

REVIEW ARTICLE

The Literacy Catch-Up: Synthesizing Reading Remediation Strategies for Senior High School Learners in the Philippines

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ABSTRACT

Background: The Philippines faces a persistent literacy crisis that extends beyond the primary grades. National and international indicators show that many learners enter secondary education without secure reading foundations, while senior high school courses demand increasingly complex disciplinary reading and writing. **Objective:** This narrative review synthesized contemporary evidence on reading remediation for adolescents and translated that evidence into a context-responsive framework for Grades 11 and 12 in the Philippines. **Methods:** A structured narrative review prioritized peer-reviewed meta-analyses, systematic reviews, randomized and quasi-experimental studies, evidence-based practice guidance, and Philippine policy and curriculum documents. Literature published mainly from 2019 to 2025 was examined across decoding and morphology, fluency, vocabulary and background knowledge, comprehension, motivation, intervention intensity, and disciplinary literacy. **Results:** Meta-analytic evidence showed positive effects for adolescent reading comprehension interventions ($g = 0.63$), broader comprehension interventions for struggling readers ($g = 0.59$), and targeted fluency intervention (effect size = 0.46). Motivation-focused interventions also produced gains in reading comprehension ($d = 0.27$). Across sources, effective remediation was explicit, diagnostically matched, multicomponent, sufficiently intensive, progress-monitored, and connected to meaningful text. Evidence also showed that gains can diminish after intervention and that fluency practice alone rarely transfers reliably to comprehension. **Conclusion:** Senior high school literacy recovery should combine protected foundational remediation for learners with persistent word-level or fluency deficits with subject-embedded instruction in vocabulary, comprehension, and disciplinary reading. This two-layer model preserves curricular rigor while addressing unfinished foundational learning.

I. INTRODUCTION

Reading difficulty is often treated as an early-grade problem, yet its consequences accumulate across the school years. When learners reach secondary education without efficient word recognition, adequate fluency, a sufficiently broad academic vocabulary, or reliable comprehension routines, the curriculum does not become easier to access simply because they are older. Instead, the linguistic and conceptual load rises. Texts become longer and denser, vocabulary becomes more specialized, ideas are distributed across paragraphs and sources, and evidence must be evaluated rather than merely located. In this environment, a learner may participate in senior high school while still carrying unresolved foundational reading needs that originated years earlier. The central challenge is therefore not whether adolescents can still benefit from remediation, but how schools can repair foundational gaps without reducing the intellectual demands of senior-level learning.

The Philippine context makes this challenge urgent. The 2024 Philippines Learning Poverty Brief reports that 91% of children at late primary age are not proficient in reading when out-of-school children are taken into account, while learning deprivation alone is estimated at 90.4% (World Bank & UNESCO, 2024). These figures describe late-primary performance rather than the current reading status of every senior high school learner, but they identify the scale of the weak literacy pipeline from which later cohorts emerge. PISA 2022 provides a second signal closer to secondary education: only 24% of 15-year-old students in the Philippines reached at least Level 2 in reading, the OECD

threshold at which students can identify a main idea in a text of moderate length and locate information under explicit but sometimes complex criteria (OECD, 2023). The implication is structural. A system in which a large majority of adolescents remain below a minimum international reading benchmark cannot assume that all learners who progress to Grades 11 and 12 are ready to learn exclusively through complex text.

Senior high school itself raises the literacy threshold. The Department of Education's Reading and Writing Skills curriculum for Grades 11 and 12 expects learners to treat written text as connected discourse, recognize patterns of development across disciplines, evaluate text and context relationships, read critically, and produce purposeful writing for academic and professional contexts (Department of Education, 2018). These are not elementary reading tasks. They depend on fluent access to print, substantial vocabulary and background knowledge, control of text structures, inferential reasoning, monitoring of comprehension, and familiarity with how evidence and explanation differ across subject areas. A learner who spends excessive cognitive effort decoding multisyllabic words or rereading sentences has fewer resources available for those higher-order demands.

Recent Philippine policy acknowledges the need for systematic learning recovery, but formal coverage does not fully resolve the senior high school problem. Republic Act No. 12028 established the Academic Recovery and Accessible Learning Program for learners from Kindergarten through Grade 10 who have returned after interruption, fall below minimum proficiency in reading, mathematics, or science, or fail school assessments. The law

emphasizes structured tutorial sessions, carefully designed intervention plans, assessment of learners, trained tutors, and learner-centered support (Republic of the Philippines, 2024). Those design principles are relevant to remediation beyond Grade 10, yet the statutory coverage stops before Grades 11 and 12. The result is a policy and implementation space in which senior high schools may encounter substantial literacy needs without a comparably explicit national remediation architecture for those grades.

