Secondary School Management Strategies to Develop Critical Reading Skills for Students at Nanning Yinhai Sanya High School

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Abstract

This study aimed to (1) study the conceptual frameworks of secondary school management and critical reading skills, (2) analyze the strengths, weaknesses, opportunities, and threats (SWOT) of secondary school management for developing students' critical reading skills, and (3) develop secondary school management strategies for improving students' critical reading skills at Nanning Yinhai Sanya High School, Guangxi, China. A multiphase mixed-methods design was used. The population comprised 5,200 students, 220 teachers, and 25 academic administrators. Yamane's formula indicated a minimum student sample of 372; all 439 valid student responses obtained through school-based simple random procedures were retained. The staff sample comprised 39 teachers and 11 academic administrators selected through stratified purposive procedures. Three experts validated the conceptual framework, seven experts evaluated the first strategy draft, and a seven-member focus group evaluated the second draft. Data were analyzed using descriptive statistics, the Modified Priority Needs Index (PNImodified), content analysis, SWOT analysis, and the TOWS matrix. Results showed that all three management components and seven critical-reading dimensions were accepted (IOC = 1.00). Students reported a larger overall development need (PNImodified = 0.219) than staff (0.196). Students prioritized Curriculum Development and Analyzing Arguments, whereas staff prioritized Evaluation and Assessment and Critical Thinking Skills.

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The final model comprised three strategies, six substrategies, and twelve procedures. Expert and focus-group judgments supported its suitability and feasibility, while its effectiveness on student outcomes remains to be tested

Keywords: Critical reading skills, secondary school management, strategy development

Introduction

Critical reading is increasingly important in secondary education because students must judge claims, evidence, assumptions, and credibility across print, digital, and multimodal information. Recent intervention research shows that critical-thinking and critical-reading abilities can be strengthened through explicit classroom instruction, including in secondary-school settings (Chaisinlapin & Suwannatthachote, 2023; Fan, 2024). The challenge for schools is therefore not only whether such abilities can be taught, but how they can be supported consistently across subjects and grade levels.

A school-wide response requires management mechanisms that align curriculum expectations, teacher learning, instructional supervision, and assessment. Evidence from China indicates that school leadership can influence student achievement through teacher commitment and collaborative culture, while principal leadership is also associated with teacher collaboration and self-efficacy (Li et al., 2022; Xie et al., 2022). A recent integrative review further emphasizes that instructional leadership in China is strongly shaped by local policy and organizational context and calls for contextually relevant approaches to curriculum and instructional improvement (Chai et al., 2026).

China's curriculum reforms provide a direct policy rationale for the study. The General Senior High School Chinese Language Curriculum Standards emphasize core competencies, thinking development, evidence-based interpretation, and higher-order learning, while the 2022 compulsory-education curriculum standards likewise emphasize thinking quality, information processing, and curriculum implementation

(Ministry of Education of the People's Republic of China, 2020, 2022). These policy expectations require schools to translate broad competency goals into curriculum progression, teacher-development routines, supervision indicators, and usable assessment evidence.

At Nanning Yinhai Sanya High School, the need was also visible in internal performance evidence. Based on Chinese-language examination records supplied by the school and reviewed for this study over the academic year preceding formal data collection, the Modern Text Reading - Informational Text component showed persistent gaps. Newly enrolled students achieved 58%, 61.15%, and 51% against a 70% target; graduating students achieved 41.3%, 63%, and 60% against a 65% target. The records covered monthly, mid-term, and final examinations. The instability and shortfall suggested that critical-reading development was not yet supported by a sufficiently coherent curriculum, teaching, monitoring, and feedback system.

Recent studies have mainly demonstrated critical reading or critical thinking through classroom-level instructional interventions. For example, Chaisinlapin and Suwannatthachote (2023) tested an eight-week instructional model with Grade 9 students, and Fan (2024) evaluated critical-thinking infusion in regular English lessons across Chinese secondary schools. These studies provide important evidence about pedagogy, but they do not by themselves specify how a school should coordinate curriculum planning, teacher development, supervision, assessment, and resource allocation as one management system.

This study addresses that practice and knowledge gap by integrating conceptual validation, priority-needs assessment, SWOT analysis, TOWS strategy formulation, and two rounds of expert refinement. Its significance lies in shifting the unit of intervention from a single classroom technique to a school-level management architecture that is explicitly connected to seven critical-reading dimensions. The intended contribution is a context-specific, operationally feasible model for an examination-oriented secondary school rather than a claim of universal effectiveness.

