Beyond Established Literacy Gaps: An Integrative Narrative Review of Literacy Recovery in Kenyan Primary Schools.

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ABSTRACT

Accumulated foundational literacy deficits among primary learners in Grades 4 to 6 pose a severe threat to educational equity and progression in Kenya as pupils transition to Junior Secondary School. This study synthesizes empirical, policy, and assessment evidence to achieve three primary objectives: determine the scale and distribution of accumulated reading difficulties, evaluate the transferability and developmental limitations of existing foundational interventions, and design an operationally viable recovery model tailored to upper primary contexts. Using an integrative review methodology, the study searched primary databases (ERIC, Scopus, Web of Science, and Google Scholar) and institutional repositories (Usawa Agenda portal, KNEC, KICD, APHRC, and USAID DEC) for literature published from 2014 to 2026. The study critically evaluated retrieved evidence using a three-tier transferability appraisal schema. Results confirm that 35 percent of Grade 6 pupils nationally, rising to 39 percent in rural communities and 44 percent in refugee schools, cannot comprehend a foundational Grade 3 English story. This crisis is intensified by the abrupt Grade 4 switch to English as the exclusive medium of instruction. While early-grade structured pedagogy and targeted instruction provide valuable mechanisms, direct application to older pupils is constrained by juvenile materials that stigmatize learners and rigid lockstep pacing that neglects multisyllabic decoding and higher-order comprehension. In conclusion, the study develops a contextualized Five Phase Literacy Recovery Framework and establishes concrete 12-week public school pilot specifications. The proposed model incorporates rapid pseudo-word diagnostics, cross-grade flexible ability grouping, Curriculum Support Officer coaching, and low-cost thematic decodable readers. Sustainable implementation requires embedding dedicated remediation blocks into national timetables, with field testing serving as the vital next step.

Keywords: Accumulated literacy deficits, Literacy recovery, Upper primary, Targeted instruction, Instructional coaching

INTRODUCTION

Reading is the gateway skill through which formal schooling delivers almost everything else(Greenleaf et al., 2023). Learners who read accurately, fluently and with understanding can use texts to acquire knowledge in every learning area(Wawire & Kiroro, 2026); those who cannot are progressively excluded from the curriculum, however well that curriculum is designed(Coleman, 2022). Foundational literacy deficits in Kenya form part of a wider regional pattern. The 2022 update of the global learning poverty estimates simulated that 89 per cent of 10-year-olds in sub-Saharan Africa were unable to read and understand a simple text, up from a measured 86 % in 2019 (World Bank et al., 2022). More recent continental evidence indicates that only 10.8% of African children achieve minimum proficiency in reading and mathematics by the end of primary school (Global Education Monitoring Report Team, 2025), suggesting that the deficit has persisted despite the expansion of access. Kenyan national assessments show a similar trajectory. Assessments by the Kenya National Examinations Council (KNEC) indicate that deficits are visible as early as Grade 3, with 58.9 per cent of learners

below minimum proficiency in English literacy (KNEC, 2026). The 2025 Foundational Literacy and Numeracy Assessment (FLANA) further found that 35 in 100 Grade 6 learners could not read and comprehend a Grade 3-level English story, rising to 39 in 100 in rural areas and 44 in 100 in refugee community schools(FLANA, 2026).These learners are about to enter junior school under the Competency-Based Education (CBE) framework, where they are expected to read longer and more demanding texts, interpret multi-step instructions and communicate understanding in writing across subjects. This indicates that where foundational skills are missing, grade progression does not remedy the deficit; it compounds it. Addressing accumulated literacy deficits among upper primary learners presents a distinct instructional challenge. In addition to strengthening decoding and reading fluency, interventions must develop vocabulary, inferential comprehension and independent reading proficiency while aligning instructional materials and tasks with learners' age, cognitive development and grade-level expectations.

Kenya has also generated some of the strongest African evidence on how reading outcomes can be improved at scale. The Primary Math and Reading (PRIMR) Initiative(Wawire, 2023a; Wawire & Kiroro, 2026) and its national successor, Tusome, showed that structured lesson plans, learner materials and regular classroom support can raise early-grade reading(Hwa, 2025; Wanyama et al., 2025). These programmes, however, were designed for Grades 1 to 3. Their gains partly eroded once implementation support weakened and schools closed during the COVID-19 pandemic (Wanyama et al., 2025).The extent to which these interventions addressed the needs of upper primary learners with persistent foundational literacy deficits remains unclear, particularly among those who entered Grades 4–6 without achieving age- and grade-appropriate reading proficiency.

This integrative narrative review synthesises empirical evidence and policy literature on accumulated literacy deficits among upper-primary learners to identify instructional and systemic conditions for literacy recovery and inform a context-responsive framework for Kenyan schools. It examines three approaches that international evidence identifies as promising and that Kenyan programme experience suggests are mutually reinforcing: targeted instruction , teacher coaching and structured reading (Downer et al., 2024; Doyle et al., 2023; Shelton et al., 2023; Wawire, 2023b).

It addresses three questions.

1. What does existing evidence indicate about the contribution of each approach to literacy outcomes, and how strong is that evidence for learners in grade 4 to 6 in Kenya?

2. Second, how can the approaches be integrated into a coherent recovery model?

3. Third, what implementation conditions and research priorities should guide adoption?

REVIEW METHODOLOGY

To ensure methodological rigor and transparency, this section outlines the review design, database search strategy, eligibility criteria, screening protocols, and critical appraisal framework employed in this synthesis.

2.1 Review Design and Rationale

This study employs an integrative review design (Alvarenga et al., 2024; Hopia et al., 2016). Integrative reviews are particularly well suited to educational policy and pedagogy because they enable the concurrent integration and critical synthesis of diverse methodological paradigms, including large-scale cross-sectional assessments, randomized controlled trials, quasi-experimental evaluations, and qualitative implementation analyses (Alvarenga et al., 2024).

While systematic reviews with meta-analyses are optimal for pooling effect sizes across homogeneous interventions, they are structurally ill-suited for bridging disparate literature that spans early-grade trials, adolescent cognitive theories, and systemic policy constraints(Ahn et al., 2012). Restricting the synthesis solely to experimental trials risks overlooking contextual, pedagogical, and institutional mechanisms vital to effective

policy translation (Kaffenberger & Hwa, 2024). In contrast, the integrative review structure provides the conceptual flexibility required to assess the transferability and ecological validity of early-grade evidence to upper-primary contexts while upholding scholarly rigor through systematic search, screening, and critical appraisal protocols(Alvarenga et al., 2024; Cronin & George, 2023; Torraco, 2016) .

