

Policy-to-Practice Gaps: Institutional and Systemic Barriers to Competency-Based Curriculum Implementation

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Abstract

Competency-Based Curriculum (CBC) reforms have been adopted across many education systems, particularly in sub-Saharan Africa, as a strategy for shifting instruction away from rote content coverage toward the development of learner competencies, skills, and applied knowledge. Despite the policy appeal of CBC, a persistent gap has emerged between what national curriculum frameworks prescribe and what actually occurs in classrooms. This systematic literature review synthesizes evidence from peer-reviewed studies, government reports, and grey literature published between 2013 and 2025 to examine the institutional and systemic barriers that constrain CBC implementation. Following PRISMA guidelines, 54 studies met the inclusion criteria after a multi-stage screening process from an initial pool of 412 records identified across four databases. Thematic synthesis of the included studies produced six dominant barrier categories: policy design and communication gaps; institutional capacity and resource constraints; teacher preparedness and continuous professional development deficits; assessment and examination system misalignment; weak leadership, governance, and monitoring systems; and socio-cultural and contextual resistance. The review finds that policy-to-practice gaps are rarely attributable to a single point of failure but instead emerge from the cumulative interaction of under-resourced institutions, examination systems that still reward content recall, inadequately supported teachers, and top-down policy processes that exclude implementers from design. The review concludes that sustainable CBC implementation requires coherent alignment between policy intent, institutional capacity, and classroom-level support structures, and proposes a multi-level framework for closing the policy-to-practice divide. Implications for policymakers, curriculum developers, teacher training institutions, and future research are discussed.

Keywords: *Competency-Based Curriculum, curriculum implementation, policy-practice gap, education reform, systematic review, institutional barriers, sub-Saharan Africa*

Background to the Study

Curriculum reform has become one of the most visible mechanisms through which governments attempt to respond to changing labour market demands, technological disruption, and criticisms that traditional content-heavy curricula fail to equip learners with transferable skills (Audrey & Kazaara, 2025; Geera & Onen, 2023; Ongowo, 2022). Competency-Based Curriculum (CBC), sometimes referred to as competency-based education (CBE) or outcomes-based education, represents a deliberate shift from an input-driven model of schooling, where success is measured by content coverage and examination recall, toward an output-driven model in which learners are expected to demonstrate defined competencies such as critical thinking, collaboration, communication, and problem-solving (Cook, 2022;

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Fatimah et al., 2023; Prosper Mubangizi, 2020; Salazar-Fernandez et al., 2021). Over the past two decades, CBC has been adopted, piloted, or is under active rollout in numerous countries, including Kenya, Uganda, Rwanda, Tanzania, South Africa, Zambia, and several countries in Southeast Asia and Latin America. The appeal of CBC to policymakers lies in its promise of producing graduates who are better prepared for the twenty-first century economy and less dependent on white-collar formal employment (Julius & Audrey, 2025a; Julius & Isaac Kazaara, 2025; Julius & Nancy, 2026). However, the transition from a well-articulated policy document to functioning classroom practice has proven far more complex than policy architects typically anticipate. Numerous evaluations and independent studies conducted since the early phases of CBC rollout in various contexts have documented a persistent implementation gap, wherein teachers continue to rely on lecture-based, examination-oriented pedagogy even after formal curriculum change, largely because the institutional and systemic conditions required to support competency-based teaching have not been put in place alongside the policy shift (Julius & Audrey, 2025b; Julius & Kazaara, 2025b; Julius & Nancy, 2025; Okoed, 2023). This phenomenon, often described broadly as a "policy-to-practice gap," is not unique to CBC; it echoes long-standing findings in the implementation science and education policy literature regarding the difference between policy as written, policy as interpreted by intermediate actors, and policy as enacted in the classroom. What distinguishes the CBC case, however, is the scale and simultaneity of the demands it places on multiple layers of the education system at once: curriculum content, pedagogy, assessment, teacher preparation, school leadership, resource provisioning, and community and parental understanding must all shift in a coordinated manner for the reform to achieve its intended outcomes (Chakrabarty & Singh, 2025; Charles et al., 2023; Julius & Kazaara, 2026; VERGUN et al., 2021). Where any one of these layers lags behind, the policy risks being implemented only symbolically, with classroom practice remaining largely unchanged behind a relabelled curriculum document.

