



Investigating the Efficacy of Critical Thinking Skills of College Students for the Comprehension of English Textbooks in Pakistan

Arooba Rao Niaz Muhammad¹, Jawaid Iqbal Meerani² & Syedah Hafsah Wahida³

¹HST (BPS-16) at Education Department, Govt. of Sindh, Email: raoaroba25@gmail.com

²Lecturer in English at Shaheed Benazir Bhutto University, Shaheed Benazirabad,

Email: javedmirani_nf@sbbusba.edu.pk

³PhD Scholar in the Center for Language Studies at Universiti Tun Hussein Onn Malaysia,

Email: wahidahafsah@gmail.com

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Corresponding Author:

Arooba Rao Niaz Muhammad

Email:

raoaroba25@gmail.com

ABSTRACT

The development of critical thinking skills is widely recognized as essential for effective comprehension of academic texts, particularly in an English-as-a-second-language context. This study investigates the efficacy of critical thinking skills among college students in Pakistan in relation to their comprehension of English textbooks. Employing a qualitative research design, data were collected through questionnaires and reading-based tasks administered to students at selected colleges. The study aimed to evaluate students' ability to analyze, interpret, and critically engage with English texts. The findings reveal that although students generally have a positive attitude toward reading English materials, their critical thinking skills remain limited when applied to comprehension tasks. Several factors contribute to this gap, including insufficient cognitive and academic vocabulary, limited exposure to higher-order thinking strategies, and limited emphasis on critical reading practices in the existing curriculum. Additionally, the minimal integration of interactive and technological learning tools further constrains students' analytical engagement with texts. The study concludes that while students possess the foundational motivation to improve, there is a pressing need to strengthen instructional approaches that foster critical thinking in reading. It recommends curriculum reform, enhanced teacher training, incorporation of higher-order questioning techniques, and improved access to well-resourced libraries. Strengthening these areas can significantly enhance students' comprehension skills and prepare them for higher education and lifelong learning.



Introduction

The ability to engage critically with written discourse has become a central expectation in modern education, particularly in contexts where English serves as the medium of instruction. In Pakistan, English textbooks are not merely sources of information but vehicles through which students are expected to interpret, evaluate, and construct meaning. However, this expectation often contrasts sharply with prevailing pedagogical realities, where emphasis remains on memorization and surface-level comprehension rather than analytical engagement. This disconnect raises important questions regarding the extent to which college students possess the critical thinking skills required to comprehend English textbooks effectively.

Critical thinking is widely understood as a higher-order cognitive process involving analysis, inference, evaluation, and reflection. Within reading contexts, it requires readers to move beyond literal interpretation and actively interrogate the assumptions, arguments, and implications embedded in texts. Contemporary research consistently demonstrates a strong, positive relationship between reading comprehension and critical thinking, particularly in second-language learning environments (Facione, 2020; Kirmizi et al., 2021). Despite this established relationship, educational practices in Pakistan often fail to integrate critical thinking into reading instruction systematically. One of the persistent challenges lies in the dominance of traditional, teacher-centered approaches that prioritize content delivery over cognitive development. Students are often trained to reproduce information rather than question it, resulting in limited critical engagement with texts. Studies examining English as a Second Language (ESL) contexts in Pakistan indicate that learners struggle to develop critical academic reading skills despite exposure to English-medium instruction (Ali & Ahmad, 2019; Hussain et al., 2022; Shah et al., 2025). This suggests that mere access to English texts does not automatically translate into meaningful comprehension or analytical competence.

Furthermore, linguistic limitations continue to impede students' engagement with complex academic material. Restricted vocabulary, inadequate familiarity with academic discourse, and limited exposure to diverse reading materials constrain students' interpretive abilities. Research indicates that reading comprehension is closely tied to cognitive and metacognitive processes that enable learners to monitor and regulate their understanding (Zohar & Barzilai, 2018; Tariq et al., 2023). However, such processes are rarely emphasized in classroom practices, leaving students ill-equipped to navigate challenging texts independently. Another critical concern is the design of English textbooks and curriculum frameworks. Evidence suggests that instructional materials in Pakistan often emphasize lower-order cognitive skills, such as recall and basic understanding, while higher-order skills, such as analysis, evaluation, and creation, receive comparatively little attention (Mahmood, 2020; Sultana & Zaki, 2021). This imbalance not only limits opportunities for intellectual engagement but also reinforces passive learning habits. Consequently, students may perform adequately in examinations that reward memorization but struggle when required to demonstrate independent reasoning or critical judgment.