Evidence from adolescent literacy research offers grounds for action. A meta-analysis focused on students with reading difficulties in Grades 6 to 12 synthesized 97 effect sizes from 37 intervention studies and found an overall positive effect on reading comprehension of $g = 0.63$ (Sohn et al., 2023). A broader meta-analysis of comprehension interventions for struggling readers in Grades 3 to 12 reported $g = 0.59$ across 64 studies, with stronger effects associated with background-knowledge instruction and strategy instruction (Filderman et al., 2022). These estimates do not imply that any single program will produce the same result in a Philippine senior high school, but they directly counter the assumption that remediation becomes futile after the elementary years. Adolescents remain responsive to well-designed reading intervention.

The intervention question is also more complex than assigning additional reading time. Baye et al. (2019), in a synthesis of 69 experimental or high-quality quasi-experimental studies of secondary reading programs, found positive patterns for one-to-one and small-group tutoring, cooperative learning, whole-school approaches, writing-focused approaches, and selected structured programs. In contrast, simply adding a daily reading period or relying on technology was not, on average, sufficient to produce stronger outcomes. This distinction matters for schools under pressure to act quickly. Remediation requires instructional specificity rather than additional exposure alone. The content, sequence, feedback, interaction, and fit between learner need and instructional target determine whether extra time becomes productive learning time.

A second complication is that adolescent reading difficulty is heterogeneous. Some students can decode accurately but read too slowly for efficient comprehension. Others read fluently at the sentence level but lack the vocabulary, morphological knowledge, background knowledge, or inferential control required by senior high school texts. Still others have persistent difficulty with multisyllabic word reading, especially when academic terms combine Greek and Latin roots, affixes, or discipline-specific morphological patterns. The What Works Clearinghouse practice guide for students in Grades 4 to 9 therefore recommends distinct but connected attention to complex word decoding, purposeful fluency practice, comprehension-building routines, world and word knowledge, and opportunities to ask and answer questions about text (What Works Clearinghouse, 2022). Although the guide does not extend to Grade 12, its component logic aligns with the broader adolescent literature and provides a useful diagnostic principle: remediation should begin with the actual source of reading breakdown.

The social experience of remediation is equally important. Frankel et al. (2021) synthesized 21 qualitative studies of secondary reading intervention classes and found that students' experiences were shaped by how they understood themselves as readers and writers, whether the intervention felt relevant and agentive, and whether it supported relationships. Students also described placement practices as confusing, frustrating, or embarrassing. This evidence cautions against a deficit-only model in which older learners are publicly labeled, removed from meaningful academic work, or assigned childish materials. Effective catch-up for adolescents must increase instructional intensity while preserving dignity, relevance, and access to age-appropriate ideas.

For senior high school, a further distinction is required between foundational remediation and disciplinary literacy. Foundational remediation repairs bottlenecks such as inaccurate word reading, weak automaticity, limited morphological analysis, and fragile comprehension routines. Disciplinary literacy addresses how competent readers make meaning differently in science, mathematics, social science, technical-vocational fields, and the humanities. Shanahan and Shanahan (2008) argued that advanced literacy becomes increasingly discipline-specific as learners progress through school. A student may therefore need both kinds of support at the same time: explicit repair of a foundational weakness and apprenticeship into the reading practices of a particular subject. Treating one as a substitute for the other creates a false choice.

This narrative review addresses that combined problem. Its objective was to synthesize recent evidence on reading remediation for adolescent struggling readers and to translate the findings into a senior high school framework suited to the Philippine context. Three questions guided the review: first, which reading domains remain responsive to intervention in adolescence and what magnitude of effects has recent research reported; second, which instructional and implementation features recur across effective secondary interventions; and third, how can foundational remediation be integrated with the reading demands of Grades 11 and 12 without diluting disciplinary content. The intended contribution is an evidence-linked model for literacy catch-up that schools can adapt to local assessment systems, staffing, schedules, and learner profiles.

II. METHODS

The study used a structured narrative review design. A narrative approach was selected because the review question was deliberately integrative: it required comparison of meta-analytic effect estimates, intervention design features, learner-experience evidence, practice guidance, Philippine curriculum expectations, and national policy. These forms of evidence are not sufficiently homogeneous for a single pooled effect estimate. The review nevertheless adopted explicit procedures for source identification, prioritization, extraction, comparison, and reporting so that readers can trace how the synthesis was produced. The SANRA framework informed the methodological safeguards, particularly the need to justify the review's importance, state clear aims, describe the literature search, reference key claims, apply scientific reasoning, and present relevant endpoint data (Baethge et al., 2019).

The population of primary interest was adolescents in secondary education, with particular attention to evidence from Grades 6 to 12 and direct applicability to Grades 11 and 12. Evidence from upper elementary or mixed K-12 samples was retained only when it addressed a reading mechanism that persists into adolescence, such as complex word decoding, morphology, fluency, comprehension, or motivation, or when the source was an evidence-based practice guide whose recommendations were derived partly from older struggling readers. Philippine documents were included to define the local literacy problem, senior high school curricular demands, and policy environment. The review focused on school-based intervention rather than clinical treatment of acquired reading disorders.