Statement of the Problem

Despite substantial policy investment in CBC reforms, a growing body of empirical evidence suggests that implementation on the ground consistently falls short of policy intent. Governments have issued revised curriculum frameworks, syllabi, and teacher guides, yet classroom observation studies, teacher surveys, and school-level evaluations repeatedly report that teaching continues to be dominated by traditional methods, that assessment practices remain misaligned with competency-based objectives, and that schools lack the physical, financial, and human resource capacity to deliver the reform as designed (Chemutai et al., 2023; Ma et al., 2022; Mobegi, 2026; Ndomondo et al., 2022). This mismatch between policy intent and classroom reality represents a significant threat to the anticipated returns on CBC investment and risks undermining public and professional confidence in curriculum reform more broadly. While a considerable volume of literature has examined CBC implementation in individual country contexts, much of this evidence remains fragmented across disciplinary silos, institutional reports, and country-specific studies that are rarely synthesized collectively (Aheisibwe & Barigye, 2023; Julius & Kazaara, 2025a; Mubarak, 2023; Muwanguzi et al., 2023). There is a need for a systematic and comparative synthesis that consolidates existing evidence on the institutional and systemic barriers to CBC implementation, identifies recurring patterns across

contexts, and clarifies where the weight of the evidence points toward the most consequential points of failure. This review addresses that gap by systematically synthesizing the empirical and grey literature on institutional and systemic barriers to CBC implementation.

Objectives of the Review

1. To systematically identify and synthesize empirical evidence on the institutional barriers that constrain the implementation of Competency-Based Curriculum reforms.
2. To examine the systemic and structural factors that contribute to the divergence between CBC policy intent and classroom-level practice.
3. To synthesize the pedagogical, assessment-related, and teacher capacity barriers reported across the reviewed literature.
4. To propose an integrated, multi-level framework for understanding and addressing policy-to-practice gaps in CBC implementation.

Research Questions

1. What institutional barriers have been documented in the literature as constraining the implementation of Competency-Based Curriculum reforms?
2. What systemic and structural factors contribute to the gap between CBC policy design and classroom practice?
3. How do teacher preparedness, assessment systems, and school leadership interact to shape implementation outcomes?
4. What strategies and recommendations does the existing literature propose for narrowing the policy-to-practice gap?

Significance of the Review

This review contributes to the education policy and curriculum studies literature in three ways. First, it consolidates a fragmented evidence base into a single, systematically derived synthesis that policymakers and curriculum developers can draw upon when designing or revising CBC implementation strategies. Second, it offers education researchers a structured thematic map of the barriers reported across contexts, which can guide the design of future empirical studies, including comparative and longitudinal research. Third, by explicitly framing the analysis around the policy-to-practice divide, the review foregrounds an implementation science perspective that is often underused in curriculum studies, encouraging closer attention to the mechanisms through which policy translates, or fails to translate, into classroom practice.

Conceptual and Theoretical Framework

Conceptualizing Competency-Based Curriculum

Competency-Based Curriculum is conceptually distinct from traditional, content-driven curricula in that it organizes learning around demonstrable competencies rather than the sequential coverage of subject content. A competency, in this framing, is typically understood as an integrated combination of knowledge, skills, attitudes, and values that a learner can apply in real-life and work-related contexts. CBC frameworks commonly specify core competencies such as communication and collaboration, critical thinking and problem-solving, creativity and imagination, citizenship, digital literacy, learning to learn, and self-efficacy, which cut across subject areas rather than residing within a single discipline. Operationally, CBC implementation requires substantial changes across four interlocking domains: curriculum content and structure, pedagogy, assessment, and the broader enabling environment, including teacher capacity, school leadership, resourcing, and community engagement. The literature is broadly consistent in framing CBC not merely as a change in curriculum documents but as a systemic reform that depends on parallel and mutually reinforcing shifts across all four domains; a reform that changes syllabi without a corresponding shift in assessment practice, for instance, is unlikely to alter classroom behaviour because teachers will continue to "teach to the test."

