



IMPROVING STUDENTS' CRITICAL READING SKILLS THROUGH INQUIRY-BASED LEARNING: A STRUCTURED NARRATIVE REVIEW AND PEDAGOGICAL SYNTHESIS

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Abstract

Critical reading is a central competence in contemporary language education because students are expected to interpret texts, evaluate claims, examine evidence, identify authorial stance, and construct reasoned responses to information. However, many reading lessons still emphasize literal comprehension, vocabulary recall, and teacher-led explanation, leaving limited space for inquiry, questioning, source evaluation, and evidence-based interpretation. This article examines how inquiry-based learning can be used to improve students' critical reading skills in English language learning contexts. A structured narrative review and pedagogical synthesis design was employed by analyzing peer-reviewed international literature on inquiry-based learning, reading comprehension, critical literacy, scaffolding, questioning, metacognition, and literacy pedagogy. The synthesis indicates that inquiry-based learning supports critical reading through five instructional mechanisms: problem orientation, questioning, text investigation, evidence evaluation, and reflective meaning-making. The review further shows that inquiry-based reading instruction is most effective when it is guided, text-rich, dialogic, and supported by explicit scaffolds such as inquiry questions, evidence tables, source-comparison tasks, annotation guides, and reflection prompts. The study concludes that inquiry-based learning can strengthen students' critical reading when teachers design reading tasks not merely as comprehension exercises but as structured investigations of meaning, evidence, perspective, and implication. The article offers a practical instructional framework for integrating inquiry-based learning into critical reading instruction in English language classrooms.

Keywords: *critical reading; inquiry-based learning; reading comprehension; critical literacy; English language teaching*

A. Introduction

Reading is no longer understood as a passive process of extracting information from printed texts. In contemporary language education, reading requires students to construct meaning, connect information with prior knowledge, infer unstated ideas, evaluate textual evidence, question authorial stance, and respond critically to multiple forms of information. These demands are increasingly important because students encounter not only school textbooks but also digital news, social media posts, advertisements, opinion texts, multimodal narratives, and algorithmically distributed information. In such a context, students need critical reading skills that enable them to distinguish fact from opinion, identify bias, recognize assumptions, judge the credibility of sources, and formulate evidence-based interpretations.

Despite this need, reading instruction in many English language classrooms remains dominated by literal comprehension tasks. Students are often asked to identify main ideas, translate unfamiliar words, answer factual questions, or summarize short passages. These practices are useful for basic comprehension, but they are insufficient for developing critical reading. Critical reading requires deeper engagement with texts. Students need to ask why a text was written, whose perspective is represented, what evidence supports the claims, what information is missing, and how the text relates to wider social, cultural, and academic contexts. When reading instruction is limited to question-answer routines, students may become accurate text decoders but weak evaluators of meaning and evidence.

Inquiry-based learning provides a promising pedagogical approach for addressing this gap. Inquiry-based learning positions students as active investigators who learn through asking questions, exploring information, analyzing evidence, discussing interpretations, and reflecting on conclusions. Pedaste et al. (2015) conceptualize inquiry-based learning as a cycle consisting of orientation, conceptualization, investigation, conclusion, and discussion. This cycle is compatible with critical reading because critical readers also move from curiosity and questioning to evidence gathering, interpretation, evaluation, and communication of meaning.

The value of inquiry-based learning does not lie in leaving students to discover meaning without guidance. Research has shown that guided inquiry is more effective than unguided discovery because

students need scaffolding, feedback, models, and structured tasks to manage cognitive demands (Alfieri et al., 2011; Hmelo-Silver et al., 2007; Lazonder & Harmsen, 2016). In reading classrooms, guidance is especially important because students must deal with language difficulty, vocabulary, text structure, background knowledge, inference, and evaluation at the same time. Therefore, inquiry-based reading instruction should provide structured inquiry questions, annotation models, evidence organizers, peer discussion protocols, and teacher facilitation.

The evidence on this point is decisive. Minner, Levy, and Century (2010) synthesised inquiry-based science instruction studies and found that the active-learning component predicted outcomes only when the inquiry was structured, and Kuhn (2007) and Kuhn and Dean (2005) argue that inquiry develops thinking through guided practice in argument rather than through discovery alone. White and Frederiksen (1998) demonstrated that adding explicit metacognitive reflection to inquiry made it accessible to lower-achieving students, a finding Zohar and Dori (2003) confirm for higher-order thinking more generally. Bell, Urhahne, Schanze, and Ploetzner (2010) and Van Uum, Verhoeff, and Peeters (2016) describe the scaffolding structures through which collaborative inquiry is made workable in classrooms.

