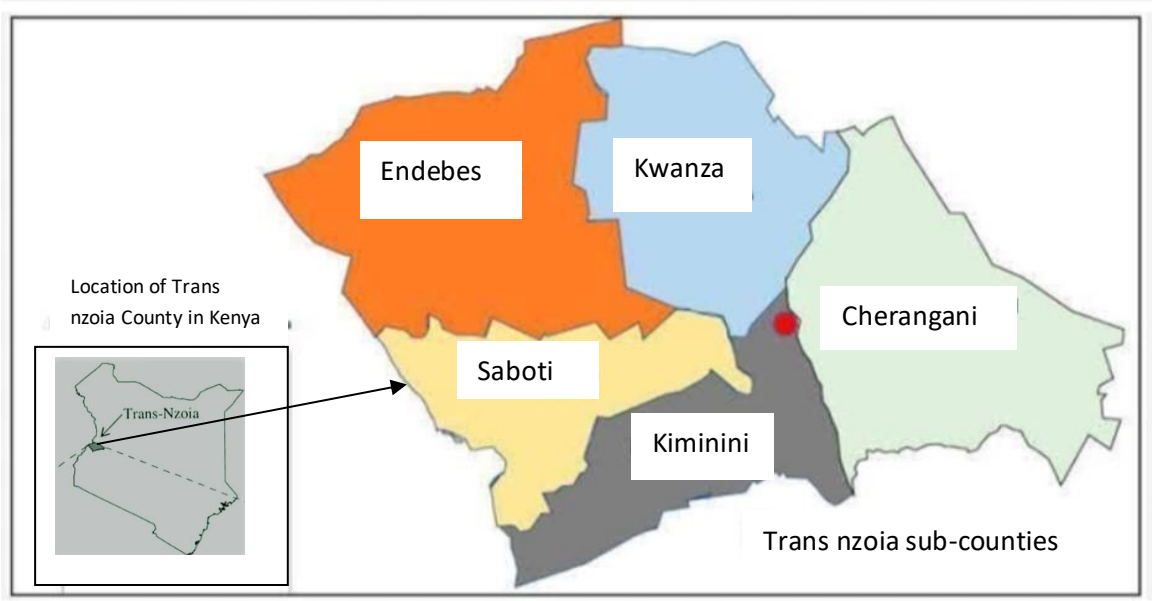
APPENDICES

APPENDIX I : Map of study area



(Source : Google Maps)

APPENDIX II: Introductory Letter for Teachers

Denis N. Mochama
University of Eldoret
P.O BOX 1125-30100, ELDORET
1ST, JULY, 2025
Dear Respondent,

RE: RESEARCH PROPOSAL FOR MASTERS DEGREE PROGRAMME

I am a postgraduate student at University of Eldoret and currently I am pursuing a Masters' degree in Educational Psychology. I am conducting research as a requirement for the award of the degree.

The questionnaire and interview questions are designed to collect information on the research topic: "**Teacher perception on the implementation of competency-based education in Junior schools" in Trans-nzoia west subcounty, Trans-nzoia county-Kenya.**

Your school has been selected to be part of study sample. Kindy provide genuine information by ticking appropriately in spaces provided the items that best match your opinion.

The information you provide will be treated with utmost confidentiality. For that reason, **do not** write **your name** on the questionnaire.

Thank you in advance.

Yours Sincerely,

……..

Denis N. Mochama

APPENDIX III: Introductory letter to HoI

Denis N. Mochama
University of Eldoret
P.O BOX 1125-30100, ELDORET

27TH, JUNE, 2025

Dear Sir/Madam,

RE: RESEARCH PROPOSAL FOR MASTERS DEGREE PROGRAMME

Currently I am carrying out research on "**Teacher perception on the Implementation of Competency-Based Education in JS**" in Trans-nzoia west subcounty, Trans-nzoia county-Kenya. The required information is to be obtained from Heads of Institutions (HOI) through interview guide and teachers through questionnaire. I plan to visit your school in the morning/afternoon of **……, July, 2025** for the research. I request to have a session for interview with you (HOI), deliver questionnaire to your teaching staff and to have an observation of school infrastructure and instructional resources.