2.2 Search Strategy and Information Sources

Literature was searched across primary electronic databases and specialized educational repositories, including ERIC, Web of Science, Scopus, Google Scholar, and institutional portals: (Kenya National Examinations Council [KNEC], Kenya Institute of Curriculum Development [KICD], African Population and Health Research Center [APHRC] and the USAID Development Experience Clearinghouse [DEC]). The search covered empirical and policy publications spanning from 2014 to 2026, capturing evidence from early-grade national reforms (PRIMR, Tusome), COVID-19 learning disruption studies, and ongoing Competency-Based Curriculum (CBC) transitions to evaluate the efficacy of foundational reading interventions in upper primary, their integration into coherent recovery frameworks, and the systemic conditions required for sustainable implementation.

Search strings utilized Boolean combinations of controlled vocabulary and free-text terms tailored across four core conceptual dimensions:

- Population Terms: ("upper primary" OR "middle primary" OR "middle school" OR "Grade 4" OR "Grade 5" OR "Grade 6" OR "Standard 4" OR "Standard 5" OR "late primary" OR "older struggling readers" OR "adolescent literacy")
- Deficit Terms: ("accumulated literacy deficits" OR "reading failure" OR "foundational reading gaps" OR "learning poverty" OR "reading fluency" OR "reading comprehension")
- Intervention & Recovery Framework Terms: ("targeted instruction" OR "Teaching at the Right Level" OR "TaRL" OR "structured pedagogy" OR "instructional coaching" OR "remedial reading" OR "levelled readers" OR "accelerated learning" OR "catch-up pedagogy" OR "learning recovery" OR "multi-tiered system of support" OR "tiered instruction" OR "differentiated learning")

Eligibility Criteria

Sources were screened according to explicit eligibility parameters. Inclusion criteria comprised: (1) peer-reviewed empirical studies and quasi-experimental/experimental field trials from any low- and middle-income country context evaluating foundational reading interventions (phonemic awareness, decoding, oral reading fluency, and comprehension) targeting upper-primary cohorts (Grades 4–6 / Standards 4–8) or older struggling readers; (2) field evaluations of scalable pedagogical and recovery models including Teaching at the Right Level, structured pedagogy, ability-based grouping, instructional coaching, and multi-tiered remedial frameworks; (3) nationally representative learning assessment datasets, diagnostic reports, and institutional policy frameworks from Kenya (e.g., KNEC, Uwezo/FLANA, KICD) relevant to the Competency-Based Curriculum (CBC); and (4) conceptual, structural, or implementation frameworks addressing learning recovery, instructional time allocation, and systemic adoption conditions.

Exclusion criteria removed: (1) studies set in high-income contexts whose resource assumptions preclude transferability to resource-constrained classroom settings; (2) early-childhood or pre-primary (ECDE) studies lacking continuity or explicit tracking into middle- and upper-primary remediation; (3) non-peer-reviewed commentaries, papers, commercial promotional materials, and opinion editorials; and (4) computational, machine learning, or medical studies using homonymous phrasing (e.g., algorithmic "targeted instruction selection" or biological "reading frames") outside primary classroom instruction.

2.4 Screening Workflow and Inter-Rater Reliability

Database searches yielded 1,482 records, with an additional 41 institutional reports identified through grey literature repositories. Following deduplication (412 records removed), 1,111 unique titles and abstracts were screened.

Screening was conducted independently by two reviewers (IBM and CMG). To calibrate screening consistency, a pilot calibration was conducted on a random sample of 100 abstracts, achieving an initial inter-rater agreement of 88% (Cohen's $\kappa = 0.74$). Disagreements were discussed with a third reviewer (HNO) to refine inclusion boundaries. During the title and abstract screening, 964 records were excluded for failing eligibility criteria.

The remaining 147 full-text articles were independently reviewed. Of these, 103 were excluded with documented rationales (e.g., focus on secondary schooling, absence of disaggregated literacy data, or non-transferable clinical designs). In total, 44 publications met the inclusion criteria: 28 empirical studies and national assessment datasets informing the evidence synthesis, and 16 conceptual/methodological papers informing the theoretical framework and review architecture.

2.5 Critical Appraisal and Transferability Framework

To address the methodological hazards of uncritically conflating early-grade reading acquisition with upper-primary remediation, empirical evidence was evaluated using a three-tiered transferability appraisal schema calibrated to the cognitive, structural, and institutional realities of upper-primary education in Kenya:

Tier 1: Direct Empirical Evidence (Kenyan Upper Primary). Diagnostic and summative data originating directly from Kenyan middle/upper-primary school cohorts (Grades 4–6). This tier establishes the empirical baseline, longitudinal persistence, socioeconomic distribution, and structural severity of foundational reading deficits.

Tier 2: Proximate / Functionally Transferable Evidence (Kenyan Lower Primary). Large-scale empirical evaluations and randomized controlled trials (RCTs) conducted within Kenyan public primary schools targeting Grades 1–3 (e.g., PRIMR, Tusome, APHRC pilot remediation). These studies validate systemic delivery mechanics such as tablet-mediated Curriculum Support Officer (CSO) coaching, scripted teacher guides, and decodable reader supply chains but require structural calibration for older learners who have developed accumulated deficits and require accelerated morphology/comprehension rather than early emergent decoding.

Tier 3: Indirect / Conceptual Mechanism Evidence (Regional & Global Trials). Experimental field evaluations of targeted remedial instruction, Teaching at the Right Level (TaRL), and instructional coaching across comparable low- and middle-income country (LMIC) systems (e.g., Ghana, South Africa, Botswana). These studies provide proof-of-concept for pedagogical mechanisms (ability-based grouping, instructional differentiation, targeted remediation), but their findings must be evaluated against Kenyan staffing constraints, timetable allocations, and Competency-Based Curriculum (CBC) assessment structures.

