

INFLUENCE OF SCHOOL SUPPORT SYSTEMS ON THE IMPLEMENTATION OF THE COMPETENCY-BASED CURRICULUM IN JUNIOR SECONDARY SCHOOLS IN KILIFI COUNTY, KENYA

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ABSTRACT

Implementation of the Competency-Based Curriculum (CBC) has been identified as one of the major changes implemented in the Kenyan education system, aiming at enhancing the learners' competencies, skills, and learner-centered teaching. While there has been much government input in the reforming of the curriculum in terms of finance and resources, differences exist in the efficiency of the implementation of the CBC among the Junior Secondary Schools (JSS) in terms of school-based support systems. Differences in the level of teachers' professional development, stakeholder involvement, and availability of learning materials are some of the factors influencing the implementation of the curriculum. However, little is known about their combined effects in Kilifi County. The research sought to evaluate the effects of school support systems in the implementation of CBC in JSS in Kilifi County, Kenya. In particular, the study assessed the effect of teacher training, stakeholder participation, and learning materials on CBC implementation. The study used descriptive design whereby the main respondents were teachers, school administrators, and governance stakeholders in public Junior Secondary Schools in Kilifi County. Using Yamane formula, a total of 183 respondents were randomly selected using stratified random sampling method from a total of 1,750 respondents. Data collection was done through semi-structured questionnaires that underwent validity and reliability testing. Analysis of quantitative data was done through descriptive statistics, Pearson correlation analysis and multiple regression analysis through SPSS version 26. Results indicated that teacher professional development, stakeholder participation and learning resources had statistically significant influence on the implementation of CBC. Teacher professional development was found to have the highest influence on CBC implementation compared to stakeholder participation and learning resources. The study suggests that the following are necessary for the success of CBC in JSS. These include the need for improved continuous teacher professional development, improved collaboration among stakeholders, and the need for increased availability of instructional and ICT resources. The recommendations of this study include that there should be institutionalization of continuous professional development programs, improved collaborative school governance, and increased investment in instructional resources.

Keywords: Competency-Based Curriculum, School Support Systems, Teacher Professional Training, Stakeholder Involvement, Learning Resources, Junior Secondary Schools, Kilifi County, Kenya.

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INTRODUCTION

The implementation of the CBC has come out as a very effective educational reform strategy through which the quality and relevance of education systems can be improved across the world. While conventional content-based curricula concentrate on mastering specific pieces of information, CBE stresses the development of competencies such as the ability to acquire practical knowledge, think critically, solve problems, create, communicate effectively, and learn throughout life (Leijen et al., 2021). Due to the changes that the global economy, technology, and the job market bring about, education systems across the globe have adopted learner-centred curriculums that ensure that learners develop the competencies needed in the modern world rather than just learn theoretical content (Schipper et al., 2020). The success of curriculums' implementation is thus very important.

Globally, countries have employed various approaches towards improving the delivery of competency-based curricula using institutional support mechanisms that enhance the delivery of the curricula. Countries such as Finland, Singapore, Canada, and Australia have heavily invested in the continuous professional development of their teachers, collaboration among stakeholders, and provision of sufficient learning resources to promote the success of their curriculum reforms (Niemi, 2020; Campbell et al., 2020; Tan et al., 2021; Lingard et al., 2021). It is acknowledged by these nations that curriculum reforms can only be successful not just through the policy-making process, but through effective institutional support which would help their teachers deliver curriculum goals in their classrooms. Continuous professional development will ensure teachers are well-equipped with proper pedagogical skills.

In African countries, there have been attempts to adopt a competency-based approach to education as a strategy for improving educational quality and addressing problems of employability among graduates through education reforms. In Rwanda, Ghana, Uganda, and South Africa, there have been curriculum reforms where competency-based curriculum reforms have been adopted alongside measures meant to develop teaching capacity, stakeholder engagement, and learning resources (Nsengimana et al., 2022; Boadu et al., 2023; Kizza et al., 2024). However, despite the reforms, many education systems face challenges related to curriculum implementation because of problems of lack of teacher preparedness, instructional materials, institutional capacity, and stakeholder engagement.

In Kenya, education reforms have also been made through the CBC, which has been brought about under the Basic Education Curriculum Framework. CBC tries to revolutionize learning and teaching through competency development, a learning-centered approach, formative assessment, and application of knowledge in real-life situations (Akala, 2021). It is evident that the introduction of JSS is a very important step in the process of implementing the curriculum as the teachers will need to use different ways of teaching, assess competencies, adopt learner-centered strategies while at the same time helping learners transition from primary education. In efforts to ensure successful implementation of the curriculum, the Government of Kenya has ensured that teacher trainings, orientation programs for the curriculum, instructional materials, and policies are put in place (Waweru, 2020). Despite this effort by the government, there are significant differences in the readiness of teachers, involvement of stakeholders, and instructional materials.

Kilifi County represents a unique setting when it comes to the implementation of the CBC due to the existence of different social, infrastructure and organizational characteristics of the Public JSS in the area. The factors such as professional competence of teachers, resource availability, participation of the stakeholders and availability of the information and communication technology infrastructure still affect the process of curriculum implementation in the region. Though a number of institutions have been able to benefit from various government assistance programs, the disparities in organizational systems, especially as regards to professional development, stakeholder participation and ICT availability persist.

Although there has been increased academic interest in competency-based education in Kenya, the current research on the topic has focused on aspects such as preparation of teachers for the new curriculum, readiness

of the curriculum, obstacles in the implementation process at an institutional level, or even the experiences during implementation from a national level point of view. There is little empirical literature about the effect of support systems in schools on the implementation of the CBC in JSS, especially in Kilifi County.

The current study aimed at filling this gap by analyzing the effects of school support mechanisms on CBC curriculum implementation in JSS in Kilifi County, Kenya. In particular, the study focused on the effects of teachers' professional training, stakeholders' participation, and learning materials on curriculum implementation. The results of the study add to existing literature on competency-based education through providing empirical data based on the specific context of Kenyan public JSS.