Theoretical Underpinnings

This review is informed by two complementary theoretical perspectives. The first is Fullan's theory of educational change, which conceptualizes implementation not as a single event but as an ongoing process comprising initiation, implementation, and institutionalization phases, each of which can stall if the conditions for the next phase are not adequately prepared. Fullan's framework is particularly useful for explaining why CBC reforms that appear well-designed on paper (the initiation phase) often stall during implementation when insufficient attention is paid to building the capacity, resources, and buy-in required for institutionalization (Franco et al., 2023; Gracious Kazaara & Julius, 2025; Lozano et al., 2022). The second perspective draws on Fixsen and colleagues' implementation science framework, which identifies distinct stages of implementation, including exploration, installation, initial implementation, full implementation, and sustainability, and emphasizes that successful implementation depends on the alignment of core implementation drivers: competency drivers (selection, training, coaching, and performance assessment of implementers), organizational drivers (systems intervention, facilitative administration, and decision support data systems), and leadership drivers (Kazaara & Audrey, 2026; Müller et al., 2024; Muwanguzi et al., 2023; Souza et al., 2022). Applied to CBC, this framework helps explain why reforms that under-invest in teacher coaching and ongoing professional support, or that lack functioning feedback and monitoring systems, tend to remain stuck at an early or partial implementation stage regardless of how well the policy document itself is written (Kazaara & Desire, 2025; Sanusi et al., 2022; Umeze & Ohen, 2016). Together, these two frameworks provide the conceptual lens through which the barriers identified in the reviewed literature are organized and interpreted in this review.

Methodology

Review Design

This review adopts a systematic literature review design, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for the identification, screening, eligibility assessment, and inclusion of studies. A systematic approach was selected over a narrative or scoping review because the objective was to comprehensively and transparently synthesize the empirical evidence on a clearly bounded research question, using explicit and replicable criteria for study selection and quality appraisal, rather than to broadly map the extent of the literature.

Search Strategy

A structured search strategy was developed and applied across four electronic databases: ERIC, Scopus, Google Scholar, and African Journals Online (AJOL), supplemented by a manual search of the websites of relevant ministries of education, national curriculum development centres, and international organizations, including UNESCO and UNICEF, to capture policy reports and grey literature not indexed in academic databases. The search combined terms related to the intervention ("competency-based curriculum" OR "competency-based education" OR "competence-based curriculum" OR "outcomes-based education") with terms related to implementation and barriers ("implementation" OR "policy-practice gap" OR "policy implementation" OR "barriers" OR "challenges" OR "institutional capacity"). Boolean operators and truncation were used to maximize sensitivity, and searches were restricted to literature published between January 2013 and March 2025, a period chosen to capture the wave of CBC reforms initiated across sub-Saharan Africa and other regions following the adoption of the Sustainable Development Goals' education targets.

Inclusion and Exclusion Criteria

Studies were included if they: (a) empirically examined the implementation of a competency-based, competence-based, or outcomes-based curriculum reform at the basic, secondary, or teacher-training education level; (b) reported findings specifically related to institutional, systemic, or structural barriers to implementation; (c) were published in English between 2013 and 2025; and (d) were peer-reviewed journal articles, government or institutional evaluation reports, or postgraduate theses and dissertations that met a minimum methodological quality threshold. Studies were excluded if they: (a) focused exclusively on higher education competency frameworks unrelated to basic or secondary education curriculum reform; (b) were purely theoretical or opinion pieces without an empirical basis; (c) were conference abstracts, editorials, or non-peer-reviewed commentary without sufficient methodological detail; or (d) could not be accessed in full text through institutional or open-access channels.

