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Teacher's Perceptions on the Availability and Adequacy of Resources in the Implementation of Competency-Based Education in Junior Schools in Trans-Nzoia West Sub County, Kenya

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Abstract

The transition to Competency-Based Education (CBE) in Kenya marks a significant shift from a content-heavy, exam-oriented system to a learner-centered one. This new approach requires not only well-prepared teachers but also adequate teaching and learning resources. Yet, in many schools, the sufficiency of these resources remains in question. Teachers, as the frontline implementers of the curriculum, directly shape how learners experience CBE, and their perceptions strongly influence both the delivery process and learning outcomes. In Trans-Nzoia West Sub-County, as in other parts of the country, the transition to CBE and the establishment of junior secondary schools have brought about new demands and challenges. This study examined teachers' perceptions regarding the availability and adequacy of infrastructure and instructional resources in supporting CBE implementation. The adequacy of facilities and materials not only affects teachers' perceptions but also determines the teaching approaches they adopt. The study was grounded in constructivist learning theory, which emphasizes student-centered learning where teachers act as mediators who organize materials and foster a supportive environment that values learners' experiences. The study adopted a concurrent mixed methods design. The study targeted 60 junior secondary schools in Trans-Nzoia West Sub-County, comprising 288 teachers involved in CBE implementation. From this population, the study sample comprised 15 schools, including 64 teachers and 15 head teachers. Data collection involved teachers' questionnaires and observation checklists for first-hand information. Content validity of the items was reviewed by experts, while a pilot test confirmed reliability with a Cronbach's alpha coefficient of 0.73. Data were analyzed using descriptive statistics with the aid of SPSS version 22, while chi-square tests were applied to assess associations between categorical variables. The study found that most teachers viewed competency-based education as necessary and reported moderate competence in developing tasks aligned with CBE skills (M=3.75, SD=0.600). While teachers acknowledged applying varied lesson

planning approaches (M=3.52, SD=0.676), their teaching strategies were only moderately aligned with learner-centered CBE requirements (M=3.28, SD=0.691). However, perceptions of infrastructural facilities were largely negative, with very low mean scores (M=1.86, SD=0.551), indicating dissatisfaction with available classrooms, materials, and resources for effective CBE assessment. Chi-square tests confirmed significant associations between teacher perceptions of both instructional resources (χ^2=24.9, p=0.002) and infrastructural facilities (χ^2=79.0, p=0.000) with CBE implementation. Therefore, to develop positive teacher perception, one of the determinants for successful implementation of CBE, adequate infrastructure and instructional materials should be prioritized. The study recommended that the government through the ministry of education should provide adequate infrastructure and instructional facilities for effective implementation of CBE.

Keywords: Teacher, perception, Competency-Based Education, instructional resources, infrastructural facilities

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Introduction

Education is widely recognized as a catalyst for societal and economic advancement. As technology and labor markets evolve, education systems must adapt to remain relevant. In Kenya, this led to the replacement of the 8-4-4 system with the Competency-Based Curriculum (CBC), or Competency-Based Education (CBE). This reform aims to produce innovative and productive citizens by shifting the focus from rote memorization to the acquisition of practical skills (Awuonda et al., 2023; Pluff & Weiss, 2022; Ondimu, 2018).

Teachers are at the heart of this transformation. Their role is to transmit knowledge, skills, and values in both formal and informal settings (Isola, 2019). Effective teaching cultivates creativity, critical thinking, and problem-solving essential qualities in a competency-based model. Therefore, teachers are indispensable for turning curriculum reforms into tangible learning outcomes. In CBE, teachers are expected to go beyond traditional instruction, giving

students the freedom to explore, investigate, and apply their knowledge to real-world issues. This requires designing learner-centered activities and formative assessments that promote skill acquisition (Madani, 2019). However, the success of any reform is highly dependent on teachers' perceptions and their ability to adapt. When teachers view reforms as impractical or lacking adequate resources, implementation often fails, and well-intentioned policies remain unfulfilled (AlAbri, 2022).