Pedagogy is equally significant in shaping students' reading experiences. Innovative instructional strategies, such as interactive reading, guided questioning, and metacognitive training, have been shown to enhance both comprehension and critical thinking. For instance, research indicates that structured reading interventions and collaborative learning approaches can significantly improve students' inferential and evaluative skills (Rahman et al., 2022; Saeed & Ghani, 2023). Similarly, explicit instruction in critical thinking has been found to positively influence reading comprehension and overall academic performance (Abrami et al., 2018; Dwyer et al., 2020). Despite these findings, such strategies remain underutilized in many Pakistani classrooms. In

addition to institutional and pedagogical constraints, broader socio-cultural factors also influence students' reading practices.

The decline in reading for pleasure, coupled with limited access to well-resourced libraries, restricts students' exposure to a range of intellectually stimulating texts. Without sustained engagement in reading beyond academic requirements, students are unlikely to develop the depth of understanding necessary for critical analysis (Clark & Teravainen, 2019). This issue is particularly significant in contexts where digital distractions increasingly compete with traditional reading habits. Given these multifaceted challenges, it becomes essential to examine the efficacy of critical thinking skills among college students in Pakistan, particularly in relation to their comprehension of English textbooks. Such an investigation not only provides insight into students' current capabilities but also highlights the structural and pedagogical gaps that hinder their development. Rather than treating reading comprehension as a purely linguistic skill, it is necessary to conceptualize it as a complex cognitive activity that requires deliberate cultivation of analytical abilities.

This study, therefore, seeks to critically explore how effectively college students employ critical thinking while engaging with English texts. By doing so, it aims to contribute to ongoing debates about educational reform and the need to align teaching practices with the cognitive demands of higher education. Addressing these issues is imperative, as the development of critical reading skills is not merely an academic requirement but a fundamental component of intellectual autonomy and lifelong learning.

1. To what extent do college students in Pakistan demonstrate critical thinking skills while comprehending English textbooks?
2. What factors influence the development and application of critical thinking skills in reading English texts among college students?
3. How does the level of critical thinking ability affect students' comprehension and interpretation of English textbooks?

Literature Review

Concept of Critical Thinking in Education

Critical thinking has been widely recognized as a fundamental component of higher education, enabling students to analyze, evaluate, and synthesize information rather than merely recall it. According to Facione (2020), critical thinking involves purposeful, self-regulatory judgment that results in interpretation, analysis, and evaluation. In academic contexts, particularly in English language learning, it plays a crucial role in enabling learners to engage deeply with texts.

Scholars argue that critical thinking is not an automatic outcome of education but requires structured instructional support (Dwyer et al., 2020). In many developing educational systems, including Pakistan, the focus remains heavily on rote learning, limiting students' opportunities to cultivate analytical reasoning. This gap becomes particularly problematic when students are expected to comprehend complex English textbooks that demand interpretive and evaluative skills.

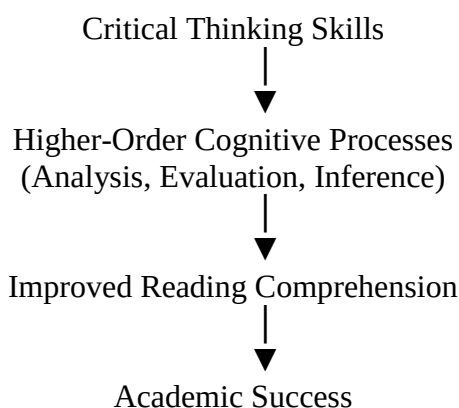
Reading Comprehension and Its Cognitive Dimensions

Reading comprehension extends beyond decoding words; it involves constructing meaning through interaction with the text. Zohar and Barzilai (2018) emphasize that comprehension is a metacognitive process in which readers actively monitor their understanding and adjust their strategies accordingly. This process is closely linked with higher-order thinking skills.

Research suggests that students with strong critical thinking skills tend to achieve better reading comprehension (Kirmizi et al., 2021). However, in ESL contexts, comprehension is often hindered by linguistic limitations such as restricted vocabulary and unfamiliarity with academic discourse. Tariq et al. (2023) found that Pakistani students frequently struggle with inferential comprehension, indicating a lack of deeper engagement with texts.