The evidence search emphasized publications from January 2019 through December 2025, with targeted updates conducted through September 2026 to confirm policy status and identify major evidence changes. Older sources were retained only when they supplied a foundational construct that later literature continued to use, most notably disciplinary literacy. Searches were conducted across ERIC, PubMed, publisher-indexed journal platforms, and institutional repositories, with additional searches of the World Bank, OECD, Department of Education, Institute of Education Sciences, and Philippine legal repositories for policy and practice documents. Citation chaining from recent reviews was used to locate high-relevance intervention studies and to verify bibliographic details.

Search terms were organized in concept blocks rather than a single fixed string because databases differed in indexing. The population block included adolescent, secondary, high school, Grades 6-12, struggling reader, reading difficulty, and older reader. The intervention block included reading intervention, reading remediation, literacy intervention, intensive reading, tutoring, and academic recovery. Component terms included decoding, multisyllabic word, morphology, fluency, vocabulary, background knowledge, comprehension, reciprocal teaching, reading motivation, and disciplinary literacy. Philippine context searches combined Philippines with learning poverty, PISA reading, senior high school reading and writing, academic recovery, and ARAL. Boolean combinations were adapted to each source while preserving the same conceptual coverage.

The search was intentionally sensitive to evidence syntheses. Meta-analyses, systematic reviews, and rigorous research syntheses were used as anchors because they permit comparison across programs and settings. Randomized controlled trials, cluster randomized trials, high-quality quasi-experimental studies, and long-term intervention development reports were then used to clarify delivery features or upper-secondary applicability. Qualitative meta-synthesis was included to capture learner experience, placement, identity, relevance, and relational conditions that standardized reading outcomes do not measure.

Sources were eligible when they met at least one of four functions: they quantified the effects of reading intervention for adolescent or secondary learners; they examined a reading component with direct relevance to adolescent remediation; they described implementation or student-experience features of secondary reading intervention; or they established the Philippine curricular or policy context. Peer-reviewed evidence was prioritized over commentary. For intervention claims, preference was given to meta-analyses and systematic reviews with explicit search and inclusion procedures, followed by randomized or quasi-experimental studies. Practice guidance was retained when it transparently linked recommendations to an evidence base.

Sources were excluded from the core synthesis when they focused only on emergent literacy with no plausible adolescent transfer, addressed reading solely as a correlate without instructional relevance, evaluated postsecondary populations, or provided insufficient methodological information to judge the basis of a claim. Studies of motivation or morphology could include broader school-age ranges if subgroup age coverage reached adolescence or if the mechanism was explicitly relevant to secondary reading. No study was excluded because its effect was null or small. This was important because the review sought design constraints as well as positive findings.

Methodological quality was treated as part of the evidence rather than as a binary gate. Calvi et al. (2023), for example, found that only two of 17 randomized reading-intervention studies for students in Years 7 to 12 met all eight Council for Exceptional Children quality indicators. Accordingly, individual effect estimates were not interpreted in isolation. Greater weight was given to findings that converged across independent syntheses, used standardized outcomes, or were supported by multiple study designs. Researcher-developed measures were treated cautiously because Filderman et al. (2022) found larger effects on such measures than on more distal outcomes.

For each core source, the review matrix recorded publication year, participant age or grade span, design, number of studies or effect sizes where applicable, intervention target, delivery characteristics, reading outcome, reported effect metric, follow-up evidence, methodological qualifications, and relevance to Philippine senior high school. Effect sizes were reproduced exactly as reported by the source and were not converted into a new common metric. Consequently, the review did not calculate a pooled overall effect across reviews. This avoided double counting primary studies that appeared in more than one synthesis and avoided treating unlike outcomes as interchangeable.

The narrative synthesis proceeded in three passes. The first pass organized evidence by reading mechanism: word-level accuracy and morphology, fluency, vocabulary and background knowledge, comprehension and metacognition, motivation and engagement, and disciplinary transfer. The second pass identified delivery features that recurred across stronger evidence, including diagnostic matching, explicit instruction, scaffolded practice, small-group or individualized support, adequate dosage, corrective feedback, progress monitoring, and connection to meaningful text. The third pass mapped these features against senior high school curricular demands and the Philippine learning-recovery policy environment.

The final analytic product was a two-layer literacy catch-up framework. Layer 1 represented protected, targeted remediation for learners whose assessment profiles showed foundational bottlenecks severe enough to obstruct access to grade-level text. Layer 2 represented subject-embedded literacy support within regular senior high school courses, with vocabulary, text structure, evidence evaluation, comprehension monitoring, and discipline-specific reading routines taught through authentic course materials. The framework was derived from convergence across sources rather than from a newly tested intervention package; accordingly, the Results section reports its evidence basis and structure, while the Discussion addresses its interpretation and implications.

III. RESULTS

Philippine Literacy Indicators and Senior High School Demands

The contextual evidence showed a large gap between the reading proficiency demonstrated by many Filipino learners and the literacy demands specified for senior high school. The World Bank and UNESCO reported learning poverty of 91% for the Philippines using the latest available pre-pandemic late-primary data, with learning deprivation at 90.4% (World Bank & UNESCO, 2024). At age 15, PISA 2022 data showed that 24% of Filipino students reached at least

Level 2 in reading, while almost no students reached Level 5 or higher (OECD, 2023).