Research Objectives

1. To study the conceptual frameworks of secondary school management and critical reading skills.

2. To analyze the strengths, weaknesses, opportunities, and threats (SWOT) of secondary school management based on the concept of critical reading skills.

3. To develop secondary school management strategies based on the concept of critical reading skills at Nanning Yinhai Sanya High School, Guangxi, China.

Expected Benefits of the Research

The study was expected to provide four benefits: an evidence-based diagnosis of critical-reading management priorities for the case school; a practical framework for administrators and teachers to coordinate curriculum, professional learning, supervision, and assessment; an adaptable reference for schools facing similar examination and digital-information pressures; and a contribution to the literature by connecting school-management processes directly with specified critical-reading competencies. Because the model is context-specific, adoption by other schools should follow local needs analysis and feasibility review rather than direct replication.

Research Methods

This study employed a multiphase mixed-methods design covering conceptual validation, priority-needs and SWOT analysis, and strategy development. Integration occurred at two points: first, quantitative priority-needs results were compared with open-ended responses, school records, policy documents, and expert evidence to classify internal and external SWOT factors; second, the resulting SWOT profile was matched through TOWS and then refined through quantitative expert ratings and qualitative comments. This integration allowed the final strategies to remain empirically responsive while being tested for practical fit within the case-school context.

1. Population and Sample

According to administrative enrollment and staffing records supplied by Nanning Yinhai Sanya High School for the study period, the population consisted of

5,200 students, 220 full-time teachers, and 25 academic administrators. For students, the minimum sample was determined using Yamane's (1967) formula, n = N / [1 + N(e^2)], with N = 5,200 and e = .05, producing n = 371.43, rounded to 372. Because 439 complete and valid student questionnaires were obtained through school-based simple random procedures, all 439 were retained, exceeding the minimum requirement. The staff sample comprised 50 respondents: 39 teachers and 11 academic administrators. Stratified purposive selection was used for staff so that Chinese/literature, mathematics/science, and key academic-management roles were represented; the purpose was perspective coverage rather than statistical estimation of the entire staff population. Three purposively selected experts evaluated the conceptual framework. Seven experts evaluated the first strategy draft, and seven purposively selected experts and stakeholders participated in the focus-group evaluation; their backgrounds covered Chinese language studies, educational management, curriculum/education, and examination-related expertise.

2. Research Instruments

The instruments included: (1) a conceptual-framework evaluation form using Agree (+1), Not Sure (0), and Disagree (-1); (2) parallel student and staff questionnaires measuring current and desirable conditions on a five-point scale and including open-ended questions; (3) a strategy evaluation form assessing suitability and feasibility; (4) a focus-group protocol; and (5) a document-analysis record. The questionnaires covered three management components and seven critical-reading dimensions. IOC was used as evidence of content-objective congruence, a recognized content-validation approach in educational assessment. IOC values of 0.50 or higher are commonly treated as acceptable; all ten framework components obtained IOC = 1.00, indicating complete expert congruence (Ismail & Zubairi, 2022). An eight-participant pilot study, conducted before the main survey and excluded from the final sample, examined clarity and internal consistency. Overall Cronbach's alpha was .990 for the current-condition scale and .991 for the desirable-condition scale. Current/desirable alpha coefficients by dimension were: Curriculum Development .978/.981; Teaching Management .980/.989; Evaluation and Assessment .978/.969;

Questioning Assumptions .921/.956; Analyzing Arguments .941/.955; Reflecting on Meanings .919/.938; Critical Thinking Skills .933/.955; Reading Context .918/.907; Higher-order Literacy Skills .961/.962; and Academic Skills .955/.939. These coefficients exceed the commonly used .70 guideline for good internal consistency (Winkler, 2022).