This research will form part of the course requirements for my Post graduate studies (Master of education, Educational Psychology) at University of Eldoret. Any assistance that will be accorded to me will be greatly appreciated.

Thank you in advance.

Yours sincerely,

……..

Denis N. Mochama

Appendix IV: Teachers' Questionnaire

RESEARCH PROJECT: Teacher perception on implementation of CBE

Dear teacher,

This questionnaire is designed to gather information on teacher perception regarding the implementation of CBE in Trans-nzoia county, Trans-nzoia west sub county. The study is carried out for research purpose in partial fulfilment of the requirements for award of MED in Educational Psychology at University of Eldoret. The information extracted from this questionnaire will be treated with utmost confidentiality and solely for academic purpose only. Please fill out the questionnaire by Ticking (√) Appropriately.

Note: **Part A to E**; Strongly disagree (SD) 1; Disagree (D) 2; Moderate (M) 3; Agree (A) 4; Strongly agree (A) 5.

Part F; Very low (VL) 1; Low (L) 2; Moderate (M) 3; High (H) 4; Very high (VH) 5.

Variable	1	2	3	4	5
A. Perception on Teacher Preparedness					
A competence-based reform was necessary					
Task development takes into account CBE skills such as creativity and problem solving					
My teaching strategy is in line with CBE requirements					

I apply different teaching styles to enhance student creativity and innovativeness					
B. Teacher's Workload in Relation to CBE Implementation					
The workload involved in implementing the competence-based approach is in line with benefits obtained					
I use limited teaching methods in large classes					
Students in smaller class sizes perform better than students in large class sizes					
I apply CBE in student assessment					
C. Teacher Perception on Adequacy on Instructional Resources					
I use competence-based approach in my teaching					
My lesson planning follows the competence-based model					
I take into account the competence-based approach when designing tasks					
I design teaching activities which aim to develop key competencies					
The teaching strategies I use are in line with the competence-based curriculum model					

I evaluate my student's achievement of competencies when assessing their learning					
D. Institutional and stakeholders support					
The level of implementation of CBE to learning is similar across all teaching staff					
The level of implementation of CBE to teaching is similar in all schools					
The educational authorities set clear guidelines for developing a competence-based curriculum					
When I am unsure about something related to competence-based teaching, I have access to appropriate advice					
E. Infrastructure and Economic Resources					
Resources are adequate for me to carry out CBE assessment					
The classroom materials available are suitable for competence-based teaching					
The economic resources available at my school are sufficient to implement competence-based curriculum					
The facilities at my school are suitable for competence-based teaching					

F. Challenges Facing CBE Implementation	1	2	3	4	5
My need for training in lesson planning for the development of key competencies is					
My need for training in lesson planning to link key competencies to specific competencies of an area of knowledge is					
My need for training in the design of tasks to develop key competencies is					
My need for training in designing a model to assess the development of key competencies is					

Note: **Part A to E**; Strongly disagree (SD) 1; Disagree (D) 2; Moderate (M) 3; Agree (A) 4; Strongly agree (SA) 5.

Part F; VL: Very low; L: Low; M: Moderate; H: High; VH: Very high.

Appendix V: Interview Schedule

RESEACH PROJECT: Teacher perception and implementation of CBA

Interview schedule for Head teachers

A) Concept of CBC

i) Approximately how many years have you been involved with CBE?

ii) What do you like or dislike about CBE?

B) Intervention measures

i) How can the government improve teachers views of CBE?

ii) What kind of support do you think the government needs to offer to newly employed teachers in order in order to implement CBC effectively?

C) Teacher Training

i) How satisfied are your teachers in the CBE training?

ii) What has influenced your teachers' confidence to implement CBE?

D) Infrastructure and resources

i) Do you think available economic resources in your school are adequate for the implementation of CBE?

ii) Are classroom materials adequate for the implementation of CBE?

E) Teaching workload

i) What is the teacher-student ratio in your school?

