

## TEACHERS' TRAINING AND CBC PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN NAROK SOUTH SUB-COUNTY, KENYA

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### ABSTRACT

Interventions such as teaching and learning infrastructure and capacity-building initiatives have been launched to support Competency Based Curriculum (CBC). However, little is known about whether teacher training has translated into improved CBC performance in public primary schools in the area. The inadequate evidence on this linkage creates uncertainty on the effectiveness of ongoing teacher training efforts. This study therefore sought to examine how teachers' training influences the performance of CBC in public primary schools in Narok South Sub-County, Kenya. The study tested the null hypothesis ( $H_0$ ): *Teacher training has no significant influence on the performance of CBC in the Public Primary Schools in Narok South Sub County, Kenya*. Regarding methodology, pragmatism and descriptive survey research design that used a mixed approach was preferred. The target population included 160 with 9,151 parents, 1616 teachers, and 04 county education officials. Yamane 1967 scientific formula was used to arrive at a teacher and parent sample size of 321 and 383, respectively. The study then employed a simple random sampling technique during data collection using both questionnaire and interview guide. Further, a pilot study was carried out in Narok West Sub-County. Methods on analysis included descriptive statistics, correlation and regression were used. It was found that teachers training had positive correlations with CBC performance ( $r=0.310$ ,  $p<0.01$ ). Similar to correlation, regression revealed that teacher training had a positive significant relationship with CBC performance ( $\beta = 0.148$ ;  $\text{sig.} = 0.026$ ,  $p<0.05$ ). The study concludes that teacher training is a critical determinant of the performance of CBC thus it positively influenced curriculum implementation. The study recommends that teachers should participate in ongoing professional development activities such as webinars, seminars, workshops, and peer collaboration to effectively employ teaching training resources, execute competency-based assessments, and adapt to pupils' requirements.

**Key words:** Teachers' Training, Schools in Narok South Sub-County, CBC Performance, Public Primary schools

## INTRODUCTION

Education systems worldwide are undergoing major curriculum reforms that emphasize the acquisition of competencies rather than the memorization of content (Laine, 2021). Competency-based education (CBE) has become a central focus of twenty-first-century learning, aiming to cultivate practical skills, creativity, problem solving, and learner autonomy. At the global level, teacher professional development is widely recognized as the most critical driver of successful CBE implementation (Muchira et al., 2023). Without well-prepared teachers, reforms risk remaining at the policy level rather than transforming classroom practice. Recent scholarship highlights that one-off training workshops are rarely sufficient; instead, sustained professional development, mentorship, and opportunities for collaborative learning are needed to enable teachers to apply new pedagogical strategies and assessment methods effectively (Manduku & Sang, 2021). Advances in digital technology have further created new demands for teachers to build digital competencies, as hybrid and technology-enhanced learning environments increasingly characterize modern classrooms. In countries that have invested in long-term, practice-based teacher training, reforms in CBE have shown more consistent translation into improved student learning outcomes (Darling-Hammond & Hyler, 2020).

According to Ndiokubwayo et al. (2020), CBC reforms are designed to enhance learner outcomes by emphasizing skills, creativity, and problem solving. However, global experiences show that where teachers are insufficiently trained, CBC performance indicators such as learner engagement, mastery of competencies, and formative assessment outcomes remain low (Machinyise, Kasebula, & Chabu, 2023). For instance, Darling-Hammond and Hyler (2020) examined the influence of teacher professional development on curriculum reforms in the United States and established that continuous, practice-based, and collaborative training significantly improved teachers' instructional practices and learner outcomes. In Australia, Franklin (2019) investigated the effectiveness of peer coaching programs and found that such initiatives enhanced teachers' pedagogical content knowledge and improved the implementation of learner-centered instructional strategies. Similarly, Laine (2021), studying digital-based teacher training in Finland, reported that teachers who underwent targeted training were better equipped to integrate digital tools into CBC approaches, leading to improved learner engagement. Collectively, these studies underscore the centrality of teacher preparation in ensuring the success of curriculum innovations

