



Needs Analysis for Developing Critical Reading: Perspectives from EFL Undergraduates and Teachers

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Relevant literature revealed that critical reading presents a significant challenge for English as a Foreign Language (EFL) learners, especially non-English major undergraduates in China. Although critical reading is widely acknowledged as essential, its effective integration into EFL instruction remains inadequate. This study is an initial step in exploring strategies to address this gap. It aims to discover the need to develop critical reading skills from the perspectives of Chinese EFL non-English major undergraduates and EFL teachers. A sample of 386 non-English major EFL undergraduates and 82 EFL teachers participated in the study, with a Need Analysis Students' Questionnaire (NASQ) and a Need Analysis Teachers' Questionnaire (NATQ) used. Results revealed a congruency between learners and teachers, as both groups reported moderate levels of engagement—learners in their use of critical reading skill ($M = 3.151$) and teachers in implementation of critical reading instruction ($M = 3.045$). This study recommends designing modules that align teacher instruction with learner needs, developing critical reading skills from lower-level to progressively higher-level skills, and providing structured tasks within the skills development.

Keywords: needs analysis, critical reading, Chinese EFL undergraduates, EFL teacher, undergraduates, EFL

INTRODUCTION

Critical reading involves applying high-order thinking skills to comprehend written materials (Pirozzi, 2003; Li, 2010; Omar & Mohamed, 2024). It is a dynamic communication between readers and text in a social context, which goes beyond surface understanding. Critical reading encourages readers to analyse, synthesize, and evaluate the text and to develop their comprehension. Through critical thinking when reading, individuals engage with academic material in a deeper and more meaningful way (Liu & Yan, 2022).

Citation: He, D., & AlSaqqaf, A. (2025). Needs analysis for developing critical reading: Perspectives from EFL undergraduates and teachers. *International Journal of Instruction*, 18(4), 421-440. <https://doi.org/10.29333/iji.2025.18423a>

The described elements of critical reading are relevant to what was stated by Zhuo (2021), stating that, despite the Chinese college EFL learners today being faced with a vast amount of information, they cannot often critically evaluate and analyse this information. They were unaware of how the massive amount of information available today has influenced their reading habits. As a result, they sometimes ignored the underlying meaning present in the information. For an education reform, advancements in critical thinking education in China have been initiated since the late 1990s, but the progress has been slow. As Yan (2020) pointed out, educators have raised concerns about critical reading, but the practical effect continues to be a challenge in EFL education.

Critical reading is crucial for academic and personal development, especially in today's information-rich society. With abundant information online, readers must not simply accept or reject content but analyse it critically from multiple perspectives. For university students, reading critically enables them to assess whether the information received is credible, and equips individuals with the ability to interpret the digital or printed information. According to Roomy (2022), reading critically enables learners to analyse, evaluate, make connections, draw conclusions, and find new ways to reinterpret. These skills empower readers to navigate academic requirements, deepening their understanding and awareness of language and content. Mastery of critical reading is essential for functioning effectively in educational environments and beyond in the 21st century.

While there is growing recognition of critical reading as a vital skill, there remains a deficiency of contextual insights from both learners and teachers in EFL education. Hutchinson and Waters (1987) emphasized that the design of English language teaching (ELT) should balance the target needs of what learners should do and the learning needs of how they learn best through teachers' scaffolding. As further illustrated by Zou and Lee (2021), identifying the needs from the perspectives of EFL learners and teachers is fundamentally related to targeted curriculum development. This is particularly in the critical reading, as it involves understanding students' challenges in real-time learning contexts (Sukarni, 2024). However, past research reveals that this balance is particularly lacking in the Chinese EFL context, where relevant and learning-centred needs have not been thoroughly explored (e.g., He & AlSaqqaf, 2024; Zhang et al., 2020; Ke & AlSaqqaf, 2023). To address the gap, this study integrates insights from two primary essential stakeholders: Chinese EFL teachers and non-English major undergraduates. Accordingly, the objectives of this study are as follows:

- 1) To identify the needs for developing critical reading skills from the perspective of EFL non-English major undergraduates at a public university in China.
- 2) To identify the needs for developing critical reading skills from the perspective of EFL teachers at a public university in China.

Literature Review

This section explores the concept of critical reading and the theoretical framework of needs analysis, offering comprehensive insights into the topic.