Statement of the Problem

It is anticipated that the introduction of CBC is believed to enhance the quality of education through provision of learners with practical skills, critical thinking, creativity, communication, and value education necessary for lifelong learning and national development (Akala, 2021). The success of this educational initiative is greatly dependent on having effective school supports for curriculum delivery through properly prepared teachers, involvement of stakeholders, and adequate learning materials. Past research has shown that support structures in institutions contribute greatly towards improvement of teaching and learning practices and the implementation of curriculum (Darling-Hammond et al., 2020; Leithwood et al., 2020).

However, despite the efforts taken through various government interventions such as continuous professional development of teachers, curricula orientations, provision of learning materials, and policies to aid the implementation of CBC, there still are inequalities in the implementation of the curriculum in JSS in Kenya. Literature suggests that some of the challenges that have been experienced by some of the schools include unpreparedness of teachers, low participation of stakeholders, lack of adequate instructional and ICT facilities among others. The challenges mentioned above are mainly faced in those counties which are distinguished by diversity in educational infrastructure and socio-economic background such as Kilifi County.

Though a number of empirical studies have investigated teacher preparedness, curriculum readiness, availability of instructional materials, and difficulties related to the CBC implementation process in Kenya, there is scarce scholarship about the effect of the cumulative support from schools on the implementation of the CBC in JSS. The majority of previous studies have looked at individual elements such as professional development for teachers, stakeholder participation, or learning resources without much regard to their collective impact on the curriculum implementation process.

There is therefore not much empirical information on the level of impact of teacher professional training, stakeholder participation, and learning resources on the implementation of the CBC in JSS in Kilifi County. Lack of such information makes it difficult for the relevant stakeholders to develop evidence-based strategies for strengthening support systems within institutions in order to facilitate implementation of the curriculum. Hence, this study sought to explore the influence of school support systems on the implementation of the CBC in JSS in Kilifi County, Kenya.

LITERATURE REVIEW

In this section, the literature review related to the theories and evidence will be presented. The literature review will address how the theories explain the impact of institutional support systems on the curriculum implementation process. The empirical literature will be discussed in reference to the implementation of the CBC curriculum.

Theoretical Framework

The research was based on three theoretical perspectives that discuss the significance of institutional infrastructure for curriculum implementation. According to the Institutional Theory proposed by Meyer and Rowan (1977), organizations become more legitimate and efficient if they adopt existing policies, norms, and

institutional requirements. In the sphere of education, implementation of curriculum reforms is contingent upon the degree of structural, pedagogical, and governance practices conformity to national education policy. The theory explains why the introduction of curricula is facilitated through professional teachers' training, institutional leadership and adherence to CBC policy requirements. Nevertheless, the theory assumes a homogeneous organizational response to institutional pressure, which does not take into account differences in the institutional environment, for example, differences in school resources.

Social capital theory is a framework proposed by Coleman (1988) that stresses the significance of networks, cooperation, trust and reciprocity in fostering the performance of organizations. The theory implies that reforms are likely to be successful if there is a collaboration between the school, parents, BoM teachers, and community members in facilitating the process of learning. In JSS, stakeholder participation helps in building better communication, resource acquisition, accountability, and joint ownership of curriculum reform. However, the theory ignores the structural obstacles to stakeholder participation even if there are structures for cooperation.

Resource-Based View (RBV), introduced by Barney (1991), is a management model that asserts that organizations' performance relies on access and efficient use of resources in the organization. Within educational organizations, some of the resources include quality teachers, learning materials, ICT resources, and other facilities needed for effective delivery of the curricula. According to the theory, schools that have sufficient quality resources are able to implement any reforms in the curricula. This theory concentrates more on internal resources and pays little attention to external environment aspects, such as governmental funding, difficulties in implementing the policies, and socio-economic issues.

These theories together present a complete theory for the role of school support systems in implementing the CBC successfully. The Institutional Theory helps understand policy alignment and institutional readiness, the Social Capital Theory focuses on stakeholder cooperation and responsibility while the Resource Based Theory points to the critical role of human and physical resources for successful implementation. Together these theories explain comprehensively how professional training of teachers, stakeholder cooperation, and availability of learning resources facilitate implementation of the CBC in JSS in Kilifi County.

Empirical Literature

Teacher Professional Training and Implementation of the Competency-Based Curriculum

Teacher professional training for teachers is well understood to be an essential factor in successful curriculum implementation since such a program enables teachers to acquire the knowledge and skills necessary for implementing a learner-centered curriculum. Darling-Hammond, Hyler, and Gardner (2020) conducted a systematic review in the United States to understand the features of effective professional development programs. The review concluded that professional development characterized by sustainability, content focus, collaboration, and being based on practice considerably enhanced teachers' instruction and learner performance. Nevertheless, the review was generally focused on the improvements of instruction and did not consider competency-based curriculum implementation in secondary schools.

Desimone and Garet (2019) explored the impact of content-based professional development on the instructional practice in the classroom by conducting surveys among teachers in the United States. It was shown that participating in structured professional development had a positive impact on the instructional practice of teachers. Nonetheless, this research focused on improving instruction rather than implementing curriculum.

Nsengimana et al., 2022 investigated factors affecting the adoption of CBC in secondary schools in Rwanda. The study conducted through questionnaires and interviews found out that lack of adequate preparation among teachers and in-service training had hampered the adoption of competency-based teaching methods. Although

the study identified the need for teacher preparedness, professional training was considered together with other institutional factors, hence the difficulty of measuring its independent effect on curriculum adoption.

Adu & Ngibe (2021) examined the impact of teacher professional development on curriculum reforms implementation in South African secondary schools. The results showed that teachers participating in teacher professional development programs showed improved instructional skills and confidence in implementing curriculum reforms. Nevertheless, the research mainly focused on training participation but not on the adequacy and quality of professional development programs.