Table 1: Evidence Matrix of Major Empirical Studies and National Assessments

Category & Study	Context & Sample	Learner Grade	Research Design	Core Findings	Methodological Limitations	Relevance / Transferability
Tier 1: Direct FLANA / Usawa Agenda (2024, 2026)	Kenya (National, 47 counties; 2,056 enumeration areas)	Grades 3–6 (Ages 10–15; N=49,835)	Nationally representative household cross-sectional survey	35% of Grade 6 pupils cannot read/comprehend a Grade 3 English story (39% rural, 44% refugee schools). Library presence (OR=1.18) and SES (OR=1.76)	Cross-sectional survey; identifies correlational rather than causal relationships; referenced to Grade 3 benchmark.	Direct / High: Establishes empirical baseline and geographic disparities of upper-primary deficits in Kenya.

				correlate with proficiency.		
Tier 1: Direct KNEC NASMLA & KPSEA (2023, 2024, 2026)	Kenya (National public and private schools)	Grade 3 & Grade 6 cohorts	Curriculum-referenced national school assessment	NASMLA revealed 41.4% of Grade 3 learners attained proficiency in English. In KPSEA 2023, ~38.6% of Grade 6 pupils performed below expected competency standards.	Evaluates broad curriculum standards rather than granular diagnostic sub-skills (decoding vs. oral comprehension).	Direct / High: Confirms that foundational deficits emerge early and persist through upper primary without natural catch-up.
Tier 2: Proximate Tusome National Literacy Activity (Piper et al., 2018; Kioko et al., 2021, 2025)	Kenya (National public primary schools; 24,000+ schools)	Grades 1–3	Large-scale quasi-experimental national program evaluation	Scripted lesson plans, 1:1 book access, and CSO tablet-based coaching produced initial effect sizes >0.7 SD. However, Grade 2 benchmark mastery fell to 18% post-2019 and after COVID closures.	Evaluated only in lower primary; lacked longitudinal tracking into upper grades; coaching intensity waned over time.	Proximate / High: Validates systemic coaching and structured materials, but proves early gains decay without upper-grade reinforcement.
Tier 2: Proximate PRIMR Initiative (USAID, 2014; Wawire, 2023)	Kenya (Kiambu, Nakuru, Murang'a counties)	Grades 1–2	Multi-arm cluster Randomized Controlled Trial (RCT)	Teacher professional development, structured guides, and monthly coaching yielded gains of 0.46 SD. A 15:1 school-to-coach ratio proved optimal and cost-effective.	Targeted foundational acquisition in early grades; required substantial external technical and donor support.	Proximate / Moderate: Informs the instructional architecture, coaching frequency, and material design for upper-primary recovery.
Tier 2: Proximate Developing Readers Study (APHRC, 2024; Muhia et al., 2024)	Kenya (Kiambu County; 15 pilot schools)	Grades 2–3 struggling readers	Pilot intervention study with pre-/post-assessment	13-week structured remediation matched to baseline levels reduced non-readers from 43.3% to 18.9%, with 37% progressing to fluent reading.	Small geographical sample; restricted to lower primary; short follow-up duration.	Proximate / High: Direct Kenyan proof-of-concept that level-targeted catch-up instruction can remediate severe reading deficits rapidly.
Tier 3: Indirect Ghana Remedial Policy Evaluation (Duflo et al., 2024)	Ghana (National public primary schools)	Primary grades (lower and upper)	Multi-arm Randomized Controlled Trial (RCT)	Targeted instruction grouped by learning level (assistant and teacher-led) raised test scores by 0.1 to 0.4 SD with persistent long-term gains.	Assistant fidelity declined over time; structural differences in staffing and timetables relative to Kenya.	Indirect / High: Validates Teaching at the Right Level (TaRL) principles as an effective, scalable policy in African public schools.

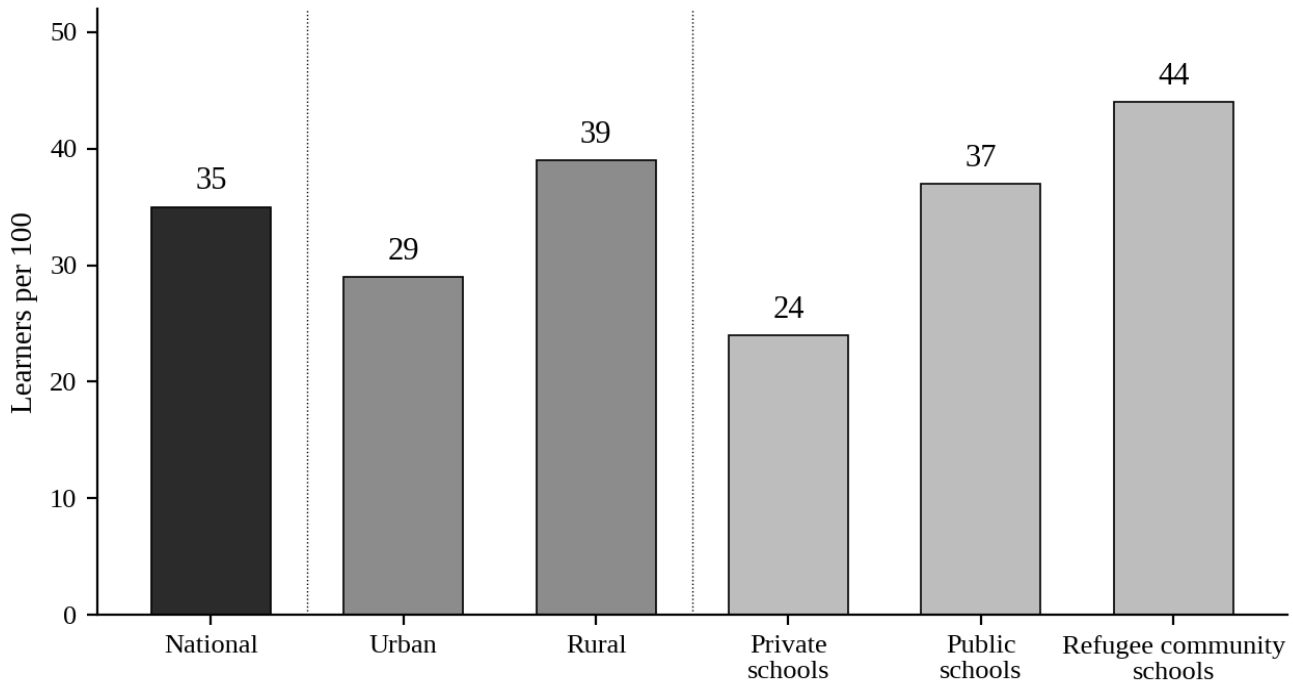
Tier 3: Indirect South Africa Coaching RCT (Cilliers et al., 2020)	South Africa (North West Province)	Grades 1–3	Randomized Controlled Trial (RCT)	In-classroom coaching improved reading by 0.24 SD vs. 0.12 SD for centralized workshops; shifted teacher practice toward small-group leveled reading.	Higher per-pupil cost; evaluated in lower primary second-language classrooms.	Indirect / High: Demonstrates that instructional coaching directly changes teacher practice toward differentiated small-group instruction.