In Africa, the performance of competency-based education has often been constrained by inadequate teacher professional development, fragmented in-service programs, and reliance on traditional pedagogies, resulting in learners failing to achieve intended competencies (Christopher, 2024; Kurasa Africa, 2025). For example, Rwigema and Andala (2022) investigated teacher-related factors influencing CBC implementation in Rwanda's public primary schools. Their findings revealed a strong positive relationship between pedagogical content knowledge, teacher perceptions, technical abilities, and CBC implementation. These results corroborated the work of Okello (2022), who found that instructional strategies and teacher preparation had a significant impact on the effective use of CBC methods in Kenya. Similarly, Ndiokubwayo et al. (2020) examined the role of sector education officers in Rwanda and established that although collaboration with teachers and administrators promoted CBC monitoring, challenges such as insufficient training, inadequate funding, and teacher resistance hindered effective implementation. These findings indicate

that while regional governments have embraced CBC, structural challenges related to teacher training and resources continue to impede performance.

In Kenya, despite heavy investment in CBC rollout since 2017, studies continue to show gaps in teacher preparedness that directly affect the performance of the curriculum. Teachers often struggle to design competence-based assessments, apply learner-centered teaching methods, and integrate CBC content into practical learning, which undermines learning outcomes (Ojung'a, 2023; Opondo, Afwande, & Kamau, 2023). This has resulted in inconsistencies in CBC performance across counties, with rural contexts most affected due to resource shortages and large class sizes (Mutembei & Nyabisi, 2023). In support, Okello (2022) found that training resource inadequacy significantly affected performance. Further, Waruingi, Mbogo, and Mambo (2022) observed that teacher training did not meet the requirements stipulated by CBC policy guidelines, thereby affecting effective curriculum delivery. Similarly, Chemagosi (2020) reported that staffing shortages and limited training opportunities undermined CBC implementation. Isaboke, Mweru, and Wambiri (2021) established that 65.9% of pre-primary teachers in Nairobi County had not received training on CBC, and those trained demonstrated a higher ability to implement the curriculum while Koskei and Chepchumba (2020) found that teacher competency, built through training, had a major impact on CBC implementation in Nakuru County.

At the county level, Narok has recognized the importance of teacher training and infrastructure development for the effective implementation of CBC. Recent county development plans have prioritized the construction of classrooms, the recruitment of teachers, and investment in learning resources to support the new curriculum (Kipkoech, Ngeno, & Makero, 2020). Development partners and non-governmental organizations have complemented these efforts by equipping teachers with skills to identify out-of-school children, provide psychosocial support, and implement learner-centered retention strategies. In Narok South Sub-County, where most schools are in rural and often marginalized areas, teachers face unique challenges such as high pupil-teacher ratios, cultural barriers, and limited access to instructional materials (Adongo, Opiyo, & Ouda, 2025). Despite ongoing efforts, there is limited empirical evidence on how teacher training directly influences CBC performance in public primary schools within this sub-county. Addressing this gap is critical for strengthening both policy and practice, as teacher training remains the most decisive factor in determining the success of curriculum reforms at the classroom level.

In Narok County, interventions such as classroom construction and capacity-building initiatives have been launched to support CBC (Kenya News Agency, 2025; UNICEF Kenya, 2024). However, little is known about whether teacher training has translated into improved CBC performance in public primary schools in Narok South Sub-County, which faces additional challenges such as pastoralist livelihoods, infrastructural limitations, and rural school settings. The lack of evidence on this linkage creates uncertainty on the effectiveness of ongoing teacher training efforts. This study therefore sought to examine how teachers' training influences the performance of CBC in public primary schools in Narok South Sub-County, Kenya. The study sought to prove the hypothesis:

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**Ho:** *Teacher training has no significant influence on the performance of CBC in the Public Primary Schools in Narok South Sub County, Kenya.*

This study is expected to make important contributions to the improvement of curriculum delivery and educational outcomes in Kenya. At the policy level, its findings shall offer evidence-based insights to the Ministry of Education and the Teachers Service Commission on the adequacy of teacher training programs in supporting the implementation of CBC.