Despite its potential, CBC implementation faces challenges similar to those found throughout Sub-Saharan Africa. Countries like Rwanda (Kwok, 2022) and Tanzania (Mpate, 2025) have reported persistent obstacles, including inadequate training, a lack of digital resources, and limited subject-specific facilities. These discrepancies between reform expectations and actual resource provision undermine intended outcomes and often worsen inequalities between urban and rural schools.

New junior secondary schools in Kenya clearly illustrate these challenges. Many were integrated into existing primary school facilities, and as a result, they lack the specialized infrastructure required for CBC, such as science labs, workshops, and digital devices (Gichurur, 2024). In Nairobi County, research found that even though teachers understood the goals of CBC, their ability to deliver was limited by a shortage of ICT resources, which widened the digital divide and undermined the goals of digital literacy (Awiti, 2023).

Additional studies in counties like Tharaka Nithi and Muranga reinforce that inadequate instructional resources negatively affect teacher morale (Kathuni, 2023; Kamau, 2024). Delays in textbook deliveries, non-functional laboratories, and a lack of teaching materials have forced teachers to improvise, which often compromises the quality of instruction (Isaboke et al., 2021). When teachers feel unsupported, they tend to view reforms as unrealistic, which in turn reduces their motivation and commitment to fully implementing the CBC. Ultimately, teacher perceptions are a vital factor in determining the success of any educational reform. Teachers' views on the availability and adequacy of resources shape their instructional strategies, assessment methods, and overall dedication to new curricula. In regions like Trans-Nzoia West Sub-County, where schools face both infrastructural and instructional limitations, examining teachers' perceptions offers critical insights into the real-world challenges of CBC implementation. These insights can help guide targeted interventions that align reform efforts with Sustainable Development Goal 4, which calls for inclusive and equitable quality education.

Theoretical framework

The study was anchored on Constructivism is a learning theory that 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 to 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 learner's 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 Competency-Based Curriculum (CBC). The CBC is a learner-centered, activity-based model that aligns directly with this theory's principles. Since the 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 teachers 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 the CBC.

Literature Review

The Concept of CBE

According to Wongnaa and 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 (Amutabi, 2019). CBE focuses on equipping learners with competencies which are defined as the ability to perform a particular task to a prescribed level in solving imbedding problems. KICD conceptualized a competency as ones' ability to apply teaching-learning resources and outcomes (knowledge, skills, values and attitudes) (Kabita & Lili, 2017). This research examined teacher perception on implementation of competency-based education in junior schools in line with available instructional resources and infrastructural facilities.

The Concept of Teacher Perception

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. According to Tanyi (2014), perception is identification, organization and interpretation that is given to a sensation.

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 provision of adequate instructional resources and infrastructural facilities. This becomes an integral component since it enables students to fully tap into their potential by completing assigned tasks, providing required assistance and materials for hands-on activities and providing feedback of learners completing tasks given by teachers (Aminga, Were and Ashioya, 2020). Waigera, Mweru and Ngige (2020) carried out a study on the relationship between teacher perception and the utilization of instructional resource es 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.

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. On the account of the state of existing classrooms, library space and computer laboratories, the circumstances are even more appalling.

According to Ibrahim and Aslam (2025), deficient educational and learning facilities inhibit the execution of CBE and students may not be able to develop necessary independent learning capabilities, problem-solving, critical thinking minds which might deprive them the chances to being equipped skillfully. With the affair of things in schools, it is imperative to improve the quality and quantity of learning resources since it impacts on teacher perception and their decision to adopt CBE.

Inadequate 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 curriculum (Thiruaine et. al.,2024; Komba & Mwandanji, 2015). According to a study conducted by Charles, (2022) on factors affecting the implementation of CBE in junior schools, it showed that the success of implementation largely depends on available resources, adequate training of teachers and effective policy implementation. By providing adequate infrastructure such as digital technology, modern classrooms, flexible space for collaborative learning and individualized instruction enables educators to 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 (Thiruaine et. al., 2024).