Akala (2021) examined the teachers' preparedness for CBC implementation through qualitative interviews and documents analysis in Kenya. The results showed that there were variations in teacher training and inadequate pedagogical preparedness was noted as one of the barriers to successful curriculum implementation. Likewise, Ochieng and Omondi (2022) confirmed that capacity building of teachers considerably improved curriculum delivery and CBAs in the public secondary schools. Nonetheless, both studies mainly considered the teacher preparedness issues but failed to cover other aspects of professional development of JSS.

Stakeholder Involvement and Implementation of the Competency-Based Curriculum

Stakeholder involvement is a crucial institution arrangement that enhances successful curriculum implementation. School administrators, Boards of Management, parents, teachers, and local community members are some of the educational stakeholders who play a role in curriculum implementation through decision-making, mobilizing resources, policy support, and institutional accountability. Epstein & Sheldon (2019) studied the role of school-family-community partnerships in the USA and found out that stakeholder participation greatly enhanced the process of implementing improvements in schools. Effective schools with active parent participation and collaboration in governance were institutions that implemented their programs successfully. Nevertheless, the study focused on school improvement in general and not competency-based curriculum implementation.

Leithwood, Harris & Hopkins (2020) carried out an empirical investigation into distributed leadership and cooperation among stakeholders in Canadian schools. It was found out that collaborative leadership models contributed to increased institutional capability, higher levels of teachers' motivation, and better realization of educational reforms. Still, this research was concentrated mainly on leadership practices.

Within Africa, Boadu et al., (2023) assessed the implementation of reforms associated with competency-based education within Ghana, discovering that low stakeholder involvement negatively affected the confidence of teachers and hindered the implementation of learner-centered approaches to instruction. Similarly, Kizza et al., (2024) indicated that low collaboration between schools, parents, and education authorities impeded curriculum implementation in Uganda.

In Kenya, Waweru (2020) indicated that for the CBC to be successfully implemented, there has to be collaboration among the school administrators, parents, and BoM. In addition, Opondo (2023) found out that schools that exhibit efficient stakeholder collaboration had more smooth curriculum implementation compared to schools with poor governance structures. Nevertheless, these studies have focused on the problems of curriculum implementation without looking at stakeholder collaboration as an independent variable.

Learning Resources and Implementation of the Competency-Based Curriculum

The availability of sufficient learning resources is necessary for effective use of competency-based education due to the requirement of learner-centered education to have adequate instructional material, technology, laboratory, books, and classroom facilities. The sufficiency of the resources provides an opportunity to the teachers to develop new strategies of teaching, carry out competency-based assessments and make the learning process interesting to facilitate competency acquisition. Gudmundsdottir & Hatlevik (2020) researched digital technologies in competency-based education and realized that the adequacy of ICT

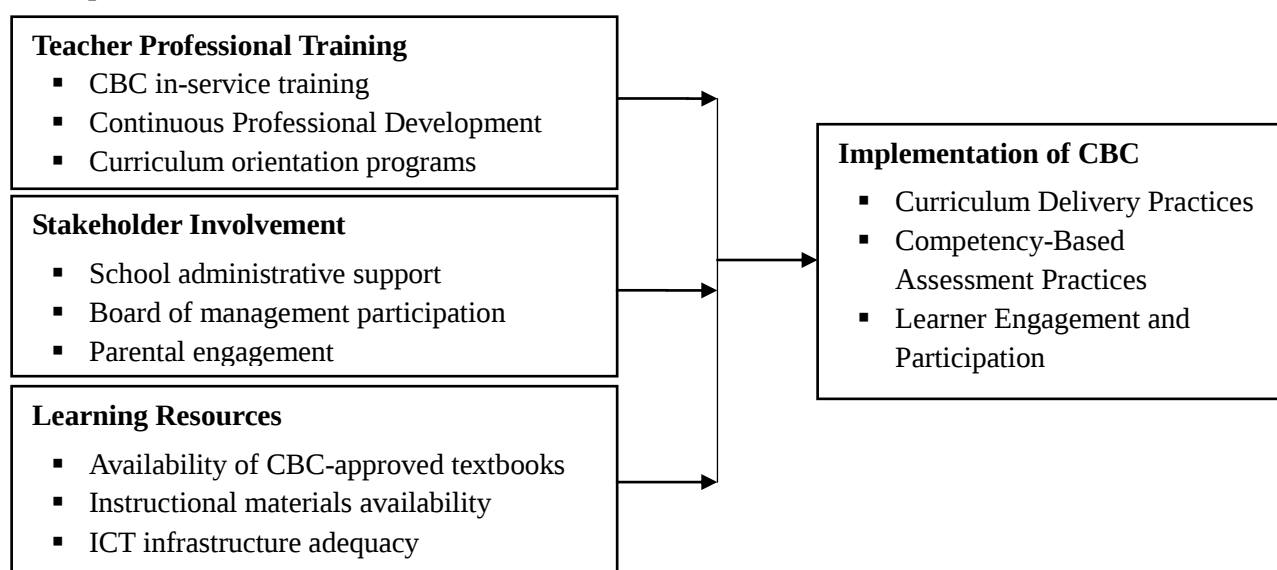
technology has greatly contributed to improvement in teaching, learners' engagement and assessments. However, the study mainly concentrated on ICT integration in developed educational systems.

Tadesse and Muluye (2022) examined the availability of instructional resources and curriculum implementation in secondary schools in Ethiopia. It was discovered that the presence of enough textbooks, laboratories, and learning materials greatly improved the quality of instruction and learner performance. Nonetheless, the study focused on the implementation of the general curriculum and did not consider competency-based education.

In Ghana, Boateng et al ,(2021) found that ICTs were vital in improving the quality of teaching and helping learners to comprehend complex topics taught. However, the lack of ICT infrastructure and teachers' skills hindered their effective use. Likewise, Mungai and Nyaga (2022) reported that digital learning technologies improved learner engagement in Kenyan TVET institutions despite the insufficient technological infrastructure.

