

Challenges Affecting Teacher Preparedness in the Implementation of Competency-Based Education in Public Junior Schools in Kapenguria Sub-County, West Pokot County

Sophie Chepkorir Amutale¹, Dr. Charles Nyabero², Dr. Roseline Koskei³

University of Eldoret, Department of Curriculum and Instruction.

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ABSTRACT

This study investigated the challenges affecting teacher preparedness in the implementation of Competency-Based Education (CBE) in public junior schools in Kapenguria Sub-County, West Pokot County, Kenya. Adopting a mixed-methods convergent parallel design, the study drew on responses from 134 teachers, 28 headteachers, and 3 education officers, complemented by 10 classroom observations (100% completed), achieving a respondent response rate of 89.2%. Quantitative data were analyzed descriptively using SPSS, while qualitative data were analyzed thematically. Findings revealed that teachers rated lack of ICT resources, poor internet connectivity and shortage of CBE-aligned teaching materials as the most serious challenges, alongside large class sizes and insufficient time for lesson planning and assessment. Headteachers and education officers corroborated these findings, citing severe teacher shortages, inadequate infrastructure, insecurity, and limited community understanding of CBE as compounding factors specific to this marginalized region. Classroom observations further confirmed the absence of ICT integration, overcrowded classrooms, limited teaching aids, and lessons that remained largely teacher-centred and orally assessed. Nearly a third of teachers had received no CBE training, and most existing training consisted of one-off workshops rather than sustained professional development. The study concludes that resource constraints, contextual marginalization and inadequate training are closely associated with, and appear to constrain, teacher preparedness for CBE implementation in Kapenguria Sub-County. It recommends that the Teachers Service Commission address teacher shortages through recruitment and incentives, the Ministry of Education prioritize ICT infrastructure and instructional materials.

Keywords: Teacher preparedness; Competency-Based Education; ICT resources; Teacher training; Kapenguria Sub-County

INTRODUCTION

Teacher preparedness remains a central pillar in the successful implementation of educational reforms worldwide. In contemporary education discourse, teacher preparedness refers to the extent to which educators possess the requisite pedagogical knowledge, instructional skills, assessment competencies, and professional attitudes necessary to effectively deliver curriculum content and facilitate meaningful learning experiences. Recent studies have emphasized that continuous professional development, adaptability to pedagogical innovations, and digital literacy are critical components of teacher readiness in the 21st century education systems (Darling-Hammond et al., 2020; OECD, 2021).

In Kenya, the education system has undergone significant transformation since independence, evolving from a content-oriented model to a competency-based framework. The introduction of the Competency-Based Education (CBE) in 2017 marked a major milestone in aligning the education sector with the aspirations of Kenya Vision 2030 and global education trends. The CBE, operationalized through the 2-6-3-3-3 structure, seeks to nurture learners' talents, competencies, and values necessary for personal and national development. Unlike the previous 8-4-4 system, which was widely criticized for its examination-oriented approach, CBE

emphasizes formative assessment, learner engagement, and practical application of knowledge (Ministry of Education, 2019; Kenya Institute of Curriculum Development [KICD], 2020).

Despite the progressive intentions of CBE, recent empirical studies indicate that teacher preparedness remains a critical challenge in its implementation. A national survey conducted by the Kenya Institute of Curriculum Development (KICD) and the Teachers Service Commission (TSC) between 2020 and 2023 revealed that while a majority of teachers had undergone some form of CBE training, significant gaps persisted in their understanding of competency-based assessment, learner-centered pedagogy, and integration of digital learning tools (TSC, 2023; KICD, 2022). Similarly, a study by Waweru (2021) found that many teachers experienced difficulties in interpreting curriculum designs and implementing formative assessment strategies, which are central to CBE. These findings are consistent with international research, which highlights that curriculum reforms often fail when teacher training is inadequate, inconsistent, or not contextually responsive (OECD, 2021).

