# PREPAREDNESS OF STUDENT TEACHERS FOR IMPLEMENTING COMPENTENCY-BASED CURRICULUM SYSTEM EDUCATION IN KENYA

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## Abstract

The rollout of Competency-Based curriculum (CBC) in Kenya aims to equip students with the 21st century skills. Its success depends on early teacher training preparations. The study, guided by Constructivism theory and online survey, outlined four objectives: a. Assessment of current preparedness, b. Identifying needs, c. Examining available resources, and d. Investigating implementation strategies. A random sampling technique from 51 respondents through online questionnaires. Descriptive statistics analyzed the data, revealing: over forty percent of the respondents indicated, indicated that materials for sign language were lacking in all schools. Secondly, teaching Methods predominantly included inquiry based learning, lectures, demonstrations, group discussions, and role play. Then, core competencies such as, citizenship, learning to learn, self-efficacy, and creativity and imaginative were applied by majority of the respondents in schools. Lastly, a few of the respondents indicated not to have used online assessments (ICT). The study found that the majority of secondary school student teachers were prepared to implement CBC during their teaching practice. It concluded that specific readiness, particularly in Senior High School (SHS), is crucial under CBC, influenced by training, resources, and support provided by the Kenyan government and educational institutions.

**Keywords**: Competency based curriculum (CBC), Assessment, Methods of Learning, Core Competences, Resources.

## Introduction

The Competence-Based Curriculum (CBC) in Kenya has gained momentum, with junior high school learners transitioning to senior high school within a year. This curriculum emphasizes learner's active construction of knowledge, skills and values. Teachers play a crucial role in preparing students to attain the core competencies of the CBC, including Communication and Collaboration, Critical Thinking and Problem Solving, Imagination and Creativity, Citizenship, Digital Literacy, Learning to Learn and Self-Efficacy (Ford, 2014). To ensure quality education without discrimination, schools must adequately prepare by providing sufficient classrooms, learning materials and laboratories for all learners. Many countries worldwide, such as France, Canada, and United States of America, have already adopted competence based curriculum ((Ngeno, 2023). Additionally, several African countries including Rwanda, South Africa, Mozambique,

Zimbabwe, Zambia and Tanzania, have implemented CBC, as noted by Mulenge and Kabombwe (2019).

The primary objective of introducing CBC is to enhance education at all levels and improve the quality of training to meet the demands of the labor market. The government places significant emphasis on teacher competencies in delivering the competency based curriculum. For CBC to succeed, teachers must be thoroughly equipped with diverse range of instructional strategies to be used effectively in classroom, fostering learner engagement and interaction within a conducive environment (Ndihokubwayo & Habiyaremye, 2018).

Teacher preparedness for the competency based curriculum in Kenya requires urgent attention to adequately equip learners with knowledge, skills, and values. According to a study by KICD (2018) only 20% of teachers were adequately prepared for the new paradigm shift in the education sector, with over 80% lacking awareness of CBC. Therefore, based on these findings it is crucial to invest efforts in training competent teachers who are ready to deliver the CBC curriculum effectively in schools.

The importance of this study lies in its multifaceted impact across various stakeholders and educational domains:

- Students - This study targets to equip students with essential life skills crucial for their personal and professional development in the 21st century. By focusing on the Competency-Based Curriculum (CBC), it aims to ensure that students are better prepared to navigate real-world challenges, fostering their ability to think critically, communicate effectively, and adapt to diverse environments.

- Teachers –By understanding the requirements of CBC implementation, teachers can enhance their teaching practices, promote student engagement, and create inclusive learning environments that cater to the individual strengths and abilities of all learners.

- Policy makers - This study anticipates to inform policy implementation for inclusive learning by offering evidence-based recommendations and best practices. By understanding the challenges and opportunities associated with CBC adoption, policymakers can develop informed policies and allocate resources effectively to support teachers, schools, and students in achieving the goals of the curriculum reform. This can contribute to the creation of an education system that is equitable, inclusive, and responsive to the need of all learners.