However, in the context of Kenya, Kailo and Njagi (2025) revealed that provision of instructional materials had a substantial impact on the implementation of the CBC during teacher education programmes. In the same manner, Mwita (2025) observed that ICT facilities positively impacted the teachers' implementation of the competency-based teaching approaches in JSS. However, while these studies provide useful information, there have been few attempts at looking at learning resources collectively.

Conceptual Framework



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework Source: (Researcher, 2026)

METHODOLOGY

Descriptive research design was chosen for this study since it was suitable for investigating the impact of the school support systems on CBC implementation among JSS in Kilifi County, Kenya under natural settings. The design helped to collect quantitative information to find out the connection between teacher professional training, stakeholder participation, learning materials and CBC implementation. The targeted respondents amounted to 1,750 people sampled from 250 public JSS in Kilifi County. The respondents were JSS teachers, head teachers, curriculum support officers and chairpersons of boards of management involved in CBC implementation. From the total number of 1,750 respondents a sample of 183 respondents was selected by using Yamane's (1967) formula at 7% level of accuracy.

Primary data were obtained from the use of structured questionnaires distributed to the selected respondents. The research tool was put through an expert evaluation to measure content validity of the tool while reliability was measured by conducting a pilot test in public Junior Secondary Schools other than those in the study area. All Cronbach's alpha values of all the constructs of the study were above the required level of 0.70.

The quantitative data was then analyzed using SPSS Version 26. Descriptive statistics such as frequencies, percentages, means, and standard deviation were used to analyze the data. Pearson's correlation analysis was done to measure the relationships between teacher professional training, stakeholder involvement, learning resources, and CBC implementation. Further analysis using multiple regression was carried out to determine the extent to which the independent variables predict CBC implementation. The results of the study are presented in tables with concise narrative discussions.

RESULTS AND DISCUSSION

The results obtained from the research on the effect of school support systems on the adoption of the CBC program in JSS in Kilifi County, Kenya, are outlined in this section. The results are presented according to the objectives of the research. Survey respondents were asked to provide their opinions about various issues concerning teacher professional training, participation of stakeholders, learning materials, and the CBC implementation process on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Teacher Professional Training and Implementation of the Competency-Based Curriculum

The first objective was to evaluate the effect that teacher professional training had on the introduction of CBC in JSS in Kilifi County, Kenya. The respondents were expected to express the extent to which they agreed with certain statements about teacher professional training using a five-point Likert scale. The results are shown in Table 1.

Table 1: Descriptive Statistics on Teacher Professional Training (n = 180)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
Adequate CBC in-service training to effectively implement the curriculum has been done.	12 (6.7%)	18 (10.0%)	30 (16.7%)	82 (45.6%)	38 (21.1%)	3.64	1.07
Attendance of CBC in-service training improved competence in competency-based instruction.	8 (4.4%)	15 (8.3%)	28 (15.6%)	88 (48.9%)	41 (22.8%)	3.77	1.00
The school provides ongoing Continuous Professional Development (CPD) programs to support CBC implementation.	14 (7.8%)	22 (12.2%)	36 (20.0%)	72 (40.0%)	36 (20.0%)	3.52	1.13
Continuous professional development activities have strengthened the ability to deliver CBC effectively.	10 (5.6%)	17 (9.4%)	33 (18.3%)	80 (44.4%)	40 (22.2%)	3.68	1.05
Sufficient curriculum orientation was provided before CBC implementation at the Junior Secondary level.	16 (8.9%)	24 (13.3%)	34 (18.9%)	70 (38.9%)	36 (20.0%)	3.47	1.18
Curriculum orientation programs clarified CBC structure, content, and assessment requirements.	11 (6.1%)	19 (10.6%)	29 (16.1%)	83 (46.1%)	38 (21.1%)	3.66	1.06
Overall Mean	—	—	—	—	—	3.62	1.08

The research results have shown that teacher professional training positively impacts the implementation of the CBC program in JSS in Kilifi County. In response to the question on whether there is sufficient CBC in-service training for effective implementation of the CBC, 82 (45.6%) respondents agreed, 38 (21.1%) strongly agreed, 30 (16.7%) were neutral, 18 (10.0%) disagreed, and 12 (6.7%) strongly disagreed. $\bar{x} = 3.64$ and $\sigma = 1.07$ imply that there is general agreement that in-service training has taken place, but it has not been consistent across all schools. On the other hand, in response to the statement on whether attending CBC in-service training increased competence in competency-based instruction, 88 (48.9%) agreed and 41 (22.8%) strongly agreed. Also, 28 (15.6%) were neutral, 15 (8.3%) disagreed, and 8 (4.4%) strongly disagreed. $\bar{x} = 3.77$ and $\sigma = 1.00$ imply that there was strong agreement that training increased competence.

In terms of whether there is an ongoing provision of Continuous Professional Development (CPD) program at school level for the successful implementation of CBC, 72 respondents (40.0%) answered yes, and 36 (20.0%) strongly agreed that there is a program. However, 36 (20.0%) were neutral; 22 (12.2%) did not agree, and 14 (7.8%) strongly disagreed. The $\bar{x} = 3.52$ and $\sigma = 1.13$ indicate that there is moderate agreement on this issue although some schools lack CPD structures. As far as CPD program has improved the capacity to implement CBC is concerned, 80 respondents (44.4%) agreed and 40 (22.2%) strongly agreed; 33 (18.3%) were neutral; 17 (9.4%) disagreed; and 10 (5.6%) strongly disagreed.