The challenges of teacher preparedness are further exacerbated in marginalized and resource-constrained regions. In counties such as West Pokot, structural inequalities including inadequate infrastructure, limited access to teaching and learning materials, and persistent teacher shortages significantly hinder effective curriculum implementation. Recent reports by the Ministry of Education (2022) indicate that rural and arid regions continue to experience disparities in teacher distribution and access to professional development opportunities. Moreover, digital divides and limited connectivity have constrained the adoption of technology-enhanced learning, which is a key component of CBE implementation.

Kapenguria Sub-County, West Pokot County, in particular, presents a unique context for examining teacher preparedness. The region is characterized by difficult terrain, high poverty levels, insecurity, and low literacy rates, which collectively pose challenges to both teaching and learning processes. According to recent county education reports (County Government of West Pokot, 2023), the teacher-student ratio remains significantly above the recommended levels, and many schools lack adequate instructional resources. These contextual challenges raise concerns about the extent to which teachers in such environments are prepared to effectively implement CBE requirements, particularly in public junior schools (Grades 7–9) where the curriculum demands specialized subject teaching, continuous assessment, and learner-centered approaches.

Therefore, while the adoption of CBE in Kenya represents a progressive step toward transforming education and aligning it with global standards, its success largely depends on the preparedness of teachers as key implementers. Understanding the contextual challenges faced is essential for informing policy interventions and improving curriculum implementation outcomes. This study, therefore, seeks to identify the challenges affecting teacher preparedness in the implementation of competency-based education in public junior schools in Kapenguria Sub-County, West Pokot County, with a view to generating context-specific insights that can support equitable and effective education reform.

Conceptual Clarification

For the purposes of this study, teacher preparedness is defined operationally as the level at which teachers are equipped with the pedagogical skills, assessment practices, and resource utilization capacity needed to effectively deliver Competency-Based Education. This three-dimension operationalization was applied consistently throughout the study, from the research instruments through to data analysis, rather than the broader set of attributes (e.g., curriculum knowledge, attitudes, motivation, classroom management) sometimes associated with the construct in the wider literature (Darling-Hammond et al., 2020). Where such broader attributes are discussed in this paper, they are treated as contextual or intervening factors rather than as additional dimensions of preparedness measured in the study.

In addition, the Ministry of Education and the Kenya Institute of Curriculum Development have, since 2023, increasingly referred to Kenya's reformed school curriculum as Competency-Based Education (CBE) rather than the original 2017 label, Competency-Based Curriculum (CBC), to reflect its broader scope beyond curriculum content to include assessment, teacher development, and institutional reform. This study adopts

CBE as its consistent term of reference throughout, using CBC only where a cited source specifically discusses the original 2017 curriculum design.

METHODOLOGY

The study adopted a mixed-methods convergent parallel design, collecting quantitative and qualitative data concurrently in Kapenguria Sub-County, West Pokot County. The study area is a rural, marginalized area recurrently affected by drought, flooding, and security challenges that made it a valuable but understudied setting for evaluating teacher preparedness for Competency-Based Education (CBE). The target population comprised 245 public junior school teachers, 32 heads of institutions, and 3 Sub-County education officers.

Sampling Procedure

Twenty (20) of the sub-county's 32 schools (63%) were selected through proportionate stratified random sampling across three geographic zones, so that each zone contributed schools in proportion to its share of the sub-county's junior schools (e.g., a zone containing 40% of all schools contributed 40% of the sampled schools). Within each stratum, schools were assigned unique identification numbers and selected using computer-generated random numbers, giving every school an equal probability of selection. Within each of the 20 selected schools, a census approach was then applied, whereby all teachers present and willing to participate were included; this two-stage design (stratified selection of schools, followed by census of teachers within selected schools) is reflected in the combined use of the term "stratified random sampling" for the school selection stage and "census" for the teacher inclusion stage. Head teachers in each of the 20 selected schools and all 3 Sub-County education officers were purposively included by census/purposive sampling given their small numbers and their direct oversight roles in CBE implementation. A subset of 10 lessons was purposively selected for classroom observation, based on teaching experience, subject taught, and willingness to be observed, to corroborate the self-reported questionnaire and interview data.