The Grade 11 and 12 Reading and Writing Skills curriculum requires learners to recognize written text as connected discourse, distinguish development patterns across disciplines, identify properties of well-written text, establish text-context connections, apply critical reading, and produce purposeful disciplinary and professional writing (Department of Education, 2018). Republic Act No. 12028 provides national academic recovery for Kindergarten through Grade 10 and specifies assessment, structured tutorials, designed intervention plans, learner-centered support, and trained tutors, but its coverage does not extend to Grades 11 and 12 (Republic of the Philippines, 2024). Table 1 summarizes the contextual indicators used in the review.

Table 1
Philippine Literacy Indicators, Curriculum Expectations, and Recovery-Policy Context

Source	Indicator or provision	Value or scope	Relevance to the review
World Bank & UNESCO (2024)	Learning poverty	91% of late-primary-age children not proficient in reading, adjusted for out-of-school children	Defines the scale of foundational reading risk entering later grades
World Bank & UNESCO (2024)	Learning deprivation	90.4%	Shows that weak reading proficiency is not explained only by school participation
OECD (2023)	PISA 2022 reading	24% reached Level 2 or higher; almost none reached Level 5 or higher	Provides an adolescent benchmark near the transition to senior high school
Department of Education (2018)	Grades 11-12 Reading and Writing Skills	Connected discourse, text development patterns, critical reading, purposeful disciplinary writing	Defines literacy demands expected in senior high school
Republic of the Philippines (2024)	ARAL Program coverage	Kindergarten through Grade 10	Establishes a national recovery architecture but leaves Grades 11-12 outside statutory coverage

Note. PISA estimates refer to 15-year-old students and are not direct measures of all senior high school learners. Learning poverty refers to late-primary reading proficiency.

Table 2
Quantitative Evidence on Reading Intervention and Related Mechanisms

Source	Evidence base	Primary outcome	Reported result
Sohn et al. (2023)	37 studies; 97 effect sizes; Grades 6-12	Reading comprehension	$g = 0.63$
Filderman et al. (2022)	64 studies; Grades 3-12 struggling readers	Reading comprehension	$g = 0.59$, 95% CI [0.47, 0.74]
Maki & Hammerschmidt-Snidarich (2022)	33 articles; K-12 targeted fluency intervention	Reading fluency	Effect size = 0.46, 95% CI [0.23, 0.68]
Daniel et al. (2021)	10 follow-up studies; Grades 6-12	Combined reading outcomes	$g_w = 0.78$ immediate; $g_w = 0.27$ follow-up
van der Sande et al. (2023)	39 effect studies	Motivation; reading comprehension	$d = 0.38$ affirming motivation; $d = 0.27$ comprehension
Toste et al. (2020)	132 articles; 185 independent samples; K-12	Motivation-reading association	$r = .22$
Calvi et al. (2023)	17 randomized intervention studies; Years 7-12	Methodological quality	2 studies met all 8 CEC quality indicators

Note. Effect metrics are reproduced from the cited reviews and should not be compared as though they share an identical outcome or design. CI = confidence interval; CEC = Council for Exceptional Children.

Magnitude and Pattern of Intervention Effects

Across the quantitative syntheses, reading intervention for older struggling readers produced positive average effects, although magnitude varied by outcome and design. Sohn et al. (2023) reported $g = 0.63$ from 97 effect sizes across 37 studies of adolescents with reading difficulties in Grades 6 to 12. Filderman et al. (2022) reported $g = 0.59$ across 64 comprehension-intervention studies involving struggling readers in Grades 3 to 12. Dietrichson et al. (2020) identified positive short-run effects across targeted school-based interventions for students with or at risk of academic difficulty in Grades 7 to 12, with substantial heterogeneity across intervention types and outcomes.

Fluency-focused evidence showed measurable improvement in fluency but less consistent transfer to comprehension. Maki and Hammerschmidt-

Snidarich (2022) synthesized 33 articles and reported an overall fluency-intervention effect size of 0.46, with stronger estimates in more rigorous subsets. Steinle et al. (2022) reviewed 17 studies in Grades 6 to 12 and found that repeated-reading approaches commonly improved fluency, while positive comprehension effects were comparatively infrequent. Long-term evidence was more limited. Daniel et al. (2021) located 10 adolescent intervention studies with follow-up data and reported a weighted mean effect of $g_w = 0.78$ at immediate posttest and $g_w = 0.27$ at follow-up.

Motivation-related syntheses also produced positive reading outcomes. Van der Sande et al. (2023) identified 39 effect studies and reported $d = 0.38$ for affirming motivation outcomes and $d = 0.27$ for reading comprehension. Toste et al. (2020), across 132 articles and 185 independent samples, reported a positive relation between motivation and reading achievement of $r = .22$. Table 2 presents quantitative results from the principal syntheses.