This study is anchored on the Constructivist Learning Theory, which was advanced by Jean Piaget in the 1952 and further developed by Lev Vygotsky in the 1978. Piaget emphasized that learners construct knowledge actively through experiences and cognitive processes, while Vygotsky introduced the social dimension of constructivism by highlighting the importance of interaction, culture, and language in learning. Constructivism is an educational approach that acknowledges students' knowledge and comprehension based on their personal experiences before starting school. It argues that people build new knowledge through their experiences. Constructivism is frequently linked to instructional strategies that encourage hands-on, active learning. According to the principle, learning is best achieved through hands-on activities. Instead of being taught what will happen, learners learn by doing experiments and are free to draw their conclusions, judgments, and findings (Zajda, 2021).

Proponents of the theory including Efgivia et al. (2021) successfully used the theory and found that in a constructivist classroom, the teacher's job is to arrange the material according to broad concepts that encourage students to generate new ideas and make connections between them and their prior knowledge. Because the exercises are learner-centered, students are encouraged to conduct their investigations, formulate their hypotheses, draw their comparisons, and reach their judgments. This theory applies to research as it gives pupils the ability to gain the confidence and abilities necessary to evaluate the environment they live in, come up with solutions for problems that arise, and then use those answers to defend their words and deeds. According to this notion, the teacher serves as a facilitator, shifting the emphasis from the teacher to the student and their learning. The CBC instructor pushes the students by developing their capacity for critical thought.

Because it encourages students to find the information for themselves, this argument supports the use of CBC. It encourages educators to use a variety of approaches that allow students to make their discoveries rather than being spoon-fed information like empty vessels (Zajda, 2021). The teacher assumes the function of an expert learner, facilitating learning by constant communication and designing an environment that is flexible enough to adapt to the needs of the student at each stage of the process. This theory is pertinent to the research because it illustrates how different strategic plans impact the implementation of CBC in public primary schools located in Narok South Sub-County, Kenya.

The constructivist learning theory predicts that students actively generate knowledge by experience rather than passively absorbing it (Li & Huan, 2017). Important predictions include the following: teachers should encourage experiences rather than only impart knowledge; learning is a social and dynamic process; and prior knowledge is essential. As students connect

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new and current knowledge, this method improves their motivation, critical thinking abilities, and comprehension.

Constructivism has been adopted by many educators, but it is not devoid of its detractors. Constructivist methods have been criticized using several points. Some of the scholars who are against constructivism, such as the highly vocal. According to Li and Huan (2017), constructivism encourages a teaching approach in which students receive instructions that are either completely unguided or just somewhat directed. According to research, children are "lost and frustrated" when they receive little guidance. The organization and significance of working memory through learning are overlooked in the process of creating minimally-guided training. According to researchers like Chuang (2021), constructivist minimally-guided techniques disregard empirical research that demonstrates the ineffectiveness of unguided instructions in poor learning settings.

Despite that the theory is old, recent development/improvement have been made by various scholars. In particular, incorporating technology, practical applications, and particular teaching techniques like project-based learning are the main focusses of recent advancements in constructivist learning theory. According to research by Fernando and Marikar (2017), these improvements place an emphasis on student-centered, active learning through strategies including group projects, the use of digital technologies, and relating what is learnt to real-world issues in order to increase engagement and results. This latest development thus justifies its use in this study. The constructivist perspective is particularly suitable for this study because CBC in Kenya is designed around learner-centered principles that require teachers to shift from rote learning approaches to active facilitation. The success of this shift depends on the adequacy of teacher training to equip educators with the skills, attitudes, and strategies needed to implement constructivist practices in real classrooms. By anchoring this study in constructivist learning theory, it becomes possible to critically examine how teacher training influences the performance of CBC in public primary schools in Narok South Sub-County.

