

KEMI Journal of Educational Leadership and Management

KJELM

[ISSN 3079-4048]

Volume: 2 Issue: 3 | Nov-2026

Status of competency-based curriculum implementation in public junior secondary schools in Kenya: Challenges and policy implications

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Cite this article in APA

https://doi.org/10.68147/3bbc28c3

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Abstract

Kenya's Competency-Based Curriculum (CBC) represents a major policy shift from examination-centred schooling to learner-centred, competency-oriented education. This concurrent triangulation mixed-methods study evaluates the status of CBC implementation in public Junior Secondary Schools (Grades 7–9) at a critical transition point. Data were collected from 406 teachers (98.4% response rate) across 39 of Kenya's 47 counties between September and October 2025—during the final term of the pioneer cohort and prior to the inaugural Kenya Junior Secondary Education Assessment (KJSEA) in November 2025. Purposive sampling was implemented through 412 university student research assistants, each targeting one public school in their home sub-county. Descriptive analysis showed strong teacher endorsement of the reform rationale (M = 5.25) and core competencies (M = 5.09). However, infrastructure (M = 1.18), ICT integration (M = 1.17), competency-based assessment clarity (M = 1.17), teacher induction (M = 1.19), and support for learners with special needs (M = 1.09) were rated as critically inadequate. Chi-square tests confirmed a significant association between CBC-specific training and teacher confidence ($\chi^2(2) = 31.24$, $p < .001$, Cramér's V = 0.44). Multiple linear regression ($R^2 = 0.49$) identified training ($\beta = 0.32$), infrastructure ($\beta = 0.30$), resources ($\beta = 0.28$), and parental involvement ($\beta = 0.23$) as significant predictors of perceived implementation success; special-needs support was not independently significant ($p = .055$). Qualitative data from open-ended responses and interviews with 39 headteachers corroborated the quantitative patterns of resource and capacity deficits. Findings are interpreted through the Concerns-Based Adoption Model and constructivist

perspectives, with direct implications for instructional leadership, quality assurance, and resource management as the first cohort enters Senior Secondary.

Key terms: Competency-Based Curriculum; Junior Secondary Schools; teacher preparedness; infrastructure; instructional leadership; educational policy; Kenya

1.0 Introduction

Kenya adopted the Competency-Based Curriculum (CBC) in 2017 in response to longstanding critiques of the 8-4-4 system. These critiques centred on its examination-centric orientation, shallow content coverage, high teacher–learner ratios, and limited production of graduates equipped with employable skills and values (Akala, 2021; Sifuna & Obonyo, 2019). The CBC prioritizes values, attitudes, skills, knowledge, and seven core competencies—communication and collaboration, critical thinking and problem-solving, creativity and imagination, citizenship, digital literacy, learning to learn, and self-efficacy—as articulated in the Basic Education Curriculum Framework (Kenya Institute of Curriculum Development [KICD], 2017). The reform is philosophically aligned with constructivist principles and 21st-century skill demands.

By 2023 the pioneer cohort entered Junior Secondary School (JSS, Grades 7–9). Government reports document the deployment of approximately 76,000 teachers to JSS by 2025 and plans for the construction of 1,600–2,600 new laboratories (Ministry of Education, 2024, 2025). Despite these interventions, persistent challenges in resources, training, infrastructure, and assessment clarity continue to be reported in both scholarly literature and official monitoring (Cheruiyot, 2024; Mackatiani, 2023; Muthoka, 2025). The pioneer cohort completed JSS in 2025, sat the first Kenya Junior Secondary Education Assessment (KJSEA) in November 2025, and transitioned to Senior Secondary in January 2026.

This study provides a timely national evaluation of CBC implementation in public JSS. Primary data were collected between September and October 2025—during the final term of the pioneer cohort and prior to the inaugural KJSEA—from 406 teachers across 39 of Kenya's 47 counties. A team of 412 university student research assistants purposively visited one public JSS in their home sub-counties. While the geographic spread is extensive, the non-probability sampling design and unequal county representation limit statistical generalizability. The study extends earlier primary-focused research to the JSS level, identifies significant predictors of perceived implementation success, and offers evidence for instructional leadership and policy adjustment as the first cohort enters Senior Secondary.