Table 3
Reading-Remediation Components Identified Across the Evidence

Component	Learner signal	Instructional elements reported in the literature	Progress evidence
Complex word reading and morphology	Inaccurate or effortful reading of multisyllabic academic words	Explicit syllable and morpheme analysis, roots and affixes, word meaning links, cumulative practice	Accuracy and efficiency on taught and untaught complex words
Fluency	Accurate but slow, dysfluent, or effortful connected-text reading	Modeled reading, repeated or supported oral reading, corrective feedback, phrasing and rate practice	Accuracy, rate, prosody, and transfer to unfamiliar passages
Vocabulary and background knowledge	Frequent breakdown on academic terms or unfamiliar concepts	Preteaching key concepts, semantic relations, morphology, examples and nonexamples, knowledge building	Meaning recall, application in context, comprehension of target text
Comprehension and metacognition	Weak main-idea construction, inference, monitoring, or integration across text	Questioning, clarifying, summarizing, predicting, inference, text structure, self-monitoring	Near-transfer comprehension plus authentic course-text checks
Motivation, relevance, and agency	Avoidance, low persistence, negative reader identity, weak perceived relevance	Meaningful age-appropriate texts, choice within goals, visible progress, collaborative dialogue, respectful placement	Participation, persistence, reading volume, motivation measures, qualitative feedback
Disciplinary literacy	Difficulty applying general comprehension to science, social science, technical, or humanities texts	Subject-specific vocabulary, evidence routines, source evaluation, graphical-text integration, disciplinary questioning	Performance on authentic subject texts and tasks

Note. The matrix summarizes recurring instructional elements across the cited syntheses, trials, practice guidance, and qualitative evidence.

Instructional Components Identified Across the Evidence

The evidence matrix yielded six recurrent instructional components. First, word-level remediation for older readers included explicit analysis of complex multisyllabic words and morphemes rather than a return to undifferentiated early-grade phonics. The What Works Clearinghouse (2022) identified complex word decoding as a strong-evidence recommendation for intervention in Grades 4 to 9. Collins et al. (2020) described morphology as a central component of multilingual structured literacy for adolescents with reading or language disorders, and Liu et al. (2024) reported a substantial association between morphological awareness and reading comprehension across 44 studies of learners ages 6 to 16.

Second, fluency work was most consistently represented by structured oral reading practice, repeated reading, modeling, feedback, and attention to accurate, appropriately paced connected-text reading. The reviewed evidence reported gains in fluency but did not show reliable comprehension transfer when fluency was treated as an isolated endpoint (Maki & Hammerschmidt-Snidarich, 2022; Steinle et al., 2022). Third, vocabulary and background knowledge appeared as recurring comprehension supports. Filderman et al. (2022) reported larger comprehension effects in interventions that included background-knowledge instruction, and the What Works Clearinghouse

(2022) explicitly linked world and word knowledge to comprehension-building practice.

Fourth, comprehension instruction frequently used explicit modeling and guided routines for questioning, clarifying, summarizing, predicting, inference, main-idea construction, and monitoring understanding. Thurston et al. (2020) reported positive reading-attainment effects from Reciprocal Reading in secondary schools, and Oo et al. (2021) reported a strong effect of a reflection-based reciprocal teaching approach on English reading comprehension among upper-secondary students in Myanmar. Fifth, motivation and relevance appeared as instructional conditions rather than separate enrichment. Quantitative syntheses linked motivation-focused instruction with gains in motivation and comprehension (McBreen & Savage, 2021; van der Sande et al., 2023), while the qualitative meta-synthesis by Frankel et al. (2021) identified relevance, agency, relationships, and literacy identity as mediators of students' experiences in intervention classes.

Sixth, intervention structure mattered. Baye et al. (2019) found positive patterns for tutoring, cooperative learning, selected whole-school models, and cognitively engaging instructional approaches in secondary reading, while additional reading periods or technology alone were not superior on average. Schumaker (2022) described an intensive secondary intervention architecture built across decoding, vocabulary, and comprehension components over an extended program-development period. Across these sources, explicit instructional routines, opportunities for guided response, corrective feedback, and a coherent sequence of skills were recurring characteristics. Table 3 presents the component matrix.

Table 4
Two-Layer Literacy Catch-Up Framework for Senior High School

Level	Primary learners	Illustrative delivery	Instructional focus and monitoring
Layer 2: Universal subject-embedded literacy	All Grades 11-12 learners	Brief explicit literacy routines within regular subject periods	Disciplinary vocabulary, text structure, evidence evaluation, questioning, summarization, source comparison; course-based checks
Layer 1A: Targeted catch-up	Learners with specific moderate deficits	30-45 minutes, 3-5 sessions weekly, usually small group, delivered in 8-12 week cycles	One or two priority components plus explicit transfer to current subject texts; biweekly skill monitoring
Layer 1B: Intensive remediation	Learners with severe word-reading, fluency, or multicomponent deficits	45-60 minutes, 4-5 sessions weekly, very small group or individualized where feasible	Cumulative explicit instruction across priority foundational components; weekly monitoring and periodic diagnostic review
Maintenance and transfer	Learners exiting targeted or intensive support	Reduced-frequency booster sessions plus continued subject-embedded routines	Retention of gains, independent course-text performance, re-entry criteria if progress declines

Note. Time and frequency values are implementation parameters for school planning, not estimates of a single tested Philippine program. Placement should be based on a multicomponent reading profile and available school resources.