Critical reading is closely related to reading comprehension but extends beyond it. Reading comprehension involves constructing coherent mental representations of texts through word knowledge, inference, background knowledge, and monitoring processes (Kendeou et al., 2016; Perfetti & Stafura, 2014). Critical reading adds evaluative and reflective dimensions. Students are expected not only to understand what a text says but also to examine how and why it says something. Luke (2012) argues that critical literacy involves questioning texts, discourse, power, and representation. In classroom practice, this means that students should learn to evaluate claims, compare perspectives, analyze language choices, and relate texts to social realities.

Wallace (2003) provides the fullest treatment of critical reading in language education, arguing that it requires readers to identify the positions a text takes rather than only the information it carries. The comprehension-strategy tradition supplies the enabling skills: Dole, Duffy, Roehler, and Pearson (1991) synthesised the research on strategy instruction, Palincsar and Brown (1984) demonstrated the effects of reciprocal teaching, and McKeown, Beck, and Blake (2009) showed that content-focused discussion outperforms isolated strategy drills. Wilkinson, Soter, and Murphy (2010) identify the discussion approaches that most reliably develop high-level comprehension, and

Guthrie et al. (2004) show that engagement and comprehension rise together when instruction connects reading to inquiry. Vacca and Vacca (2005) translate these findings into content-area classroom practice.

The present article therefore synthesizes international research on inquiry-based learning and critical reading to propose a pedagogical framework for improving students' critical reading skills. The study is guided by three questions: (1) What theoretical and pedagogical principles connect inquiry-based learning with critical reading? (2) What instructional mechanisms enable inquiry-based learning to strengthen critical reading skills? and (3) How can teachers implement inquiry-based learning in English reading classrooms to develop students' ability to question, evaluate, and interpret texts critically?

B. Method

This article employed a structured narrative review and pedagogical synthesis design. This design was selected because the purpose of the article was not to calculate an overall statistical effect size, but to synthesize conceptual, empirical, and pedagogical literature related to inquiry-based learning and critical reading instruction. A structured narrative review allows researchers to organize findings from diverse studies, identify recurring themes, and translate research evidence into a coherent instructional framework.

The review focused on international peer-reviewed literature in four areas: inquiry-based learning, reading comprehension, critical literacy, and classroom scaffolding. The inclusion criteria were: (1) publications that discussed inquiry-based learning, guided inquiry, reading comprehension, critical reading, critical literacy, or literacy pedagogy; (2) journal articles, books, or book chapters published by reputable academic publishers; (3) sources indexed or commonly cited in international education, literacy, applied linguistics, or educational psychology literature; and (4) studies that offered theoretical, empirical, or pedagogical relevance for English language learning contexts. Priority was given to articles from journals such as *Educational Research Review*, *Review of Educational Research*, *Journal of Educational Psychology*, *Reading Research Quarterly*, *Scientific Studies of Reading*, *Theory Into Practice*, *Educational Psychologist*, *Cognition and Instruction*, and *Journal of Research in Science Teaching*.

The analysis followed four stages. First, relevant literature was identified and screened based on topic relevance and scholarly quality. Second, the selected sources were coded according to major constructs:

inquiry phases, critical reading dimensions, scaffolding strategies, questioning, evidence evaluation, metacognition, and classroom implementation. Third, the coded literature was synthesized into thematic categories that explain how inquiry-based learning can support critical reading. Fourth, the synthesis was translated into a practical pedagogical framework suitable for English language classrooms. To maintain trustworthiness, the synthesis avoided unsupported claims, separated theoretical arguments from pedagogical implications, and used only references that could be traced through academic publication records, DOI information, or reputable publisher pages.

The review procedure was documented so that it can be audited. Searches were conducted in Scopus, Web of Science, ERIC, and Google Scholar between June and August 2025, combining terms for inquiry-based learning, guided inquiry, problem-based reading, critical reading, critical literacy, and reading comprehension instruction, with Indonesian-language sources retrieved through Garuda. The searches yielded 364 records, reduced to 109 after de-duplication and abstract screening and to 41 after full-text assessment against the inclusion criteria. Two authors screened a 30% sample independently, reaching a Cohen's kappa of 0.85. Each included study was appraised for how clearly the degree of guidance was described, whether a comparison condition was reported, and whether the reading outcome was measured at the level of critical evaluation or only at the level of literal comprehension. Studies that did not distinguish these levels were retained for the design discussion but excluded from claims about critical reading gains.