Concerning whether enough orientation about the curriculum had been provided to the teachers before implementing CBC at JSS, 70 (38.9%) respondents agreed while 36 (20.0%) strongly agreed. On the other hand, 34 (18.9%) had neutral opinions, while 24 (13.3%) disagreed and 16 (8.9%) strongly disagreed. With $\bar{x} = 3.47$ and $\sigma = 1.18$, this shows that there was some moderate agreement on the matter. However, there is some concern that the initial orientation was not adequate. As for whether the orientation programs helped in explaining the structure, content, and assessment processes of CBC, 83 (46.1%) respondents agreed and 38 (21.1%) strongly agreed. There were 29 (16.1%) neutral respondents, then 19 (10.6%) disagreed, and 11 (6.1%) strongly disagreed. From $\bar{x} = 3.66$ and $\sigma = 1.06$, it is clear that there was some enhancement in understanding of CBC through the orientation programs. In the descriptive statistics for teacher professional training, there was an average $\bar{x} = 3.62$ and $\sigma = 1.08$. This shows that there was a general agreement that teacher professional training affects CBC implementation at JSS. However, the moderate standard deviation suggests some variation in training experiences.

Qualitative findings validated the quantitative findings in proving that training was effective since it improved the teachers' pedagogical competence, assessment literacy, lesson planning, and confidence in adopting learner-centered instruction. The participants also indicated that lack of refresher training, unequal professional development, insufficient practical exercises, over-crowding in classes, and lack of adequate resources were some of the issues limiting their ability to effectively utilize the learned skills. These findings validate those of Kennedy (2019), Schipper et al., (2021), Mutisya and Mwanja (2022), and Avalos (2019), which indicate the importance of ongoing professional development.

Stakeholder Involvement and Implementation of the Competency-Based Curriculum

The second objective of this study was to establish the impact of stakeholders' participation on the adoption of the CBC among JSSs in Kilifi County, Kenya. The respondents were asked to rate the extent to which stakeholders participated in the adoption of the CBC using the 5-point Likert Scale. Results have been presented in Table 2.

Table 2: Descriptive Statistics on Stakeholder Involvement (n = 180)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
The school administration provides adequate support for CBC implementation.	9 (5.0%)	16 (8.9%)	29 (16.1%)	82 (45.6%)	44 (24.4%)	3.75	1.03
School leadership actively supervises and supports CBC instructional practices.	8 (4.4%)	18 (10.0%)	31 (17.2%)	79 (43.9%)	44 (24.4%)	3.74	1.05
The Board of Management actively supports CBC implementation in this school.	14 (7.8%)	21 (11.7%)	34 (18.9%)	71 (39.4%)	40 (22.2%)	3.56	1.16
The Board of Management allocates adequate resources for CBC implementation.	16 (8.9%)	24 (13.3%)	38 (21.1%)	65 (36.1%)	37 (20.6%)	3.46	1.21
Parents are actively involved in supporting CBC learning activities.	18 (10.0%)	27 (15.0%)	36 (20.0%)	63 (35.0%)	36 (20.0%)	3.40	1.25
There is effective communication between the school and parents regarding CBC implementation.	12 (6.7%)	20 (11.1%)	33 (18.3%)	75 (41.7%)	40 (22.2%)	3.62	1.12
Overall Mean	—	—	—	—	—	3.59	1.14

The findings show that the participation of the stakeholders positively affects the implementation of the CBC at JSS in Kilifi county. On the question on whether there is enough administrative support for the implementation of CBC in schools, a majority of the respondents agreed, with 82 (45.6%) respondents agreeing and 44 (24.4%) respondents strongly agreeing, 29 (16.1%) being neutral, 16 (8.9%) disagreeing, and 9 (5.0%) strongly disagreeing. This shows a strong agreement since $\bar{x} = 3.75$ and $\sigma = 1.03$. On the question on whether there is active supervision of CBC instructional practices by school leadership, 79 (43.9%) agreed and 44 (24.4%) strongly agreed, with 31 (17.2%) being neutral, 18 (10.0%) disagreeing, and 8 (4.4%) strongly disagreeing.

In terms of the degree of support given by the Board of Management to the CBC implementation process in the school, 71 (39.4%) agreed, and 40 (22.2%) strongly agreed; 34 (18.9%) were neutral; 21 (11.7%) disagreed; and 14 (7.8%) strongly disagreed. The results $\bar{x} = 3.56$ and $\sigma = 1.16$ indicate that there is moderate agreement. However, this may not be uniform in all schools as the Board of Management does provide some degree of support. In relation to the question of whether the Board of Management provides adequate resources for CBC implementation, 65 (36.1%) agreed; 37 (20.6%) strongly agreed; 38 (21.1%) were neutral; 24 (13.3%) disagreed; and 16 (8.9%) strongly disagreed. The $\bar{x} = 3.46$ and $\sigma = 1.21$ indicate moderate agreement, but also highlight some concerns regarding adequacy of resource allocation.

When it comes to whether parents are engaged in participating in CBC learning exercises, 63 (35.0%) of respondents agreed with 36 (20.0%) strongly agreeing on the same, while 36 (20.0%) remained neutral, 27 (15.0%) disagreed, and 18 (10.0%) strongly disagreed. In this case, since $\bar{x} = 3.40$ and $\sigma = 1.25$, the results indicate moderately neutral agreement, which implies that parental engagement is present but not consistently effective among all schools. Concerning whether there is effective communication between the school and the parents on the issue of CBC, 75 (41.7%) agreed while 40 (22.2%) strongly agreed, whereas 33 (18.3%), 20 (11.1%), and 12 (6.7%) were neutral, disagreed, and strongly disagreed respectively. The $\bar{x} = 3.62$ and $\sigma = 1.12$ suggest general agreement that communication channels are fairly effective.

The data on stakeholder involvement gave $\bar{x}=3.59$ and $\sigma=1.14$. Thus, one can conclude that stakeholder involvement plays a positive role in promoting the implementation of CBC at JSS. However, the differences in

resource allocation and parents' involvement show certain weaknesses in the engagement process which can be addressed through the improvement of engagement strategies to improve the outcomes of curriculum implementation. The results are in line with the findings of the recent studies which state that stakeholder and parents' engagement increases curriculum implementation and effectiveness of the school (Epstein et al., 2023).