Evidence-to-Implementation Mapping for Grades 11 and 12

The synthesis produced a two-layer structure with three levels of intensity within the targeted layer. Universal subject-embedded support was mapped to all senior high school learners and emphasized disciplinary vocabulary, text structures, evidence use, questioning, summarization, source comparison, and explicit teacher modeling with current course texts. Targeted catch-up was mapped to learners whose screening showed moderate but specific deficits in fluency, vocabulary, morphology, or comprehension. Intensive remediation was mapped to learners with persistent word-reading, severe fluency, or multiple-component deficits that substantially limited independent access to grade-level text.

The mapped delivery structure used assessment profiles rather than a single reading score. Word-reading accuracy, multisyllabic word analysis, oral reading fluency, vocabulary or morphology, and comprehension were treated as separable diagnostic indicators. Progress measures were aligned with the skill under instruction, while transfer checks used authentic senior high school texts. The evidence mapping also separated short-cycle monitoring from broader outcome evaluation because Daniel et al. (2021) documented attenuation between immediate and follow-up effects and Calvi et al. (2023)

documented variable methodological quality in the secondary intervention literature.

Table 4 displays the resulting implementation matrix. The time allocations are presented as school-design parameters derived from the intensity patterns reported across intervention and practice literature rather than as a tested national prescription. The framework preserves participation in grade-level subject instruction while adding progressively more protected intervention time as foundational need increases.

IV. DISCUSSION

The central finding of this review is that reading remediation remains viable in adolescence, but it works best when schools stop treating older struggling readers as a single group. The overall comprehension effects reported by Sohn et al. (2023) and Filderman et al. (2022) are educationally meaningful because they show that secondary-age learners retain substantial capacity to improve. At the same time, the heterogeneity within those syntheses argues against a one-program solution. A senior high school learner whose main obstacle is inefficient multisyllabic word reading needs different first-line instruction from a learner who reads fluently but cannot integrate ideas across an argumentative text. The practical starting point is therefore diagnostic differentiation, not program branding.

That conclusion is particularly important in the Philippines, where system-level indicators point to cumulative unfinished learning. Learning poverty at late primary age and the PISA reading profile at age 15 describe different populations and constructs, yet together they show that weak reading is not confined to the earliest years (OECD, 2023; World Bank & UNESCO, 2024). Senior high school consequently inherits a portion of the literacy problem. The curriculum then increases text complexity at the same point that many learners still need foundational repair. A catch-up model that assumes every Grade 11 learner can already access academic text independently risks converting a reading deficit into apparent failure in science, social science, humanities, or technical subjects.

The evidence also clarifies what foundational repair should mean for older learners. It should not reproduce beginning-reading instruction in an age-inappropriate form. The strong-evidence recommendation to teach complex multisyllabic word reading (What Works Clearinghouse, 2022), together with the morphological evidence summarized by Liu et al. (2024) and the adolescent structured-literacy account of Collins et al. (2020), supports a more mature word-level approach. Academic English contains many morphologically complex words whose parts carry both pronunciation and meaning. Explicit work with roots, prefixes, suffixes, syllable patterns, and word families can therefore serve two purposes at once: it can increase efficiency of word recognition and expand access to disciplinary vocabulary. In senior high school, this instruction can use terms drawn directly from biology, social science, business, health, and technical-vocational materials rather than elementary word lists.

Fluency evidence provides a second design constraint. Maki and Hammerschmidt-Snidarich (2022) found a moderate overall effect for targeted fluency intervention, so fluency should not be ignored when slow or dysfluent reading limits access to text. However, Steinle et al. (2022) found that fluency gains in secondary interventions did not consistently produce comprehension gains. The implication is not that fluency practice is ineffective, but that fluency should be treated as a bottleneck to be repaired and then connected immediately to meaning. Oral rereading, modeling, phrasing, and feedback are most defensible when the same passage also supports vocabulary, inference, or content learning. Practice that ends with rate alone can improve the surface of reading without guaranteeing deeper understanding.

Comprehension intervention is strongest when it integrates knowledge with strategic action. Filderman et al. (2022) found stronger effects for background-knowledge and strategy instruction, while reciprocal approaches in secondary settings have produced positive outcomes through routines such as questioning, clarifying, summarizing, and predicting (Oo et al., 2021; Thurston et al., 2020). These practices matter in senior high school because complex comprehension depends on more than a generic strategy label. Learners must know enough about a topic and its vocabulary to interpret what a text leaves implicit. They must also know what to do when meaning breaks down. Explicit teacher modeling can make these otherwise invisible processes observable: how a reader notices an inconsistency, identifies an unknown

term, uses a heading or diagram, connects evidence across paragraphs, or revises an initial interpretation.