Class size is an important consideration in a teaching-learning exercise since it influences the choice of classroom activities. Class size, student-teacher ratio affects 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, 2016; Alsarawi,2019). In Kenya, since the inception of free basic education and the all-learner transition policy, class size has increased over time. The issue of large class is a common phenomenon in many countries in Africa. This situation creates difficulties for both teachers and learners when engaging in teaching and learning in the classroom. Recent studies have shown that investment in educational facilities enhances how suitable an instruction is and supports the successful adoption of innovative curriculum (Thiruaine et. al.,2024).

Instructional Resources

In the Kenya, the ministry of education has initiated programs to supply text and reference books in a ratio of one to one, (KICD, 2023) 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). Schools with better instructional resources are successful in the adoption of CBE, indicating a strong link between instructional resources and the educational outcome (Kiteetu et. al., 2023). Recent studies in Kenya have highlighted the critical role of instructional resources in educational effectiveness (Chepkonga, 2017).

The integration of technology into teaching and learning enables teachers and learners to develop new tasks and ideas, thereby facilitating a deeper acquisition of knowledge. For instance, digital tools and resources are vital for assessing learners' progress and in adapting instructional approaches appropriately. Okello (2022) 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 hindered the ability to utilize the technological tools necessary for integrating technology into classroom instruction. For effective implementation of CBE, teaching requires various teaching aids, laboratories and practical tools to facilitate experiential learning (Emmanuel et al., 2023). 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 implement CBE as envisioned. The inadequacy of the required resources has constrained teachers, a component that this study sought to examine and its effect on teacher perception and the implementation of CBE.

Methodology

Research design is a broad framework that explains the entire plan of carrying out research work. According to Pawar Neelam (2020), to test study findings a research design serves as the back-borne structure that responds to research questions. This research adopted a mixed method concurrent research design. The design was considered appropriate for the study. It made it possible to analyze both qualitative and quantitative data on teacher perception on infrastructural

facilities and instructional facilities regarding CBE implementation. The target population was 60 junior secondary schools in Trans-nzoia west subcounty (MoE, 2025). In the schools, 288 junior school teachers were involved in the implementation of CBE and 60 heads of institutions.

Mugenda and 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. Fifteen (15) schools were sampled and all the 64 teachers in the respective schools were selected as the study sample. The required data was collected using a Five-point Likert scale questionnaire. The researcher also used an observation schedule to collect first-hand information on infrastructure and instructional facilities.

Reliability for questionnaire test items was ascertained using Cronbach's alpha coefficient which was found to be 0.73 and therefore suitable for the study. Data analysis was done through the aid of SPSS. Descriptive statistics, the mean and standard were computed and interpretations done as follows: mean of below 1.5, signified strong disagreement (SD); 1.5-2.4 disagree (D); 2.5-3.4 Moderate (M), 3.5-4.5 agree (A) and mean above 4.5 strongly agree (SA) (Croasmun and Ostrom (2011). A standard deviation of less than 1.5 shows consensus in test items while SD>1.5 portrays lack of consensus among test items. Chi-square test inferential analysis was also conducted to determine the degree of association of the independent variable (teacher perception) and the dependent variable CBE implementation.

Results and Discussion

Response Rate

The study collected data from 64 junior school teachers and 15 heads of institutions. The questionnaire return rate was 97%. Two questionnaires were not completely filled and two teachers did not return their questionnaires. Therefore, only 60 questionnaires were found suitable for analysis. This was taken as the study sample size.

Teacher Perception on Instructional Resources

The study was to assessed teacher perception on availability and adequacy of instructional resources on CBE implementation in junior schools in Trans-nzoia west subcounty. To achieve this objective, teachers were provided with four (4) test items on a five-point Likert scale questionnaire where 1=Strongly disagree (SD), 2=Disagree (D), 3=Moderate (M), 4=Agree (A) and 5=Strongly agree (SA). The items were measuring the level of teacher understanding on instructional resources. The mean, standard deviation, skewness and Kurtosis for all test items were summarized and presented in Table 1 below.

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 Karua 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.