Relationship between Critical Thinking and Reading Comprehension

A substantial body of literature highlights a strong correlation between critical thinking and reading comprehension. Critical thinking enables students to question assumptions, identify biases, and evaluate arguments presented in texts. Without these skills, reading remains a passive activity. Abrami et al. (2018) demonstrate that instructional interventions aimed at improving critical thinking significantly enhance students' reading performance. Similarly, Rahman et al. (2022) found that students exposed to higher-order questioning techniques performed better on comprehension tasks than those taught through traditional methods.



Note: This model illustrates that critical thinking acts as a mediating factor in enhancing comprehension and overall academic achievement.

Challenges in the Pakistani Context

Rote Learning Culture

One of the most significant barriers to developing critical thinking in Pakistan is the dominance of rote learning. Ali and Ahmad (2019) argue that students are conditioned to memorize textbook content rather than engage with it critically. This approach limits their ability to analyze or question information.

Curriculum Limitations

The design of English curricula often emphasizes lower-order cognitive skills. Mahmood (2020) notes that textbooks frequently focus on factual recall and comprehension questions that do not require deeper analysis. As a result, students are rarely challenged to think critically.

Linguistic Barriers

Language proficiency plays a crucial role in comprehension. Hussain et al. (2022) highlight that limited vocabulary and weak grammatical understanding hinder students' ability to interpret complex texts. This issue is particularly pronounced in rural and under-resourced institutions.

Lack of Teacher Training

Teachers often lack the training required to incorporate critical thinking strategies into their instruction. Saeed and Ghani (2023) found that many educators rely on traditional lecture methods, which do not promote interactive or analytical learning.

Instructional Strategies to Enhance Critical Thinking

Research suggests that critical thinking can be effectively developed through targeted pedagogical approaches. These include:

Guided questioning techniques that encourage students to analyze and evaluate texts

Collaborative learning activities such as group discussions and debates

Metacognitive strategy instruction to improve self-regulation in reading

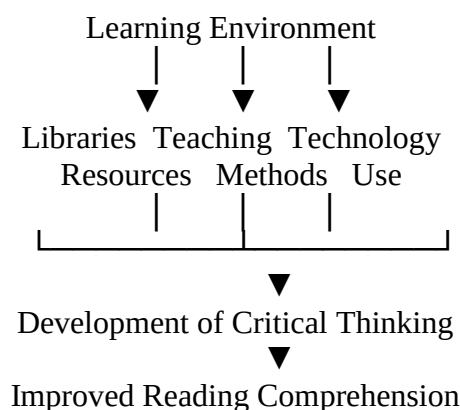
Problem-based learning that connects reading with real-world contexts

Dwyer et al. (2020) emphasize that explicit instruction in reasoning skills significantly improves students' cognitive abilities. Similarly, Rahman et al. (2022) found that interactive reading strategies lead to measurable improvements in comprehension.

Role of Reading Habits and Learning Environment

Students' reading habits significantly influence the development of their critical thinking. Clark and Teravainen (2019) note that regular pleasure reading enhances vocabulary, comprehension, and analytical skills. However, in Pakistan, reading is often limited to academic requirements.

Additionally, the lack of well-equipped libraries and limited access to diverse reading materials restricts students' exposure to different perspectives. The increasing reliance on digital media has also shifted reading patterns, often reducing deep engagement with texts.



While existing studies establish a strong link between critical thinking and reading comprehension, there is limited research specifically examining how effectively Pakistani college students apply critical thinking while reading English textbooks. Most studies focus either on general language proficiency or teaching methods, leaving a gap in understanding students' actual cognitive performance during reading tasks. The literature clearly indicates that critical thinking is essential for effective reading comprehension, particularly in ESL contexts. However, systemic challenges such as rote learning practices, limited curriculum design, linguistic barriers, and inadequate teaching strategies hinder its development among college students in Pakistan. Addressing these issues requires a comprehensive approach that integrates pedagogical reform, curriculum enhancement, and improved learning environments. This study aims to contribute to this gap by

investigating the efficacy of critical thinking skills in the comprehension of English textbooks among Pakistani college students.