- Parents – It highlights the importance of collaboration between parents and learners for the successful achievement of CBC objectives. By involving parents in their children's education and fostering strong partnership between home and schools, this study intends total engagement, support student learning, and enhance the overall educational experiences. By actively participating in their children's educational journey, parents can contribute to their academic success, socio-emotional wellbeing and holistic development.

The following are the key terms in the study:

*Competency based curriculum* – A curriculum integrating the application of knowledge, skills, and values.

*Assessment:* The process of evaluating and making judgements about the knowledge, skills, and values during the learning.

*Methods of learning:* Principles and approaches used to enable CBC learning

*Core competences:* Intellectual, personal social and emotions skills essential for lifelong learning.

*Resources:* Diverse materials and tools assisting in the acquisition knowledge, skills and values.

## Literature review

**School Resources and Competency Based Curriculum**

Research on school resources and their relationship with the implementation of the Competency Based Curriculum offers valuable insights into the factors influencing the effectiveness of educational reforms (Ngeno, 2023). This study delves into disparities in resources allocation across schools and regions, shedding light on their impact on teaching and learning outcomes. For successful CBC programs, schools must be equipped with resources based on several key themes:

- Resource Availability: This includes technology infrastructure (such as ICT devices), teaching materials (including teacher guidebooks, course materials, manila papers, charts, and sign language books), and physical facilities (such as functional playgrounds).

- Technology Integration and ICT Resources: with the growing emphasis on digital literacy and ICT skills in CBC, research investigates the integration of technology resources into teaching and learning practices. This encompasses the availability of ICT infrastructure, teachers' ICT competencies, and the utilization of digital resources to support CBC.

- Teacher preparedness and Training: the study explore the role of teacher training and professional development programs in CBC implementation, including initiatives, teachers' attitudes, and the impact of professional development on instructional practices.

- Curricular Materials and Support: Research examines the role of educational publishers, NGOs and government agencies in providing support and resources to schools and teachers aligned with the CBC framework.

- Infrastructure and Physical Resources: Access to physical infrastructure and facilities in schools implementing CBC is crucial, including classrooms, libraries, laboratories, and recreational spaces.

- Equity and Access: Literature scrutinizes matters of equity and access to resources in CBC, particularly in marginalized and underserved communities. Research highlights disparities in resource distribution, barriers to access, and interventions aimed at promoting equity and inclusion in education (Ngao & kirimi, 2023).

Addressing these key themes, schools can better ensure that they have the necessary resources to effectively

implement CBC, ultimately enhancing teaching quality and improving student learning outcomes.

**Teaching methods**

Exploration of teaching methods and their alignment with the competency based curriculum sheds light on effective pedagogical approaches for fostering 21st century skills among students. Some prominent teaching methods include:

- Inquiry based learning – Inquiry based learning (IBL) is a teaching method emphasized in CBC, encouraging students to explore and investigate concepts through questioning, experimentation, and critical thinking. Studies observed the implementation of IBL in CBC classrooms, to have a positive impact on student engagement and learning outcome.

- Active Learning Strategies – Active learning strategies, such as cooperative, problem based learning, and experiential learning, are explored in the context of CBC implementation. Investigations on the effectiveness of these strategies promote deeper understanding of content.

- Differentiated Instruction –the main focus is based on personalized learning and competency development. CBC promotes differentiated instruction to accommodate diverse learner need and abilities. The method promotes student achievement and motivation.

- Project Based Learning (PBL) –is another pedagogical approach aligned with CBC, encouraging learners to apply knowledge and skills to real projects and problems. Research examines the implementation of PBL in CBC classrooms, to have an impact of critical thinking, motivation and collaboration, and many more (O'Sullivan & Bruce, 2014).

**Core competency and Competency Based Curriculum**

The study on core competences and their alignment with the competency based curriculum focuses on identifying and developing the essential skills, knowledge, and attitudes that students need to succeed in the 21st century. Here are some key ideas in this area:

- Identification of Core Competences – Literature has identified core competences within the CBC framework and how they integrate into the curriculum and learning objectives, including competences related to critical thinking, communication, collaboration, creativity, digital literacy, and socioemotional.

- Integration of core competences into instruction - Instructors must explore strategies for integrating core competences into teaching and learning practices across subject areas and grade levels. Competences fosters learner's engagement, motivation and deeper learning.