Sample Size Determination

The teacher sample size was determined using Cochran's (1977) formula for finite populations. The initial sample size was calculated as $n_0 = Z^2pq/e^2$, using a 95% confidence level ($Z = 1.96$), an assumed proportion of $p = 0.5$ ($q = 1 - p = 0.5$, which maximizes the required sample size when no prior estimate of the population proportion is available), and a margin of error of $e = 0.05$, giving $n_0 = 384$. Because the target population of teachers is finite ($N = 245$), the finite population correction $n = n_0 / (1 + (n_0 - 1)/N)$ was then applied, yielding a final teacher sample size of 150. All 32 heads of institutions and all 3 education officers were included by census rather than by formula-based sampling, consistent with their small population sizes.

Research Instruments, Validity and Reliability of the Instruments

Data were collected using a structured teacher questionnaire, semi-structured interview schedules for heads of institutions and officers and a classroom observation checklist. Content validity was established through review by the supervisor and subject specialists. Reliability was confirmed through test-retest analysis of the interview schedule and Cronbach's alpha for the questionnaire (0.70 or higher, reaching 0.841 in a pilot conducted in neighbouring Pokot South Sub-County). Observation data were used to triangulate and check for common-method bias in teachers' self-reports.

Ethical Procedures

Ethical clearance was obtained from the university's research ethics committee prior to data collection, and requisite research permits were obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and from the West Pokot County Director of Education. Informed consent was obtained from all participants after they had received a detailed explanation of the study's objectives, procedures, and their right to withdraw at any point without repercussion. Confidentiality was maintained through anonymization of responses; digital data were stored on password-protected devices and physical records kept in locked storage accessible only to the researcher. Because classroom observations involved

learners as incidental participants in the observed lessons, additional care was taken to protect their dignity and privacy, and observations proceeded only with the concurrent consent of the class teacher and the authorization of the school administration.

Data Analysis

Data were analyzed in SPSS version 29 using descriptive statistics, with teacher preparedness operationalized as a composite score across pedagogical skills, assessment practices and resource utilization, calculated as the mean of the three-dimension scores. Qualitative data were analyzed thematically.

RESULTS AND DISCUSSION

Response Rate

The study achieved a high response rate across all respondent categories. Respondent response rate and classroom observation completion are reported separately below, because they are conceptually distinct: response rate describes the proportion of intended human respondents who agreed to participate and provided usable data, whereas observation completion describes the proportion of planned, researcher-scheduled classroom visits that were successfully carried out. Collapsing the two into a single averaged figure would overstate the respondent response rate, since observation completion is not subject to the same non-response dynamics as questionnaires and interviews. Table 1 presents the respondent response rate, and Table 1b reports observation completion separately.

Table 1: Respondent Response Rate

Category	Target Respondents	Actual Respondents	Response Rate (%)
Teachers	150	134	89.3
Headteachers	32	28	87.5
Education Officers	3	3	100.0
Total/Average	185	165	89.2

Source: Field Data (2026)

Table 1b: Classroom Observation Completion

Category	Planned	Completed	Completion Rate (%)
Classroom Observations	10	10	100.0

Source: Field Data (2026)

The respondent response rate of 89.2% indicates that the study obtained adequate data from the intended respondents, and all 10 planned classroom observations were completed. This strengthens the credibility of the findings because the views of teachers, headteachers and education officers were well represented, and the observation record was complete. The strong teacher response rate was particularly important because the study focused on teacher preparedness for CBE implementation. As noted by Segera, Ndanu, and Wambiya (2024), understanding teacher preparedness requires adequate representation from teachers themselves. Therefore, the response rate and the complete observation record together give confidence that the findings reflect the actual preparedness levels and implementation experiences of public junior school teachers in Kapenguria Sub-County, West Pokot County.