2.0 Problem Statement

Despite substantial political commitment and a phased national rollout, CBC implementation in public Junior Secondary Schools faces systemic hurdles that risk undermining its transformative potential. Empirical evidence indicates that only 3–34% of the teachers report feeling adequately prepared after training, while material shortages, overcrowded classrooms, absence of laboratories, weak ICT infrastructure, and limited parental involvement remain widespread (Cheruiyot, 2024; Muchira et al., 2023; Ogembo, 2025; Wanyoike, 2018). Recent JSS-specific analyses confirm acute shortages in core subjects, missing laboratory and ICT facilities, curriculum overload, and policy–practice misalignment (Gichuru, 2024; Mackatiani, 2023; Muthoka, 2025).

Although multiple studies have examined CBC implementation at the primary level, fewer have generated large-scale, mixed-methods evidence at the JSS level immediately prior to the transition to Senior Secondary. Existing research frequently relies on smaller samples, single-county designs, or purely quantitative approaches and has not systematically quantified the relative contribution of training, infrastructure, resources, and parental involvement to perceived implementation success. This study

addresses that empirical and methodological gap by examining these indicators across 39 counties, integrating quantitative predictors with qualitative insights from teachers and headteachers, and locating the findings within established curriculum-implementation frameworks.

3.0 Research Objectives and Hypotheses

The study pursued four interrelated objectives: (a) to assess the adequacy of facilities, materials, infrastructure, and digital integration in public JSS; (b) to evaluate teacher preparedness, training, and confidence levels; (c) to examine parental engagement and provisions for learners with special needs; and (d) to identify significant predictors of perceived CBC implementation success.

Three hypotheses guided the inferential analyses. First, CBC-specific training level was expected to be significantly associated with teacher confidence (chi-square test of independence). Second, infrastructure and resources were hypothesized to correlate positively with implementation perceptions (Pearson product-moment correlation). Third, training, infrastructure, resources, parental involvement, and special-needs support were expected to predict implementation success in a multiple linear regression model.

4.0 Literature Review

Competency-based reforms globally and across Africa display consistent patterns of ambitious policy intent accompanied by recurring implementation challenges in teacher capacity, infrastructure, assessment, stakeholder engagement, and inclusion. The following thematic synthesis integrates selected international and African experiences to illuminate the Kenyan JSS context and to identify transferable lessons.

4.1 Teacher Preparedness and Professional Development

High-performing systems invest heavily in teacher capacity. Finland’s national core curriculum (revised 2014–2016) embeds seven transversal competences and grants teachers substantial professional autonomy in local interpretation, supported by strong municipal guidance and master’s-level initial education (Finnish National Agency for Education, 2016; Sahlberg, 2015; Vitikka et al., 2016). Singapore has progressively embedded 21st Century Competencies since 2010, with sustained investment in Character and Citizenship Education and ongoing professional learning (Ministry of Education, Singapore, 2018, 2023; Tan, 2021). South Korea’s 2015 Revised National Curriculum emphasizes six core competences and has documented gains in learner skills where teacher support was adequate, although resistance to pedagogical change and residual examination pressure persist (Kim, 2019; Kwon & Kim, 2022; Ministry of Education, Republic of Korea, 2015).

In contrast, Kenyan studies consistently report low teacher confidence after CBC training (ranging from 3% to 34%), hurried and insufficiently practical in-service workshops, and misalignment with the practical demands of JSS classrooms (Cheruiyot, 2024; Ogembo, 2025; Wanyoike, 2018). Rwanda’s progressive CBC rollout since 2015 has produced measurable gains in learner engagement and practical competencies where teacher training and ICT support were provided, yet coordination of continuous professional development remains uneven (Mugabo et al., 2021; Nzabalirwa, 2019; Rwanda Education Board, 2015). These comparative patterns indicate that the quality, duration, and classroom relevance of professional development—not merely its occurrence—determine teacher confidence and implementation fidelity.