- Teacher competencies for core competence development – it is crucial for teachers to be competent and develop professionally in order to support educators in fostering core competencies. Teachers must possess knowledge, skills and positive attitude in their profession.

- Student outcomes and impact of core competence development - students who embrace core competencies tend experience long term effects on their learning, such as academic achievement, socio emotional wellbeing, and preparedness for further education and the workforce (Mbehero, Wamocha, Nasong'o & Mukonyi, 2022).

Synthesizing from the above themes policy makers need to embrace systemic change for effective competency based approach to teaching and learning.

**Assessment and Competency Based Curriculum**

Assessment within the context of the CBC curriculum explores different aspects of assessment practices, methods and their alignment with the goals and principles of CBC. Here are some key themes and literature in this area:

Authentic Assessment- this method must be aligned with CBC principles, allowing real and practical tasks that enable students to develop competencies in authentic ways (Otieno & Machani, 2022). The use of performance assessments, project based tasks, portfolios, and simulations allows a comprehensive evaluation of learning outcomes and competencies, by encouraging:

- Formative Assessment – CBC assessment emphasizes formative assessment, which occurs during the learning, with a variety of techniques are applied. Summative assessments should be less frequent, focusing on outcomes after learning with limited variety if measures. Formative assessment strategies such as feedback, self-assessment, peer assessment, and classroom observations monitor to student progress, provide timely feedback and guide instructional decision making.

- Technology Enhanced Assessment – Integration of technology in CBC facilitates digital assessment tools, online portfolios, and adaptive learning systems to enhance individual learning experiences while providing actionable feedback to students and teachers.

- Teacher Assessment literacy – Knowledge is power, teachers must develop professional competence in various CBC assessments practices, aimed at enhancing effectiveness of CBC assessments (Otieno & Machani, 2022).

Educators and policy makers can gain insights into effective assessment practices aligned with the competency based curriculum.
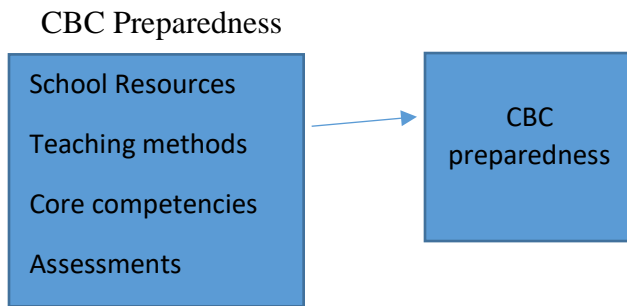
**Constructivism Theory**

Vygotsky, a prominent figure in psychology, posited that humans learn through

The Zone of Proximal Development (ZPD) and scaffolding. Learners actively construct their own knowledge rather than passively receiving it. Learning is influenced by interactions with others, such as teachers, peers and parents (Kozulin, Gindis, Ageyev, & Miller, 2003). Social interactions play a crucial role in establishing knowledge, skills, and values fostering collaborative learning process.

**Conceptual paradigm**

This conceptual framework illustrates how this study theorizes the causal relationship between the dependent variable and independent variables, directly and indirectly.

CBC Preparedness

| | |
|---|---|
| School Resources<br><br>Teaching methods<br><br>Core competencies<br><br>Assessments | CBC preparedness |

**Research Methodology**

The study utilized an online survey and was conducted among University of Eastern Africa, Baraton (UEAB) student teachers on teaching practice across various counties of Kenya in 2023. A random sampling method was used to select group E members during teaching practice. A total of 51 respondents participated in answering the questionnaire (Creswell, 2008).