Note: Evidence matrix critically categorises study contexts, designs, limitations, and empirical relevance to Kenyan upper primary.

3. The Scale and Distribution of Accumulated Literacy Deficits in Kenya

Data from the second Foundational Literacy and Numeracy Assessment (FLANA 2025), conducted across all 47 Kenyan counties in June and July 2025 (FLANA, 2026), provides the most comprehensive post-pandemic empirical record of learning outcomes. Assessing 49,835 children aged 10 to 15 years across 2,056 enumeration areas, the study evaluated reading against Grade 3 Competency-Based Curriculum standards across five progressive levels: syllable recognition, word reading, sentence paragraphing, story reading, and inferential reading comprehension. Against this foundational benchmark, 35 in every 100 Grade 6 learners nationally were unable to read and comprehend a Grade 3-level English story (FLANA, 2026).

Figure 1 Grade 6 Learners Unable to Read and Comprehend a Grade 3-Appropriate English Story, by Location and School Type



Note. Data are from the second Foundational Literacy and Numeracy Assessment (FLANA) fieldwork of June–July 2025 (FLANA, 2026, Figures 64–65).

Curriculum-based national assessment points in the same direction. In the 2023 Kenya Primary School Education Assessment (KPSEA), 61.36 % of Grade 6 learners were exceeding or meeting expectations in English (KNEC, 2024), implying that roughly 2 in 5 were approaching or below expectations. KPSEA is referenced to curriculum outcomes and not to a Grade 3 benchmark, so the two sets of figures are not directly comparable, but they converge on a large minority of learners completing primary school below the level at which grade-level texts become accessible.

The literacy deficit does not originate in upper primary. KNEC's Monitoring Learner Progress (MLP) assessment of Grade 3 in 2022 found that 45 per cent of learners were below the "meeting expectation" level in reading comprehension, 40 per cent in reading aloud and 56 per cent in writing (KNEC, 2022,) as cited in (Kioko, 2025). The 2024 Grade 3 midline of the National Assessment System for Monitoring Learner Achievement (NASMLA), implemented under the Kenya Primary Education Equity in Learning Programme, reported that 41.4 per cent of learners reached the 50 per cent benchmark at the highest competency level in English, compared with 23.9 per cent at baseline (KNEC, 2026). These estimates indicate improvement, but also that most Grade 3 learners were not yet at the level KNEC treats as proficient.

Kenya's structured early-grade programmes show both what is achievable and how fragile gains can be. The Tusome external evaluation documented significant improvements on all early-grade reading subtasks in English, with Grade 2 English gains roughly equivalent to an additional year of schooling, yet it also concluded that the vast majority of early-grade learners still could not read at a grade-appropriate level(Lysenko et al., 2019; Nyakundi, 2026; WASIKE, 2024).Gains had already begun to recede before the pandemic, as improvements recorded at the 2016 midline were partly reversed by the 2019 endline, a pattern the evaluation linked to the reduction in English and Kiswahili lessons under the new Competency-Based Curriculum timetable (Keaveney et al., 2020). At the 2019 endline, only 18 per cent of Grade 2 learners met the English reading benchmark (Keaveney et al., 2020; Kioko, 2025). A national Early Grade Reading Assessment in 2021 then showed that the proportion of Grade 2 learners unable to read a single English word had nearly doubled, from 14 to 27 per cent, while the proportion of fluent readers fell from 18 to 12 per cent (USAID, 2022,) as cited in (Kioko, 2025). Kioko (2025) identifies several explanations for the erosion: the nine-month pandemic school closure and compressed academic calendar, curriculum reform that initially reduced English and Kiswahili lessons, weakened coaching as the responsibilities of curriculum support officers changed, and the movement of Tusome-trained teachers to upper grades with their cohorts. Modelling for sub-Saharan Africa suggests that such early deficits compound as learners advance, with Grade 3 learning losses projected to grow to nearly three years of lost learning by Grade 10 (Angrist et al., 2021; Boulet, 2025; THUO, 2024). Learners who passed through these conditions are now in upper primary or junior school, which is the population for whom recovery is needed. Recent Kenyan pilot evidence suggests that structured, level-based remediation supported by coaching can move struggling readers, with non-readers falling from 43.3 to 18.9 per cent over 13 weeks, although evidence for learners already in upper primary remains scarce (Muhia et al., 2024,Wawire et al., 2026).

Crucially, the deficit is sharply stratified by geography, school governance, and socioeconomic status. While 29% of urban learners failed the benchmark, failure rates rose to 39% among rural learners, 37% among public school attendees (compared to 24% in private institutions), and reached 44% in refugee community schools (FLANA, 2026). Multivariate logistic regression modeling indicates that household socioeconomic status and educational infrastructure exert strong influences: children from the wealthiest quintile had 76% higher odds of English proficiency (OR = 1.76) relative to those in the poorest quintile, and the physical presence of a functional school library was associated with 18% higher proficiency odds (OR = 1.18; FLANA, 2026). Importantly, these cross-sectional findings represent systemic correlations rather than direct causal effects, pointing to profound structural inequalities that constrain literacy acquisition.

Classroom structural realities further constrain recovery. Primary schools operate with an average pupil-to-teacher ratio of 41:1, dropping to only 0.79 permanent and pensionable teachers per classroom nationally (FLANA, 2026). In Grade 6, English textbooks are predominantly shared between pairs or trios of pupils, and only one in four public primary schools possesses a dedicated school library. Furthermore, primary classrooms are marked by substantial age dispersion: approximately 31% of Grade 6 learners are overage (above age 12)

and 31% are underage, creating complex socio-emotional classroom dynamics where standard, juvenile early-grade materials can lead to learner disengagement and stigma.