Qualitative results also showed that the inclusion of stakeholders improved the implementation of CBC through instructional leadership, teachers' support, mobilization of resources, and collaboration between school administrators, BoM, parents, and other stakeholders. However, some of the barriers identified by the participants included financial problems, poor BoM's support, lack of knowledge on CBC by parents, and low levels of stakeholder involvement. The recommendation was to strengthen stakeholder sensitization, communication between schools and parents, and collaborative governance for improving curriculum implementation. These findings are congruent with those reported by Mora-Ruano et al. (2021), Amunga et al. (2020), Cheruiyot (2024), and Syomwene (2022), which state that effective leadership, stakeholder involvement, and communication are vital for implementing CBC reforms.

The Learning Resources and Implementation of the Competency-Based Curriculum

The third objective aimed at investigating the effect of learning materials on the implementation of CBC in JSS in Kilifi County, Kenya. The respondents were required to give their opinion on six different statements that discussed the availability and adequacy of learning materials for CBC implementation using a 5-point Likert Scale. The results have been tabulated in Table 3.

Table 3: Descriptive Statistics on Learning Resources (n = 180)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
CBC-approved textbooks are sufficient for learners in this school.	18 (10.0%)	26 (14.4%)	34 (18.9%)	66 (36.7%)	36 (20.0%)	3.42	1.23
Learners have regular access to required CBC textbooks during lessons.	16 (8.9%)	24 (13.3%)	32 (17.8%)	72 (40.0%)	36 (20.0%)	3.53	1.17
The school has adequate teaching and learning materials to support CBC delivery.	20 (11.1%)	28 (15.6%)	36 (20.0%)	62 (34.4%)	34 (18.9%)	3.34	1.27
Available instructional materials are aligned with CBC requirements.	14 (7.8%)	22 (12.2%)	33 (18.3%)	75 (41.7%)	36 (20.0%)	3.54	1.12
The school has adequate ICT facilities to support CBC instruction.	26 (14.4%)	34 (18.9%)	40 (22.2%)	50 (27.8%)	30 (16.7%)	3.14	1.34
Teachers and learners effectively use digital tools in CBC learning activities.	22 (12.2%)	30 (16.7%)	38 (21.1%)	58 (32.2%)	32 (17.8%)	3.27	1.29
Overall Mean						3.37	1.24

From the results, it can be noted that the availability of learning resources slightly affects the adoption of the CBC in JSS. As far as the sufficiency of CBC approved textbooks to the learners in the school is concerned, the majority of respondents, 66 (36.7%), agreed, while 36 (20.0%) strongly agreed, 34 (18.9%) were neutral, 26 (14.4%) disagreed, and 18 (10.0%) strongly disagreed. From the $\bar{x} = 3.42$ and $\sigma = 1.23$, there seems to be a

slight agreement as far as the sufficiency of the textbooks is concerned, although there are some inadequacies in some schools.

Concerning the availability of CBC textbooks to learners on a consistent basis in the class, 72 (40.0%) agreed while 36 (20.0%) strongly agreed; 32 (17.8%) had no opinion on this, 24 (13.3%) disagreed and 16 (8.9%) strongly disagreed. The $\bar{x} = 3.53$ and $\sigma = 1.17$ this shows that there is overall consent regarding access to textbooks by the learners although it is not completely uniform. Concerning whether there are enough learning materials for CBC implementation in the school, 62 (34.4%) consented while 34 (18.9%) strongly consented and 36 (20.0%) were neutral, 28 (15.6%) disagreed, and 20 (11.1%) strongly disagreed. The $\bar{x} = 3.34$ and $\sigma = 1.27$ show neutrality to moderation implying that instructional materials may be inadequate in some places..

Whereas in relation to whether the available instructional materials match CBC requirements, 75 (41.7%) were in agreement, and 36 (20.0%) strongly agreed, while 33 (18.3%) had no opinion, 22 (12.2%) were in disagreement, and 14 (7.8%) strongly disagreed. The $\bar{x} = 3.54$ and $\sigma = 1.12$ show that the use of instructional materials that aligns with CBC is widely recognized. As far as the availability of ICT facilities in the school to facilitate CBC teaching is concerned, 50 (27.8%) agreed and 30 (16.7%) strongly agreed, while 40 (22.2%) had no opinion, 34 (18.9%) were in disagreement, and 26 (14.4%) strongly disagreed. The $\bar{x} = 3.14$ and $\sigma = 1.34$ point towards a fairly neutral attitude, indicating huge inadequacies in the ICT infrastructure in most schools. In relation to whether teachers and learners make proper use of digital devices during CBC activities, 58 (32.2%) agreed and 32 (17.8%) strongly agreed, while 38 (21.1%) had no opinion, 30 (16.7%) were in disagreement, and 22 (12.2%) strongly disagreed. The $\bar{x} = 3.27$ and $\sigma = 1.29$ suggest moderate adoption of digital tools, though usage levels vary considerably.

The results for the six items for learning resources revealed an average $\bar{x}=3.37$ and $\sigma=1.24$. This shows that there is moderate adequacy in terms of availability of learning resources that can support CBC implementation. The availability of textbooks and content alignment seems to be quite satisfactory, but ICT infrastructure and digital integration seem to require major improvements. This result is in line with previous research that showed that although traditional learning resources might be adequately available in schools, ICT infrastructure and digital learning resources lack behind (Tondeur et al., 2023).

The qualitative data was consistent with the quantitative findings, as it demonstrated that sufficient textbook provision, teaching resources, and ICT resources facilitate learner engagement, practical teaching, and competence development. The respondents indicated the lack of textbooks, lack of science laboratory apparatus, lack of ICT facilities, overcrowding in the classrooms, and lack of funds as the main limitations in implementing the CBC effectively. They suggested increased provision of teaching resources, ICT facilities, classroom facilities, and reliable internet access to improve the delivery of the curriculum. This is in agreement with the findings of Gudmundsdottir and Hatlevik (2020), Tadesse and Muluye (2022), Orodho et al. (2021), and Lingard et al. (2021).