The questionnaires were administered to student teachers covering four main areas:

1. Perceptions regarding the availability of the following resources in the schools:
   a. ICT devices
   b. Teachers guide book
   c. Course material
   d. Manila papers
   e. Charts
   f. Functional play grounds
   g. Sign language books

2. Perceptions regarding the level of usage of the following methods to facilitate learning:
   a. Role play
   b. Group discussion
   c. Demonstration
   d. Lecture
   e. Inquiry-based learning
   f. Direct instruction
   g. Dramatization
   h. Question and answers
   i. Written assignment

3. Assessment of the teacher's ability to apply core competencies to learners:
   a. Citizenship
   b. Learning to learn
   c. Digital literacy
   d. Self-efficacy
   e. Creativity and imaginative
   f. Critical thinking and problem solving
   g. Communication and collaboration

4. Opinion on the assessment method used:
   a. Peer assessment
   b. Project method
   c. Online assessment
   d. Written test
   e. Observation schedule
   f. Interviews
   g. Rating scales
   h. Portfolio
   i. Oral questions
   j. Use of diary
   k. Anecdotal record

**Findings and Discussion**

The following are suggested outcomes and discussion:

Demographics Variables. In relation to gender, age, counties, types of schools, category of schools in relation to teacher preparedness, and the survey revealed that 56.9% of the respondents were female, while male respondents comprised 43.1%. Indicating a higher proportion of female teachers in schools compared to male teachers. The teaching practice placements were distributed across various counties in Kenya, including Meru, Embu, Kitui, Machakos, Nyandarua, Nyeri, Kirinyaga, Muranga, Kericho and Nandi. Most students undertook teaching practice in public schools (80.4%), with a minority in private schools (19.6%). Among the schools 52.9%, were categorized as boarding, 23.5% as day

schools, and 23.5% both day and boarding. Institutions, with boarding schools being predominant in the secondary level. Furthermore, schools were classified based on gender composition with 54.9% being mixed, boys 29.4%, girls 15.7% only schools, indicating a predominance of mixed gender institutions for teaching practice placements.

Answers to Research Questions

Four research questions are explored in this study:

1. Availability of various resources.

The first question aimed to assess perceptions regarding the availability of various resources in respondents' schools, including ICT devices, teachers guide book, course material, manila papers, charts, functional playgrounds, sign language books and projectors.
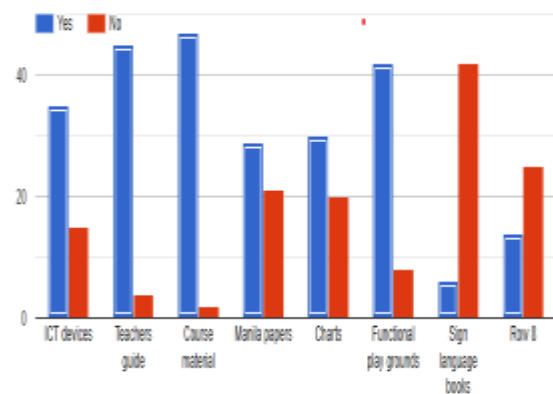
Table 1 presents available resources.



*Figure 1 AVAILABLE RESOURCES*

The majority of respondents indicated that the mentioned resources were available, except for ICT devices and sign language books in their schools, suggesting a deficiency in inclusive education practices within regular schools

settings. Teaching resources enhance learning experiences, promote active learning and support differentiated instruction. Ngao and kirimi (2023) study on school resources recommended that administrators need to provide adequate and sufficient school resources for success of competency based curriculum without discrimination.

2. Teaching methods that facilitate learning

In the second section of the questionnaire, participants were asked about the teaching methods employed to facilitating learning. These included Role play, Group discussion, Demonstration, Lecture, Inquiry-based learning, Direct instruction, Dramatization, Question and Answers, and Written assignments.
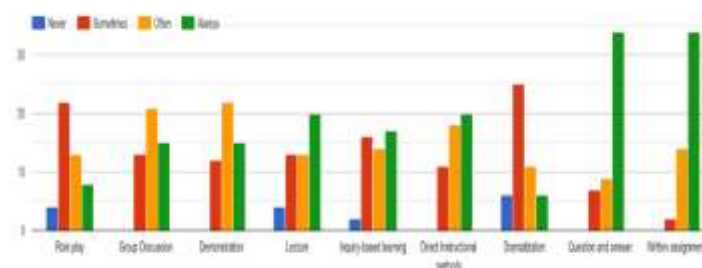
Table 2 presents teaching methods



*Figure 2 TEACHING METHODS*

While a significant number of teachers reported using these methods, some indicated that Role play, Lectures, Inquiry based learning, and Demonstrations were never utilized in their teaching practices. Teaching methods play a crucial role in enhancing learning, promoting critical thinking and problem solving skills, fostering student engagement and aiding in the retention of subject matter (Ngeno, 2023). It is essential for educators to employ a variety of teaching methods effectively to facilitate learning.