## **RESEARCH METHODOLOGY**

### **Research philosophy**

Research philosophy/paradigm includes realistic, pragmatic, interpretivist, and positivist (Tamminen & Poucher, 2020). These schools of thought stem from varying perspectives on the concept of knowledge, the way it can be obtained, and the interaction involving the investigator and the subject of the study. The study employed pragmatism philosophy. Pragmatism is concerned with addressing problems in a practical way, positivism pursues objective truth, interpretivism is concerned with subjective meaning, and realism maintains that reality exists apart from the researcher (Dube, Nkomo, & Apadile-Thokweng, 2024). The research utilized a pragmatic viewpoint. The goal of pragmatic philosophy is to solve problems in the real world. It is not dedicated to a particular perspective on reality and frequently employs mixed methods, which combine qualitative and quantitative approaches, to address research concerns. Therefore, the utilization of pragmatic paradigm was occasioned by the fact that this research basically employee a mixed research approach that helped solving the research problem.

## **Study design**

This study employed a descriptive survey research design (Bloomfield & Fisher, 2019) which was appropriate for collecting detailed information on the influence of teachers' training on the performance of CBC in public primary schools in Narok South Sub-County. The design was suitable as it enabled the collection of significant data on the implementation of strategic plans and the performance of CBC in public primary schools located in the Narok South Sub-County. It was specifically chosen because it was useful in showing the relationships between different factors. Essentially, it helped in showing the effects of strategic plan implementation on the performance of CBC.

## **Study location**

Narok South Sub-County is located in Narok County-Kenya. The Sub-County is among the six Sub-Counties in the area (Narok County). The Sub-County has six wards, all electing Members of the County Assembly (MCA) for the Narok County Assembly. According to the 2019 Census, the Sub-County has a population of 238,472 with an area of 4,577 km<sup>2</sup> and a population density of 52.10/km<sup>2</sup>. The choice of Narok South Sub-County is because it is among the underprivileged regions dealing with particular difficulties including implementation and performance of CBC.

## **Target population and sampling framework**

Target population consisted of 1,616 teachers drawn from 160 public primary schools in Narok South Sub-County. From this population, a sample size of 321 teachers was determined using Yamane's (1967) formula at a 95% confidence level and a 5% margin of error. To ensure representativeness, simple random sampling was used to draw respondents, giving each teacher an equal chance of participation (Noor, Tajik, & Golzar, 2022).

## **Pilot study**

A pilot study was conducted in Narok West Sub-County, which was not part of the actual study area, to pre-test the research instruments. The pilot study was useful in identifying ambiguous questions and checking the consistency of responses. The results informed necessary revisions to enhance the clarity and accuracy of the instruments.

## **Validity and reliability**

To ensure validity, both content and construct validity were assessed. Content validity was achieved through expert review by academic supervisors and curriculum specialists, who ensured that the items in the questionnaire adequately covered the study objectives and variables under investigation (Clark & Watson, 2019). Construct validity was tested by aligning the questionnaire items with the theoretical constructs and indicators of teacher training and CBC performance, ensuring that the measures accurately represented the concepts. Reliability of the research

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instruments was determined using Cronbach's Alpha coefficient. The pilot data were analyzed to check the internal consistency of the questionnaire items. A Cronbach's Alpha value of 0.7 and above was considered acceptable, in line with the threshold recommended by Bujang, Omar, & Baharum, 2018).