Interpretation of Likert-Scale Means

Throughout this paper, mean scores on the 5-point Likert-type items are interpreted using equal-width class bands (range/number of categories = $4/5 = 0.80$): 1.00–1.80 = Very Low; 1.81–2.60 = Low; 2.61–3.40 = Moderate; 3.41–4.20 = High; and 4.21–5.00 = Very High. For agreement-format items (Strongly Disagree to Strongly Agree), these bands correspond to the same descriptors (e.g., 3.41–4.20 corresponds to general

agreement); for frequency-format items (Never to Always), the same bands correspond to Often (3.41–4.20) and Always (4.21–5.00), and so on. This convention is applied consistently below and was applied to the questionnaire's original response options.

Challenges Affecting Teacher Preparedness and CBE Implementation

The findings below draw on two kinds of evidence that are worth distinguishing from the outset: teachers', headteachers', and education officers' self-reported perceptions, gathered through questionnaires and interviews, and the classroom observation findings, which record what was directly seen during lesson delivery rather than what respondents reported about their own practice. Both are reported below, and the extent to which they corroborate one another is addressed explicitly in the Mixed-Methods Integration subsection.

Teachers' Perspectives on Challenges

The main objective of this study was to identify the challenges affecting teacher preparedness in the implementation of Competency-Based Education in public junior schools in Kapenguria Sub-County, West Pokot County. Both quantitative and qualitative data were collected to identify these challenges.

Table 2 presents teachers' perspectives on the severity of various challenges affecting CBE implementation.

Table 2: Teachers' Perspectives on Challenges (n=134)

Challenge	SD (%)	1	D 2 (%)	N 3 (%)	A 4 (%)	SA 5 (%)	Mean	Std. Dev.
Lack of CBC materials	6 (4.5)		12 (9.0)	20 (14.9)	48 (35.8)	48 (35.8)	3.90	1.17
Large class sizes	8 (6.0)		14 (10.4)	22 (16.4)	50 (37.3)	40 (29.9)	3.75	1.19
Lack of ICT resources	4 (3.0)		10 (7.5)	16 (11.9)	42 (31.3)	62 (46.3)	4.10	1.11
Poor internet connectivity	5 (3.7)		12 (9.0)	18 (13.4)	44 (32.8)	55 (41.0)	3.99	1.14
Heavy workload	10 (7.5)		16 (11.9)	24 (17.9)	46 (34.3)	38 (28.4)	3.64	1.23
Insufficient classrooms	12 (9.0)		18 (13.4)	28 (20.9)	42 (31.3)	34 (25.4)	3.51	1.28
Lack of time	8 (6.0)		14 (10.4)	22 (16.4)	50 (37.3)	40 (29.9)	3.75	1.19
Limited administrative support	14 (10.4)		20 (14.9)	30 (22.4)	38 (28.4)	32 (23.9)	3.40	1.31
Limited parental support	10 (7.5)		16 (11.9)	24 (17.9)	46 (34.3)	38 (28.4)	3.64	1.23
Poor community understanding of CBC	12 (9.0)		18 (13.4)	28 (20.9)	42 (31.3)	34 (25.4)	3.51	1.28

Source: Field Data (2026).

The findings in Table 2 revealed that teachers identified multiple challenges affecting CBE implementation. The most serious challenges were:

Lack of ICT resources (M=4.10, SD=1.11): With 77.6% of teachers rating this as a serious or very serious problem, this was the most significant challenge identified. This aligns with Mwangi (2024) and Mauti, Moindi, and Masagara (2025), who reported significant ICT infrastructure gaps in rural schools.

Poor internet connectivity ($M=3.99$, $SD=1.14$): With 73.8% rating this as serious or very serious, this challenge is closely related to the lack of ICT resources. The finding is consistent with Hussein (2023), who reported that marginalized regions like West Pokot have virtually non-existent ICT infrastructure.

Lack of CBE materials ($M=3.90$, $SD=1.17$): With 71.6% rating this as serious or very serious, the shortage of CBE-aligned teaching and learning materials is a critical challenge. This aligns with Wamokhela, Oduori, and Koross (2025), who reported that textbook shortages were among the most significant barriers to effective curriculum delivery in rural public schools.