APPENDIX VI: Observation Checklist for Teaching Resources

RESEARCH PROJECT: Teacher perception on CBE implementation

Note: Poor 1; Moderate 2; Good 3; Very good 4; Excellent 5.

	Observation check list	Poor	Moderate	Good	V. good	Exce-llent	Remark
	A. B. Teaching-learning resources						
1	School facilities are suitable for CBE implementation						
2	Classroom materials are suitable for CBE implementation.						
3	Availability of economic resources for effective CBE implementation						
4	Use of technology to make learning lively and to reduce workload						
5	The size of the class is suitable for classroom group activities						

APPENDIX VII: University of Eldoret Introductory Letter

University of Eldoret
Home of knowledge and innovation

P.O. Box 1125-30100,
ELDORET, Kenya
Tel: 0774 249552
Fax No. +254-(0)53-206311 Ext 2232

Our Ref: UOE/B/PSY/NCST/061 **DATE: 10th June, 2025**

The Executive Secretary,
National Council for Science Technology & Innovation
P.O.BOX 30623-00100,
NAIROBI.

Dear Sir/Madam,

SUBJECT: RESEARCH PERMIT FOR DENIS MOCHAMA NYANGARESI-SEDU/PSY/M/001/23

This is to confirm that the above-named Masters student has completed Course work of his masters in Educational Psychology.

He is currently preparing for his field research work on his thesis entitled: ***"Teacher Perception on the Implementation of Competency-Based Education in Junior Schools"***. He successfully presented his proposal on 3rd June, 2025 and has been approved by the University.

Any assistance accorded to him to facilitate successful conduct of the research and the publication will be highly appreciated.

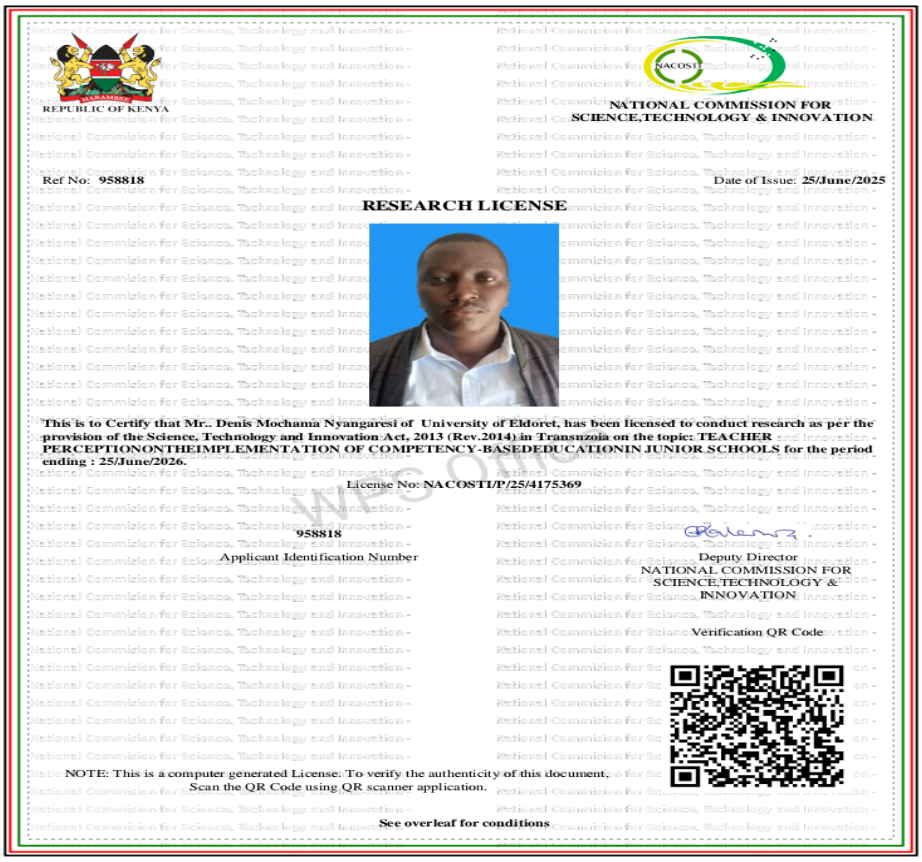
Yours faithfully,

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY
10 JUN 2025
RECEIVED
UNIVERSITY OF ELDORET