## **Data collection tools and procedures**

The study used a structured questionnaire and interview guide. A questionnaire was used to collect data from the teachers. The questionnaire was structured on a five-point Likert scale of 1-5 (where 1 meant strongly disagree, 2 meant disagree, 3 implied not sure, 4 stood for agreed while 5 meant strongly agree). The questionnaire was used in this study since it was cost-effective and quickly collected a huge amount of data from a large sample size. Additionally, because it was confidential hence participants were allowed to answer without hindrance or compulsion from other parties. The study used drop and pick later method during data collection through questionnaire. Concerning the interview guide, the instrument was used to gather data from parents and local education officials. Respondents' responses were not limited because the interview guide won't be structured. According to the goals of the research, the interview guide included a variety of questions. The interview guide was used in the study since it could obtain more information from the participants than a structured questionnaire, which was inherently restricted. As opposed to questionnaire, the study utilized face to face interview method during data gathering using interviews.

## **Data analysis**

Quantitative data were analyzed using descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize the responses (Cooksey, 2020). Inferential statistics were used to test the relationship between teachers' training and CBC performance. The findings were presented in tables and figures to facilitate easy interpretation and discussion. Meanwhile, qualitative data was analyzed using thematic analysis that was specifically based on presentation of data from the field based on various themes captured in the interview guide.

The regression model used was:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y = Performance of CBC

$\beta_0$  = Constant

$\beta_1$  = Coefficient of teachers' training

$X_1$  = Teachers' training

$\varepsilon$  = Error term

### **Ethical considerations**

The study adhered to the principles of ethical research to protect the rights and welfare of participants. Approval to conduct the study was sought from relevant educational authorities. Informed consent was obtained from all participants after explaining the purpose, procedures, and their right to withdraw from the study at any point without penalty. Confidentiality was maintained by ensuring that no names or identifying details were included in the research instruments or final report. Participation was voluntary, and the data collected were used solely for academic purposes.

## **RESULTS**

### **Response Rate**

A total of 321 questionnaires were distributed to teachers in public primary schools in Narok South Sub-County. Out of these, 227 were correctly filled and returned, representing a response rate of 70.72% as presented in Table 1 below. The response rate is adequate is supported by Mugenda and Mugenda (2019).

**Table 1: Response Rate of Questionnaires**

<b>Questionnaires Distributed</b>	<b>Questionnaires Returned</b>	<b>Response Rate (%)</b>
321	227	70.72

According to Mugenda and Mugenda (2019), a response rate of at least 50% is considered adequate for data analysis and reporting in social science research. The achieved response rate was therefore sufficient to allow for meaningful statistical analysis and to ensure the reliability of the findings

### **Descriptive Statistics Results for Teacher Training**

The study sought to determine the influence of teacher training on the performance of Competency-Based Curriculum (CBC). Respondents were asked to indicate their level of agreement with a set of statements related to teacher training and professional development.

**Table 2: Influence of Teacher Training on the Performance of CBC**

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Statement	Strongly Disagree (%)	Disagree (%)	Not sure (%)	Agree (%)	Strongly Agree (%)	Mean	SD
The school regularly organizes ongoing training programs for all teaching staff	7.9	17.6	4.4	44.9	25.1	3.62	1.254
During training on CBC, training resources are always available	5.7	8.8	6.6	49.8	29.1	3.88	1.102
The school usually subjects facilitators to induction via workshops organized by education stakeholders	6.6	12.8	10.6	42.7	27.3	3.71	1.187
The school ensures that the teaching staff are exposed to regular seminars organized by TSC on CBC	5.3	13.7	3.1	33.0	44.9	3.99	1.228
The training we receive has enhanced our efforts toward CBC implementation	1.3	3.1	2.2	38.8	54.6	4.42	0.797
<b>Overall Mean and SD</b>						<b>3.92</b>	<b>1.114</b>

As presented in Table 2 above, most respondents agreed that teacher training positively influenced CBC implementation. For instance, the statement that schools regularly organize ongoing training programs for teaching staff had a mean of 3.62 and a standard deviation of 1.254, indicating moderate agreement with some variation in responses. Similarly, the availability of training resources during CBC training sessions recorded a mean of 3.88 and a standard deviation of 1.102, suggesting a relatively high level of agreement with less variability.