3. Core competencies

The third section of the questionnaire focused on preparedness to facilitate the development of the following core competencies in the learners: Citizenship, Learning to learn, Digital literacy, Self-efficacy, creativity and imaginative, Critical thinking and problem solving, Communication and collaboration.
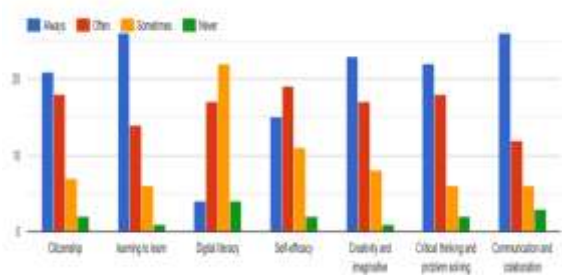
Table 3 presents core competencies



*Figure 3 CORE COMPETENCIES*

Most student teachers demonstrated knowledge of these core competencies, with less than 5% of respondents indicating a lack of information on them.  However, a study by Mbehero, Wamocha, Nasong'o and Mukonyi (2022), revealed that many educators feel uncertain about  applying these core competencies in schools. Nonetheless, they acknowledged their importance in decision making and problem solving, resilience and adaptability, serving as guiding principles, fostering accountability and daily continuous improvement.

4. Assessment methods

The final section of the questionnaire focused on the assessment methods utilized, including Peer assessment, Project method, Online assessment, Written test, Observation schedule, Interviews, Rating scales, Portfolio, Oral questions, Use of diary and Anecdotal record.
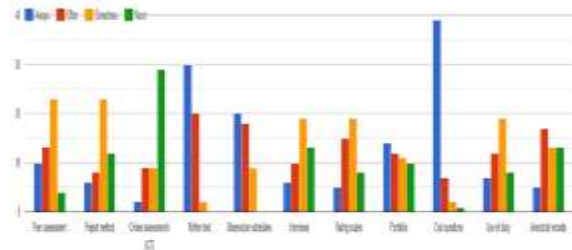
Table 4 displays assessment methods



*Figure 4 ASSESSMENT METHODS*

A majority of the respondents reported high usage of different assessment methods such as, peer assessment, written test, observation schedules, and oral questions. However, there was minimal practice of utilizing assessments such as project, interviews, rating scales, portfolio, use of diary and anecdotal records.

Approximately 30% of the students indicated that they have never used ICT digital literacy, online assessment. A Study by Otieno and Machani (2022) revealed that teachers had limited knowledge on formative assessment. However, they acknowledged that assessment offers numerous benefits, including timely feedback, personalized learning, enhance engagement, accessibility and inclusivity, efficiency and scalability, and monitoring. Through the use of technology, educators can create effective and equitable learning experiences for all students.

## Conclusion and Recommendations

Readiness for competence based curriculum has the following benefits (Witty & Gaston, 2008):

1. Sign language materials were lacking in all schools.
2. Teaching Methods, including inquiry based learning, lectures, demonstrations, and role play, were underutilized.
3. Core competencies such as, citizenship, learning to learn, self-efficacy, and creativity and imaginative were applied by the majority of respondents.
4. A good number of the respondents indicated not to have used online assessments (ICT).

This study made the following recommendations:

1. Encourage the department of Education to introduce sign language courses where students can learn the skills of using sign language books. Partnership with the government and get some sign language books for schools with physically challenged.
2. Emphasis the importance of using role play, lectures, lecture and inquiry based learning, as methods that facilitate learning.
3. Enhance core competencies in the learners namely: Citizenship, Learning to learn, Digital literacy, Self-efficacy, creativity and imaginative, Critical thinking and problem solving, Communication and collaboration.
4. Urgent need to infuse aspects of ICT (digital literacy) online assessment in the curriculum.

The following is the suggestion for further study:

A nationwide study on regular teacher's preparedness on competence based curriculum.

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