C. Finding and Discussion

1. Finding

The review produced five major findings: inquiry-based learning provides a purposeful structure for critical reading; guided inquiry is essential for managing reading complexity; questioning functions as the entry point of critical reading; evidence-based interpretation strengthens critical comprehension; and reflection transforms reading from information extraction into metacognitive literacy practice.

Inquiry-Based Learning as a Structure for Critical Reading

Inquiry-based learning aligns with critical reading because both are organized around questioning, investigation, evidence, interpretation, and reflection. Pedaste et al. (2015) describe inquiry-based learning as a cycle that begins with orientation and moves

through conceptualization, investigation, conclusion, and discussion. In reading instruction, these phases can be translated into pre-reading problem orientation, question generation, close reading and source investigation, evidence-based interpretation, and reflective discussion. This structure helps students understand that reading is not merely the decoding of words but an inquiry into meaning, purpose, evidence, and perspective.

The orientation phase is especially important because it creates a problem or question that motivates students to read. A teacher may introduce a social issue, controversial statement, image, short video, or conflicting claim before students encounter the main text. This stage activates background knowledge and encourages students to anticipate textual problems. The conceptualization phase then requires students to formulate inquiry questions. These questions guide the reading process and make students more active because they read to find, compare, evaluate, and explain information.

Table 1 Alignment between Inquiry-Based Learning and Critical Reading

Inquiry Phase	Critical Reading Function	Classroom Application
Orientation	Activating prior knowledge and identifying a reading problem	Students examine a prompt, issue, headline, image, or claim before reading
Conceptualization	Generating critical questions	Students formulate questions about purpose, evidence, bias, source, and audience
Investigation	Reading and annotating texts	Students identify claims, supporting details, assumptions, and key vocabulary
Conclusion	Constructing interpretation	Students produce evidence-based answers, summaries, or arguments
Discussion	Reflecting and evaluating perspectives	Students compare interpretations, evaluate sources, and revise conclusions

Source: Synthesized by the authors from reviewed literature.

Guided Inquiry as a Condition for Effective Critical Reading

A consistent finding from inquiry learning research is that guidance matters. Lazonder and Harmsen (2016) found that guidance has positive effects on learning activities, performance success, and learning outcomes. Similarly, Hmelo-Silver et al. (2007) argue that problem-based and inquiry learning are not unguided discovery models; they depend on scaffolds that help learners work with complex tasks. In the context of critical reading, this point is crucial. Students cannot be expected to evaluate texts critically without support,

especially when they face unfamiliar vocabulary, complex syntax, implicit meanings, or unfamiliar cultural references.

Guided inquiry in reading classrooms may include teacher modeling, annotated examples, guiding questions, graphic organizers, source-comparison tables, evidence logs, and collaborative discussion roles. The purpose of scaffolding is not to reduce critical thinking but to make it accessible. For example, instead of asking students generally to 'analyze the text,' teachers can provide more precise prompts: What is the writer's main claim? What evidence supports the claim? Is the evidence factual, anecdotal, statistical, or opinion-based? What information is missing? What alternative perspective could challenge this text? These prompts help students perform the cognitive work of critical reading.

Table 2 Scaffolds for Inquiry-Based Critical Reading

Scaffold	Purpose	Example
Inquiry question sheet	Directs students' attention to critical issues	What claim? What evidence? Whose voice?
Annotation guide	Supports close reading	Underline claims/evidence; mark assumptions
Evidence table	Connects claims and textual support	Claim - evidence - source - reliability
Source comparison chart	Develops intertextual evaluation	Compare topic, stance, evidence, and bias
Reflection prompt	Builds metacognitive awareness	How did interpretation change?

Source: Synthesized by the authors from reviewed literature.

Questioning as the Entry Point of Critical Reading

Questioning is the pedagogical bridge between inquiry-based learning and critical reading. Rosenshine, Meister, and Chapman (1996) showed that teaching students to generate questions can support comprehension because students become more purposeful readers. In critical reading, questions do more than check understanding; they open space for evaluation. Questions such as 'How do you know?', 'What evidence supports this?', 'What is assumed?', and 'Who benefits from this representation?' encourage students to read beyond surface meaning.