Implementation of the Competency-Based Curriculum

The respondents were supposed to state their agreement with six statements regarding the implementation of the CBC in JSS on a five-point Likert scale. The results are shown in Table 4 below.

Table 4: Descriptive Statistics on Implementation of the CBC (n = 180)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev
Learner-centered teaching methods are frequently used in CBC lessons.	8 (4.4%)	16 (8.9%)	28 (15.6%)	86 (47.8%)	42 (23.3%)	3.77	1.02
Lessons integrate knowledge, skills, values, and real-life applications as required by CBC.	6 (3.3%)	14 (7.8%)	30 (16.7%)	88 (48.9%)	42 (23.3%)	3.81	0.98
Rubrics and performance-based tasks are used to assess learner competencies.	10 (5.6%)	18 (10.0%)	32 (17.8%)	80 (44.4%)	40 (22.2%)	3.68	1.08
Learner competency development is continuously assessed throughout the term.	9 (5.0%)	17 (9.4%)	29 (16.1%)	85 (47.2%)	40 (22.2%)	3.72	1.04
Learners actively participate during CBC classroom activities.	7 (3.9%)	15 (8.3%)	26 (14.4%)	90 (50.0%)	42 (23.3%)	3.81	0.99
Collaborative learning activities in CBC instruction.	8 (4.4%)	18 (10.0%)	31 (17.2%)	83 (46.1%)	40 (22.2%)	3.72	1.05
Overall Mean						3.75	1.03

From the findings, it is clear that the adoption of CBC in JSS is highly positive. In terms of whether learner-centered pedagogy is often used in CBC classes, 86 (47.8%) responded that they agree, while 42 (23.3%) strongly agreed to the statement. On the other hand, 28 (15.6%) respondents were neutral, 16 (8.9%) disagreed and 8 (4.4%) strongly disagreed. From the mean ($\bar{x}$)=3.77 and standard deviation (σ)=1.02, the findings suggest a high level of adoption of the learner-centered pedagogical approach. Regarding whether the lessons incorporate knowledge, skills, values, and application of knowledge in real-life situations as per CBC requirements, 88 (48.9%) respondents agreed to the statement, and 42 (23.3%) strongly agreed. At the same time, 30 (16.7%) respondents were neutral, 14 (7.8%) disagreed, and 6 (3.3%) strongly disagreed. From $\bar{x}$ =3.81 and σ =0.98, the findings show a high level of conformity with CBC classroom instructional requirements. As for the use of rubrics and performance-based assignments in assessing learners' competencies, 80 (44.4%) respondents agreed, and 40 (22.2%) strongly agreed, while 32 (17.8%) were neutral, 18 (10.0%) disagreed and 10 (5.6%) strongly disagreed. The $\bar{x}$ = 3.68 and σ = 1.08 indicate that competency-based assessment practices are widely applied, though not uniformly.

As for whether the development of competence among the learners is constantly assessed throughout the term, 85 (47.2%) were in agreement, while 40 (22.2%) strongly agreed. Meanwhile, 29 (16.1%) were neutral, 17 (9.4%) disagreed, and 9 (5.0%) strongly disagreed on this matter. With the $\bar{x}$ of 3.72 and σ = 1.04, it could be seen that the constant formative assessment is being practiced in most of the schools. In regards to the involvement of the learners in the CBC classroom activities, 90 (50.0%) were in agreement, while 42 (23.3%) strongly agreed. Also, 26 (14.4%) were neutral, 15 (8.3%) disagreed, and 7 (3.9%) strongly disagreed on this matter. With the $\bar{x}$ of 3.81 and σ = 0.99, it could be seen that the learners engage well in CBC lessons. As for the collaborative learning activities in CBC instructions, 83 (46.1%) were in agreement, while 40 (22.2%) strongly agreed. Moreover, 31 (17.2%) were neutral, 18 (10.0%) disagreed, and 8 (4.4%) strongly disagreed. The $\bar{x}$ = 3.72 and σ = 1.05 suggest that collaborative approaches are commonly practiced.

However, based on the analysis above, the results show that CBC practice is quite strong, where the total average is $\bar{x}$ =3.75, while standard deviation is σ =1.03. Most of the participants think that the principles of

competency-based education (CBE), like learner-centered teaching method, competency-based assessment, learner involvement, and collaborative learning, are applied in JSS. Although there are slight differences in answers, it is important to emphasize the necessity of continuous professional support and monitoring in order to guarantee proper application of CBE. In other words, this study confirms the results of recent research conducted by Darling-Hammond et al. (2022).

The qualitative analysis provided evidence of teacher use of learner-centred teaching methods, project-based learning, continuous assessment and collaboration in CBC classes. However, difficulties were experienced in the form of increased workload in assessment, insufficient instructional time, learning resource shortages, and different degrees of adaptation of learners and parents to competency-based learning. The respondents suggested improvements through enhanced institutional support, continuous teacher training, and stakeholder sensitisation towards ensuring successful CBC adoption. This was similar to Waweru (2020), Darling-Hammond et al. (2022), Fullan (2020), and Campbell et al. (2020) who identified the importance of professional support, sufficient resources, and stakeholder involvement in successful implementation of competency-based curriculum reforms.

Correlation Analysis

Correlation analysis by Pearson was done to establish the correlation between teachers' professional development, stakeholder participation, learning resources, and CBC implementation in JSS in Kilifi County. The findings are summarized in Table 5 below.