Critical Reading

Critical reading is defined as high-level comprehension requiring analysis, synthesis, and evaluation (Pirozzi, 2003; Li, 2010; Omar & Mohamed, 2024). It involves active engagement with the text, fostering a dynamic reader-text interaction. For EFL learners, varying foreign-language proficiency and diverse reading strategies necessitate a progressive approach (Ibrahim et al., 2021) because this approach is more effective than presenting advanced skills outright. It caught the hierarchical nature of critical reading, where basic skills of knowledge and comprehension precede higher-order thinking, reflecting Bloom's Taxonomy (1956). The following diagram illustrates a progressive learning path for critical reading.

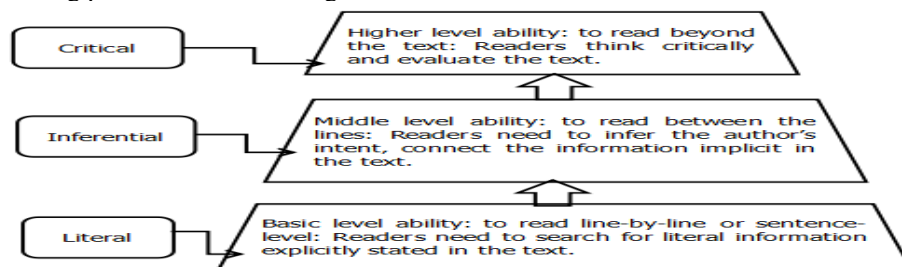


Figure 1
Pyramid of reading comprehension
Adapted from Basaraba et al., (2013)

As shown above, critical reading encompasses the development of comprehension from lower-level to higher-level skills, including knowledge, comprehension, application, analysis, synthesis, and evaluation (Ibrahim et al., 2021). Enhancing critical reading is crucial for self-development, especially in today's information-rich society. With easily accessible information online, readers must not simply accept or reject content but analyse it critically from multiple perspectives (Roomy, 2022). Critical reading promotes academic development, enhancing understanding of arguments, viewpoints, and themes within texts. By enabling learners to interpret literature personally, critical reading supports deeper academic inquiry and performance (Carracedo, 2025). Mastery of critical reading skills is essential for success in college and beyond, as it fosters analytical thinking and judgment crucial for academic success across disciplines.

Despite the key role of critical reading in academic development, past studies revealed that Chinese EFL undergraduates are insufficiently developed in this area. The primary reason is that the current instruction may be inadequate for enhancing students' critical reading skills. A quantitative study by Zhou and Zhou (2019) of 120 Chinese EFL learners revealed that both high- and low-scoring groups were less skilled in structure and rhetoric analysis, and holistic evaluation. A qualitative study done by Huang et al. (2019) further supported this, showing a deficiency in key critical reading activities such as inference, reasoning, fact-opinion differentiation, prediction, evaluation, and use of contextual clues in the reading materials. Shamida et al. (2023) found that despite having above-average perceptions of their critical reading abilities, many students find it challenging to employ critical reading strategies effectively.

The weakness of critical reading among Chinese EFL learners directly affects their performance on international tests such as the International Student Assessment Program (PISA), the International English Language Testing System (IELTS), and the Scholastic Aptitude Test (SAT). These are prominent assessments that evaluate critical reading skills like determining the purpose of a text and distinguishing between fact and opinion, reasoning, inference-making, and evaluation. While China achieved top rankings in the PISA reading assessment in 2009, 2012, and 2018, and a mid-range ranking in 2015. Kong (2023) highlighted a less developed proficiency in critical reading compared to other academic areas, such as mathematics. This is corroborated by lower-than-average SAT scores for Chinese students relative to their international peers, indicating potential weaknesses in critical reading components like reasoning and evaluation (Zhang, 2021; Xu, 2019).

In summary, as highlighted by Kong (2023), Zhang (2021), and Xu (2019), the limited development of critical reading among Chinese EFL learners was reflected in their performance on standardized international assessments. This indicated a challenge in their ability to effectively engage with complex and real-world texts. Consequently, there is a pressing need for instructional reforms equipping learners with higher-order thinking skills, thereby better preparing them to thrive in an information-driven global environment.