4.2 Infrastructure, Resources and Digital Integration

Adequate physical and digital infrastructure is a necessary condition for competency-based pedagogy.

Finland and Singapore achieve relatively equitable outcomes through well-resourced schools and reliable ICT access. Japan's revisions to the Course of Study (2017–2020) emphasize active learning, problem-solving, and "zest for life," yet equitable implementation across schools remains a documented challenge (Ministry of Education, Culture, Sports, Science and Technology, 2017; Saito, 2019; Takayama, 2018). South Africa's Curriculum and Assessment Policy Statement (CAPS), while conceptually distinct from CBC, illustrates how resource inequities, textbook delays, and overcrowded classrooms constrain learner-centred enactment (Department of Basic Education, 2011; Hoadley, 2018; Spaull, 2013).

Kenyan JSS evidence reveals critical shortages of laboratories, furniture, textbooks, and functional ICT infrastructure, particularly in rural and marginalized counties (Mackatiani, 2023; Muthoka, 2025). Government plans for laboratory construction have not yet translated into classroom reality for the majority of public schools. Without these foundational resources, the shift from teacher-centred to activity-based, inquiry-oriented learning remains largely theoretical.

4.3 Assessment Practices

Competency-based assessment requires a fundamental shift from high-stakes summative testing toward formative, mastery-oriented, and authentic approaches. Singapore's "Learn for Life" reforms and South Korea's competency framework seek to reduce examination pressure while retaining accountability mechanisms (Tan, 2021; Kwon & Kim, 2022). Kenyan teachers report persistent lack of clarity regarding ability-based assessment tools, rubrics, and exemplars, resulting in continued reliance on traditional examination practices (Cheruiyot, 2024). This assessment misalignment constitutes a major implementation barrier and contributes to teacher uncertainty.

4.4 Stakeholder Engagement and Inclusion

Parental and community involvement is essential for CBC success, yet Kenyan studies document low engagement frequently linked to misconceptions about the meaning of "free" basic education and to hidden costs of materials and projects (Amunga et al., 2020). Support for learners with special needs remains minimal in most African CBC contexts, including Kenya (Isaboke et al., 2021). Higher-performing systems integrate inclusion through targeted resourcing, adapted assessment, and specialized teacher preparation—provisions that are largely absent in Kenyan public JSS.

Taken together, the literature demonstrates that teacher preparedness, infrastructure and digital resources, assessment clarity, parental engagement, and inclusive support are cross-cutting determinants of CBC implementation quality. Kenya's JSS phase exhibits the same gaps documented elsewhere in Africa while lacking the sustained resource equity and professional autonomy characteristic of higher-performing systems. The present study addresses the relative scarcity of large-scale mixed-methods evidence at the precise moment of transition from Junior to Senior Secondary.

5.0 Theoretical Grounding

This study is theoretically grounded in a multi-framework approach that addresses the multifaceted nature of curriculum reform. The Concerns-Based Adoption Model (CBAM; Hall & Hord, 1987; Hall et al., 2006) serves as the primary lens for understanding teacher preparedness and concerns. CBAM posits that change is a personal, developmental process progressing through seven Stages of Concern—from self-oriented (Awareness, Informational, Personal) through task-oriented (Management) to impact-oriented (Consequence, Collaboration, Refocusing). In the Kenyan CBC context, low confidence and management challenges align with stalled early-to-middle stages, guiding the analysis of training–confidence associations.