DR. ESTHER NYABUTO
HOD, EDUCATIONAL PSYCHOLOGY

Copy to: Dean, School of Education

APPENDIX VIII: NACOSTI Research License



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 958818

Date of Issue: 25/June/2025

RESEARCH LICENSE

This is to Certify that Mr.. Denis Mochama Nyangaresi of University of Eldoret, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Transnzoia on the topic: TEACHER PERCEPTIONONTHEIMPLEMENTATION OF COMPETENCY-BASEDEDUCATIONIN JUNIOR SCHOOLS for the period ending : 25/June/2026.

License No: NACOSTI/P/25/4175369

958818

Applicant Identification Number

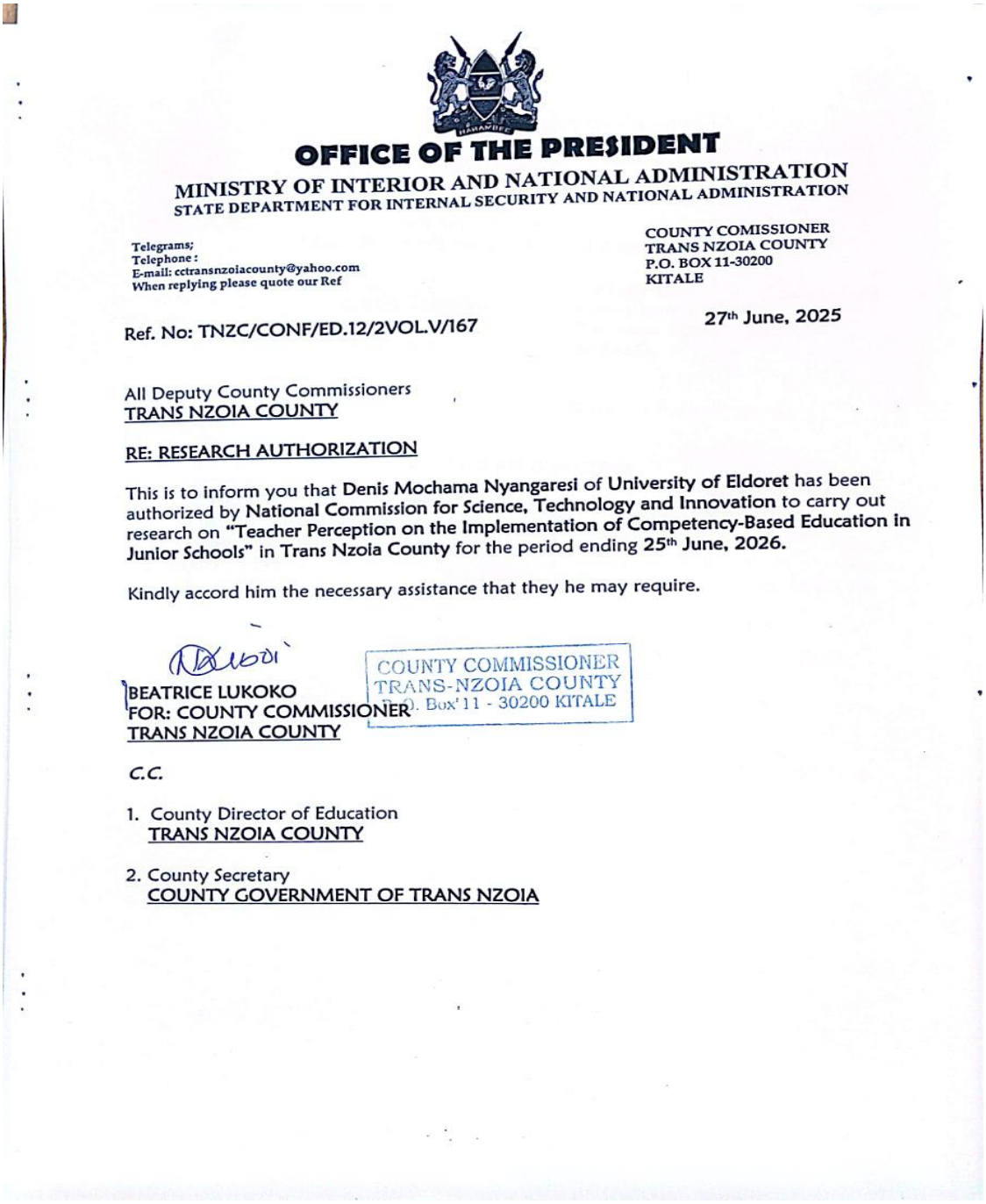
Deputy Director
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