4. Strategies for Addressing Accumulated Literacy Deficits in Upper Primary

4.1 Diagnosing Accumulated Difficulties and Cognitive Grounding

Accumulated literacy deficits arise when learners progress through school without mastering foundational reading sub-skills, resulting in an insurmountable cognitive barrier as curriculum demands escalate (Pandita et al., 2025; Snowling & Hulme, 2025). The Simple View of Reading provides a useful organizing frame that reading comprehension is the product of Word Recognition (decoding) and Linguistic Comprehension(Hoover, 2024; Perfetti & Helder, 2022). . In upper-primary classrooms, struggling readers divide into distinct, often coexisting profiles: (1) learners who possess spoken language comprehension but cannot decode written orthography; (2) hyperlexic learners who decode fluently but cannot comprehend due to severe English vocabulary and syntactic deficits; and (3) dual-deficit learners who lack both basic decoding and oral language comprehension.

An analysis of reading assessment data from more than half a million pupils in 48 countries concluded that inadequate foundational decoding skills constrain literacy attainment, including where pupils are tested in a language of instruction (Crawford et al., 2025). In a multilingual context such as Kenya where most learners navigate mother tongue, Kiswahili, and English concurrently; diagnostic assessment must disentangle word-level decoding failure from English language comprehension (Kioko, 2025;Masinde, 2023; Wawire & Kiroro, 2026). Consequently, two key actions are needed: First, recovery must begin by locating each learner's difficulty along the decoding–fluency–vocabulary–comprehension continuum (Hamoc, 2023; McDermott, 2023). Second, timing is essential because texts and tasks become more demanding each year; deficits that are modest in Grade 3 become barriers to every learning area by Grade 6 (Apiles, 2025). Programmes that treat low reading as a single undifferentiated problem, or that address only oral reading rate, are unlikely to produce durable gains in comprehension.

3.2 Targeted Instruction (Teaching at the Right Level)

Targeted instruction organizes learners by verified competency rather than age or chronological grade, integrating rapid diagnostic evaluation, dynamic ability grouping, targeted skill delivery, and iterative reassessment to facilitate learner mobility across tiers (Bunga et al., 2025; Gaitas et al., 2024; Roberts & Inman, 2023). Designated a high-yield "great buy" for low- and middle-income country (LMIC) systems by the Global Education Evidence Advisory Panel (2023; Glewwe, 2026; Letzel-Alt & Pozas, 2023; Maulana et al., 2023), the approach boasts substantial experimental backing. In Ghana, a government-led multi-arm randomized trial evaluating four targeted configurations (pull-out remediation, after-school sessions, assistant-led reduced ratios, and partial-day grouping) generated persistent gains between 0.10 and 0.40 standard deviations, moderated by implementation fidelity (Duflo et al., 2024). Paralleling these findings, randomized evaluations in Madagascar verified that Teaching at the Right Level (TaRL) ability groupings significantly raised reading acquisition (Maruyama & Igei, 2024a, 2024b), while qualitative evidence from South African full-service schools indicates that differentiated texts, structured phonics, and peer scaffolding remain fundamental to remediating reading gaps despite entrenched material and training deficits (Phala & Hugo, 2025).

In Kenya, emerging empirical work corroborates the efficacy of targeted recovery models within resource-constrained environments. The African Population and Health Research Center's Developing Readers Study demonstrated that a 13-week structured, level-matched remedial pilot in Kiambu County transitioned 37% of at-risk primary pupils to emergent or fluent reading benchmarks (African Population and Health Research Center [APHRC], 2024). Translating these mechanisms to Kenyan upper-primary classrooms where foundational deficits have accumulated alongside curriculum cognitive demands requires four integrated design conditions:

- Multi-Dimensional Diagnostic Profiling: Formative assessments must map learners across the decoding–fluency–vocabulary–comprehension continuum (Brock et al., 2024; Shukla, 2025). While five-level

foundational ladders such as the FLANA assessment (FLANA, 2026) offer rapid one-on-one administration, they must be augmented with vocabulary and inferential measures to capture the reading-to-learn transition required in upper primary.

- Dynamic, Non-Tracking Group Architecture: Groupings must remain instructional, transient, and subject to regular formative adjustments rather than calcifying into institutionalized ability tracks (Doubet, 2022).

- Institutional Timetable Protection: Mitigating the fidelity drift and intervention attrition observed in regional at-scale trials (Duflo et al., 2024) necessitates dedicated, non-negotiable instructional time for foundational catch-up during upper-primary phase transitions (Kioko, 2025; Nayak et al., 2026; Shaked, 2025).

- Cognitively Mature Decodable Media: Pedagogical materials must reconcile low decoding thresholds with age-appropriate intellectual content, avoiding infantile early-grade primers to preserve learner dignity and engagement among older readers (Green, 2024; Maulana et al., 2023).

4.3 Instructional Coaching

Coaching, comprising classroom observation, structured feedback, instructional modelling, and collaborative lesson planning, functions as the primary operational bridge converting structured curriculum materials and diagnostic assessments into altered classroom practice (Goodman et al., 2023; Lammert & Tily, 2022). Kenyan early grade interventions demonstrate that conventional teacher training yields negligible instructional change unless accompanied by direct classroom oversight (Goodman et al., 2023; Kraft et al., 2018). In the Primary Math and Reading initiative, differentiated supervisory arrangements produced measurable variations in literacy acquisition, with a 15:1 school to coach ratio proving more cost effective and administratively viable than a 10:1 configuration (Nyakundi, 2026; Okumu & Nyakundi, 2026; USAID, 2014; Wawire et al., 2023). Integrated coaching, structured teacher guides, and individual pupil textbooks generated substantial early literacy gains (Shalem & De Clercq, 2022; Wawire et al., 2023), establishing the operational foundation for the Tusome national literacy activity, which institutionalized tablet mediated coaching by Curriculum Support Officers across public primary schools (Kioko, 2025).

Comparative evidence reinforces the efficacy and operational conditions of instructional coaching across low and middle income settings. In South Africa, a randomized trial demonstrated that two years of on site coaching raised reading achievement by 0.24 standard deviations compared with 0.12 standard deviations for centralized workshops utilizing identical lesson plans (Cilliers et al., 2020). Crucially, coaching operated by compelling teachers to reorganize whole class instruction into smaller, level matched reading groups (Cilliers et al., 2020). Global causal meta analyses corroborate substantial impacts on instructional practice and pupil achievement (Kraft et al., 2018), even as widespread implementation gaps persist between validated coaching practices and the truncated cascade models commonly deployed (Popova et al., 2022). The South African findings confirm that on site coaching is indispensable for institutionalizing the flexible ability grouping required by targeted instruction.