3. Data Collection and Analysis

Data collection occurred in three phases. Phase I synthesized the literature and obtained expert validation of the conceptual framework. Phase II collected student and staff questionnaires through paper-based and online procedures after institutional data-collection authorization, school permission, and participant information. Participation was voluntary, respondents were informed of the study purpose and confidentiality protections, and no separate IRB reference number was contained in the study records used for this manuscript; therefore, no approval number is reported. Qualitative materials from open-ended responses, school and policy documents, expert comments, and focus-group discussion were read, coded by topic, grouped into recurring themes, and compared across sources. Phase III used the TOWS matrix to create a first draft of three strategies, six substrategies, and twenty-four procedures. Seven experts evaluated the first draft; low-feasibility or high-workload procedures were simplified or merged, producing a second draft with sixteen procedures. A seven-member focus group then rated the second draft at both strategy and substrategy levels for suitability and feasibility and provided consensus comments. These quantitative ratings and qualitative comments were used to refine the model to three strategies, six substrategies, and twelve final procedures.

Quantitative data were analyzed using frequency, percentage, mean, standard deviation, and PNImodified = (D - C) / C, where D is the desirable-condition mean and C is the current-condition mean. This form of the Modified Priority Needs Index follows the needs-assessment approach used in Thai educational research (Wongwanich, 2015). Higher PNImodified values indicated larger relative development needs. No paired-samples significance test was planned because the study's

quantitative purpose was descriptive priority-needs diagnosis and strategy development rather than hypothesis testing of a current-versus-desirable mean difference; PNImodified was the prespecified decision statistic. For expert suitability and feasibility ratings, mean scores were interpreted using the study's prespecified ranges: 4.51-5.00 = highest, 3.51-4.50 = high, 2.51-3.50 = moderate, 1.51-2.50 = low, and 1.00-1.50 = lowest. SWOT classification was not determined from adjacent PNI values alone. Internal factors were interpreted as weaknesses when quantitative priority results and qualitative evidence jointly indicated a recurring development gap, and as strengths when triangulated evidence identified an established organizational routine or capacity that could be leveraged for implementation even if residual needs remained. Opportunities and threats were derived from external policy/document analysis and focus-group evidence rather than from PNI scores. SO, ST, WO, and WT matching in the TOWS matrix was then used to generate strategic alternatives.

Research Results

Objective 1: To study the conceptual frameworks of Secondary School Management and Critical Reading Skills

The conceptual framework was developed from the literature synthesis and evaluated by three experts. The framework combined three management components with seven critical-reading dimensions so that the later questionnaire and strategy-development process would address both organizational practices and intended student competencies.

Table 1 Results of Conceptual Framework Evaluation by Experts

Component	Agree	Not Sure	Disagree	Percent Agree
Secondary School Management				
1. Curriculum Development	3	0	0	100%
2. Teaching Management	3	0	0	100%
3. Evaluation and Assessment	3	0	0	100%

Component	Agree	Not Sure	Disagree	Percent Agree
Critical Reading Skills				
1. Questioning Assumptions	3	0	0	100%
2. Analyzing Arguments	3	0	0	100%
3. Reflecting on Meanings	3	0	0	100%
4. Critical Thinking Skills	3	0	0	100%
5. Reading Context	3	0	0	100%
6. Higher-order Literacy Skills	3	0	0	100%
7. Academic Skills	3	0	0	100%

As shown in Table 1, all three experts agreed with every proposed component. Curriculum Development, Teaching Management, and Evaluation and Assessment, together with the seven critical-reading dimensions, each received 100% agreement and an IOC value of 1.00. The experts considered the framework sufficiently comprehensive for the school context and recommended only minor wording improvements. The validated framework was therefore retained and used to construct the questionnaires, organize the priority-needs analysis, classify SWOT factors, and guide strategy formulation.

Objective 2: To analyze the strengths, weaknesses, opportunities, and threats (SWOT) related to critical-reading development

Questionnaire data showed a consistent gap between current and desirable conditions. Students rated the overall current condition at a moderate level (M = 3.364, SD = 0.543) and the desirable condition at a high level (M = 4.101, SD = 0.474), producing PNImodified = 0.219. Staff respondents also rated the current condition as moderate (M = 3.470, SD = 0.496) and the desirable condition as high (M = 4.151, SD = 0.427), producing PNImodified = 0.196. The larger student value indicated that students perceived a somewhat greater relative development need.