Methodology

This study adopted a qualitative research design to investigate the efficacy of critical thinking skills among college students in Pakistan for comprehending English textbooks. A qualitative approach was considered appropriate because it allows for an in-depth exploration of students' cognitive processes, perceptions, and reading behaviors, which cannot be fully captured through numerical data alone. The design enabled the researcher to interpret students' experiences and identify patterns related to critical thinking and reading comprehension. The study's target population consisted of college students enrolled in English language and literature courses in Pakistan, particularly those at the intermediate or undergraduate level. A purposive sampling technique was used to select participants who had direct exposure to English textbooks in their academic curriculum. A sample of students was selected from colleges in Karachi to ensure relevance to the study context and to obtain rich, meaningful data.

Data were collected through a structured questionnaire comprising both open-ended and closed-ended questions. The questionnaire was designed to examine students' reading habits, comprehension strategies, and application of critical thinking skills while engaging with English texts. Open-ended questions allowed respondents to express their views in detail, while closed-ended items helped identify general trends in responses. The instrument also included items related to vocabulary use, inferential understanding, and evaluative reading skills. The questionnaires were distributed to selected participants in their respective colleges, with prior permission from the institutional authorities. Students were briefed on the study's purpose and assured that their responses would remain confidential and would be used solely for research. They were given adequate time to complete the questionnaire, ensuring thoughtful responses. After collection, the data were organized and reviewed for consistency and completeness before analysis.

The collected data were analyzed using thematic analysis, a method commonly used in qualitative research to identify, analyze, and interpret patterns within data. Responses to open-ended questions were carefully examined and categorized into themes such as reading comprehension, critical thinking, vocabulary limitations, and classroom practices. These themes were then interpreted in relation to existing literature to draw meaningful conclusions about students' cognitive abilities and reading behaviors.

Ethical standards were strictly followed throughout the study. Participants were informed about the objectives of the research and their voluntary participation. Confidentiality and anonymity were maintained, and no personal identifiers were included in the study. Participants were also given the right to withdraw at any stage without any consequences.

Findings and Discussion

The analysis is based on data collected from college students in Pakistan regarding their critical thinking skills and their comprehension of English textbooks. The findings are organized thematically to address each research question separately, focusing on key components such as literal comprehension, inferential thinking, evaluative skills, and the factors influencing critical reading practices. The discussion further interprets these findings in light of relevant literature to deepen understanding of the relationship between critical thinking and reading comprehension in the Pakistani educational context.

RQ 1: To what extent do college students in Pakistan demonstrate critical thinking skills while comprehending English textbooks?

Literal Comprehension Level

The findings show that most college students primarily operate at the literal comprehension level when reading English textbooks. Their reading practice is largely confined to identifying directly stated information in the text. Students reported focusing on understanding “what the text says” rather than exploring “what the text means,” suggesting a surface-level engagement with the reading materials.

Inferential Thinking Ability

The data reveal a weak ability among students to make inferences while reading. A majority of participants struggled to read between the lines or derive implied meanings from the text. When faced with questions that require interpretation, students often rely on guesswork or teacher explanations rather than independent reasoning. This suggests limited development of inferential thinking skills.

Evaluative Thinking Skills

The findings also indicate minimal engagement in evaluative thinking. Students rarely questioned the credibility of information or assessed the strength of arguments presented in the texts. Their responses suggest that they accept textbook content as absolute truth without critical examination or comparison with alternative perspectives.

These findings suggest that critical thinking skills among college students remain underdeveloped in reading contexts. According to Facione (2020), critical thinking involves interpretation, analysis, inference, and evaluation; however, the observed reading behavior reflects dominance of lower-order thinking skills. This aligns with Abrami et al. (2018), who argue that without explicit instructional strategies, students are unlikely to progress beyond basic comprehension. The findings also reflect Mahmood (2020), who highlights that Pakistani educational materials rarely encourage analytical engagement, thereby restricting students’ critical reading development.

RQ2: What factors influence the development and application of critical thinking skills in reading English texts among college students?

Linguistic Competence Barriers

The findings indicate that limited vocabulary and weak command of English grammar significantly hinder students’ ability to engage critically with texts. Many students reported difficulty understanding complex sentence structures, which leads them to rely heavily on translation rather than interpretation. This linguistic barrier restricts deeper cognitive processing.

Instructional Practices in Classrooms

A dominant factor influencing the development of critical thinking is teacher-centered instruction. Students reported that classroom instruction is mostly lecture-based, with teachers explaining content and students passively listening. There is minimal opportunity for discussion, questioning, or analytical engagement, which limits the development of independent thinking skills.