Study Selection Process

The search across the four databases and supplementary sources yielded an initial pool of 412 records. After removing 87 duplicate records, 325 records remained for title and abstract screening. Title and abstract screening, conducted independently against the inclusion and exclusion criteria, excluded a further 201 records that were clearly unrelated to the review question, leaving 124 records for full-text assessment. Of these, 70 were excluded at the full-text stage, most commonly because they addressed higher education competency frameworks, lacked an empirical basis, or did not report findings specific to institutional or systemic barriers. This process resulted in a final sample of 54 studies included in the systematic synthesis. The overall selection process is consistent with standard PRISMA flow reporting, moving from identification through screening and eligibility to final inclusion.

Quality Appraisal

Included studies were appraised using a modified version of the Mixed Methods Appraisal Tool (MMAT), which allows for the quality assessment of qualitative, quantitative, and mixed-methods studies within a single review. Each study was rated against criteria relevant to its methodological design, including clarity of research questions, appropriateness of data collection methods, adequacy of sampling, and coherence between data and interpretation. Studies rated as low quality on the majority of applicable criteria were excluded from the final synthesis; no studies were excluded solely on the basis of study design, in keeping with the review's aim of capturing the breadth of available evidence, including grey literature that often provides valuable system-level detail not always available in peer-reviewed sources.

Data Extraction and Synthesis

Data from the 54 included studies were extracted using a structured matrix capturing author(s), year, country, education level, study design, sample, and reported barriers to implementation. Thematic synthesis, following the approach of Thomas and Harden, was used to analyse the extracted data. This involved line-by-line coding of reported findings, the development of descriptive themes grounded closely in the original studies, and the subsequent generation of analytical themes that moved beyond the content of the individual studies to address the review's specific research questions. Six dominant themes emerged from this process and form the structure of the findings presented in the following section.

Findings

Overview of Included Studies

Of the 54 studies included in the review, the majority (33 studies) were drawn from sub-Saharan African contexts, principally Kenya, Uganda, Rwanda, Tanzania, and Zambia, reflecting the intensity of CBC rollout activity in the region over the review period. The remaining studies were drawn from South and Southeast Asia, Latin America, and

a smaller number of comparative or multi-country studies. Study designs were predominantly qualitative (28 studies), employing interviews, focus group discussions, and document analysis with teachers, head teachers, curriculum officers, and policymakers; a further 16 studies employed mixed-methods designs combining teacher surveys with qualitative components; and 10 studies were primarily quantitative, typically employing structured questionnaires administered to teachers or school administrators. Across this diverse evidence base, six recurring and interrelated thematic barriers to CBC implementation were identified.

Thematic Synthesis

Policy Design and Communication Gaps

A recurring theme across the reviewed studies is that CBC policies are frequently developed through centralized, top-down processes that provide limited opportunity for meaningful input from the teachers, head teachers, and district-level education officials who are ultimately responsible for implementation. Several studies report that curriculum frameworks and syllabi were disseminated to schools with insufficient lead time for schools to prepare, and that the cascade model of training commonly used to roll out CBC, in which a small number of national trainers train regional trainers who in turn train district and school-level teachers, results in significant dilution and distortion of the intended content by the time it reaches classroom teachers. Studies consistently find that teachers report receiving conflicting or incomplete information about what CBC requires of them in practice, particularly regarding how competency-based objectives should translate into specific lesson plans, learning activities, and assessment tasks. This communication gap is compounded in several contexts by the frequent revision of curriculum guidelines and implementation timelines, which several studies describe as eroding teacher confidence in the stability and credibility of the reform itself.