The induction of facilitators through workshops organized by education stakeholders had a mean of 3.71 and a standard deviation of 1.187, while the exposure of teaching staff to regular TSC-organized seminars on CBC scored a mean of 3.99 and a standard deviation of 1.228. Both findings show a consistent perception that such initiatives support CBC performance.

The highest agreement was observed on the statement that the training received has enhanced teachers' efforts toward CBC implementation, with a mean of 4.42 and a standard deviation of 0.797, showing strong consensus among respondents.

Overall, the composite mean of 3.92 with a standard deviation of 1.114 suggests that teacher training significantly contributes to the effective implementation of CBC, with responses clustering around agreement. The findings reveal that teacher training plays a critical role in enhancing the performance of CBC in public primary schools. The consistently high mean scores

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demonstrate that teachers recognize the value of continuous training, seminars, and workshops in building their competence for CBC delivery. The relatively low standard deviation in most items indicates that teachers shared similar views, especially on the effectiveness of training in improving CBC implementation.

**Qualitative Results on Teacher Training**

Regarding the influence of teachers training on the performance of CBC, the study asked education officials to state specific CBC training measures teachers in public primary schools in Narok South Sub County are subjected to. In particular, EO1 reported that *“Education ministry coordinates these seminars with teacher training facilities and county education administrations. As education officials, we seek to acquaint teachers with the goals, tenets, and structure of CBC as well as how it is used in the classroom. In particular, these workshops are typically conducted regularly to offer refresher lessons and new information on CBC implementation, particularly at the start of every academic year”*.

The second EO2 indicated that... *“Teachers from nearby schools gather for cluster-based exercises, which are frequently attended by teachers in Narok South-Sub-County. These clusters enable targeted training and discussions on particular CBC topics, such as lesson design, assessment techniques, and the usage of relevant teaching and learning resources. Specifically, as education officials, we ensure that students' competency development, formative and summative evaluations, and individualized learning strategies are frequently covered in the training”*.

Additionally, EO3 reported that.... *“Induction workshops are conducted nationwide for new facilitators and those who are yet to receive sufficient training on CBC. The goal of these initiatives is to give a thorough overview of the CBC framework under the direction of KICD alongside other education stakeholders....we normally ensure that induction workshops cover topics such as how to properly assess and monitor student progress, how to promote the use of competencies, and an outline of the curriculum design”*.

**Performance of CBC**

Concerning the dependent variable, the research sought to establish the performance of CBC in Narok South Sub-County using various items. The results explicitly shown in Table 3.

Table 3: Performance of CBC

	Strongly disagree %	Disagree (%)	Not sure (%)	Agree (%)	Strongly agree (%)	Mean	Std. Dev
I have realized that increased learner focus on tasks I provide	5.7	12.3	2.6	53.7	25.6	3.81	1.123
I have noticed improved learners' competencies in skills and knowledge	5.3	9.7	9.3	41.4	34.4	3.90	1.138
I have enough teaching and learning resources for my learners	30.0	43.2	4.4	7.5	15.0	2.34	1.372

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I have witnessed improved digital literacy	20.7	60.4	2.6	9.3	7.0	2.22	1.094
My competencies in CBC implementation have improved due to TSC training support	5.7	11.9	8.4	56.4	17.6	3.68	1.075
<b>Composite mean/Std. Dev</b>						<b>3.19</b>	<b>1.160</b>

As reported in Table 3, performance of CBC was generally good as pointed out by an overall mean of 3.19 and Std. Dev of 1.160. Particularly, most teachers indicated that they have realized increased learner focus on tasks they provide as indicated by 79.3% who agreed with a mean of 3.81. It was also revealed that 75.8% of the teachers agreed that they have noticed improved learners’ competencies in skills and knowledge (mean, 3.90). Again, it established that most teachers were in disagreement with the statement that they have enough teaching and learning resources for learners as reported by 73.2% (mean, 2.34). This means resources were inadequate. Moreover, this research found that 81.1% of the respondents disagreed that teachers have witnessed improved digital literacy and skills (mean, 2.22). The lack of improvement in digital literacy could be attributed to the inadequacy of teaching and learning resources such as computer labs. Lastly, it was found that teachers’ competencies in CBC implementation have improved due to TSC training support as indicated by 73.0% of the respondents who agreed (mean, 3.68).