Table 2 Summary of Priority Needs Analysis and SWOT Classification

Dimension	Current Mean	Desired Mean	PNI modified	SWOT
Students - Secondary School Management				
Curriculum Development	3.358	4.099	0.221	W1
Teaching Management	3.369	4.101	0.217	S1
Evaluation and Assessment	3.370	4.103	0.218	W2
Students - Critical Reading Skills				
Questioning Assumptions	3.352	4.072	0.215	-
Analyzing Arguments	3.332	4.084	0.226	W3
Reflecting on Meanings	3.369	4.120	0.223	W5
Critical Thinking Skills	3.372	4.108	0.218	W5
Reading Context	3.382	4.120	0.218	S2
Higher-order Literacy Skills	3.354	4.097	0.221	W4
Academic Skills	3.390	4.105	0.211	S3
Staff - Secondary School Management				
Curriculum Development	3.474	4.147	0.194	W1
Teaching Management	3.473	4.156	0.197	S1
Evaluation and Assessment	3.457	4.149	0.200	W2
Staff - Critical Reading Skills				
Questioning Assumptions	3.468	4.146	0.196	-
Analyzing Arguments	3.456	4.172	0.207	W3
Reflecting on Meanings	3.522	4.148	0.178	W5
Critical Thinking Skills	3.436	4.154	0.209	W5
Reading Context	3.512	4.152	0.182	S2
Higher-order Literacy Skills	3.428	4.132	0.205	W4

Dimension	Current Mean	Desired Mean	PNI modified	SWOT
Academic Skills	3.468	4.152	0.197	S3
External Environment Factors				
O1 National Curriculum Standards	-	-	-	O
O2 Curriculum and Teaching Reform	-	-	-	O
O3 Gaokao Reform Orientation	-	-	-	O
O4 Digital Learning Resources	-	-	-	O
O5 Family-School and Social Support	-	-	-	O
T1 Fragmented Online Information	-	-	-	T
T2 Examination Pressure and Limited Time	-	-	-	T
T3 Assessment-System Conflict	-	-	-	T
T4 Teacher Competence Gaps	-	-	-	T
T5 Cost and Organizational Resistance	-	-	-	T

Note. Internal SWOT classification was based on triangulation rather than PNImodified magnitude alone. A factor was treated as a weakness when priority-needs evidence and qualitative evidence converged on a recurring gap; a factor was treated as a strength when the survey pattern and qualitative/document evidence identified an existing school routine or capacity that could support implementation. External opportunities and threats were identified from policy/document analysis and focus-group evidence and therefore have no questionnaire means or PNImodified values.

As shown in Table 2, students identified Curriculum Development as the highest management priority (PNImodified = 0.221), followed by Evaluation and Assessment (0.218) and Teaching Management (0.217). Their highest critical-reading priority was Analyzing Arguments (0.226), followed by Reflecting on Meanings (0.223) and Higher-order Literacy Skills (0.221). Staff respondents identified Evaluation and Assessment as the highest management priority (0.200), followed by Teaching Management (0.197) and Curriculum Development (0.194). Their highest skill priority was Critical Thinking Skills (0.209), followed by Analyzing Arguments (0.207) and Higher-order Literacy Skills (0.205).

The two respondent groups therefore differed in emphasis but converged on several important needs. Students focused more strongly on curriculum coherence and opportunities to practice argument analysis, while teachers and administrators focused on assessment evidence, instructional consistency, and critical thinking. Analyzing Arguments and Higher-order Literacy Skills were among the three highest priorities for both groups. These results indicated that curriculum, teaching, and assessment should be improved as an interconnected system rather than through a single isolated intervention.

The internal SWOT synthesis identified Teaching Management, Reading Context, and the existing academic-learning foundation as relative strengths. The principal weaknesses were fragmented curriculum integration, insufficient evaluation and monitoring, weak argument analysis, insufficient higher-order literacy, and gaps in critical thinking and reflective interpretation. Document analysis and focus-group evidence identified national curriculum standards, curriculum and teaching reform, competency-oriented Gaokao development, digital learning resources, and family-school support as opportunities. Threats included shallow and fragmented online information, examination pressure and limited instructional time, conflict between standardized and diversified assessment, teacher-capacity gaps, and implementation cost or organizational resistance. These factors became the basis for TOWS matching.

Objective 3: To develop Secondary School Management Strategies for Developing Critical Reading Skills

The TOWS matrix combined the identified strengths, weaknesses, opportunities, and threats to produce an initial framework of three strategies, six substrategies, and twenty-four procedures. Seven experts evaluated the first draft. The strategic directions received high to highest suitability ratings, but procedures requiring separate committees, full cross-subject modules, additional timetable periods, and extensive multi-source assessment received lower feasibility ratings. The first draft was therefore reduced to a second draft of sixteen procedures. A seven-member focus group then evaluated the second draft at both strategy and substrategy levels. The complete ratings are reported in Table 3. The focus-group ratings and consensus comments were used to simplify coordination and assessment requirements further,

resulting in the final framework of three strategies, six substrategies, and twelve procedures.