Assessment System Influence

The findings show that the examination system strongly influences students’ learning strategies. Since assessments primarily focus on memorization and reproduction of textbook content, students prioritize rote learning over critical engagement. This exam-oriented approach discourages analytical reading practices.

Reading Exposure and Academic Environment

Students reported limited exposure to reading materials beyond textbooks. Reading for pleasure is rare, and access to diverse academic resources is limited. This lack of exposure reduces opportunities to develop interpretive flexibility and critical awareness.

Metacognitive Awareness Deficiency

The findings also reveal that students lack awareness of reading strategies such as summarizing, questioning, and evaluating. Most students do not consciously regulate their understanding or monitor comprehension, which restricts their ability to engage in critical reading.

These factors collectively indicate that systemic educational issues influence the development of critical thinking. Zohar and Barzilai (2018) emphasize the importance of metacognitive strategies for reading comprehension, yet their findings show that these strategies are rarely practiced. Hussain et al. (2022) similarly highlight linguistic constraints as a major barrier in ESL contexts. The dominance of teacher-centered instruction and exam-oriented assessment further reinforces passive learning, as Saeed and Ghani (2023) support. Clark and Teravainen (2019) also stress that limited reading exposure significantly restricts cognitive development, as evidenced by the present findings.

RQ3: How does the level of critical thinking ability affect students' comprehension and interpretation of English textbooks?

Comprehension Accuracy

The findings indicate that students with higher critical thinking ability demonstrate better comprehension accuracy. These students can identify main ideas, understand supporting details, and interpret textual meaning more effectively. They show greater clarity in understanding academic content compared to their peers with lower critical thinking skills.

Inferential Understanding

Students with stronger critical thinking skills are better able to infer implied meanings from the text. They can interpret underlying messages and connect ideas across paragraphs. In contrast, students with weak critical thinking skills struggle to move beyond literal meanings and often misinterpret abstract concepts.

Analytical Interpretation

The findings reveal that students with well-developed critical thinking skills engage more effectively in the analytical interpretation of texts. They can evaluate arguments, recognize author perspectives, and differentiate between facts and opinions. Students with weaker skills lack this analytical depth.

Dependency on Memorization

Students with low critical thinking ability rely heavily on memorization strategies, which negatively affects comprehension quality. Their understanding remains fragmented and dependent on recall rather than interpretation, leading to poor academic reading performance.

The findings confirm a strong relationship between critical thinking and reading comprehension. Kirmizi et al. (2021) similarly found that students with higher critical thinking skills perform better in comprehension tasks, especially in ESL environments. Dwyer et al. (2020) argue that critical thinking enhances cognitive organization, enabling a deeper understanding of texts. The present

findings support this view by showing that students with stronger analytical abilities demonstrate superior comprehension and interpretation skills. However, the overall inconsistency in performance suggests that critical thinking development is uneven and largely dependent on instructional exposure rather than innate ability. The findings consistently indicate that critical thinking skills among college students in Pakistan are underdeveloped in relation to English textbook comprehension. Students predominantly rely on memorization and translation strategies, while higher-order cognitive skills such as analysis, evaluation, and inference remain weak. Linguistic challenges, traditional teaching methods, exam-oriented assessment systems, and limited reading exposure strongly contribute to this limitation. The findings collectively suggest that critical thinking is not systematically integrated into reading instruction, resulting in superficial comprehension and limited academic development.

Conclusion

This study investigates the efficacy of critical thinking skills among college students in Pakistan in relation to their comprehension of English textbooks. Based on the findings and discussion, it is evident that while students possess basic reading abilities, their capacity to engage in higher-order thinking during reading remains limited. The overall results highlight a clear gap between surface-level comprehension and deeper cognitive engagement, indicating that critical thinking is not yet fully integrated into students' reading practices.

One of the most significant conclusions drawn from the study is that college students predominantly rely on literal comprehension when reading English texts. Their engagement is largely restricted to identifying explicitly stated information, while inferential and evaluative thinking skills remain weak. Students are generally unable to interpret implied meanings, analyze arguments, or critically assess the text's content. This suggests that reading is treated as a passive activity rather than an active cognitive process that involves reasoning and judgment. As a result, students' understanding of English textbooks remains fragmented and superficial.