For upper primary recovery, coaching must center on a discrete set of high leverage instructional routines (Dennis et al., 2024): administering and interpreting rapid reading diagnostics, dynamically forming and recalibrating ability groups (Cilliers et al., 2020), modelling multisyllabic decoding, delivering explicit vocabulary instruction (Dennis et al., 2024; Diazgranados Ferráns et al., 2026), and scaffolding inferential questioning and summarization (Boguslav, 2024; Raya Castellano et al., 2024). Operationalizing these routines entails an iterative four stage cycle to identify an instructional impediment, formulate a pedagogical strategy, observe practice with focused feedback, and review learner artefacts (Kioko, 2025). Systemic adoption can leverage the tablet and dashboard infrastructure developed under Tusome, though feasibility remains constrained by coach to school ratios, geographic dispersion, and competing administrative duties (Kioko, 2025; Piper & Zuilkowski, 2015). Sustainable implementation ultimately requires an institutional culture that treats diagnostic evidence of reading failure as a trigger for instructional support rather than punitive administrative sanction.

4.4 Structured Reading and Multilingual Scaffolding

Structured reading provides planned, sequenced opportunities to read with systematic support, progressing from modelled and guided instruction to independent reading while uniting decoding practice with explicit vocabulary and comprehension development (Boyd, 2026). As the operational practice engine of learning recovery, it mirrors structured pedagogy, which the Global Education Evidence Advisory Panel (2023) identifies as an integrated package of structured lesson plans, aligned learning materials, and ongoing coaching that ranks among the most cost effective global educational investments. Kenya's large scale early grade reforms demonstrate this empirical potential: Tusome combined daily scripted teacher guides, decodable texts, levelled readers, a targeted one to one book ratio, instructional coaching, and benchmark monitoring (Kioko, 2025), producing national effect sizes exceeding 0.70 standard deviations across English and Kiswahili within a single year (Piper et al., 2018a), building directly upon the Primary Math and Reading initiative endline gains that averaged 0.46 standard deviations (USAID, 2014, as cited in Kioko, 2025).

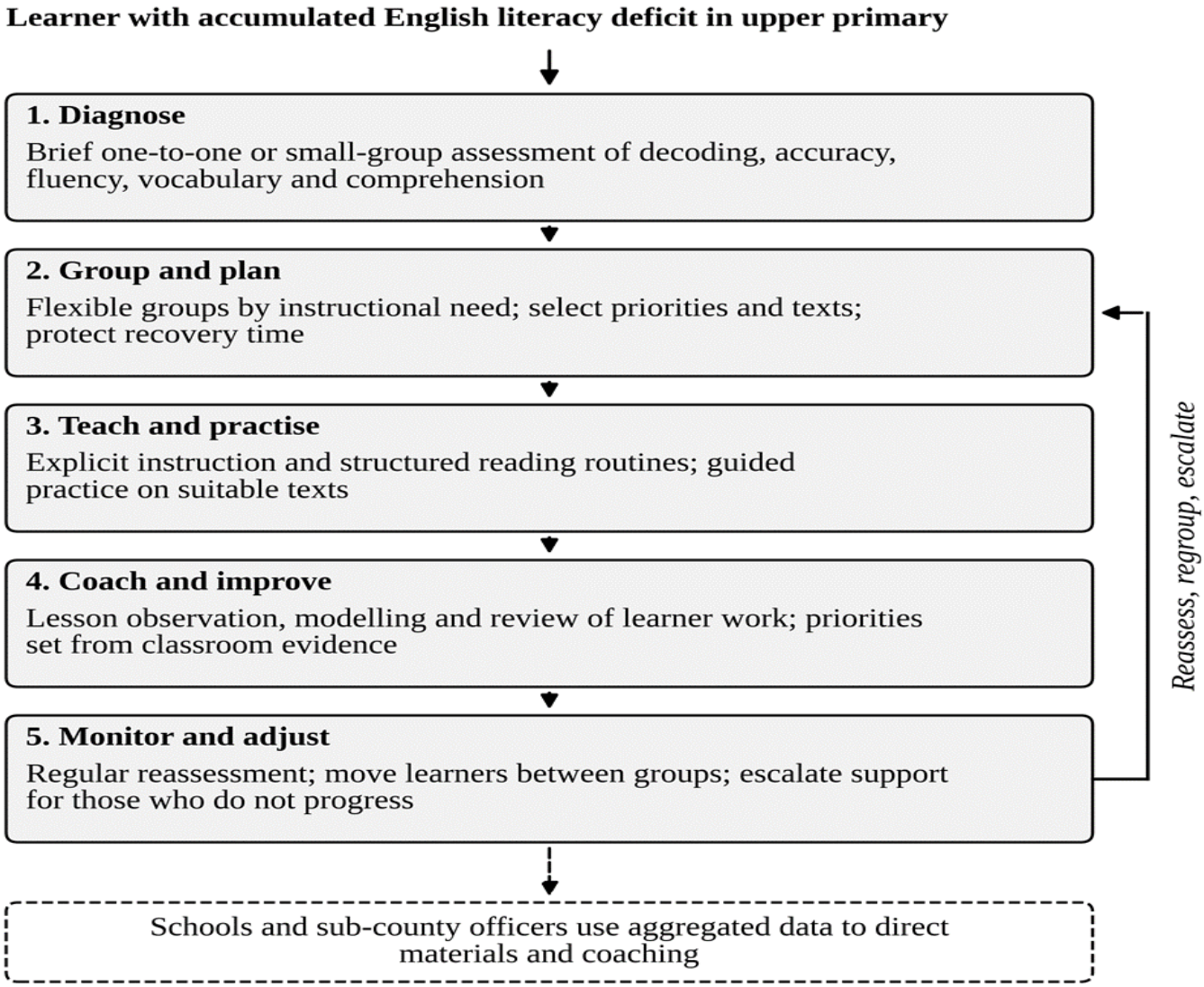
Adapting structured reading for upper primary recovery demands three essential shifts. First, text provision must address severe infrastructural deficits. National FLANA data show that pupils routinely share English textbooks in pairs and only one in four schools possesses a functional library, a structural asset positively correlated with reading proficiency (Usawa Agenda, 2026). Because sustained reading volume is indispensable for fluency and lexical growth (Bilge & Kalenderoğlu, 2022; Liu & Saad, 2025), recovery programmes require age respectful, locally contextualized levelled narratives and informational texts managed through systematic school level book inventories. Second, the text gradient must move beyond early grade decodables to manage phonological demands while systematically building academic vocabulary, morphological awareness, and syntactic knowledge across subject disciplines (Amendum et al., 2018; Kioko, 2025; Tortorelli et al., 2024). Third, instructional routines must synthesize reading, writing, vocabulary development, and comprehension into a unified practice rather than treating them as isolated exercises; across 35 primary interventions, integrating literacy with content area instruction generated large effect sizes for vocabulary acquisition ($ES = 0.91$) and reading comprehension ($ES = 0.40$; Hwang et al., 2022). High leverage routines operationalizing this integration include teacher modelling, guided oral reading with corrective feedback, repeated reading, explicit vocabulary teaching, inferential questioning, and structured summarization within a gradual release framework (Verdugo et al., 2025).