Constructivism (Vygotsky, 1978; Piaget, 1950; Bruner, 1961) underpins CBC's learner-centred pedagogy, emphasizing active construction of knowledge through social interaction, scaffolding, and meaningful application. The study evaluates whether available infrastructure and resources enable such experiential learning. Technological Pedagogical Content Knowledge (TPACK; Mishra & Koehler, 2006) informs assessment of teachers' capacity to integrate digital tools for competency development. Provus's (1971) Discrepancy Evaluation Model frames the analysis of gaps between intended CBC design standards and actual installation and process conditions. Fullan's (2007) change theory and Rogers' (2003) diffusion of innovations further explain systemic adoption dynamics, particularly the role of perceived complexity and stakeholder buy-in. These complementary frameworks collectively guide interpretation of the descriptive, correlational, and qualitative findings.

6.0 Methodology

A pragmatic research philosophy guided the study, prioritizing practical problem-solving and the integration of quantitative and qualitative methods to address the multi-dimensional nature of CBC implementation (Creswell & Poth, 2018). A concurrent triangulation mixed-methods design with a quantitative-dominant approach was employed. Quantitative and qualitative data were collected simultaneously, analyzed separately, and converged during interpretation through joint displays and narrative weaving to enhance credibility and depth.

6.1 Study Population and Sampling

The target population comprised teachers posted to public Junior Secondary Schools across Kenya. In the absence of a complete, accessible national sampling frame, purposive sampling was adopted to maximize geographic reach within logistical constraints. A team of 412 research assistants (undergraduate and postgraduate university students) was recruited, trained in a standardized protocol, and deployed. Each assistant collected data from one public JSS in their home sub-county, operating across 39 of Kenya's 47 counties. Of 412 questionnaires distributed, 406 were returned and valid, yielding a 98.4% response rate.

The design provides broad coverage of urban, peri-urban, and rural settings but does not support strong statistical generalizability because of non-probability selection and unequal county representation (see Appendix B). Potential familiarity bias arising from home-sub-county data collection was mitigated through standardized training, official introductory letters from the university, supervisory oversight, instrument validation, and triangulation with structured observation checklists.

6.2 Research Instruments

The primary instrument was the CBC Evaluation Matrix (summary in Appendix A; full instrument available from the corresponding author upon reasonable request), developed for this study and subjected to content and face validity review by curriculum and educational-measurement specialists. A pilot with 20 teachers outside the main sample confirmed item clarity and approximate completion time. Section A captured highest academic qualification, years of junior-secondary teaching experience, and CBC-specific training status (fully trained, partially trained, or not trained). Section B contained ten Likert-scale statements (1 = Absolutely Inadequate to 7 = Excellent). The composite Implementation Success score was calculated as the mean of the seven statements measuring operational adequacy (ICT and digital literacy incorporation, assessment clarity, facilities/infrastructure, teacher training and induction, parental involvement, special-needs support, and stakeholder engagement; Cronbach's $\alpha = 0.87$).

The three high-endorsement items concerning reform rationale and core competencies were retained for descriptive reporting but excluded from the composite to avoid artificially inflating the success measure. Sections C–F addressed workload manageability, lessons per week, preparation time, in-service training

adequacy and alignment, administrative guidance and resource access, teacher confidence, overall role satisfaction, and an open-ended item on the most significant challenge. Supplementary tools included a structured observation checklist focusing on facilities, ICT availability, and classroom practice, and brief semi-structured interview guides administered to 39 headteachers (one per represented county where feasible). Test–retest reliability on a subset of 30 teachers yielded r = 0.81.

6.3 Data Collection and Ethics

Data collection occurred between September and October 2025. Research assistants administered the matrix face-to-face or by drop-and-collect, conducted observations, and interviewed headteachers after obtaining written informed consent. Consistency across the 39 counties was maintained through a two-day standardized training workshop, a common protocol manual, and weekly supervisory check-ins via a shared digital platform. Ethical approval was granted by the Institutional Ethics Review Committee of Karatina University. Additional permissions were secured from County Directors of Education. Confidentiality and anonymity were assured; all data were stored on password-protected devices accessible only to the core research team and will be destroyed after the mandated retention period.