APPENDIX IX: Research Authorization. County commissioner, Trans-nzoia county



OFFICE OF THE PRESIDENT

MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION

Telegrams;
Telephone :
E-mail: cctransnzoiacounty@yahoo.com
When replying please quote our Ref

COUNTY COMISSIONER
TRANS NZOIA COUNTY
P.O. BOX 11-30200
KITALE

Ref. No: TNZC/CONF/ED.12/2VOL.V/167

27th June, 2025

All Deputy County Commissioners
TRANS NZOIA COUNTY

RE: RESEARCH AUTHORIZATION

This is to inform you that **Denis Mochama Nyangaresi** of **University of Eldoret** has been authorized by **National Commission for Science, Technology and Innovation** to carry out research on **"Teacher Perception on the Implementation of Competency-Based Education in Junior Schools"** in **Trans Nzoia County** for the period ending **25th June, 2026.**

Kindly accord him the necessary assistance that they he may require.

BEATRICE LUKOKO
FOR: COUNTY COMMISSIONER
TRANS NZOIA COUNTY

COUNTY COMMISSIONER
TRANS-NZOIA COUNTY
P.O. Box 11 - 30200 KITALE

C.C.

1. County Director of Education
   TRANS NZOIA COUNTY
2. County Secretary
   COUNTY GOVERNMENT OF TRANS NZOIA

APPENDIX X: Research Authorization. County Director of education Trans-nzoia county.

REPUBLIC OF KENYA
Ministry of Education
State Department for Basic Education

Telegrams: .....
Telephone: Kitale 054-31653 – 30200
Fax: 054-31109
Email: transnzoiacde@gmail.com
When replying please quote:

Ref. No. TNZ/CNT/CDE/R.GEN/1/VOL.III/100

County Director of Education
Trans Nzoia
P.O. Box 2024 – 30200
KITALE.

Date: 27th June, 2025

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION

This office acknowledges receipt of Research License No. **NACOSTI/P/25/4175369** dated 25th June, 2025 from National Commission for Science Technology & Innovation.