Needs Analysis

In language teaching, needs analysis involves identifying the language needs of learners and prioritizing them (Richards et al., 1992; Srijono, 2006; Barghamadi, 2020). Jordan (1997) initially identified five primary approaches to needs analysis, which were later expanded upon by Khan and Khan (2024). Among them, the learning-centred approach proposed by Hutchinson and Waters (1987) was especially recognized for analysing the situation in which learners use the language. The learning-centred approach, as examined by Kaewpet (2009) and Warti (2020), has been extensively utilized in EFL and ESL contexts. It emphasized continuous needs analysis and the use of multiple data collection methods to gain a deeper understanding of learners' educational backgrounds. The learning-centred approach was utilized in the current study.

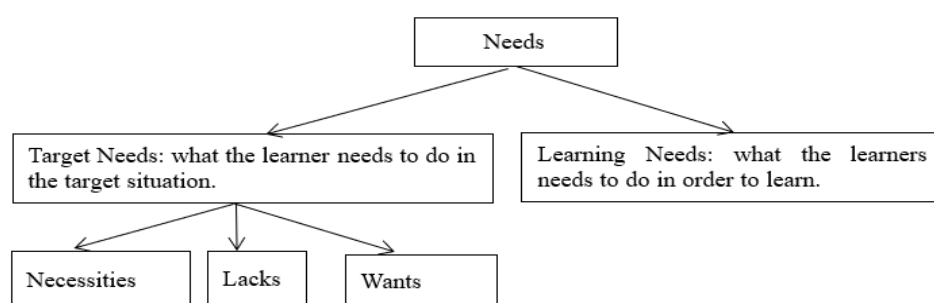


Figure 2

Classification of need analysis

Adopted from Hutchinson and Waters (1987)

The figure above divides needs into target needs and learning needs. Target needs are the skills required for real-life situations, including necessities, gaps, and wants. Necessities are the essential skills and knowledge needed. Lacks are gaps between current abilities and required proficiency. Wants are the personal goals and expectations of learners. Learning needs to focus on what learners need to acquire these skills. This approach facilitates designing educational programs by recognizing the skills required and the supportive strategies needed (Sönmez, 2019).

Past studies applied a learning-centred approach to analyse learners' needs in EFL contexts. For instance, Emaliana and Amaranggani (2020) focused on developing ELT materials tailored to the target needs of Indonesian third-semester students, emphasizing the necessity of aligning instructional resources with learners' evolving educational demands. Similarly, Yuan and Stapleton (2020) emphasized the importance of tailored needs analysis for distinct learner groups, highlighting significant gaps in critical thinking for Chinese international postgraduate students. They underscored the need to identify the target needs of what learners must achieve and the learning needs of the support required for effective curriculum design.

Despite the findings emphasizing the application of needs analysis, relevant studies showed that incorporating needs analysis into critical reading in Chinese EFL contexts is scarce. As previously noted, Chinese EFL learners experienced challenges in critical reading. Their unique educational backgrounds, strategies, and learning needs collectively influenced their critical reading performance. Conducting a thorough investigation into their specific challenges and expectations, thus, is essential for designing targeted interventions (Zhang, 2021). Accordingly, this study aims to fill existing gaps by collecting insights from Chinese EFL teachers and non-English major undergraduates regarding identifying the needs for developing critical reading skills.

METHOD

Research Design

This study applied a quantitative design to collect and analyse data. The data was collected from a survey involving non-English major undergraduates and teachers from a public university in the central south part of China. Three reasons guided the selection of this research context. Firstly, this university is known for its centralized location, the students are enrolled from various parts of China, and it has a diverse student population to provide a representative group. Secondly, the university emphasizes improving English language education for its students. Helping students develop advanced analytical reading abilities in English is a priority for the school. The third reason is accessibility; the existing connections of the researchers with this university ensured smooth access to the necessary resources and support for conducting the study.

Sampling Technique

Participants were chosen through a simple random sampling technique. The sample comprises undergraduate students who were enrolled at a public university in the central southern part of China. They represented a diverse range of academic majors and geographic backgrounds, with a total of 386 participants contributing to the substantial

data for comprehensive analysis. This rigorous approach to participant selection aligns with the principles of Memon et al. (2020), ensuring that the sample is representative, thereby minimizing bias and supporting the generalization of findings to the wider population.