Table 1: Teacher perception on instructional resources

Item	N	Mean	Std. D	Skewness		Kurtosis	
	Stat	Stat	Stat	Stat	Std. E	Stat	Std. 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
My lesson planning follows competency-based model	60	3.52	.676	-.402	.309	-.093	.608
Summary	**60**	**3.704**	**.497**	**-.341**	**.309**	**-.251**	**.608**

Source: Field data 2025

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 enable them solve real-life challenges.

Relationship Between Teacher Perception of Instructional Resources and CBE Implementation

The study findings were supported by results of the Chi-Square, which further helped show the relationship between teacher perception on availability and adequacy instructional resources and CBE implementation as shown in table 2 below.

Table 2. Chi-Square Test Statistics

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

Source: Field data 2025

The Chi-Square results in Table 2 demonstrate a statistically significant relationship between teachers' perception of the availability and adequacy of instructional resources and the implementation of CBE (χ^2=24.9, P=0.002<0.05). This indicates that teacher perceptions regarding the adequacy of instructional resources significantly influence the effectiveness of CBE implementation.

Perception on Infrastructural facilities and teacher workload

Teachers were given statements upon which they could either agree or disagree with the statements on availability and adequacy of infrastructural facilities on a five-point Likert scale. The findings are presented in Table 3.

Table 2: Teacher perception on infrastructural resources

Item	N	Mean	S. D	Skewness		Kurtosis	
	Stat	Stat	Stat	Stat	S. E	Stat	S. E
Facilities are adequate for me to carry out CBE assessment	60	1.90	.630	.918	.309	3.02	.608
Available classroom materials are suitable for competency-based teaching	60	1.75	.508	-.350	.309	-.232	.608
Available economic resources in my school are sufficient to implement CBE framework	60	1.87	.724	1.040	.309	2.07	.608
The facilities in my school are suitable for competency-based teaching	60	1.92	.850	1.192	.309	1.42	.608
Summary	**60**	**1.859**	**.551**	**1.329**	**.309**	**3.747**	**.608**

Source: Field data 2025

The results shown in Table 3 revealed that a higher proportion of teacher with a mean of 1.90, SD=0.630 had a strong opinion that facilities required to carry out CBE assessment were inadequate. Teachers expressed dissatisfaction on availability of adequate facilities for CBE assessment. The implication was that, however CBE was being implemented, teachers had negative perception on adequacy and availability of infrastructural facilities that can help them to fully assess the level of acquisition and mastery of CBE competencies. The study findings are in line with the findings of (Gakuru et. al., 2024), who reported prevalence of poor perception among teachers on infrastructural facilities raising concerns about the effective implementation of CBE as envisioned since teachers play an important role in its implementation.

Relationship Between Infrastructure and Instructional Resources in CBE 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.

Table 4: Infrastructure and instructional resources Chi-Square test results

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

Source: Field data 2025

The Chi-Square analysis in Table 4 indicates a strong and statistically significant relationship between the adequacy of infrastructural and instructional resources and the implementation of CBE (χ^2=79.00, P=0.000<0.05). This confirms that the availability and quality of school infrastructure and instructional materials have a direct impact on the effective adoption of CBE.

Analysis of observation Check List Data. Availability and adequacy of instructional resources.

The study further examined the availability and adequacy of instructional resources using an observation checklist administered across 15 schools. Items on the checklist were rated on a 1–5 scale, where 1 represented *poor*, 2 *fair*, 3 *good*, 4 *very good*, and 5 *excellent*. The means were 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*. Table 5

presents the descriptive statistics of the observation results.

Table 5: 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	-2.308	1.12
Classroom materials are suitable for CBE implementation	15	2.67	.488	-.788	.580	-1.615	1.12
Availability of economic resources for effective implementation of CBE	15	1.20	.414	1.67	.580	.897	1.12
I use technology to make learning lively and to reduce workload	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**

Source: Field data 2025

The findings revealed that school facilities had a mean score of 1.53 (SD = 0.516), rated as *fair*, which is consistent with teachers' earlier reports that most schools lacked adequate resources for effective CBE implementation. This points to the need for infrastructural upgrades to align with curriculum requirements. Classroom materials recorded a mean of 2.67 (SD = 0.488), rated as *good*, suggesting that teachers in most schools had access to basic instructional resources. However, economic resources scored poorly at a mean of 1.20 (SD = 0.414), with teachers reporting difficulty in acquiring materials necessary for project-based learning, thereby limiting practical application of CBE.