Table 3 Suitability and Feasibility of the Second Draft through Focus Group Evaluation (n = 7)

Strategies and Substrategies	Suitability M (SD)	Level	Feasibility M (SD)	Level
Strategy 1: Curriculum Integration	**4.68 (0.47)**	**Highest**	**3.84 (0.68)**	**High**
1.1 Policy and Competency Alignment	4.71 (0.45)	Highest	4.14 (0.53)	High
1.2 Resource and Task Integration	4.64 (0.49)	Highest	3.54 (0.69)	High
Strategy 2: Teaching Management	**4.61 (0.49)**	**Highest**	**4.15 (0.53)**	**High**
2.1 Practical Teacher Development	4.57 (0.50)	Highest	4.10 (0.54)	High
2.2 Supportive Supervision and Accountability	4.64 (0.45)	Highest	4.20 (0.50)	High
Strategy 3: Evaluation and Assessment	**4.38 (0.51)**	**High**	**3.58 (0.66)**	**High**
3.1 Feasible Diagnostic Assessment	4.43 (0.50)	High	3.43 (0.73)	Moderate
3.2 Data-Informed Adaptive Improvement	4.33 (0.52)	High	3.73 (0.58)	High

Note. The ratings in Table 3 refer to the second draft evaluated by the seven-member focus group; substrategy labels are standardized to the final terminology used throughout this article. Curriculum Integration received the highest strategy-level suitability rating (M = 4.68, SD = 0.47), while Teaching Management received the highest strategy-level feasibility rating (M = 4.15, SD = 0.53). At the substrategy level, Policy and Competency Alignment received the highest suitability rating (M = 4.71, SD = 0.45), and Supportive Supervision and Accountability received the highest feasibility rating (M = 4.20, SD = 0.50). Feasible Diagnostic Assessment received the lowest feasibility rating (M = 3.43, SD = 0.73), which was interpreted as moderate, while Resource and Task Integration showed comparatively lower but still high feasibility (M = 3.54, SD = 0.69). These results indicate that the panel strongly endorsed the overall strategic direction but identified assessment design, cross-subject coordination, and workload as the principal implementation constraints. Consensus comments therefore recommended limiting formal cross-subject joint planning to manageable intervals, embedding teacher development in existing collective lesson preparation, lesson study, and

mentorship, using simplified rubrics and existing digital examination data, and retaining only a limited amount of qualitative evidence to control grading workload. These quantitative and qualitative findings directly informed the reduction from sixteen second-draft procedures to twelve final procedures.

Strategy 1: Curriculum Integration consists of two substrategies. Substrategy 1.1, Policy and Competency Alignment, assigns coordination to the existing Academic Affairs Office, grade-level committees, and subject departments and maps the seven critical-reading dimensions across Grades 10-12, subjects, and learning units with progressively more complex expectations. Substrategy 1.2, Resource and Task Integration, establishes a shared digital repository of high-quality argumentative, informational, scientific, literary, and multimodal texts and embeds discipline-appropriate critical-reading tasks into existing lessons and homework. The strategy responds directly to the student-identified priority in curriculum development while avoiding the cost of a separate course or committee.

Strategy 2: Teaching Management also consists of two substrategies. Substrategy 2.1, Practical Teacher Development, integrates training in argument mapping, evidence evaluation, questioning, and reflective interpretation into collective lesson preparation, mentorship, demonstration lessons, and peer observation. Substrategy 2.2, Supportive Supervision and Accountability, adds a flexible higher-order-reasoning indicator to the existing classroom-observation checklist and uses quarterly reviews of observation records, selected student work, and teacher reflections to identify support needs. This strategy builds on the school's existing teaching-management foundation and was rated the most feasible because it strengthens routines already familiar to teachers and administrators.