Institutional Capacity and Resource Constraints

Resource constraints emerge as one of the most consistently reported barriers across the reviewed literature, spanning both physical and financial dimensions. Competency-based pedagogy typically requires smaller class sizes, flexible learning spaces, project-based and hands-on learning materials, digital tools, and continuous formative assessment resources, none of which are adequately available in many of the school contexts examined in the reviewed studies. Numerous studies report severe overcrowding, with pupil-to-teacher ratios far exceeding those assumed in CBC pedagogical guidance, making learner-centred, activity-based instruction logistically difficult regardless of teacher willingness or skill. Studies from rural and under-resourced districts in particular report that schools lack basic teaching and learning materials aligned to the new curriculum, with textbooks and teacher guides for the reformed curriculum arriving late or not at all, forcing teachers to revert to previous curriculum materials or improvise without adequate guidance. Financing gaps at the institutional level, including delayed or insufficient capitation grants, are repeatedly cited as constraining schools' ability to procure CBC-aligned materials, further widening the gap between what the policy specifies and what schools can realistically deliver.

Teacher Preparedness and Professional Development Deficits

Teacher capacity constitutes a third major and closely related barrier theme. A substantial number of the reviewed studies find that pre-service teacher education programmes had not been adequately revised to reflect competency-based pedagogical approaches at the time CBC was rolled out in schools, meaning that many practising teachers were never formally trained in the pedagogical philosophy underlying the reform. In-service training, delivered primarily through short, cascade-model workshops, is repeatedly described in the literature as too brief, too theoretical, and insufficiently practical to build genuine teacher competence and confidence in competency-based instructional strategies such as project-based learning, formative and continuous assessment, differentiated instruction, and integrated thematic teaching. Several studies highlight a specific gap in teachers' capacity to design and administer competency-based formative assessment, with many teachers reporting that they continue to rely on traditional test-based assessment because they were never adequately trained in alternative assessment techniques. The absence of sustained, school-based coaching and mentorship support after initial training is identified across multiple studies as a critical missing implementation driver, consistent with implementation science literature emphasizing that one-off training without ongoing coaching rarely produces durable changes in classroom practice.

Assessment and Examination System Misalignment

A particularly consequential and recurring barrier identified across the reviewed studies concerns the persistence of high-stakes, content-based national examinations that remain misaligned with the competency-based objectives of the reformed curriculum. Numerous studies document a phenomenon commonly described as "backwash," in which teachers, school leaders, and parents continue to prioritize preparation for existing national examinations because these examinations remain the primary determinant of learners' progression and life chances, regardless of the pedagogical approach specified in the curriculum policy. Where reformed national assessment frameworks have not yet been fully operationalized, or where transitional arrangements maintain elements of the previous examination system, teachers report facing direct incentive conflicts between "teaching for competency" and "teaching for the exam." Several studies note that this misalignment is compounded by parental and community expectations that continue to equate educational quality with examination performance, creating pressure on schools and teachers to prioritize test preparation over the exploratory, activity-based approaches that CBC pedagogy is intended to promote.

Leadership, Governance and Monitoring Systems

The reviewed literature also identifies weaknesses in school leadership capacity and system-level governance and monitoring structures as significant barriers to implementation. Several studies find that head teachers, who play a central role in instructional leadership, curriculum supervision, and resource allocation at the school level, frequently receive the same brief, generic training as classroom teachers, without additional preparation specific to their supervisory and change-management responsibilities under the new curriculum. This leaves many school leaders without the skills or confidence to provide meaningful instructional supervision or to support teachers in adapting to

competency-based pedagogy. At the systemic level, several studies report that ministries and curriculum development agencies lack robust, real-time data systems to monitor implementation fidelity at the classroom level, relying instead on infrequent, resource-intensive external evaluations that provide limited timely feedback to guide mid-course policy adjustment. The absence of functioning feedback loops between classroom-level implementation experience and central policy revision processes is repeatedly identified as a structural weakness that allows implementation gaps to persist largely undetected or unaddressed for extended periods.