The review further suggests that disciplinary literacy should be the destination of catch-up, not an alternative to it. Shanahan and Shanahan (2008) distinguished the specialized literacy practices of disciplines from general content-area reading strategies. That distinction becomes highly relevant in Grades 11 and 12. A science reader attends to causal mechanisms, data displays, methods, and the relation between claims and evidence. A history or social science reader compares sourcing, perspective, chronology, and corroboration. A reader of technical procedures tracks sequence, conditions, safety constraints, diagrams, and specifications. Foundational intervention should therefore create enough automaticity and language access for learners to participate in these disciplinary practices, while subject teachers make those practices explicit within ordinary instruction.

This is why the two-layer model is preferable to either of the common extremes. One extreme places all responsibility on a stand-alone remedial class. That can create a protected setting for intensive instruction, but it risks weak transfer if intervention texts and routines remain disconnected from current academic work. The other extreme asks every subject teacher to solve severe decoding or fluency problems inside the regular classroom. That preserves access to content but may not provide the intensity or specialized sequence required for a learner several years below expected reading performance. The combined architecture assigns foundational repair to protected catch-up time and assigns disciplinary transfer to every subject in which reading is required.

Intensity should also be understood as more than minutes. Baye et al. (2019) found that simply providing an extra reading period was not, on average, more effective than approaches that changed the quality and social organization of instruction. Schumaker's (2022) account of intensive secondary intervention likewise emphasizes an integrated sequence across reading components. Effective intensity includes a smaller instructional group, more opportunities to respond, faster corrective feedback, a tighter match between task and deficit, cumulative practice, and frequent decisions based on progress. Two learners can receive the same number of minutes yet experience very different instructional density.

Maintenance deserves explicit planning because immediate success can overstate long-term recovery. Daniel et al. (2021) found a weighted mean effect of 0.78 immediately after intervention but 0.27 at follow-up in the small set of adolescent studies that reported later outcomes. The lower follow-up effect does not erase the value of intervention; rather, it shows that literacy recovery must include consolidation and transfer. A learner who exits targeted support should continue to encounter the same vocabulary routines, comprehension language, and monitoring habits in subject classrooms. Short booster cycles may be warranted when progress monitoring shows renewed difficulty. In this sense, exit from intensive remediation should represent a change in support level rather than an abrupt end to literacy instruction.

Motivation and identity are not peripheral concerns in this architecture. Meta-analytic evidence shows that motivation-focused interventions can improve both motivation and comprehension, and motivation itself has a positive relation with reading achievement (Toste et al., 2020; van der Sande et al., 2023). More importantly for adolescents, Frankel et al. (2021) showed that students' perceptions of relevance, agency, relationships, and placement shape how intervention classes are experienced. A program may be technically sound yet educationally weakened if learners experience it as public evidence that they are deficient, if texts are childish, or if placement decisions are opaque. Senior high schools should therefore use age-respectful materials, explain assessment and placement clearly, offer meaningful choices within instructional goals, and make progress visible without turning reading level into a public identity.

The Philippine ARAL framework supplies useful design principles even though the law formally covers only Kindergarten through Grade 10. Republic Act No. 12028 emphasizes careful assessment, structured tutorial sessions, designed learning resources, learner-centered support, and trained tutors (Republic of the Philippines, 2024). Those same principles can guide school-level senior high school initiatives. The policy gap is therefore less a reason to wait than a reason to adapt responsibly. Schools can align local intervention protocols with national learning-recovery logic while ensuring that Grades 11 and 12 remediation remains tied to senior high school curriculum outcomes.

Implementation capacity will determine whether the model is practical. Reading intervention at the senior high school level requires staff who can distinguish decoding, fluency, vocabulary, and comprehension problems

rather than labeling every low score as poor comprehension. Professional learning is therefore a system component. Didion et al. (2020) found a positive average effect of teacher professional development on student reading achievement, although most included studies concerned younger grades. More recent evidence also emphasizes active professional learning rather than passive exposure. For senior high schools, professional development should center on brief diagnostic interpretation, explicit modeling, corrective feedback, vocabulary and morphology instruction, comprehension routines, and the use of authentic subject text. Content teachers do not need to become intervention specialists, but they do need a shared language for literacy support and transfer.

Assessment should likewise be multicomponent. A single comprehension score cannot reveal whether failure arose from inaccurate word reading, slow fluency, insufficient vocabulary, weak background knowledge, poor inference, or some combination. Screening can therefore begin broadly and proceed diagnostically for learners below threshold. Measures should be age-appropriate and efficient enough for school use, with progress measures closely aligned to the component under instruction. Transfer checks should then ask whether improvement appears in unfamiliar and authentic senior high school text. This distinction protects schools from mistaking mastery of intervention materials for generalized reading recovery.