The integration of ICT in teaching also scored low, with a mean of 1.30 (SD = 0.315), reflecting poor uptake in most schools. This gap restricts the development of digital literacy skills, a central pillar of CBE, and highlights the need for targeted investment in ICT infrastructure. Class sizes, with a mean of 2.00 (SD = 0.756), were rated *fair*. While some schools could facilitate group activities, large student–teacher ratios made it difficult for teachers to offer individualized support, hindering learner-centered instruction.

Conclusions

The study assessed teachers' perceptions on the availability and adequacy of instructional resources in the implementation of Competency-Based Education (CBE) in junior schools in Trans-Nzoia West Sub-County. Findings revealed that while teachers understood the value of CBE and acknowledged its role in equipping learners with critical skills, their perception of available resources was largely negative. Teachers reported that basic instructional materials were present in most schools, but infrastructural facilities, ICT integration, and economic resources were inadequate for effective implementation. Chi-Square tests confirmed statistically significant relationships between teacher perceptions of instructional and infrastructural resources and the implementation of CBE. This points out that resource adequacy directly shapes teachers' ability to adopt learner-centered strategies, integrate digital literacy, and facilitate project-based learning.

Observational data reinforced these findings, showing that facilities and technology use were rated poor to fair, while classroom materials were moderately available.

Recommendations

Based on research findings, the study recommends that:

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

ii. The ministry of education and school administration to provide economic resources necessary for effective implementation of CBE.

References

AlAbri, S., Mirza, C., Bellalem, F., and Forouzani, M. (2022). Teachers' beliefs about grammar teaching within a context of Omani Secondary schools. *English Journal, 13(2) 401-411*. https://dx.doi.org/1024093/awej/vol13no2.27

Alsarawi, A. (2019). A process, framework, and set of tools for facilitating co-planning among co-teachers. *International Journal of Whole Schooling. Vol 15(2), 1-23* https://eric.ed.gov/?id=EJ1218543

Aminga, J., Were, D., and Ashioya, I. (2020). The Teacher-Parent nexus in Competency Based education in Kenya. *International Journal of Educational Administration and Policy studies*. Vol 12(1): 60-76. https://eric.ed.gov/?id=EJ1256326

Amutabi, M. N. (2019). Competency Based Curriculum (CBC) and the end of an Era in Kenya's Education Sector and implications for Development: some Empirical Reflections. *Journal of Popular Education in Africa.* 3(10), 45-66.

Ashiru. B., and Syed. M. A. (2024). Exploration of Teachers Perceptions on Their Roles in Career Guidance among secondary schools Students career Choices. *Journal of Education, society and Behavioural Science. Vol 37(4): 44-55.* https://hal.science/hal-05083069/

Awiti, C. M. (2023). *Factors Affecting Implementation of Competency Based Curriculum of Education in Primary Schools in Nairobi City* (Doctoral dissertation, University of Nairobi). https://erepository.uonbi.ac.ke/handle/11295/167233

Awuonda, K., Jung, K. H., & Lee, J. H. (2023). Teachers' perceptions of competence-based curriculum implementation, and government support: A mixed method study on grade 1-5 teachers in Homabay County, Kenya. *Journal of Education and Practice.*

Charles, K., Song, Z., and Khaing, T. (2022). Factors affecting the implementation of Competency-based curriculum in Lower secondary schools in Uganda. https://scholar.google.com/scholar?cluster=9506418199338790112&hl=en7as-sdt.%3d4kzlmfyu7ymj.