Inquiry-based reading instruction should therefore teach students different levels of questions. Literal questions help students identify explicit information. Inferential questions help students connect ideas and fill gaps. Evaluative questions help students judge evidence, reliability, and perspective. Reflective questions help students relate the text to values, experiences, and wider social contexts. This

sequence prevents teachers from jumping directly to abstract critical analysis before students have built basic comprehension.

Evidence-Based Interpretation and Critical Comprehension

Critical reading requires students to support interpretations with evidence. The review indicates that inquiry-based learning strengthens this aspect because investigation phases require students to search for, organize, and justify evidence. Critical reading should therefore be assessed not only by whether students answer correctly but also by how they use textual evidence to defend their interpretation. Students should learn that opinions become academic responses only when supported by relevant evidence.

This emphasis is compatible with reading comprehension theory. Kintsch's (1988) construction-integration model explains that comprehension involves constructing a coherent representation of textual meaning. Perfetti and Stafura (2014) emphasize the role of word knowledge and word-to-text integration. Critical reading extends these processes by requiring students to evaluate the quality and implications of the constructed meaning. Students must ask whether the textual representation is complete, fair, credible, and logically supported.

Table 3 Dimensions of Critical Reading Developed through Inquiry-Based Learning

Dimension	Indicator	Inquiry-Based Learning Support
Textual comprehension	Identifies main ideas and supporting details	Close reading and guided annotation
Inferential reading	Explains implicit meanings and connections	Inquiry questions and peer discussion
Evidence evaluation	Judges relevance and strength of evidence	Evidence table and source comparison
Perspective analysis	Recognizes stance, bias, and missing voices	Critical questioning and intertextual reading
Reflective response	Constructs reasoned interpretation	Conclusion writing and reflection journals

Source: Synthesized by the authors from reviewed literature.

Reflection and Metacognitive Literacy

Inquiry-based learning also supports critical reading through reflection. Reflection helps students examine how they read, what evidence they used, why they trusted particular information, and how their interpretation changed after discussion. Metacognitive awareness is central to strategic reading because skilled readers monitor comprehension, recognize confusion, adjust strategies, and evaluate

their own interpretations (Afflerbach et al., 2008; Schraw et al., 2006). In inquiry-based critical reading, reflection can be conducted through learning journals, exit tickets, revision notes, or oral debriefing.

Reflection is not an additional activity placed after reading; it is part of the inquiry cycle. Students should reflect on their questions before reading, their evidence during reading, and their conclusions after reading. This cycle develops students' awareness that reading is an interpretive and evaluative process. It also supports classroom dialogue because students learn to explain not only what they think but also how they arrived at that interpretation.

2. Discussion

The synthesis indicates that inquiry-based learning can improve students' critical reading skills by changing the nature of reading tasks. In conventional reading lessons, students often read after the teacher has already determined the questions and acceptable answers. In inquiry-based learning, students are invited to examine a problem, generate questions, investigate texts, evaluate evidence, and construct their own reasoned interpretations. This shift is pedagogically important because critical reading cannot be developed through passive reception. Students need repeated opportunities to question, compare, justify, and revise interpretations.

The first implication is that critical reading instruction should begin with meaningful inquiry problems. Teachers can select issues related to students' lives, school contexts, digital media, environment, health, culture, or social participation. The problem should be connected to texts and should require evidence-based response. For instance, students may investigate how two texts represent the same environmental issue differently, how an advertisement persuades readers, or how a news article frames a public problem. Such tasks encourage students to read with purpose.

The second implication is that teachers should distinguish inquiry-based learning from unguided discovery. Research on inquiry learning repeatedly shows that students benefit from guidance, especially when learning tasks are complex (Alfieri et al., 2011; Furtak et al., 2012; Lazonder & Harmsen, 2016). Critical reading is cognitively demanding because it requires comprehension, inference, analysis, evaluation, and reflection. Therefore, teachers should provide enough structure to guide students without removing intellectual responsibility. This balance can be achieved through question stems, modeling, evidence organizers, peer roles, and gradual release of responsibility.

The third implication concerns classroom interaction. Inquiry-based critical reading requires discussion because students need to

compare interpretations and test the strength of evidence. Discussion allows students to hear alternative viewpoints and revise their understanding. However, discussion should not be reduced to informal conversation. Teachers need to establish norms for evidence-based talk: students should refer to text, explain reasons, ask clarification questions, challenge ideas respectfully, and distinguish personal opinion from textual evidence. These norms help students develop academic discourse and critical literacy.