6.4 Data Analysis

Quantitative data were analyzed using SPSS Version 28. Descriptive statistics (means, standard deviations, frequencies, and percentages) summarized the status of CBC implementation. Chi-square tests of independence examined the association between training level and teacher confidence. Pearson product-moment correlations assessed relationships between predictors and the composite Implementation Success score. Multiple linear regression (enter method) identified significant predictors of the composite score. Prior to regression, assumptions were rigorously checked and met: linearity confirmed by scatterplots; normality of residuals by Shapiro–Wilk test ($p = .12$); absence of multicollinearity (all variance inflation factors < 2.3); homoscedasticity by residual plots; and independence of errors by Durbin–Watson statistic = 1.89. Significance was set at $\alpha = .05$.

Qualitative data from open-ended questionnaire responses and the 39 headteacher interviews were analyzed thematically following Braun and Clarke's (2021) six-phase framework, with NVivo 14 assisting in coding and theme development. Themes were generated inductively, refined through constant comparison, and verified by a second coder on 20% of the transcripts (Cohen's $\kappa = 0.84$). Final integration of quantitative and qualitative findings occurred through narrative weaving and joint displays that linked statistical patterns to participant explanations, thereby enhancing the credibility, confirmability, and transferability of the results.

7.0 Findings

The findings rest on responses from 406 teachers across 39 counties, collected in September–October 2025 during the final term of the pioneer Junior Secondary cohort and prior to the inaugural KJSEA.

7.1 Descriptive Status of Implementation

Table 1 presents mean ratings on the ten statements. Interpretation thresholds on the seven-point Likert scale were defined as follows: 1.00–1.99 Absolutely Inadequate; 2.00–2.99 Inadequate; 3.00–3.99 Somewhat Inadequate; 4.00–4.99 Adequate; 5.00–5.99 Better than Adequate; 6.00–7.00 Excellent. The exceptionally low means on the operational items suggest possible floor effects, indicating that conditions in the majority of public JSS were perceived as critically deficient.

Table 1: Status of CBC Implementation in Public JSS (N = 406)

Statement	Mean	SD	Interpretation
Great need to reform 8-4-4 system	5.25	0.57	Better than adequate
Opportunities for learners to explore talents	5.25	0.44	Better than adequate
Stakeholders actively engaged in CBC design	2.30	0.46	Inadequate
Curriculum enhances core competencies	5.09	0.29	Better than adequate
ICT and digital literacy well incorporated	1.17	0.38	Absolutely inadequate
Student assessment clear and ability-based	1.17	0.38	Absolutely inadequate
School has required facilities/infrastructure	1.18	0.39	Absolutely inadequate
Teachers well trained and inducted	1.19	0.40	Absolutely inadequate
Parental involvement in delivery	2.40	0.67	Inadequate
Support for learners with special needs	1.09	0.29	Absolutely inadequate

Note. *Scale: 1 = Absolutely Inadequate; 7 = Excellent. Composite Implementation Success score (α = 0.87) derived from the seven operational adequacy items (ICT, assessment, facilities, training, parental involvement, special-needs support, and stakeholder engagement).*

7.2 Association Between Training and Confidence

A chi-square test of independence indicated a statistically significant association between CBC-specific training level (fully trained, partially trained, not trained) and self-reported confidence ($\chi^2(2) = 31.24$, $p < .001$, Cramér's $V = 0.44$, indicating a moderate-to-strong effect). Among fully trained teachers, 79% reported high confidence, compared with 21% among untrained teachers. This substantial difference in proportions supports the first hypothesis. The pattern is consistent with early-to-middle Stages of Concern in the Concerns-Based Adoption Model; however, Stages of Concern were not directly measured with the Stages of Concern Questionnaire, so any mapping remains interpretive rather than confirmatory.