Instruments

This research utilized two instruments: the Need Analysis Student Questionnaire (NASQ) and the Need Analysis Teacher Questionnaire (NATQ), each comprising 26 closed-ended questions. As highlighted by Creswell and Creswell (2017), closed-ended questions contribute to greater consistency in responses and higher completion rates. The NASQ focuses on evaluating students' self-assessed critical reading skills, adapted from Olifant (2020), while the NATQ examines teachers' application of critical reading strategies, also adapted from Olifant (2020). Both questionnaires were translated into Chinese, then back-translated into English to ensure accuracy and clarity. A notable advantage of these instruments is their impressive reliability, with internal consistency ratings exceeding 0.90 across all constructs. Previous research (e.g., Olifant, 2020, 2024; Saidalvi et al., 2024) has validated their reliability and construct validity. Responses were measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaires were distributed online via Wenjuanxing over two weeks. The items are detailed as follows.

Table 1
Constructs and items in questionnaire one and two

Constructs	Students' use of critical reading skills	Teachers' implementation of critical reading	Items
Knowledge Skill	Remember information, identify main ideas, and supporting details.	Assign tasks to remember information, identify main ideas, and supporting details.	1-3
Comprehension Skill	Understand titles, read quickly, locate details, describe main ideas, and supporting details.	Assign tasks to predict outcomes, use prior knowledge, and apply ideas to new situations.	4-8
Application Skill	Predict outcomes, use prior knowledge, and apply ideas to new situations.	Assign tasks to predict outcomes, use prior knowledge, and apply ideas to new situations.	9-11
Analysis Skill	Differentiate facts/opinions, identify relevance, reasons, similarities, and contradictions.	Assign tasks to differentiate facts/opinions, identify relevance, reasons, similarities, and contradictions.	12-17
Synthesis Skill	Connect ideas between paragraphs, summarize information, and draw conclusions.	Assign tasks to connect ideas, summarize information, and draw conclusions.	18-20
Evaluation Skill	Assess trustworthiness, evaluate arguments, determine strengths/weaknesses, and identify the writer's view/intention.	Assign tasks to assess trustworthiness, evaluate arguments, determine strengths/weaknesses, and identify the writer's view/intention.	21-26

*Items and constructs are adapted from Olifant (2020)

Data Collection and Analysis

The statistical analyses of the questionnaires were carried out through the SPSS program (version 26). Descriptive statistics of standard deviation, frequencies, and percentages of participants' responses were calculated. The data were collected and analyzed to determine the levels of need. Based on data analysis, the results of the needs analysis for the development of critical reading skills from each indicator and needs category levels are presented in tabular format.

Table 2
Measurement levels for self-perceived use of critical reading skills

No.	Mean Score Range	category
1	>3.5 - ≤5.0	High
2	>2.5 - ≤3.4	Medium
3	1 - ≤2.4	Low

*Source: (Oxford & Burry-Stock, 1990)

According to the findings of Oxford and Burry-Stock (1990), which were further elaborated upon by Habók et al. (2022), the average score of a learner on a language strategy questionnaire can be utilized as a significant indicator of their individual needs. Learners with lower strategy use (lower mean scores) may exhibit lower metacognitive awareness and control over their learning processes. According to Cognitive and Metacognitive Theories (Pintrich, 2000), students with lower strategy use have a greater need for direct strategy instruction. Lower scores (1.0-2.4) indicate a greater need for direct strategy instruction to develop their skills. Medium scores (2.5-3.4) show a need for targeted support to refine their strategies. Higher scores (3.5-5.0) suggest a need for more specialized, personalized training.

Before the real study, a pilot study was conducted to evaluate the reliability and refine the questionnaire items. This phase involved 30 non-English major EFL undergraduates who participated in assessing the reliability of the closed-item questionnaire. The reliability coefficient, measured by Cronbach's alpha, ranges from 0 to 1, with values between 0.7 and 0.9 considered optimal (Creswell & Creswell, 2017). As shown below, Cronbach's alpha values for all items exceeded 0.7, indicating that the questionnaire demonstrates high reliability.