The study also concludes that multiple interconnected factors contribute to the underdevelopment of critical thinking skills. Linguistic limitations, particularly in vocabulary and grammatical understanding, significantly hinder students' ability to engage deeply with texts. Many students depend heavily on translation strategies, which restricts their ability to think independently in English. In addition, traditional teacher-centered instructional practices further limit opportunities for analytical engagement. Classroom environments are largely dominated by explanation-based teaching, with minimal interaction, discussion, or questioning that could stimulate critical thinking.

Another important conclusion is the strong influence of the examination system on students' learning behavior. Since assessments primarily focus on memorization and reproduction of textbook content, students tend to prioritize rote learning over analytical reading. This exam-oriented culture discourages the development of interpretive and evaluative skills, as success is measured by recall rather than reasoning ability. Consequently, students adapt their study strategies to meet examination requirements rather than developing deeper comprehension skills.

The study further concludes that limited reading exposure outside the classroom also plays a significant role in limiting the development of critical thinking. Most students engage with English texts only for academic purposes, with little or no involvement in reading for pleasure. This lack of diverse reading experiences reduces their exposure to different perspectives, argument structures, and vocabulary usage, all of which are essential for developing critical reading skills. Additionally, students' lack of metacognitive awareness further limits their ability to regulate and evaluate their own understanding during reading tasks.

Despite these limitations, the study found a positive relationship between critical thinking ability and reading comprehension. Students who demonstrated relatively stronger analytical skills were able to comprehend texts more effectively, infer meanings, and interpret ideas with greater clarity. This confirms that critical thinking plays a crucial role in enhancing reading comprehension and academic performance. However, the overall level of critical thinking among most students remains underdeveloped, underscoring the need for targeted educational interventions.

In conclusion, the study reveals that critical thinking skills among college students in Pakistan are not adequately developed to support effective comprehension of English textbooks. The findings highlight that reading is largely confined to memorization and literal understanding, with minimal engagement in higher-order cognitive processes. Linguistic challenges, traditional teaching methods, examination-oriented assessment systems, and a limited reading culture contribute to this situation. Addressing these issues requires shifting pedagogical practices, curriculum design, and assessment strategies to promote analytical reading and critical engagement. Strengthening these areas is essential not only for improving students' reading comprehension but also for preparing them for the demands of higher education and lifelong learning.

Recommendations

Based on the study's findings and conclusions, several recommendations are proposed to enhance college students' critical thinking skills in Pakistan and improve their comprehension of English textbooks.

Firstly, it is recommended that teachers adopt student-centered and interactive teaching approaches in English classrooms. Instead of relying on lecture-based instruction, educators should incorporate activities such as group discussions, debates, questioning techniques, and text analysis exercises. These strategies can encourage students to actively engage with reading materials, think independently, and develop the ability to interpret and evaluate textual information rather than simply memorizing content.

Secondly, there is a need to integrate explicit critical thinking instruction into the curriculum. English textbooks and syllabi should be revised to include tasks that promote higher-order thinking skills such as analysis, inference, evaluation, and synthesis. Questions that require reasoning, justification, and interpretation should be included in reading exercises to ensure students are consistently engaged in critical analysis of texts.

Thirdly, it is recommended that teachers receive professional development and training in critical thinking pedagogy. Many educators may not be fully equipped with the strategies needed to promote analytical reading skills effectively. Training programs, workshops, and continuous professional development opportunities should be provided to enhance teachers' ability to design lessons that foster critical engagement and deeper comprehension among students.

Fourthly, educational institutions should focus on developing a strong reading culture among students. Libraries should be updated with a wide range of academic and general reading materials, and students should be encouraged to read for pleasure in addition to academic reading. Regular reading activities, book clubs, and reading competitions can help students become more familiar with different text types, improve vocabulary, and strengthen interpretive skills.

Lastly, it is recommended that assessment systems be reformed to include critical thinking-based evaluation. Instead of focusing primarily on memorization and recall, examinations should include questions that assess analytical reasoning, interpretation, and evaluation skills. When students are assessed on their ability to think critically, they are more likely to adopt learning strategies that support deeper comprehension and meaningful engagement with texts.

Overall, these recommendations aim to bridge the gap between students' current reading practices and the critical thinking skills required for effective comprehension of English textbooks in higher education contexts.

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