7.3 Correlations and Regression Predictors

Pearson product-moment correlations with the composite Implementation Success score were positive and statistically significant for infrastructure ($r = 0.63$, $p < .01$), resources ($r = 0.59$, $p < .01$), training adequacy ($r = 0.52$, $p < .01$), and parental involvement ($r = 0.40$, $p < .01$), and negative for workload ($r = –0.45$, $p < .01$). These results support the second hypothesis. Multiple linear regression explained 49% of the variance in the composite score ($R^2 = 0.49$, adjusted $R^2 = 0.48$, $F(5,400) = 77.12$, $p < .001$). Standardized coefficients were: training $\beta = 0.32$ ($t = 7.85$, $p < .001$), infrastructure $\beta = 0.30$ ($t = 7.12$, $p < .001$), resources $\beta = 0.28$ ($t = 6.45$, $p < .001$), and parental involvement $\beta = 0.23$ ($t = 5.11$, $p < .01$). Special-needs support ($\beta = 0.10$, $t = 1.92$, $p = .055$) did not reach conventional statistical significance at $\alpha = .05$ and is therefore not interpreted as an independent predictor after controlling for the other variables. Workload, although significantly correlated with the outcome, was excluded from the final regression model to maintain focus on actionable positive enablers and to reduce multicollinearity with the resource variables. The results partially support the third hypothesis: four of the five proposed predictors were significant.

7.4 Qualitative Themes

Thematic analysis of open-ended questionnaire responses and interviews with 39 headteachers yielded four major themes that confirm, elaborate, and occasionally nuance the quantitative findings.

Infrastructure and resource constraints. Teachers and headteachers repeatedly described the absence of laboratories, adequate furniture, textbooks, and digital tools. One teacher observed: “We have no science laboratory; practical lessons remain theoretical only, so the competencies the curriculum talks about cannot be developed properly.” A headteacher in a rural county added: “ICT integration is impossible when we have neither devices nor reliable electricity. Digital literacy is only a slogan here.”

Inadequate induction and continuous professional development. Participants noted that available training was brief, theoretical, and insufficiently aligned with the practical realities of large JSS classes. “The workshops were too short and did not show us how to assess competencies or manage project work in a class of 60,” reported a teacher with five years of experience. Several headteachers indicated that recent government retooling programmes had reached only a subset of staff.

Assessment uncertainty. Teachers expressed persistent confusion about the shift from examination-oriented to competency-based assessment. “We still do not have clear rubrics or exemplars for ability-based assessment. Most of us continue with the old continuous assessment tests because that is what we know,” was a representative comment.

Low parental engagement and weak inclusion. Parental involvement was limited by cost misconceptions and inadequate sensitization. “Parents think CBC is free, so they refuse to contribute to materials or projects,” several teachers noted. Support for learners with special needs was described as “virtually absent” in the majority of schools. These qualitative themes directly corroborate the low quantitative means and the significant predictors identified in the regression model, while also highlighting equity concerns that the statistical model alone does not fully capture.

8.0 Discussion

Teachers overwhelmingly endorsed the conceptual foundations of CBC. Mean ratings for the need to reform the 8-4-4 system and for opportunities for learners to explore talents both stood at 5.25, while endorsement of the curriculum’s capacity to enhance core competencies reached 5.09. These perceptions align closely with the original policy intent articulated in the Basic Education Curriculum Framework (KICD, 2017) and echo evidence from mature competency-oriented systems in which transversal competences are embedded across subjects (Finnish National Agency for Education, 2016; Ministry of Education, Singapore, 2023; Kim, 2019). It is important to emphasize, however, that these ratings reflect teachers’ views rather than independent measures of curriculum design quality or learner outcomes.