Table 3
Internal reliability of need analysis questionnaire

Questionnaire	Sections		
For learners	Self-perceived use of critical reading skills	Cronbach's Alpha	No. of Items
For teachers	Implementation of critical reading	0.85	26
		0.859	26

Content Validity

To measure the content validity of questionnaires, the typical use of Content Validity Index (CVI) was applied. The formula for calculating the Content Validity Index (I-CVI) for each item. For Questionnaire One, the Content Validity Index (I-CVI) is 0.85, with individual scores from Malaysian experts and a Chinese expert all above the acceptable

level of 0.66, indicating good validity. The Questionnaire Two has an I-CVI of 0.81, with scores from both groups of experts also exceeding the validity threshold, confirming its content validity. The table below shows the content validity of two questionnaires.

Table 4

Measurement of content validity of the questionnaires

Statements	ME1	ME2	CE1	I-CVI
Questionnaire One	.93	.81	.84	0.85
Questionnaire Two	.84	.84	.76	.81
Questionnaire Validation Value (>0.66)				
Content Validity Coefficient (1.00)				

*ME: Malaysia Expert, CE: Chinese Expert

Construct Validity

The existing questionnaires have been modified from a previously validated instrument created by Olifant (2020), based on the revision of Bloom's taxonomy (Anderson & Krathwohl, 2001). This instrument has exhibited robust construct validity within its initial context. The original validation process included intervention testing utilizing a two-way mixed ANOVA to assess learning outcomes (Olifant, 2024). The constructs were theoretically operationalized through distinct categories, including knowledge, comprehension, application, analysis, synthesis, and evaluation.

Furthermore, the current critical reading questionnaire has been adopted in recent studies, such as Saidalvi et. al. (2024). Their study employed the same six constructs to assess students' critical reading skills. The validation efforts in their study, such as inter-rater reliability checks and standard scoring rubrics, further substantiate their construct validity. This repeated use supports the theoretical relevance and structural integrity of the original instrument.

In this study, a pilot study was conducted involving a sample of 30 students, a panel of three experts to evaluate the clarity, relevance, and reliability of the items. By retaining the original constructs and validating the instruments through expert review and pilot test, this study established that the NASQ and NATQ are both theoretically and practically applicable for assessing the needs of students and teachers regarding critical reading.

FINDINGS

The analysis phase focuses on understanding the perspectives from both learners and educators to guide the development of the critical reading module. This was achieved through self-reported questionnaires that explored their perceptions of using and instructing the critical reading. The process revealed specific skill gaps and instructional challenges that necessitate pedagogical support.

Analysis of Students' Perceived Use of Critical Reading Skills

A total of 386 students participated in the survey. Their background information provided insights into respondents' gender, location, major, and critical reading proficiency. The details are presented below.

Table 5
Demographic background for the respondents

Item	Category	Frequency	Percentage %
Gender	Male	178	46.11
	Female	208	53.89
Geographic Region	North China	7	1.8
	Northeast China	2	0.52
	Northwest China	25	6.48
	Eastern China	21	5.44
	Central China	110	28.5
	Southern China	165	42.75
	Southwest China	56	14.51
Major	Science, Technology, Engineering, and Mathematics (STEM)	213	55.18
	Business (Economics, Marketing, Management, Accounting, Finance)	10	2.59
	Arts (Visual Arts, Music, Dance)	69	17.88
	Humanities (Law, Literature, History)	94	24.35
Level of Critical Reading	Excellent	37	9.6
	Good	53	13.7
	Average	206	53.4
	Poor	90	23.3
Importance of Critical Reading	Very unimportant	17	4.4
	Not very important	15	3.89
	Somewhat important	59	15.29
	Fairly important	147	38.08
	Very important	148	38.34
Total		386	100.0

As data shows, there was a balanced gender composition within the sample, with 46.11% male participants and 53.89% female participants. As to geographic region, most respondents were from Southern China (42.75%), followed by Central China (28.5%) and Southwest China (14.51%). The other regions were less represented, with less than 10% each. Most respondents were from Science, Technology, Engineering, and Mathematics (STEM) fields (55.18%), and a smaller proportion of respondents were from the humanities (24.35%). 76.7% of participants (those with average, good, or excellent critical reading skills) fell into a ‘medium’ proficiency range where improvement is still desirable. 23.3% fall into the ‘low’ proficiency category, signifying a significant need for improvement. Respondents rated critical reading as an overwhelmingly important skill, with the vast majority (76.42%) of respondents recognizing it as either “Fairly important” or “Very important”. The strong consensus highlighted the widespread recognition of critical reading as an essential ability across the board.