Strategy 3: Evaluation and Assessment contains Substrategy 3.1, Feasible Diagnostic Assessment, and Substrategy 3.2, Data-Informed Adaptive Improvement. The first develops simplified three-level analytic rubrics for selected open-ended responses and student work and aligns school-based assessment with competency-oriented Gaokao trends while retaining evidence of reasoning and judgment. The second uses existing digital grading and scanning systems to produce error analyses and student- and class-level progress profiles. Grade-level academic meetings then

use the evidence to adjust curriculum emphasis, remedial instruction, and teacher support. The focus group emphasized that assessment should provide useful diagnostic evidence without creating excessive grading or family-assessment workload. A procedure-level mapping of the original 24 procedures to the final 12 procedures, including the revision action and rationale, is provided in Appendix A.

Research Discussion

Discussion of Objective 1: Conceptual Framework

Objective 1 established a framework of three management components and seven critical-reading dimensions, all accepted by the expert panel with IOC = 1.00. The result supports treating critical-reading development as an organizational as well as instructional issue. Recent evidence from Chinese schools shows that leadership influences learning through teacher commitment, collaboration, and instructional processes (Li et al., 2022; Xie et al., 2022), while Chai et al. (2026) emphasize that instructional leadership in China must be interpreted in relation to local organizational and policy conditions. At the same time, recent classroom studies demonstrate that critical reading and critical thinking are teachable through structured instructional interventions (Chaisinlapin & Suwannatthachote, 2023; Fan, 2024). The contribution of the present framework is to connect those learner competencies to the school-management mechanisms required to sustain them across subjects and grades.

Discussion of Objective 2: Priority Needs and SWOT

Objective 2 showed a consistent current-desirable gap for both respondent groups: PNImodified was 0.219 for students and 0.196 for staff. Students emphasized Curriculum Development and Analyzing Arguments, whereas staff emphasized Evaluation and Assessment and Critical Thinking Skills. These different emphases are complementary: students experience the coherence and frequency of learning opportunities, while staff are responsible for monitoring implementation and judging evidence of learning. Fan's (2024) Chinese secondary-school trial found that critical-thinking infusion could improve critical-thinking skills without a parallel gain in conventional academic attainment, illustrating why instructional improvement and assessment alignment cannot be assumed to move together automatically. The SWOT

findings also align with Chinese leadership research showing that collaborative culture and teacher collaboration are important mechanisms linking leadership to instructional capacity and student outcomes (Li et al., 2022; Xie et al., 2022). Thus, the study interpreted close PNI values through triangulation with qualitative and documentary evidence rather than classifying strengths and weaknesses by PNI magnitude alone.

Discussion of Objective 3: Strategy Development and Evaluation

Objective 3 converted the needs and SWOT profile into three strategies, six substrategies, and twelve final procedures after refinement from twenty-four to sixteen and then twelve procedures. The reduction strengthened organizational fit by removing or merging structures that created excessive coordination, timetable, or assessment burdens. This is consistent with recent China-focused evidence that context matters in the enactment of instructional leadership and that job-embedded teacher collaboration and professional learning are important pathways for school improvement (Chai et al., 2026; Tang et al., 2023). Teaching Management received the highest strategy-level feasibility rating (M = 4.15, SD = 0.53), and Supportive Supervision and Accountability received the highest substrategy-level feasibility rating (M = 4.20, SD = 0.50), supporting the decision to use existing collective lesson preparation, mentorship, supervision, and routine review structures as implementation vehicles. By contrast, Feasible Diagnostic Assessment received only moderate feasibility (M = 3.43, SD = 0.73), providing a direct empirical basis for simplifying rubrics, limiting labor-intensive qualitative evidence, and relying more heavily on existing examination and digital-grading systems. The final model should therefore be understood as a suitability- and feasibility-validated management design, not as evidence that the twelve procedures have already caused gains in students' critical-reading performance.

Limitations and Transferability

This study has four principal limitations. First, it is a single-site case study of one private secondary school, so the final strategy model should not be generalized automatically to schools with different student populations, staffing patterns, resources, or governance arrangements. Second, the current and desirable conditions were based mainly on respondent perceptions rather than direct measures of every management practice. Third, the final framework was validated through expert and

stakeholder judgments of suitability and feasibility but was not implemented in a controlled outcome study. Fourth, the strategy-evaluation panels were purposively selected and small (seven experts for the first draft and seven focus-group participants for the second draft), so the reported means and standard deviations should be interpreted as design-validation evidence rather than population estimates. The most transferable elements are therefore the diagnostic and design process - needs assessment, triangulated SWOT, TOWS matching, and feasibility refinement - while the specific procedures should be adapted after local diagnosis. Future research should test the model through longitudinal or pre-post implementation, compare multiple schools, and examine whether effects differ by resource level, school type, and student population.