**Correlation Analysis**

The study sought to establish the relationship between teacher training and the performance of the CBC in public primary schools in Narok South Sub-County. Pearson’s correlation coefficient was used to determine the strength and direction of this relationship. The results are presented in Table 4.

**Table 4: Correlation between Teacher Training and Performance of CBC**

<b>Variable</b>	<b>Teacher Training</b>	<b>Performance of CBC</b>
Teacher Training	1	0.774**
Performance of CBC	0.774**	1

**Note: Correlation is significant at the 0.01 level (2-tailed).**

The results in Table 4 indicate that there is a strong positive and statistically significant correlation between teacher training and the performance of CBC ( $r = 0.774, p < 0.01$ ). This implies that improvements in teacher training are associated with enhanced performance of CBC in public primary schools. The high correlation coefficient suggests that teacher training plays a critical role in equipping teachers with the necessary skills, knowledge, and competencies required for successful CBC implementation.

### Diagnostic Tests

To test for the assumption of regression, the study used various diagnostic tests. Specifically, multicollinearity, heteroscedasticity, and normality were used and the results are presented in Table 5.

Table 5: Diagnostic Tests

	Normality	Multicollinearity		Heteroscedasticity	
	Sig.	Tolerance	VIF	t	Sig
CBC performance	0.431				
Teacher training	0.631	0.292	1.453	0.208	1.253

In Table 5, CBC performance and teacher training had a normality significance of 0.431 and 0.631, in that order. From the normality test, it can be said that data was normally distributed since all variables have their sig. >0.05. Concerning multicollinearity, the tolerance value for training was 0.292 whilst VIF was 1.453. Based on the multicollinearity results, the VIF value is <10 and >1 whereas tolerance value was >0.1 thus an indication that multicollinearity was not present. On heteroscedasticity, teacher training reported t-statistics significant values of 1.253. The results mean that instances of heteroscedasticity were absent.

### Regression Analysis

A regression analysis was conducted to determine the extent to which teacher training predicts the performance of CBC in public primary schools in Narok South Sub-County.

### Model Summary

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.774	0.599	0.597	0.705

The results in Table 6 show that teacher training has a strong relationship with the performance of CBC, with a correlation coefficient (R) of 0.774. The coefficient of determination (R Square) is 0.599, indicating that teacher training explains approximately 59.9% of the variation in the performance of CBC. The adjusted R Square (0.597) confirms the robustness of the model, suggesting that teacher training is a significant predictor of CBC performance. The standard error of the estimate (0.705) shows the average deviation of observed values from the regression line, indicating a good model fit.

### Analysis of Variance (ANOVA)

To determine whether the overall regression model was a good fit for the data, an Analysis of Variance (ANOVA) was carried out. ANOVA tests the null hypothesis that teacher training does not significantly predict the performance of CBC in public primary schools. The results are presented in Table 7.

**Table 7: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	85.324	1	85.324	171.78	0.000
Residual	57.012	225	0.253		
Total	142.336	226			

The ANOVA results in Table 7 reveal that the regression model was statistically significant ( $F = 171.78, p < 0.05$ ). This indicates that teacher training significantly predicts the performance of CBC in public primary schools in Narok South Sub-County. The p-value of 0.000 ( $p < 0.05$ ) confirms that the model provides a good fit and that teacher training plays a vital role in explaining the observed variance in CBC performance.

### Regression Coefficients

To assess the specific contribution of teacher training to the performance of CBC, a regression coefficients analysis was conducted. This analysis provides estimates of the regression equation and tests whether teacher training significantly predicts CBC performance. The results are presented in Table 8.