Students’ perceptual use of critical reading skills consists of six constructs, a total of 26 items, including knowledge, comprehension, application, analysis, synthesis, and evaluation skills. Average scores between 3.5 and 5.0 were considered high strategy use, scores from 2.5 to 3.4 were medium, and scores from 1.0 to 2.4 were low (Oxford & Burry-Stock, 1995). The table below displays detailed percentage distribution, measurement levels, and the gaps in the critical reading skills demonstrated by Chinese non-English major undergraduates.

Table 6
Students' perceived use of critical reading skills

Construct	N	Mean	SD	Indicator	Gap (5-mean)	Interpretation
Knowledge skill	386	3.259	.8931	Medium	1.741	Needs Identified
Comprehension skill	386	3.228	.9210	Medium	1.772	Needs Identified
Application skill	386	3.164	.8616	Medium	1.836	Needs Identified
Analysis skill	386	3.045	.9024	Medium	1.955	Needs Identified
Synthesis skill	386	3.158	.8702	Medium	1.842	Needs Identified
Evaluation skill	386	3.050	.9440	Medium	1.950	Needs Identified
Total	386	3.151	.8006	Medium	1.849	Needs Identified

* 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

The data showed students perceived their critical reading skills as moderate overall ($M = 3.151$), with higher confidence in knowledge skill ($M = 3.259$) and comprehension skill ($M = 3.228$). However, analysis ($M = 3.045$) and evaluation ($M = 3.050$) skills exhibit the most substantial gaps, underscoring challenges in higher-order thinking. Likewise, basic application ($M = 3.164$) and higher-level synthesis ($M = 3.158$) skills also require strengthening. In summary, the findings indicate that all critical reading skills are at moderate levels, with mean scores ranging from 3.045 to 3.259. The significant gaps (1.741–1.955) show areas for improvement.

Analysis of RO1 revealed three key findings about Chinese EFL non-English majors' critical reading skills: First, students demonstrated challenges across basic and advanced skill levels. Second, while all skills required improvement, higher-order competencies (analysis, synthesis, evaluation) showed particularly significant gaps, with evaluation being the most deficient skill. Third, the consistent performance across skill levels suggests the need for instructional support, progressing from basic skills to targeted training in advanced skills. Overall, there was moderate performance across all constructs in this population.

Analysis of Teachers' Implementation of Critical Reading

The second questionnaire examined EFL teachers' perspectives on critical reading development at a public university in China, with 82 participants. Teachers' perspective is included in this module development, as they identify approaches and learning strategies needed to support students' critical reading development. Data from 82 EFL teachers were analysed for demographic variables such as gender, age, and teaching experience. The following table presents the details.

Table 7
Demographic background of the respondents

Type	Items	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Male	41	50.00	50.00
	Female	41	50.00	100.00
Age	20-30	12	14.63	14.63
	31-40	38	46.34	60.98
	41-50	27	32.93	93.90
	51 and above	5	6.10	100.00
	5 and below	23	28.05	28.05
Years of teaching	6-10	21	25.61	53.66
	11-15	24	29.27	82.93
	16-20	14	17.07	100.00
	Total	82	100.0	100.0

The data on teachers' self-perception of implementing critical reading showed a balanced gender distribution, with 50% male and 50% female respondents. Most teachers were aged between 31 and 40 years (46.34%), followed by those aged 41 to 50 (32.93%). In terms of teaching experience, the majority had between 11 and 15 years of experience (29.27%), while 28.05% had 5 years or less. This distribution highlighted a tendency towards middle-aged, moderately experienced teachers in the sample.

Measuring Teachers' Perceived Instruction of Critical Reading

Teachers' implementation of critical reading was based on descriptive mean scores, which provided valuable insights into their learning processes. The scoring scale developed by Oxford and Burry-Stock (1995) categorizes responses into three levels: high (3.5-5.0), indicating frequent and effective strategy use; medium (2.5-3.4), signifying moderate or inconsistent use; and low (1.0-2.4), which reflects infrequent or ineffective use.