New Knowledge

This study contributes a context-specific implementation model that differs from classroom-level critical-reading interventions by linking seven critical-reading dimensions to three school-management functions through a PNI-SWOT-TOWS strategy-development process. The five implementation-support conditions were not added independently at the end of the study; they were synthesized from the empirical and strategic evidence. Leadership coordination responds to curriculum and evaluation fragmentation; professional development responds to the teacher-capacity threat while leveraging Teaching Management as a relative strength; resource and digital support builds on the digital-resource opportunity and the need to control workload; policy alignment derives from national curriculum and competency-oriented reform opportunities; and stakeholder collaboration reflects family-school support while addressing organizational resistance and implementation cost. This combination is the study's theoretical and practical novelty: it connects the content of critical reading to the organizational conditions required for implementation, whereas recent intervention studies have mainly tested classroom teaching models (Chaisinlapin & Suwannatthachote, 2023; Fan, 2024) and recent Chinese leadership studies have examined general leadership mechanisms rather than a critical-reading-specific management architecture (Li et al., 2022; Chai et al., 2026).

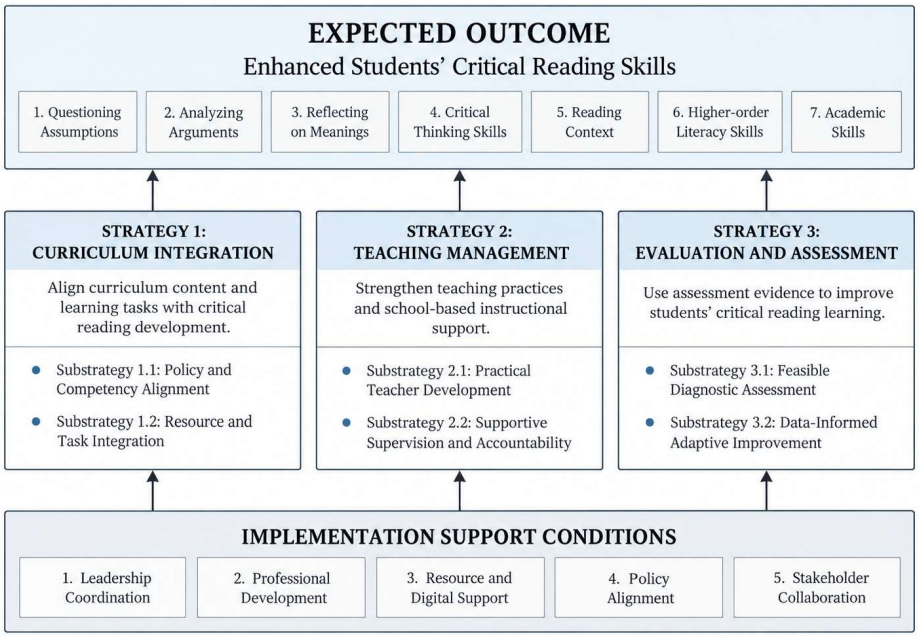

Figure 1 Final Secondary School Management Strategy Model for Developing Critical Reading Skills

Source: Developed by the researcher from the study's PNImodified, SWOT/TOWS, expert-evaluation, and focus-group findings.

As illustrated in Figure 1, the model operates from implementation-support conditions through three mutually reinforcing strategies toward enhanced critical-reading outcomes. Curriculum expectations without teacher capacity may remain on paper; teacher development without aligned assessment may not be sustained; and assessment without curriculum coherence may generate data without improvement. The model therefore translates priority-needs and SWOT evidence into twelve procedures that can be phased, monitored, and adjusted within an examination-oriented secondary school. Importantly, the model has been validated for suitability and feasibility through expert and stakeholder judgment; it has not yet been empirically tested for effectiveness in changing students' critical-reading outcomes.

Research Suggestions

1. Policy Suggestions

1.1 School and local education authorities should include critical-reading development in academic quality policies and annual improvement plans. Guidance should clarify progressive expectations across Grades 10-12, support evidence-based reading tasks across subjects, and recognize teacher collaboration, classroom observation, and diagnostic assessment as part of implementation. Resource support should prioritize teacher development, shared digital text resources, and manageable assessment tools rather than new parallel administrative structures.