Large class sizes ($M=3.75$, $SD=1.19$) and lack of time ($M=3.75$, $SD=1.19$): Both were rated as serious challenges by over 67% of teachers. Large class sizes make it difficult to implement learner-centred approaches effectively, while lack of time affects teachers' ability to plan lessons, develop assessment tasks, and provide individualized support.

The finding that limited administrative support had the lowest mean score ($M=3.40$, $SD=1.31$) suggests that teachers generally felt supported by their school administrators, although this remained a moderate challenge for some.

Headteachers' Perspectives on Challenges

Qualitative data from headteacher interviews provided additional insights into the challenges affecting CBE implementation. Consistent with the quantitative findings, headteachers most frequently raised the shortage of resources, oversized classes, teacher workload, and inadequate training as the main constraints. One headteacher captured the resource concern directly:

"The biggest challenge is the lack of resources. We do not have enough textbooks, we do not have teaching aids, we do not have computers or internet. Teachers are supposed to implement a curriculum that requires these resources, but they do not have them. They are forced to improvise, but improvisation has limits. You cannot improvise a computer." Head Teacher A, Personal Communication.

Class size and teacher workload were raised in similar terms by other headteachers, who described classes of 70 to 80 learners as making group work and individualized feedback impractical, and described teachers as stretched across lesson planning, continuous assessment, record-keeping and meetings with little time left to prepare well for CBE lessons. On training, one headteacher observed:

"Teacher training has been inadequate. Many teachers received only one or two workshops, and then they were expected to implement a complex new curriculum. There was no follow-up, no mentoring, no refresher training. Teachers were left to figure things out on their own. Some have managed, but many are still struggling." Head Teacher C, Personal Communication.

Not all headteacher commentary was uniformly negative, however. While describing the same resource shortages discussed above, one headteacher offered a more qualified view that diverged in tone from the others, acknowledging teachers' resourcefulness while still flagging it as an unsustainable coping strategy rather than a solution: "Teachers are very creative. When there are no textbooks, they use locally available materials... But this creativity should not be a substitute for proper resources. Teachers should not be forced to improvise all the time." This divergence in framing, rather than a disagreement on the underlying facts, suggests that headteachers were broadly aligned on what the challenges were, but varied in how much agency versus constraint they attributed to teachers within those challenges.

Education Officers' Perspectives on Challenges

Education officers also provided valuable insights into the challenges affecting teacher preparedness and CBE implementation, emphasizing factors specific to West Pokot's marginalized status: teacher shortages, infrastructure gaps, insecurity, and low community understanding of CBE. One Curriculum Support Officer summarized the staffing problem:

"West Pokot is a marginalized region. We have many challenges that other areas do not face. Teacher shortages are a major problem. Some schools have only two or three teachers for eight classes. How can they implement CBE when they do not even have enough teachers to cover all the subjects? It is impossible." Head Teacher E, Personal Communication.

Infrastructure gaps were described in similar terms by another officer, who noted that some schools held classes under trees with no libraries, laboratories, or electricity, making practical, digitally-enabled CBE activities impossible to deliver. A third officer linked insecurity to staffing instability, explaining that it is difficult to attract and retain teachers in some parts of West Pokot, which disrupts continuity of CBE implementation. A fourth officer raised a community-level factor:

"Community factors also play a role. Many parents in West Pokot have low levels of education. They do not understand what CBE is about. They expect teachers to use traditional methods. They want their children to pass exams, not develop competencies. This creates tension and affects teachers' ability to implement CBE effectively." Head Teacher F, Personal Communication.

Additional Challenges Identified from Classroom Observations

Classroom observations revealed several additional challenges affecting CBE implementation. Overcrowded classrooms were evident in most of the observed lessons, with class sizes ranging from 45 to 75 learners. This situation made it difficult for teachers to effectively conduct group work and provide individualized instruction. The observations also revealed limited teaching aids, as most classrooms lacked charts, posters, models, and other visual materials relevant to the subjects being taught.