Chepkonga, C. M. (2017). Influence of Learning Facilities on Provision of Quality Education in Early Childhood Development Centres in Kenya. *International journal of Education and Research Vol 5(2).* https://ijern.com/journal/2017/June-2017/02.pdf

Croasmun, J. and Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of adult education, v40, no1 p19-22 2011.* www.mpaea.org/publications.htm

EAC. (2014). Draft Harmonized Curriculum Structures and Framework for the East African Education. https://unpan1.un.org/intradoc/groups/public/documents/ un-dpadm/unpan039076.pdf.

Emmanuel, E., Rebecca, N., Kazaara, A. G., and Nicholas, K. (2023). The effect of job training on performance of local government employees in Uganda. *International Journal of Academic and Applied Research* Vol. 7, no. 2, 65-73. www.ijeais.org/ijaar

Esmaiel, Y. E. (2006). *Theory in practice: Constructivism and the technology of instruction in an authentic project-based computer class*. University of North Texas. https://www.proquest.com/openview/851fde98fe213ba3236d245d7c2

b2edf/1?pq-origsite=gscholar&cbl=18750&diss=y

Fennema, E., and Romberg, T. A. (Eds). (1999). Mathematics classrooms that promote understanding. ebook. https://doi.org/10432497814106026 19.

Gakuru, A. Oloisul, R. Aseno, B., and Muli, L (2024). Merits and Demerits of the Competency Based Curriculum (CBC) in Relation to Learner Friendliness in Kenya. *International Journal of Research and Innovation in Social Sciences. https://econpapers.repec.org/RePEc:bcp:journl:v:8:y:2024:i:11:p:1719-1725*

Ibrahim, R., & Aslam, R. (2025). Inadequate Facilities and their Impact on Learning: Voices of University Students in District Gwadar. *Indus Journal of Social Sciences*, *3*(2), 571-586. http://induspublishers.com/IJSS/article/view/1412

Isola, R. (2019). Concept of teaching. *Shanlax International journal of Education, Vol. 7, No. 2,2019, 5-8. Doi.org/10.34293/education.v7i2.329*

Kabita, D. N., and Lili J. (2017). The why, what and how of competency-based curriculum reforms. The Kenyan experience. *Science and Education*. In-progress Reflection No. 11, Geneva Switzerland: IBE-UNESCO.

Kamau, C. W. (2024). *Institutional Factors Influencing Implementation of Competency Based Curriculum in Public Primary Schools in Kigumo Sub-county, Murang'a County Kenya* (Doctoral dissertation, University of Nairobi). https://erepository.uonbi.ac.ke/handle/11295/167315

Karua, G. W., Manyasi. B., and Kara. A (2025). Teacher preparedness to implement competency Based Curriculum in Public Primary Schools in Kinangop Sub County, Kenya. *International Journal of scientific research and management. Vol 13(02);22-41. http://41.89.101.166:8080/handle/123456789/17604*

Kathuni, E. P. (2023). *Antecedents Of Competence Based Curriculum And Its Effective Implementation In Public Primary Schools In Tharaka Nithi County, Kenya* (Doctoral dissertation). http://41.89.236.15/xmlui/bitstrea m/handle/1/4369/Edward%20Kathuni%202nd%20Novmber%202023%20SIGNED.pdf?sequence=1&isAllowed=y

Kenya Institute of Curriculum Development (KICD) (2017). Facilitators training manual for early years education curriculum. Nairobi: Government Printers.

Kiteetu, P. M., Mwanza, R., & Kasivu, G. M. (2023). Impact of infrastructural Support on integration of ICT in curriculum implementation in public secondary schools in Makueni County-Kenya. *Journal of Research in Humanities and social science, vol 11(4)-2023; 199-205. https://repository.seku.ac.ke/handle/123456789/7264*

KNUT, (2019). Influence of teachers' preparedness on Implementation of Competency-based Curriculum in primary schools in Kenya.