These pedagogical practices are critically mediated by linguistic context. Because many pupils enter school without proficiency in the language of instruction, recovery frameworks require realistic pacing and protected instructional time (Kioko, 2025). At the classroom level, teachers must deploy purposeful translanguaging, drawing strategically upon learners' home languages and Kiswahili to scaffold abstract concepts and grammatical structures without displacing explicit English reading targets (Kioko, 2025). Nonetheless, the precise empirical impact of systematic language supportive scaffolding on upper primary reading outcomes remains an ongoing research priority in Kenya.

5. The Five-Phase Literacy Recovery Framework: Adaptations for Older Learners

Drawing on empirical principles from Teaching at the Right Level, structured pedagogy, and instructional coaching (Banerjee et al., 2017; Kaffenberger et al., 2026), this study proposes an integrated literacy recovery framework designed to remediate accumulated English reading deficits among Kenyan upper primary learners. The proposed literacy recovery framework operates through five continuous, interrelated phases: *Diagnose*, *Group and Plan*, *Teach and Practise*, *Coach and Improve*, and *Monitor and Adjust*.

Table 2: Integrated Framework for grade 4 to 6 Literacy Recovery.



Note. **Adapted from Teaching at the Right Level (TaRL), Banerjee et al. (2017), Kaffenberger et al. (2026), Taylor (2025), Hunter et al. (2023), Minor and Muhammad (2023), Glover et al. (2023), Jackson and Lambert (2010), and Piper et al. (2018b). The framework is a synthesis of the literature reviewed and a hypothesis for testing, not a validated model**.

To establish the originality and conceptual distinctiveness of the proposed model relative to existing interventions, Table 2 contrasts the Five-Phase Framework with conventional Teaching at the Right Level (TaRL), early-grade Structured Pedagogy, and standard Instructional Coaching models.

Table 2: Comparative Synthesis of Core Approaches and Adaptations for grade 4 to 6 Learners

Educational Approach	Core Principles & Focus	Strengths in Existing Literature	Key Limitations for Upper-Primary Learners	Integration into Upper-Primary Framework
Teaching at the Right Level (TaRL)	Groups learners by current assessed ability rather than age/grade, focusing on foundational reading and numeracy through fast-paced, active learning routines.	Rapidly accelerates basic literacy acquisition; proven high cost-effectiveness in low- and middle-income countries (Banerjee et al., 2017).	Can be socially stigmatizing for upper-primary learners grouped with younger peers; traditional play-based floor games and simple decodables infantilize older pupils.	Retains dynamic diagnostic grouping and rapid catch-up schedules, but replaces juvenile materials with age-appropriate, high-interest thematic texts aligned with upper-primary curricula.

Structured Pedagogy	Highly systematic, evidence-based instructional packages including scripted teacher lesson guides, aligned pupil books, decodables, and continuous training.	Provides clear, predictable step-by-step guidance; ensures high instructional fidelity and curricular coverage across varied teacher preparation (Piper et al., 2018).	Rigid pacing can fail to address heterogeneous deficit profiles; uniform lockstep progression often neglects remedial catch-up for older pupils needing multisyllabic decoding.	Adopts the explicit gradual release routine ("I do, We do, You do") and structured lesson syntax, embedded flexibly across differentiated ability tiers rather than whole-class lockstep.
Instructional Coaching	Continuous, job-embedded professional development featuring non-punitive classroom observations, focused feedback cycles, and collaborative modelling.	Substantially improves teaching quality; bridges training into sustained pedagogical practice shifts in classroom instruction (Cilliers et al., 2020; Kraft et al., 2018).	Resource-intensive to scale; frequently diluted into routine administrative monitoring without specialized remedial literacy support tailored for upper-primary catch-up.	Embeds phase-specific remedial observation protocols into existing supervisory roles (e.g., Curriculum Support Officers / CSOs) using standardized digital tablet rubrics.

Note: Synthesizes foundational literacy interventions and outlines targeted modifications for upper-primary learners, addressing developmental mismatch and the risks of stigmatization.

The Five-Phase Recovery Framework operates as an iterative instructional cycle designed specifically for Kenyan upper-primary schools:

Phase 1: Diagnose. Teachers administer rapid, one-on-one diagnostic assessments (5–7 minutes per learner) evaluating pseudo-word decoding, oral reading fluency, and comprehension. Rather than relying on broad terminal exam scores, this locates each pupil on the foundational reading continuum and identifies whether deficits stem from mechanical decoding or linguistic comprehension.

Phase 2: Group and Plan. Learners are organized into dynamic instructional tiers (Foundational, Intermediate, and Advanced) across or within Grade 5–6 cohorts during dedicated remediation periods. Teachers select high-interest, low-readability texts aligned with the Competency-Based Curriculum and establish structured daily pacing.

Phase 3: Teach and Practise. Teachers deliver explicit, systematic instruction following an 'I do, We do, You do' progression. Instruction focuses on multisyllabic word analysis, morphological roots, syntax, and inferential comprehension strategies, supported by deliberate trans-language scaffolds in Kiswahili.

Phase 4: Coach and Improve. Curriculum Support Officers (CSOs) and school-based instructional coaches conduct focused classroom observations using standardized tablet rubrics. Bi-weekly coaching debriefs and monthly peer learning circles support teachers in managing small-group differentiation.

Phase 5: Monitor and Adjust. Formative progress monitoring occurs weekly via micro-probes (exit tickets and 1-minute fluency checks), while formal reassessment takes place every 6 to 8 weeks. Learners who master target benchmarks immediately graduate to higher tiers, while school-level data feeds into sub-county dashboards to direct coaching resources and material distribution.