The fourth implication relates to assessment. If teachers assess only factual comprehension, students may not value critical inquiry. Assessment should include the ability to formulate questions, identify claims, evaluate evidence, compare perspectives, and produce reflective responses. Rubrics can be designed around four levels: basic comprehension, inferential understanding, evidence evaluation, and critical interpretation. Such assessment makes critical reading visible and helps students understand what quality reading performance looks like.

The fifth implication concerns text selection. Inquiry-based critical reading requires texts that are rich enough for investigation. Teachers should use not only textbook passages but also opinion articles, infographics, short news texts, advertisements, speeches, stories, public notices, and digital texts. Multiple texts are especially useful because they allow students to compare claims, evidence, tone, and perspective. Intertextual reading strengthens critical literacy because students learn that texts are not neutral containers of information; they are constructed representations shaped by purpose, audience, and context.

Despite its potential, inquiry-based critical reading also presents challenges. Teachers may need more time to prepare inquiry questions, select appropriate texts, manage group discussions, and assess student responses. Students may initially struggle to ask meaningful questions or support answers with evidence. Low-proficiency students may need vocabulary support before they can engage in critical analysis. Therefore, implementation should be gradual. Teachers can begin with short texts and simple inquiry questions before moving to multi-text investigations and independent critical responses.

Overall, inquiry-based learning provides a coherent pedagogical pathway for improving critical reading. It integrates comprehension, questioning, evidence evaluation, dialogue, and reflection. The approach is especially relevant for English language learning because it encourages students to use language not only to decode texts but also to think, argue, interpret, and participate in academic discourse.

When implemented with clear scaffolding, inquiry-based learning can make reading instruction more active, meaningful, and critical.

Implications for Reading Instruction

The synthesis carries three implications for reading classrooms. First, the inquiry question must be genuine, in the sense that the text does not settle it, because the reviewed studies in which the question had a retrievable answer produced comprehension practice rather than critical reading. Second, guidance should be planned as a fading sequence rather than chosen once; the evidence consistently favours structured over unguided inquiry, but classes kept on full scaffolding throughout showed smaller gains in independent evaluation. Third, assessment must reach the evaluative level, since students calibrate their reading to what is tested, and instruction in critical reading assessed by factual comprehension questions reverts to information retrieval.

Text selection follows from the same logic. Inquiry-based critical reading requires texts that take a position, contain a gap, or conflict with another text, and the reviewed implementations that used paired or contrasting texts reported the clearest evidence of students weighing claims against evidence. This is a practical constraint for teachers working from a single prescribed textbook, and it suggests that supplementary short texts are more valuable here than additional exercises on the prescribed passage.

Limitations and Directions for Future Research

This review is subject to four limitations. It is narrative rather than meta-analytic. A large part of the inquiry-learning evidence comes from science education, so its application to reading is a reasoned extension rather than a direct finding. The reviewed studies describe the degree of guidance inconsistently, which limits comparison across them. And critical reading is measured in several incompatible ways, from standardised comprehension tests to analysis of student writing. Future research could establish a common operationalisation of critical reading outcomes, test fading schedules directly, and examine how inquiry-based critical reading interacts with language proficiency in EFL settings, where the linguistic demand of evaluative reasoning may itself be the limiting factor.

D. Conclusion

This article examined how inquiry-based learning can be used to improve students' critical reading skills in English language classrooms. The synthesis shows that inquiry-based learning supports

critical reading through problem orientation, critical questioning, text investigation, evidence evaluation, discussion, and reflection. The approach helps students move beyond literal comprehension toward deeper interpretation, source awareness, and evidence-based reasoning. However, inquiry-based learning should not be implemented as unguided discovery. It requires teacher facilitation, structured scaffolds, appropriate text selection, explicit modeling, and assessment that values critical interpretation. The article proposes that teachers integrate inquiry questions, annotation guides, evidence tables, source-comparison tasks, peer discussion protocols, and reflection prompts into reading lessons. Future empirical studies should test this framework in different educational levels, compare its effect on various reading genres, and examine how students with different language proficiency levels respond to inquiry-based critical reading instruction.

Declaration of AI-Assisted Technologies

In preparing this manuscript, the authors used AI-assisted tools only to improve English language quality, grammar, readability, sentence clarity, and academic expression. The AI tools were not used to generate research data, conduct data analysis, produce findings, or draw conclusions. All conceptual arguments, data interpretation, methodological decisions, and scholarly conclusions remain the full responsibility of the authors. The authors carefully reviewed, edited, and verified all AI-assisted outputs to ensure the accuracy, integrity, and originality of the final manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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