Komba, C. S., and Mwandanji, M. (2015). Reflections on the implementation of competence-based curriculum in Tanzanian secondary schools. *Journal of Education and Learning vol 4(2): 73-80. https://eric.ed.gov/?id=EJ1075171*

Kwok, P. K. P. (2022). *The implementation of learner-centred pedagogy in Rwanda: Teachers as mediators* (Doctoral dissertation). https://doi.org/10.17863/CAM.83227

Madani, R. A. (2019). Analysis of Educational quality, a Goal of Education for All Policy. *Journal of Higher Education Studies,* 9(1), 100-109 2019. https://eric.ed.gov/?id=EJ1203706

Mpate, H. (2025). Biology teachers' implementation of the competence based curriculum in Tanzania: challenges and opportunities. *Journal of Biological Education*, *59*(1), 16-36. https://doi.org//10.1080/00219266.2023.2282428

Mugenda, O. M., and Mugenda, A. G. (2013). Research methods: Quantitative and Qualitative approaches. Acts Press, Nairobi. Text Book Centre.

Mwang'ombe, A. M. (2021). Competency Based Curriculum (CBC) in Kenya: Teachers understanding and skills, reality on the ground, successes, challenges and recommendations on the implementation of Competency-Based Curriculum (CBC) in the Kenyan schools. *Unpublished.*

Okello, V. (2022). *Influence of School-based Factors on Implementation of Competency-based Curriculum in Public Primary Schools in Kajiado North-sub County, Kajiado County, Kenya* (Doctoral dissertation, University of Nairobi). https://erepository.uonbi.ac.ke/handle/11295/163210

Ondimu, S. M. (2018). *Teachers' preparedness for implementation of the competency based curriculum in private pre-schools in Dagoretti North sub-county, Nairobi City County* (Doctoral dissertation, university of Nairobi). https://erepository.uonbi.ac.ke/handle/11295/104613

Ounis, T. (2017). Exploring secondary teachers' perceptions of classroom assessment in a Tunisian context. *International Journal of Language and Linguistics*, *4*(2), 116-124.

Pawar, N. (2020). Type of research and type research design. *Social Research Methodology*, *8*(1), 46-57.

Pluff, M. C., & Weiss, V. (2022). Competency-based education: The future of higher education. *New models of higher education: Unbundled, rebundled, customized, and DIY*, 200-218.

Tabaro, C. (2018). The Rwandan Secondary School Competence-Based Curriculum: Knowledge, Skills and Attitudes to Incorporate in the University of Rwanda-College of Education Programs to Align Them with the Current Curriculum. *International Journal of Education and Practice*, *6*(2), 64-75. https://eric.ed.gov/?id=EJ1210227

Tanyi, N. C. (2014). Teachers' knowledge. Understanding, ability and implementation of competence-based approach in the teaching of geography. *International Journal of Trend in scientific Research and Development. Vol 3(5), 2468-2474.*

Tejada Reyes, V. (2019). The Attitude of Teachers towards the Overpopulation of Students in EFL Classrooms at Secondary Level. *Online Submission*. https://eric.ed.gov/?id=ED597337

Thiruaine, S. K., Nzivu, E. N., and Wambiya, P. (2024). Influence of infrastructure on the implementation of CBC in Catholic Private Primary schools in the Catholic Diocese of Homabay, Kenya. *International Journal of Social and Development Concerns, vol 21(3), 32-48.*

Waigera, J. K., Mweru, M., and Ngige, L. (2020). Relationship between teacher's attitudes and the utilization of instructional materials in pre-primary schools in Kenya. *East Africa journal of education studies, 2(1), 92-104*. https://ir-library.ku.ac.ke/items/93710859-6615-4dae-ac47-cec09a7cb802

Waite-Stupiansky, S. (2022). Jean Piaget's constructivist theory of learning. In *Theories of early childhood education* (pp. 3-18). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003288077-2/jean-piaget-constructivist-theory-learning-sandra-waite-stupiansky

Wilson, G. L. (2016). Co-planning for co-teaching: time saving routines that work in inclusive classrooms. *Association for Supervision and Curriculum Development (ASD)-2016.*

Wongnaa, C.A., Boachie, W.K. Perception and adoption of competency-based training by academics in Ghana. *IJ STEM Ed 5* 52 (2018). https://doi.org/10.1186/s40594-018-0148-x