6. Framework Operationalization: grade 4 to 6 Primary Pilot Design

This section delineates operational specifications for a 12-week upper-primary literacy recovery pilot within Kenyan public primary schools, defining core protocols across diagnostic assessment, timetabling, staffing, resourcing, and outcome evaluation across Grades 4 to 6.

6.1 Diagnostic Reading Measures and Assessment Protocols

Assessments occur individually (5–7 minutes per pupil) at baseline, mid-pilot (Week 6), and endline (Week 12) across three foundational sub-skills:

- Pseudo word Decoding: 20 calibrated non-words (e.g.,mip, lat, vop, bist, churp, splent, thrabe, stroim, drat) measure independent phonetic decoding accuracy while controlling for sight-word memorization.
- Oral Reading Fluency (ORF): A 1-minute timed reading of a standardized 150-word narrative passage determines Correct Words per Minute (CWPM) and accuracy percentages.
- Comprehension and Vocabulary: Four passage-dependent questions (two literal recall, two inferential) combined with a 3-minute cloze task evaluate contextual comprehension and linguistic competence.

Diagnostic thresholds route learners into three operational tiers:

- Tier 1 (Foundational / Intensive Remediation) : <30 CWPM with <85% accuracy; addresses severe mechanical decoding deficits via explicit sound-spelling correspondence, phonemic blending, and decodable readers.
- Tier 2 (Transitional / Fluency and Morphology): 30–65 CWPM with 85–94% accuracy; addresses slow rate and poor prosody through multisyllabic decoding, phrase-reading routines, and morphological analysis.
- Tier 3 (Curriculum Ready / Advanced Comprehension) : >65 CWPM with ≥95% accuracy; focuses on disciplinary literacy, complex inference, and independent composition.

6.2 Flexible Grouping Architecture and Timetabling

Schools allocate three dedicated 40-minute remediation periods weekly (120 minutes total) scheduled during non-core activity hours. During these blocks, Grade 4, 5, and 6 cohorts dissolve traditional grade divisions and re-group across designated classrooms strictly by diagnostic tier. Integrating Grade 4 provides critical secondary prevention at the immediate medium-of-instruction transition point, while simultaneously supporting older Grade 5 and 6 pupils with accumulated deficits. This cross-grade, needs-based architecture eliminates social stigmatization and allows teachers to target a homogeneous band of reading readiness. Re-assessment every six weeks triggers immediate upward tier transitions, maintaining fluid group mobility.

6.3 Instructional Coaching Arrangements and Staffing

Implementation leverages existing Ministry of Education field structures at an operational ratio of 1 Curriculum Support Officer (CSO) to 12–15 schools, paired with internal school-level Senior Lead Teachers. CSOs conduct bi-weekly 20-minute observations using standardized digital rubrics focused on small-group levelled routines, followed by immediate 15-minute reflective debriefs. Monthly school-based Professional Learning Communities (PLCs) review learner tracking data and refine instructional delivery across upper-primary streams.

6.4 Material Resourcing and Cost Feasibility

Instruction relies on two targeted tools:

- High-Interest, Low-Readability (Hi-Lo) Anthologies: Cost-effective supplementary readers featuring age-respecting Kenyan themes (wildlife conservation, sports, local histories, public health) built with controlled phonetic structures and accessible vocabulary suitable for Grades 4–6.

- Low-Script Teacher Guides: Two-page laminated routine cards detailing the gradual-release architecture ("I do, We do, You do") for each 40-minute session, minimizing lesson preparation burdens.

By utilizing bulk printing via the Kenya Literature Bureau (KLB) and distributing materials through established Kenya Institute of Curriculum Development (KICD) textbook channels, annual per-pupil costs are projected at USD $2.50 to $3.50.

6.5 Measurable Pilot Outcome Targets (12-Week Benchmarks)

The pilot establishes four primary quantitative milestones across the Grade 4–6 cohort:

- Fluency Progression: A mean gain of +15 to +20 CWPM across Tiers 1 and 2.
- Decoding Accuracy: A minimum 80% accuracy threshold on grade-calibrated pseudo word tasks.
- Comprehension Gains: A minimum 25% relative increase in accuracy across inferential and cloze evaluations.
- Affective Gains: A statistically significant reduction in reading anxiety on validated pre- and post-pilot self-efficacy measures.

7. Enabling Systemic Conditions and Contextual Equity

Sustained literacy recovery requires addressing geographic and structural disparities across Kenya's educational landscape. In rural contexts and Arid and Semi-Arid Lands (ASAL) counties facing acute teacher shortages, the model relies on low-script instructional cards and structured peer learning to remain resilient during staff absences. In refugee-hosting schools such as those in Turkana and Garissa counties; pupil-teacher ratios frequently exceeding 80:1 necessitate smaller transitional cohorts and intensive oral language scaffolding before advancing to independent print tasks (FLANA, 2026). Long-term institutionalization depends on anchoring remedial literacy within national governance systems. Key integration measures include formalizing catch-up periods within the KICD curriculum timetable, recognizing remedial leadership within Teachers Service Commission (TSC) performance appraisals, aligning Kenya National Examinations Council (KNEC) school-based assessments with diagnostic recovery tools, and incorporating foundational reading recovery pedagogy into pre-service Teacher Training College (TTC) curricula. These policy alignments transform remedial instruction into a standard systemic practice across upper primary rather than a transient external project.

CONCLUSION

While Kenya has achieved commendable progress in expanding universal primary school access, national assessment data reveal that more than one-third of Grade 6 pupils complete the primary cycle without attaining foundational Grade 3 reading competence. When learners transition into Junior Secondary School without basic literacy, pedagogical exclusion compounds rapidly across all academic disciplines. This integrative narrative review addresses this urgent crisis by articulating an evidence-based, operationally viable recovery roadmap. By anchoring the Five-Phase Framework in the Simple View of Reading, establishing developmental adaptations distinct from early-grade structured pedagogy, and defining concrete pilot parameters for upper-primary classrooms, this synthesis bridges the divide between cognitive reading theory and institutional practice. Small-scale empirical piloting across rural, urban, and refugee-hosting primary schools constitutes the essential next step to validate the framework's operational fidelity and ensure equitable literacy outcomes for all Kenyan learners.

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