Table 8
Measurement of the teacher-perceived implementation of critical reading

Statements	N	Mean	SD	Indicator	Gap (5-mean)	Interpretation
Knowledge task	82	3.268	0.562	Medium	1.732	Needs Identified
Comprehension task	82	3.099	0.424	Medium	1.901	Needs Identified
Application task	82	3.134	0.601	Medium	1.866	Needs Identified
Analysis task	82	2.961	0.383	Medium	2.039	Needs Identified
Synthesis task	82	3.089	0.534	Medium	1.911	Needs Identified
Evaluation task	82	2.904	0.374	Medium	2.096	Needs Identified
Total	82	3.045	0.424	Medium	1.955	Needs Identified

* 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

As shown in Table 8, teachers perceived their implementation of critical reading tasks as moderate across all constructs, with means ranging from 2.904 to 3.268. The largest gaps are in Analysis (Gap = 2.039) and Evaluation (Gap = 2.096), highlighting significant challenges in implementing higher-order thinking tasks. While Knowledge tasks are relatively better implemented (M = 3.268, Gap = 1.732), all constructs fall under the "Medium" indicator, with consistent gaps (1.732–2.096). This suggests a

clear need for improvement, particularly in fostering critical thinking, analysis, and evaluation skills through targeted interventions and professional development

When cross-checking with the data obtained from learners' perception of critical reading skills, it became evident that teachers and learners shared similar concerns, particularly regarding higher-order skills like analysis, synthesis, and evaluation. While learners perceived their abilities in these areas as slightly stronger than teachers perceived their implementation, both learners and teachers fell in the medium range for all constructs. This indicates that neither party felt fully confident in critical reading tasks, thus revealing a common need for improvement. This indicates a common need for improvement. The congruency between learners' and teachers' perceptions underscores the rationale for developing a critical reading module in the second phase. Specifically, this module focuses on addressing these shared gaps through targeted and more engaging activities and interventions.

DISCUSSION

For the need analysis stage, a learning-centred target situation model provided a situational approach to understanding both what learners need to achieve (target needs) and how they learn best (learning needs). Self-reported critical reading skills from Chinese EFL non-major undergraduates and teachers' instruction of critical reading revealed an overview of target needs, including necessities, lacks, wants, and learning needs. Needs analysis is used as a starting point for instruction design (Hutchinson and Waters, 1987). Detailed discussion of the needs analysis is in the following subsections.

Necessities

Necessities are the essential skills and knowledge needed. The results of this study revealed a concerning gap in EFL learners' higher-order critical reading skills, despite the overwhelming recognition (over 76%) of its importance, highlighting its widespread perceived value. However, the needs analysis suggested that a significant proportion of learners, 23.3%, fell into the 'low' proficiency category for critical reading skills. This contradiction between the acknowledged importance of critical reading and the lack of corresponding proficiency levels pointed to a clear need for intervention.

The findings from the study on the self-perceived use of critical reading aligned with several previous research studies that highlight the challenges in developing higher-order critical thinking skills among EFL learners (Fan & See, 2022; Polat, 2020). Fan and See (2022) identified a lack of critical reading among Chinese students compared to their peers from other countries. As a parallel, Anuar and Sidhu (2017) observed comparable issues with critical reading and analytical skills among Malaysian college students, indicating that these challenges are not unique to China but are prevalent in other EFL contexts as well. Polat (2020) echoed these concerns, emphasizing the struggles students face with analytical and evaluative skills, and further supported the need to enhance evaluation and analytical skills.

This failure to explicitly address the development of critical reading skills may have contributed to the observed gap (Ke & AlSaqqaf, 2023). Target instructions are provided as a solution while acknowledging practical constraints such as curriculum

structure, time limitations, and teacher training resources. Thus, as Yohana and Anugerahwati (2023) argued, integrating input reading with critical thinking activities in a specialized critical reading module is a vital pedagogical intervention.

Lacks

Lack refers to the gap between what students know and what they do not know (Hutchinson & Waters, 1987). For the self-perceived use of critical reading skills, respondents showed a relatively strong command of a basic level of reading skills of recalling the information ($M = 3.259$), identifying the details or understanding the title of the text, but with weaknesses in a high level of synthesis ($M = 3.091$) and analysis skills ($M = 3.023$), with evaluation skills displaying a considerable deficiency ($M = 2.943$). The findings reveal a significant gap between EFL learners' basic reading skills and their ability to engage in higher-order critical reading.

This result is congruent with previous research indicating a lack of sufficient instructional support in developing critical thinking skills (Fan & See, 2022; Anuar & Sidhu, 2017). They showed that this lack of critical reading proficiency stems from inadequacies in existing instructional modules.