The findings further showed the absence of learner-centred activities in many classrooms, with lessons being largely dominated by teacher talk and characterized by minimal learner participation. In terms of assessment, it was observed that **assessment** was primarily oral, with limited written assessment activities and no use of competency-based tools such as rubrics or observation checklists. The observations also established no ICT integration during lesson delivery, despite the emphasis placed on digital literacy within the Competency-Based Education framework. Additionally, inadequate seating arrangements were observed, with most classrooms organized in traditional row seating that offered limited opportunities for group work and collaborative learning. These challenges collectively hindered the effective implementation of the CBE curriculum in the observed schools.

Because the study used a convergent parallel design, the quantitative and qualitative strands were analyzed separately and are integrated here to identify where they converge, diverge, and complement one another.

The two strands converged most clearly on resource-related constraints. Teachers' quantitative ratings identified lack of ICT resources ($M=4.10$) and poor internet connectivity ($M=3.99$) as the most serious challenges, and this was independently corroborated by headteachers and education officers describing an absence of computers, internet, and electricity in interviews, and by classroom observations, which recorded no ICT integration in any of the 10 lessons observed. Class size and workload showed the same convergence: teachers' quantitative ratings ($M=3.75$ for both) were matched almost verbatim by headteachers' description of classes of 70 to 80 learners and teachers stretched across competing responsibilities.

The clearest point of divergence concerned administrative support. Quantitatively, limited administrative support received the lowest mean severity rating among the challenges tested ($M=3.40$), suggesting teachers did not experience it as acute. Yet none of the headteachers or education officers raised administrative support as a challenge in their own account of what constrains CBE implementation; instead, their narratives concentrated on resource, staffing and community-level constraints outside their direct control. Read together, this suggests headteachers and officers may be describing the challenges they perceive themselves as responsible for addressing, while teachers' relatively low concern about administrative support indicates that, whatever support exists, it is not itself a major source of frustration relative to resource and infrastructure gaps.

The two strands were complementary on teacher training and pedagogical practice. The quantitative data established the scale of the training gap (31.3% of teachers with no CBE training) and the resulting preparedness profile (Table 1c), while the qualitative data explained the mechanism: headteachers described training as consisting of one-off workshops with no follow-up or mentoring, leaving teachers “to figure things out on their own.” Neither strand alone would have given a complete picture: the quantitative data could not explain why training appeared inadequate despite a majority of teachers having received some training, and the qualitative data alone could not establish how widespread the gap was. Together, they indicate that the preparedness problem in Kapenguria Sub-County is driven less by an absence of training per se, and more by its one-off, unsustained format.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

The study identified multiple interconnected challenges affecting teacher preparedness and CBE implementation in Kapenguria Sub-County, West Pokot County. The most significant challenges were resource-related, particularly the lack of ICT resources, poor internet connectivity, and inadequate CBE-aligned teaching and learning materials. Over three-quarters of teachers rated lack of ICT resources as a serious or very serious problem, and classroom observations confirmed that no ICT tools were used in any observed lesson. This represents a critical barrier to CBE implementation given the emphasis on digital literacy in the CBE framework.

The shortage of CBE-aligned teaching and learning materials was also identified as a critical challenge, with over 70% of teachers rating this as a serious or very serious problem. This aligns with Wamokhela, Oduori, and Koross (2025), who reported that textbook shortages were among the most significant barriers to effective curriculum delivery in rural public schools. The lack of materials forces teachers to improvise constantly, which, while demonstrating resourcefulness, is not a sustainable solution for quality education delivery.

Large class sizes and lack of time were both rated as serious challenges by over two-thirds of teachers. Large class sizes make it difficult to implement learner-centred approaches effectively, as teachers cannot provide individualized attention or effectively facilitate group work. The lack of time affects teachers' ability to plan lessons, develop assessment tasks, and provide individualized support, contributing to the implementation gaps observed in classroom practices.