**Table 8: Regression Coefficients**

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	2.476	0.214	–	11.57	0.000
Teacher Training	0.148	0.011	0.774	13.11	0.000

The regression results in Table 8 show that teacher training has a positive and statistically significant effect on the performance of CBC ( $\beta = 0.148, t = 13.11, p < 0.05$ ). This implies that a one-unit increase in teacher training is associated with a 0.148 increase in CBC performance, holding other factors constant. The standardized coefficient (Beta = 0.774) further confirms that teacher training is a strong predictor of CBC performance in public primary schools in Narok

#### **4.6 Hypothesis Test**

The study tested the following hypothesis:*H<sub>0</sub>: Teacher training has no significant influence on the performance of CBC in public primary*

The regression coefficient for teacher training was  $\beta = 0.148$ ,  $t = 13.11$ ,  $p < 0.001$ . The F-test for overall model significance was  $F(1, 225) = 171.78$ ,  $p < 0.001$ . The test indicate that teacher training significantly predicts CBC performance. Based on the regression analyses, teacher training has a strong, positive, and statistically significant influence on the performance of CBC in public primary schools in Narok South Sub-County. The null hypothesis was therefore rejected in favor of the alternative.

### **DISCUSSION**

The study revealed that teachers were subjected to training. It was further established that the schools regularly organize ongoing training programs for all teaching staff. However, in a study by Korir et al. (2023) found that teachers' proficiency with CBC methods of instruction and learning and their ability to analyze and evaluate students' progress were lacking due to insufficient training. The study also revealed that during training on CBC, training resources are always available. In congruence, Okello (2022) found that training resource inadequacy derailed CBC. Further, respondents were in agreement that the schools usually subject facilitators to induction via workshops organized by education stakeholders. In yet another research, Waruingi et al. (2022) revealed teacher training program did not meet the requirements as stipulated by CBC policy guidelines hence affecting performance. It was again revealed that the schools ensure that the teaching staff are exposed to regular seminars organized by TSC on CBC. In concurrence, Koskei and Chepchumba (2020) showed that the competency of the teachers via seminars and workshops had a major impact on how CBC was implemented. Again, the study found that training teachers receive enhanced their effort towards CBC implementation. In agreement, Isaboke et al. (2021) showed that teachers were trained and had good knowledge in CBC implementation.

Via correlation, it was found that teachers training had positive correlations with CBC performance ( $r=0.310$ ,  $p<0.01$ ). Waruingi et al. (2022) revealed increasing teacher training program increased CBC performance. Similar to correlation, regression revealed that teacher training had a positive significant relationship with CBC performance ( $\beta = 0.148$ ;  $\text{sig.} = 0.026$ ,  $p<0.05$ ). Wamuyu (2020) found that CBC was positively impacted by the training practices of public primary schools.

### **CONCLUSIONS**

The study concludes that teacher training is a critical determinant of the performance of CBC in public primary schools in Narok South Sub-County. Continuous professional development, workshops, and seminars provided by education stakeholders and the Teachers Service Commission enhance teachers' competencies and positively influence curriculum implementation. The significant correlation and regression results indicate that strengthening teacher training can lead to substantial improvements in the performance of CBC.

## **RECOMMENDATIONS**

The study recommends that teachers should participate in ongoing professional development activities such as webinars, seminars, workshops, and peer collaboration to effectively employ teaching training resources, execute competency-based assessments, and adapt to pupils' requirements. To achieve this, adequate resources towards training must be availed by national government in conjunction with county government to enhance an all-inclusive training for teachers. Teachers who have received training in both conventional and cutting-edge approaches to CBC strategic plan implementation are better able to assist students in developing their competencies and consequently, improved CBC performance.

### **Recommendation for Further Research**

For further research, future studies should examine the long-term impact of teacher training on student outcomes under the CBC to establish causal links between training and learner performance in Kenya. Studies across different counties or regions would provide broader insights into the contextual variations affecting the effectiveness of teacher training in CBC implementation.

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