Table 5: Correlation Analysis

Variables	1	2	3	4
1. Teacher Professional Training	1			
2. Stakeholder Involvement	0.614**	1		
3. Learning Resources	0.587**	0.603**	1	
4. Implementation of CBC	0.671**	0.642**	0.598**	1

** Correlation is significant at $p < 0.01$.

Source: Field Data (2025)

All dimensions of the school support system were positively and significantly correlated to CBC implementation. The highest correlation was recorded between teacher professional development and CBC implementation ($r=0.671$, $p<0.01$). Stakeholder participation also had a strong positive correlation to CBC implementation ($r=0.642$, $p<0.01$). Positive relationship was observed between learning materials and CBC implementation ($r=0.598$, $p<0.01$). These findings are consistent with Institutional theory, Social capital theory, and Resource-based theory. The theories propose that effective implementation of curriculum requires teacher development, stakeholder participation, and provision of sufficient learning resources.

Multiple Regression Analysis

Analysis of multiple regression was done to ascertain the impact of teachers' professional development, stakeholders' participation, and learning materials in the implementation of the CBC.

Table 6: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.742	0.551	0.544	0.463

Source: Field Data (2025)

This model was strong ($R = 0.742$) and accounted for 55.1% of the variation in the implementation of CBC ($R^2 = 0.551$; Adjusted $R^2 = 0.544$). This shows that teacher professional development, stakeholder participation, and learning resources significantly predict CBC implementation.

Analysis of Variance

To assess the overall significance of the regression model, ANOVA was conducted.

Table 7: ANOVA Results for Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	46.782	3	15.594	72.783	0.000
Residual	47.218	176	0.268		
Total	94.000	179			

From the analysis of variance, it was established that there is statistical significance of the regression model ($F = 72.783$, $p < 0.001$). The findings clearly demonstrate that professional training of teachers, stakeholder participation, and learning materials significantly affect the implementation of CBC in JSS in Kilifi County.

Regression Coefficients

Coefficients of regression were used in estimating the individual effects of the independent variables on the CBC implementation.

Table 8: Regression Coefficients

Predictor	B	Std. Error	Beta (β)	t	Sig.
Constant	0.512	0.284	–	1.803	0.087
Teacher Professional Training	0.389	0.074	0.356	5.257	0.000
Stakeholder Involvement	0.341	0.071	0.312	4.803	0.000
Learning Resources	0.214	0.067	0.198	3.194	0.002

Source: Field Data (2024)

It is evident from the findings that the three predictors positively and significantly impacted the implementation of CBC. Professional development of teachers was the most impactful predictor ($\beta = 0.389$, $p < 0.001$) followed by stakeholder participation ($\beta = 0.341$, $p < 0.001$) and learning resources ($\beta = 0.214$, $p = 0.002$). The findings reveal that improving the teacher's professional development, collaboration among stakeholders, and learning resources positively impacts the implementation of CBC in Junior Secondary Schools in Kilifi County, in agreement with the findings of Thurlings et al., (2023).

FINDINGS, CONCLUSION, AND RECOMMENDATIONS

The investigation sought to evaluate the impact of school support services on the implementation of CBC among junior secondary schools in Kilifi county, Kenya. The results indicated that teacher professional development positively impacted CBC implementation. Most respondents held the view that teacher professional development had a positive impact on curriculum implementation ($\bar{x}=3.62$), and the correlation analysis demonstrated a strong positive correlation between teacher professional development and CBC implementation ($r=0.671$, $p<0.01$). In addition, regression analysis indicated that teacher professional development was the strongest predictor ($\beta=0.389$, $p<0.001$).

The results have also revealed the fact that stakeholders' participation contributed to better CBC implementation. In general, stakeholders' participation was perceived as helpful for implementing CBC ($\bar{x}=3.59$) and there was evidence of the significant positive correlation with CBC implementation ($r=0.642$, $p<0.01$). Stakeholders' participation was established as the second strongest predictor for CBC

implementation in regression analysis ($\beta=0.341$, $p<0.001$) implying that school leadership, BoM, parent participation, and community-school interaction enhance curriculum implementation.

The study proved that learning resources played an important role in the implementation of the CBC. Participants agreed to some extent that learning resources played a critical role in CBC implementation ($\bar{x}=3.37$), and correlation analysis revealed the existence of a significant relationship between learning resources and CBC implementation ($r=0.598$, $p<0.01$). Regression analysis results revealed learning resources as significant predictors ($\beta=0.214$, $p=0.002$), although their importance was comparatively low compared to teacher professional development and stakeholders' participation. It can be concluded that improvement of learning resources is a necessary precondition for competency-based learning.

It was further established through regression analysis that all three dimensions of the school support systems significantly predicted the implementation of CBC. Professional training of teachers proved to be the most significant predictor ($\beta = 0.389$, $p < 0.001$), while stakeholders' involvement ($\beta = 0.341$, $p < 0.001$) and learning materials ($\beta = 0.214$, $p = 0.002$) were also significant predictors. Thus, it can be seen from the results that the regression model accounted for 55.1% of the variation in the implementation of CBC ($R^2 = 0.551$, $p < 0.001$) demonstrating that strengthening school support systems substantially enhances effective implementation of the CBC.

CONCLUSION AND RECOMMENDATIONS

It is therefore evident from this research that the support system in schools promotes the implementation of the CBC in JSS in Kilifi County. The professional development of teachers improves their capacity for delivering lessons and teaching curriculum, participation of stakeholders improves collaboration within institutions, whereas sufficient learning materials promote learner-centered approach and competency-based assessment. Collectively, these support systems contribute to effective and sustainable implementation of the CBC.

It is recommended that continuous teacher professional development be strengthened through in-service training, refresher training, mentoring within schools, and equal access to capacity building of CBC program. The schools should also improve their collaboration among stakeholders by increasing participation of school management team, BoM, parents and communities through communication and sensitization programs. Also, the government and all other stakeholders in the education sector should invest more in CBC approved books, materials, information technology, and other resources for effective curriculum implementation. Lastly, school support systems should be incorporated into school improvement policies and program implementation policies for effective implementation of CBC.

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