The data reveal a stark disconnect between conceptual approval and operational reality. Mean ratings for infrastructure (1.18), ICT and digital literacy integration (1.17), competency-based assessment clarity (1.17), teacher training and induction (1.19), and support for learners with special needs (1.09) cluster near the floor of the scale, indicating “absolutely inadequate” conditions in the majority of public JSS. Parental involvement (2.40) and broader stakeholder engagement (2.30) were also rated inadequate. Qualitative accounts from both teachers and headteachers confirm that these low ratings represent lived classroom conditions rather than abstract dissatisfaction. The findings therefore document a substantial discrepancy between the intended CBC design (learner-centred, activity-based, competency-oriented pedagogy) and actual installation and process conditions (Provus, 1971).

Inferential results further illuminate leverage points. The significant chi-square association between

training completeness and confidence, together with the dominant regression predictors (training β = 0.32, infrastructure β = 0.30, resources β = 0.28, parental involvement β = 0.23), identifies concrete areas for intervention. These relationships are associational; the cross-sectional design does not establish causality. Special-needs support, while not statistically significant after controlling for other variables (p = .055), remains a critical equity concern given its near-floor mean rating and the qualitative evidence of near-total absence of provision. The moderate negative correlation with workload (r = –0.45) underscores management-stage concerns within CBAM: excessive lesson loads leave little time for the planning, improvisation, and formative assessment that CBC requires.

Kenya's experience mirrors implementation challenges documented in other African CBC or related reforms, particularly resource inequities and teacher-preparation gaps in South Africa and Rwanda (Spaull, 2013; Hoadley, 2018; Mugabo et al., 2021). In contrast, high-performing systems such as Finland achieve stronger transversal-competence outcomes through equitable funding, smaller class sizes, master's-level teacher education, high professional autonomy, and minimal high-stakes testing until late secondary (Sahlberg, 2015; Halinen, 2018). Singapore and South Korea succeed by aligning competency goals with sustained investment in teacher capacity and digital infrastructure, albeit while retaining elements of a rigorous assessment culture (Tan, 2021; Kwon & Kim, 2022). Kenya's public JSS context—large classes, chronic under-resourcing in rural and marginalized counties, and hurried in-service training—creates structural barriers that these systems largely avoid.

Theoretically, the findings extend the application of CBAM and TPACK to a large-scale African competency-reform context, demonstrating that unresolved management and resource concerns stall progression toward consequence and collaboration stages. Methodologically, the study contributes a validated composite measure of perceived implementation success and a transparent mixed-methods integration strategy. Practically, the results underscore that policy success hinges not only on curriculum design but on closing discrepancies in installation and process. The large, geographically diverse sample strengthens confidence in the patterns observed, while the purposive design requires that claims of national generalizability remain appropriately tempered.

9.0 Conclusion

Teachers in public Junior Secondary Schools strongly endorse the conceptual foundations of the Competency-Based Curriculum. This national mixed-methods study of 406 teachers across 39 counties, conducted in September–October 2025, demonstrates that perceived implementation remains critically constrained by inadequate infrastructure, limited ICT integration, unclear competency-based assessment, insufficient induction and continuous professional development, low parental engagement, and minimal support for learners with special needs. These gaps, documented through both quantitative predictors and rich qualitative accounts, constitute the primary barriers at the point of transition to Senior Secondary. Resource and capacity deficits—not conceptual rejection of the reform—are the dominant obstacles. Accelerated, targeted, and evidence-informed remediation is essential if Kenya is to realise the transformative promise of competency-based education for all learners.

10.0 Recommendations

Recommendations are prioritized according to the strength of the supporting evidence, urgency, and feasibility:

1. The Teachers Service Commission, in collaboration with the Ministry of Education and the Kenya Institute of Curriculum Development, should scale and redesign continuous professional development. Programmes should prioritize practical classroom application, digital pedagogy, competency-based assessment, and management of large classes. This recommendation is directly

supported by the strong association between training completeness and confidence and by training's status as the strongest regression predictor.