2. Practical Suggestions

2.1 Nanning Yinhai Sanya High School should implement the strategies in a staged sequence. In the first 8-12 weeks, the Academic Affairs Office should establish the Grade 10-12 competency map, begin targeted teacher development, and add a flexible higher-order-reasoning indicator to existing observation routines; these actions should be piloted first because Teaching Management received the highest feasibility rating. During the following semester, departments should expand the shared text repository, embed short discipline-appropriate critical-reading tasks in existing lessons and homework, and pilot simplified three-level diagnostic rubrics. After one major assessment cycle, the school should use existing digital grading data to create progress profiles, conduct post-exam review meetings, and decide which cross-subject routines can be scaled without excessive workload. Implementation should be reviewed each semester using participation, workload, student work, assessment evidence, and stakeholder feedback before wider adoption.

3. Directions for Future Research

3.1 Future studies should conduct pilot implementation of the twelve procedures and measure changes in actual critical-reading performance over time. Multi-site studies should compare public and private schools, different resource levels, and different student populations. Stronger designs may include longitudinal follow-up, matched comparison schools, or mixed-method implementation

evaluation to examine both outcomes and the mechanisms through which curriculum, teacher collaboration, supervision, and assessment interact.

References

Chai, Y., Sinnema, C., & Chan, A. (2026). Principal instructional leadership in China: An integrative review. *Review of Education, 14*, e70203. https://doi.org/10.1002/rev3.70203

Chaisinlapin, P., & Suwannatthachote, P. (2023). Effect of an instructional model integrating WebQuest and five key questions of social media literacy to enhance secondary school students' critical reading and reasoning writing abilities. *Journal of Education and Innovation, 25*(4), 244–254. https://so06.tci-thaijo.org/index.php/edujournal_nu/article/view/248410

Fan, K. (2024). Can the infusion teaching of critical thinking improve Chinese secondary students' critical thinking and academic attainment? Findings from a randomised controlled trial. *Thinking Skills and Creativity, 53*, 101597. https://doi.org/10.1016/j.tsc.2024.101597

Ismail, F. K. M., & Zubairi, A. M. B. (2022). Item objective congruence analysis for multidimensional items: Content validation of a reading test in Sri Lankan university. *English Language Teaching, 15*(1), 106–117. https://doi.org/10.5539/elt.v15n1p106

Li, L., Zhu, H., & Li, H. (2022). School leadership enhances secondary students' achievement in rural China through teacher commitment and collaborative culture. *Frontiers in Psychology, 13*, 894688. https://doi.org/10.3389/fpsyg.2022.894688

Ministry of Education of the People's Republic of China. (2020). *教育部关于印发普通高中课程方案和语文等学科课程标准（2017年版2020年修订）的通知* [Notice on issuing the general senior high school curriculum plan and subject curriculum standards, including Chinese language (2017 edition, 2020 revision)] (教材〔2020〕3号). https://hudong.moe.gov.cn/srcsite/A26/s8001/20006/t20200603_462199.html

Ministry of Education of the People's Republic of China. (2022). *教育部关于印发义务教育课程方案和课程标准（2022年版）的通知* [Notice on issuing the compulsory education curriculum plan and curriculum standards (2022 edition)] (教材〔2022〕2号). https://www.moe.gov.cn/srcsite/A26/s8001/202204/t20220420_619921.html

Tang, J. J., Bryant, D. A., & Walker, A. D. (2023). In search of the middle influence: How middle leaders support teachers' professional learning. *Educational Research, 65*(4), 444–461. https://doi.org/10.1080/00131881.2023.2261127

Winkler, C. E. (2022). Advanced skills in quantitative assessment. *New Directions for Student Services, 2022*(178–179), 133–148. https://doi.org/10.1002/ss.20435

Wongwanich, S. (2015). *Needs assessment research* (3rd ed.). Chulalongkorn University Press.

Xie, Z., Wu, R., Liu, H., & Liu, J. (2022). How does teacher-perceived principal leadership affect teacher self-efficacy between different teaching experiences through collaboration in China? A multilevel structural equation model analysis based on threshold. *Frontiers in Psychology, 13*, 933838. https://doi.org/10.3389/fpsyg.2022.933838

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.