The methodological literature also requires restraint in the strength of claims. Calvi et al. (2023) found that only a small proportion of randomized secondary reading-intervention studies met all assessed quality indicators, and Filderman et al. (2022) observed larger effects on researcher-developed outcomes. These findings caution against presenting any single packaged intervention as settled science for Philippine Grade 11 and 12 learners. The strongest conclusion is at the component and design level: explicit, targeted, multicomponent instruction can improve adolescent reading; knowledge and strategy instruction strengthen comprehension; fluency can improve with direct practice but needs connection to meaning; motivation and student experience affect participation; and maintenance requires continued support. Local programs should therefore be evaluated rather than merely adopted.

For research, the most important gap is direct evidence from Philippine senior high schools. Existing international evidence is strong enough to justify action but not specific enough to determine the optimal dosage, grouping, language supports, or staffing model for Grades 11 and 12 across Philippine school types. Future studies should compare diagnostic profiles, examine strand-specific reading demands, test transfer from intervention passages to course texts, and include follow-up after intervention ends. Cluster randomized or strong quasi-experimental designs are feasible at the school or section level, while implementation studies can document fidelity, acceptability, scheduling, attendance, and teacher workload. Qualitative work should also examine whether learners perceive the intervention as useful, respectful, and relevant to their academic goals.

The practical contribution of this review is therefore a change in how the problem is framed. Senior high school literacy catch-up should not be understood as lowering standards for older students. It is a way to give learners access to the standards already expected of them. Foundational remediation supplies the reading efficiency and language tools required for participation; subject-embedded disciplinary literacy shows learners how those tools function in authentic academic work. When the two layers operate together, intervention and curriculum become mutually reinforcing rather than competing uses of time.

V. LIMITATIONS

This review has several limitations. First, it is a structured narrative review rather than a systematic review or *de novo* meta-analysis. The search and selection procedures were explicit, but the review did not claim exhaustive retrieval of every eligible study, did not produce a PRISMA flow diagram, and did not calculate a new pooled effect. Second, the evidence base contains relatively few studies conducted specifically with Grade 11 and 12 learners. Much of the strongest quantitative evidence spans Grades 6 to 12 or includes mixed upper-elementary and secondary samples, so direct transfer to Philippine senior high school requires local validation.

Third, the included literature is dominated by English-language instruction in countries whose curricula, teacher preparation systems, and resource conditions differ from those in the Philippines. The Philippine setting is multilingual, and the language of instruction, learners' first-language

resources, and the relation between English and Filipino literacy may alter intervention response. Fourth, effect estimates across reviews are not directly comparable because outcomes, intervention duration, measures, and study quality differ. Researcher-developed measures can also yield larger effects than distal standardized measures. Finally, the national indicators used to establish context describe different age groups and constructs: learning poverty concerns late-primary reading, whereas PISA represents 15-year-old performance. They demonstrate a cumulative system challenge but should not be interpreted as direct prevalence estimates for reading difficulty among all senior high school learners.

VI. CONCLUSION

Adolescent reading difficulty is remediable, but remediation must be precise. The current evidence does not support a single undifferentiated reading program for every struggling senior high school learner. It supports a diagnostic sequence that identifies the limiting component, applies explicit and sufficiently intensive instruction, monitors response, and deliberately reconnects improved skills to the texts learners must read in their subjects. Word-level accuracy and morphology, fluency, vocabulary and background knowledge, comprehension and metacognition, motivation, and disciplinary literacy form a connected system rather than competing intervention choices.

For Philippine senior high schools, the most defensible model is a two-layer literacy catch-up architecture. Learners with substantial foundational deficits receive protected targeted or intensive remediation, while all learners receive explicit literacy support through authentic Grade 11 and 12 subject texts. This design responds to the gap between widespread unfinished literacy learning and the advanced reading demands of the senior high school curriculum. It also avoids two errors: expecting content teachers to remediate severe foundational deficits without specialist time, and isolating remedial instruction so completely that gains fail to transfer to academic work. Literacy catch-up should therefore be treated as an access strategy for rigorous secondary education, supported by assessment, skilled instruction, progress monitoring, respectful learner placement, and local evaluation.

Author Contributions

The author conceptualized the review, developed the search strategy, synthesized the evidence, interpreted the findings, prepared the language support framework, and approved the final manuscript.

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Ethics Approval and Informed Consent

Ethics approval and informed consent were not required because this study reviewed and synthesized previously published literature and publicly available curriculum materials and did not involve direct participation of human subjects.

Competing Interests

The author declares no competing interests.

Data Availability

All evidence discussed in this review is available in the cited publications and official sources. The structured evidence matrix used for synthesis can be made available by the author upon reasonable request.

Declaration of AI Use

A generative artificial intelligence tool was used to assist with language refinement, structural organization, and consistency checking during manuscript preparation. Scholarly claims and bibliographic details were checked against source records, and responsibility for the final content rests with the author.

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