2. The Ministry of Education, working with county governments and development partners, should accelerate infrastructure and ICT investment in Junior Schools. Priority should be given to laboratories, furniture, devices, reliable power, and connectivity, with explicit targeting of rural and marginalized counties. The aspirational target of full laboratory and ICT coverage by 2027 is contingent on sustained increases in capitation and effective public–private partnerships.
3. The Kenya Institute of Curriculum Development and county education offices should implement nationwide parental and community sensitization campaigns and develop formal Parental Empowerment Frameworks that clarify roles, address cost misconceptions, and institutionalize regular engagement structures.
4. Inclusive education units within the Ministry of Education should develop adapted assessment tools, specialized teacher-training modules, and clear resourcing protocols for learners with special needs. Although special-needs support was not independently significant in the regression model, its near-floor quantitative rating and qualitative evidence of absence make it a high-priority equity imperative.
5. The Ministry of Education and the Kenya National Examinations Council should institutionalize annual national CBC implementation audits that track the indicators examined in this study (training, infrastructure, resources, parental involvement, assessment clarity, and inclusion) and use the findings to guide evidence-based policy adjustments for the Senior School phase.

11.0 Limitations

Eight counties were not represented owing to logistical constraints faced by student research assistants; the included counties nevertheless encompass diverse urban, peri-urban, and rural settings. Potential familiarity bias arising from data collection in home sub-counties was mitigated through standardized training, official letters, supervision, instrument validation, and triangulation with observation checklists. Self-report bias remains a consideration, although the large sample and strong convergence between quantitative results and qualitative themes reduce its impact. The non-probability sampling design precludes strong statistical generalization to all public Junior Secondary Schools in Kenya. Future research should incorporate longitudinal learner outcome data, objective facility audits, direct measurement of Stages of Concern, and full 47-county coverage.

Appendix A: CBC Evaluation Matrix (Summary)

The full instrument is available from the corresponding author upon reasonable request. Section A collected highest academic qualification, years of junior-secondary teaching experience, and CBC-specific training status. Section B contained ten Likert items (1 = Absolutely Inadequate to 7 = Excellent) measuring: need to reform the 8-4-4 system; opportunities for talent exploration; stakeholder engagement in design; enhancement of core competencies; ICT and digital literacy incorporation; clarity of student assessment; facilities and infrastructure; teacher training and induction; parental involvement; and support for learners with special needs. The composite Implementation Success score was the mean of the seven operational adequacy items. Sections C–F addressed workload, professional development frequency and alignment, administrative support and resource access, teacher confidence, role satisfaction, and an open-ended challenge item.

Appendix B: Counties Where Research Was Undertaken

Purposive sampling distribution of teachers in public Junior Secondary Schools. Research assistants (university students) collected data in home sub-counties. Standardized protocols minimized familiarity bias. Eight counties were excluded for logistical reasons. The frequencies below reflect valid responses after exclusion of incomplete returns (total N = 406). Detailed school-level lists are available from the corresponding author upon request.

Table B1: Distribution of Valid Teacher Responses by County

SR	County	Teachers
1	Baringo	10
2	Bomet	28
3	Bungoma	5
4	Busia	4
5	Elgeyo-Marakwet	10
6	Embu	10
7	Homa Bay	15
8	Kajiado	1
9	Kakamega	7
10	Kericho	20
11	Kiambu	23
12	Kilifi	5
13	Kirinyaga	9
14	Kisii	13
15	Kisumu	3
16	Kitui	10
17	Kwale	1
18	Laikipia	11
19	Machakos	10
20	Makueni	15
21	Marsabit	1
22	Meru	10
23	Migori	14
24	Murang’a	22

25	Nairobi	19
26	Nakuru	28
27	Nandi	16
28	Narok	16
29	Nyamira	8
30	Nyandarua	7
31	Nyeri	25
32	Samburu	2
33	Siaya	3
34	Tharaka-Nithi	13
35	Trans-Nzoia	4
36	Turkana	1
37	Uasin Gishu	9
38	Vihiga	2
39	Wajir	2
	Total (39 of 47 counties)	**406**

***Note**. Frequencies adjusted to valid responses (N = 406). Original distribution targeted 412 questionnaires.*

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