Socio-cultural and Contextual Barriers

Finally, a number of studies point to socio-cultural and contextual factors that complicate CBC implementation, particularly in contexts characterized by significant socioeconomic disparity between well-resourced urban schools and under-resourced rural schools. CBC's emphasis on project work, digital literacy, and parental involvement in learner assessment and portfolio development is reported in several studies to disproportionately disadvantage learners from low-income households, where parents may have limited literacy, time, or resources to support project-based homework, and where schools lack the digital infrastructure assumed by curriculum guidance. Language of instruction also emerges as a contextual barrier in multilingual settings, where competency-based materials developed centrally in a national or official language are reported to be poorly understood by teachers and learners in linguistically diverse or historically underserved regions. Several studies additionally highlight resistance rooted in teachers' professional identity and pedagogical beliefs, with some experienced teachers expressing scepticism toward pedagogical approaches that appear to depart substantially from methods they have used successfully for years, a form of resistance that purely technical or resource-based interventions are unlikely to resolve on their own.

Discussion

Synthesizing the Policy-Practice Divide

Read together, the findings of this review suggest that the policy-to-practice gap in CBC implementation is best understood not as the product of a single failure point but as the cumulative outcome of misalignment across multiple, interacting layers of the education system. Policy design and communication weaknesses set the stage for implementation difficulty by failing to adequately prepare and involve the actors responsible for delivery. These early-stage gaps are then compounded by institutional resource constraints that make faithful implementation logistically difficult even where teacher willingness exists, and further compounded by inadequate teacher preparation and professional development that leaves many teachers without the practical skills required to enact competency-based pedagogy even where resources are minimally adequate. Critically, several of the reviewed studies suggest that even where teacher capacity and resourcing are reasonably adequate, the persistence of misaligned, high-stakes examination systems continues to incentivize traditional, content-focused teaching, effectively neutralizing progress made on other implementation dimensions. This finding is consistent with the theoretical framing adopted in this review: Fullan's

emphasis on the interdependence of implementation conditions and Fixsen and colleagues' identification of organizational and leadership drivers as necessary complements to competency-focused teacher training both help explain why isolated interventions, such as one-off teacher training without corresponding assessment reform, consistently fail to close the policy-to-practice gap.

Cross-Cutting Systemic Barriers

A second cross-cutting observation from the synthesis is the recurring theme of weak feedback and monitoring systems, which appears not as a standalone barrier but as a meta-barrier that limits the education system's capacity to detect and correct the other five barrier categories in a timely manner. Where ministries and curriculum agencies lack real-time, classroom-level data on implementation fidelity, resource gaps, and teacher capacity constraints, can persist unaddressed for years, as reflected in several of the reviewed longitudinal and follow-up studies that documented largely unchanged implementation conditions several years after initial CBC rollout. This suggests that strengthening monitoring and feedback infrastructure may hold disproportionate leverage for improving implementation outcomes relative to its prominence in current CBC implementation strategies, most of which continue to emphasize front-loaded teacher training with comparatively limited investment in ongoing monitoring, coaching, and adaptive policy revision. The review also finds that socio-cultural and contextual barriers, while less frequently discussed in the CBC implementation literature than resource and training barriers, carry significant equity implications. The tendency for CBC's resource and parental-involvement assumptions to disproportionately disadvantage low-income and rural learners raises the possibility that, absent deliberate equity-focused implementation strategies, CBC reforms could inadvertently widen existing educational disparities even as they succeed in improving outcomes for better-resourced schools and communities.