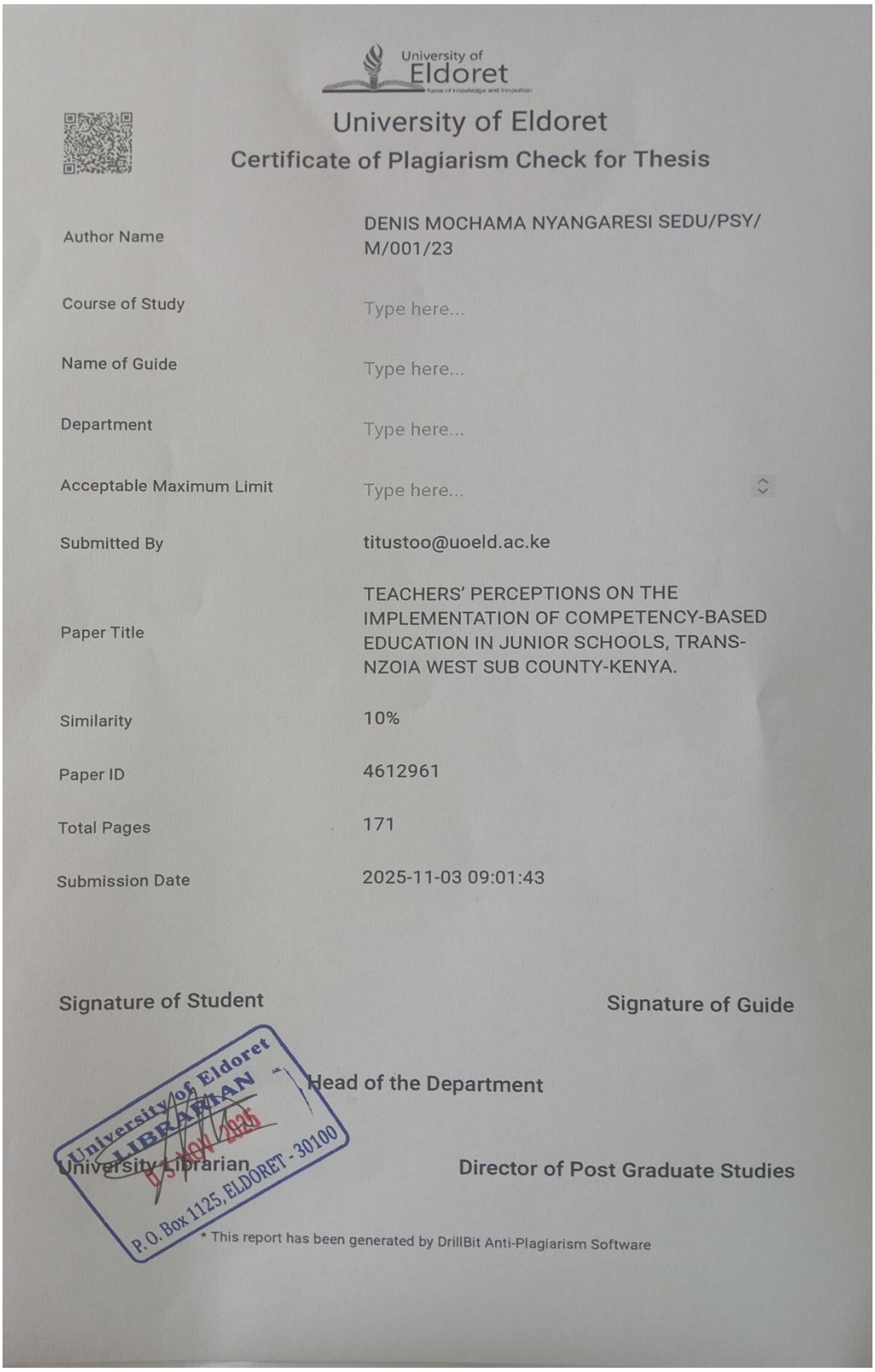
Denis Mochama Nyangaresi of **University of Eldoret has** been authorized to collect data on **"Teacher Perception on the Implementation of Competency-Based Education in Junior Schools in Trans Nzoia West Sub-County, Trans-Nzoia County"** for a period ending **25th June, 2026.**

The purpose of the letter is to request you to accord him the necessary assistance.

COUNTY DIRECTOR OF EDUCATION
TRANS - NZOIA COUNTY
P. O. Box 2024 - 30200,
KITALE.

PAMELA AKELLO, HSC
COUNTY DIRECTOR OF EDUCATION
TRANS-NZOIA COUNTY

Appendix XI: Similarity Report



University of Eldoret

University of Eldoret

Certificate of Plagiarism Check for Thesis

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Course of Study	Type here...
Name of Guide	Type here...
Department	Type here...
Acceptable Maximum Limit	Type here...
Submitted By	titustoo@uoeld.ac.ke
Paper Title	TEACHERS' PERCEPTIONS ON THE IMPLEMENTATION OF COMPETENCY-BASED EDUCATION IN JUNIOR SCHOOLS, TRANS-NZOIA WEST SUB COUNTY-KENYA.
Similarity	10%
Paper ID	4612961
Total Pages	171
Submission Date	2025-11-03 09:01:43

Signature of Student

Signature of Guide

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Head of the Department

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