Qualitative data from headteachers and education officers provided additional depth to these findings. Headteachers described the lack of resources as the biggest challenge, noting that teachers are expected to implement a curriculum that requires resources they simply do not have. Education officers highlighted that West Pokot's status as a marginalized region compounds these challenges through severe teacher shortages, inadequate infrastructure, security concerns affecting teacher deployment and retention, and low community awareness of CBE principles. These contextual challenges are consistent with Hussein's (2023) findings on CBE implementation in Northern Kenya and Munyao, Nduku, and Ndanu's (2023) study in Lamu West Sub-County, both of which documented compounded challenges in marginalized regions.

The study also found that inadequate teacher training is a significant challenge, with nearly one-third of teachers having received no CBE training. Even among those who had received training, the quality and depth varied considerably, with most training being one-off workshops rather than sustained professional development. This pattern is consistent with the Diffusion of Innovation Theory's emphasis that sustained support is necessary for successful adoption of innovations. The Ministry of Education's (2023) CBE Implementation Status Report similarly identified uneven implementation across counties, inadequate teacher preparation, and resource constraints as major challenges. The Nation Media (2025) report on CBE challenges in West Pokot County further documented the critical teacher shortage and extreme teacher-to-learner ratios, corroborating the current study's findings on the severity of contextual challenges in the region.

Conclusion

Taken together, the quantitative and qualitative strands point to the same underlying picture: teacher preparedness in Kapenguria Sub-County is constrained less by teachers' pedagogical or assessment knowhow, which both respondents and classroom observations rated comparatively favourably, and more by the resource and contextual environment within which teachers work. It is this environment — the absence of ICT infrastructure, the shortage of CBE-aligned materials, oversized classes, and unsustained training — that appears to account for the gap between CBE's policy intentions and what was observed in practice. Because the descriptive design used in this study establishes association and pattern rather than statistical causation, these constraints are best read as conditions that limit or are associated with weaker implementation, rather than as isolated causes with a single, provable effect on outcomes.

It is also worth distinguishing what kind of evidence underlies each part of this conclusion. The teacher preparedness composite score and the challenge ratings in Tables 1c and 2 reflect teachers' own self-reported perceptions, and the headteacher and education officer quotations reflect their perceptions in turn; these are valuable because they capture how the people implementing and overseeing CBE experience the process, but they remain self-report. The classroom observation findings (absence of ICT use, overcrowding, teacher-centred instruction, oral-only assessment) are the study's directly observed evidence, and it is notable that they corroborated rather than contradicted the self-reported data, which strengthens confidence in the overall picture without eliminating the distinction between what was reported and what was seen.

These conclusions are drawn from, and apply most directly to, public junior schools in Kapenguria Sub-County, West Pokot County; the sub-county's specific combination of marginalization, terrain, and security context means the findings should not be generalized to other sub-counties or to Kenya's public junior schools as a whole without further comparative research of the kind proposed below.

Recommendations

- The Teachers Service Commission (TSC) should urgently recruit and deploy more teachers to Kapenguria Sub-County while introducing hardship incentives and sustained, follow-up CBE training and mentoring, rather than one-off workshops, to close the current teacher shortage and preparedness gaps.
- The Ministry of Education should prioritize equipping Kapenguria's public junior schools with ICT infrastructure, connectivity, and CBE-aligned teaching materials, and invest in additional classrooms to reduce oversized classes and enable effective learner-centred instruction.
- Teachers should strengthen peer learning networks, adopt low-cost improvised teaching aids to offset resource shortages, and expand use of competency-based assessment tools like rubrics rather than relying mainly on oral assessment.

Suggestions for Further Research

- Future studies should be conducted in other sub-counties and counties in Kenya to establish whether similar findings would be obtained in different rural, peri-urban and urban school contexts. This would improve the generalizability of findings beyond Kapenguria Sub-County, West Pokot County.
- Research should examine the experiences of teachers in other marginalized and hard-to-reach regions of Kenya, including arid and semi-arid lands, to identify common challenges and context-specific strategies for improving teacher preparedness and CBE implementation. Comparative studies across different marginalized regions could identify best practices that can be scaled up nationally, while also highlighting the need for differentiated approaches that respond to local contexts.

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