Implications for Theory and Practice

These findings carry several implications for both theory and practice. Theoretically, the review reinforces the value of applying implementation science frameworks, rather than purely curriculum-design frameworks, to the study of large-scale curriculum reform, since many of the barriers identified in this review are not curriculum design flaws per se but implementation infrastructure gaps that curriculum design alone cannot resolve. Practically, the review suggests that CBC implementation strategies that treat teacher training as the primary or sole implementation lever are likely to under-perform relative to strategies that simultaneously address assessment system alignment, institutional resourcing, school leadership capacity, and monitoring infrastructure. The review further suggests that equity considerations should be explicitly integrated into CBC implementation planning from the outset, rather than addressed retrospectively once disparities in implementation outcomes become apparent.

Conclusion

This systematic literature review set out to synthesize the institutional and systemic barriers documented in the empirical literature on Competency-Based Curriculum implementation, with a particular focus on understanding the persistent gap between policy intent and classroom practice. Drawing on a systematically identified and quality-appraised sample of 54 studies, the review finds that this policy-to-practice gap arises from the interaction of six interrelated barrier categories: policy design and communication weaknesses, institutional capacity and resource constraints, teacher preparedness and professional development deficits, assessment and examination system misalignment, weak leadership and monitoring systems, and socio-cultural and contextual barriers. No single intervention addressing only one of these categories is likely to substantially close the policy-to-practice gap; the weight of the evidence instead points toward the need for coherent, system-wide implementation strategies that align policy design, resourcing, teacher capacity building, assessment reform, and monitoring infrastructure in a mutually reinforcing manner. As CBC and similar competency-based reforms continue to expand across education systems, particularly in resource-constrained contexts, attention to these systemic implementation conditions, rather than curriculum document design alone, will be critical to realizing the transformative potential that CBC reforms promise.

Recommendations

Policy Level

Curriculum development agencies should institutionalize structured mechanisms for teacher and school-leader participation in curriculum design and revision processes, moving away from purely top-down policy formulation toward genuinely participatory approaches that build implementer ownership from the outset.

National assessment and examination bodies should accelerate the alignment of high-stakes examination systems with competency-based curriculum objectives, including piloting and scaling competency-based assessment formats, to remove the incentive conflict that currently undermines competency-focused teaching.

Curriculum rollout timelines should build in adequate lead time between policy finalization and classroom implementation, allowing for phased resourcing, materials development, and teacher preparation rather than compressed rollout schedules that outpace system readiness.

Institutional Level

Ministries of education and development partners should prioritize equitable resourcing strategies that address the specific capacity gaps of rural and under-resourced schools, rather than assuming uniform implementation readiness across all school contexts.

School-level capitation and grant disbursement systems should be reviewed and, where necessary, reformed to ensure the timely and adequate flow of resources required for CBC-aligned teaching and learning materials.

Head teacher training programmes should be redesigned to provide leadership- and supervision-specific preparation, distinct from generic classroom-teacher training, given head teachers' central role in instructional leadership and change management at the school level.

Practice Level

In-service teacher professional development should shift from short, one-off cascade training workshops toward sustained, school-based coaching and mentorship models that provide ongoing, practical support for competency-based pedagogy and formative assessment.

Pre-service teacher education curricula should be comprehensively revised to embed competency-based pedagogical philosophy and practice, ensuring that newly qualified teachers enter the profession already equipped for competency-based instruction.

Education systems should invest in real-time, classroom-level monitoring and feedback infrastructure that allows implementation challenges to be identified and addressed through adaptive policy revision, rather than relying solely on infrequent external evaluations.

Areas for Future Research

Future research should prioritize longitudinal and comparative studies that track CBC implementation trajectories over extended periods and across diverse school contexts, to better understand how the barrier categories identified in this review interact and evolve over time.

Further empirical attention should be given to the equity implications of CBC implementation, including disaggregated analysis of implementation outcomes by school socioeconomic status, geographic location, and language context.

Research examining the specific effectiveness of alternative professional development models, particularly sustained school-based coaching approaches, relative to conventional cascade training, would provide valuable evidence to inform future implementation strategy design.

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