The reason for EFL learners having medium proficiency in basic reading skills and a lack of advanced critical reading skills may result from the lack of targeted instructional support. Fan and See (2022) highlighted similar challenges among Chinese students, suggesting that while foundational skills are present, there is a notable gap in developing higher-order thinking skills. This aligns with Anuar and Sidhu (2017), who found that despite some proficiency, significant gaps remain, particularly in applying and analysing complex texts. Just a few students could understand a variety of texts and understand the implicit ideas in a text. Furthermore, the reasons for students needing foundational support and improvement in higher-order skills are the result of a lack of instructional methods that need to focus more on enhancing these skills to bridge the gap. As Polat (2020) emphasized, these higher-order skills are crucial yet often underdeveloped among EFL students, with the suggestion that instructional methods must prioritize enhancing such skills to bridge the identified gap.

Wants

Wants are the personal goals or expectations of learners. The results showed that respondents had exhibited a relatively better command of basic-level critical reading skills but weaknesses in higher-level skills of synthesis, analysis, and evaluation. As Bloom et al. (1956) argued, progressive but gradual support was needed to improve critical reading skills for learners. This was consistent with studies (e.g., Aghajani & Gholamrezapour, 2019; Torabi & Maleki, 2022), which had proved the positive effect of offering a systematic approach to creating learning tasks that addressed various cognitive levels from fundamental comprehension to advanced analytical, synthesizing, and evaluating skills.

The reasons were that in those studies, they had provided varied project-based, productive tasks with critical thinking activities, which not only encouraged critical thinking but also gave gradual support that enabled learners to progress from more

fundamental reading skills to higher-level analytical, synthesizing, and evaluating abilities. This assumption had been supported by Wang (2022), who had underscored the importance of diverse approaches to address students' needs. This finding is further corroborated by Listiqowati and Ruja (2022), whose study on the Project-Based Flipped Classroom model demonstrated significant improvements in students' critical thinking, a skill inherently dependent on critical reading competencies. The combined findings of Farizi et al. (2023) further stressed the necessity of integrating critical thinking skills into challenge-based instruction to promote analytical reasoning in the reading process.

Learning needs

Learning needs are what the learners need to do to learn. As the results are shown, both students and teachers identified knowledge-related tasks as their strongest area and higher-level thinking skills of analysis and evaluation as the weakest. EFL teachers have a medium implementation of critical reading tasks. They showed a clear need for structured frameworks to guide instruction.

The findings from this study align with the research of Ibrahim et al. (2021), Li and Ren (2020), Toshpulatova and Kinjemuratova (2020), Horváthová and Naďová (2021), Surdyanto and Kurniawan (2020), Yulian (2021), Wang (2022), and Collins (2025), which collectively emphasized the importance of integrating critical thinking instruction, using thought-provoking questions, designing effective activities and materials, providing suitable resources, and employing diverse teaching methods to enhance students' critical reading and thinking skills. Ibrahim et al. (2021), found that integrating critical thinking instruction into teaching leads to significant improvements in students' critical thinking skills; Li and Ren (2020), suggested that using thought-provoking questions in reading and writing tasks stimulates critical thinking and enhances critical reading abilities; and Toshpulatova and Kinjemuratova (2020), who discovered that teaching critical thinking strategies and assigning essay writing tasks can enhance students' critical thinking skills. Additionally, Horváthová and Naďová (2021) highlighted the importance of well-designed activities and materials that challenge students to think critically, while Surdyanto and Kurniawan (2020) emphasized the need for suitable materials and self-assessment during critical reading activities. Yulian (2021) supported the need for teachers to guide students in critically evaluating their reading processes, and Wang (2022) underscored the importance of diverse methodologies to address students' varied learning needs. The combined findings of Collins (2025) further stress the necessity of integrating critical thinking skills into reading instruction and using materials that promote critical thinking.

The results above showed that EFL teachers face challenges or misalignment in effectively teaching critical reading. To understand why this happens, the following analysis explains each reason in detail. Firstly, the reason for EFL teachers having a medium implementation of critical reading practices is that there is a need for greater clarity and more appropriate resources. This finding aligns with research suggesting that teachers often lack sufficient understanding and resources to effectively teach critical reading (Ibrahim et al., 2021). Secondly, the reason that EFL teachers need more tailored materials that involve real-life tasks, interactive activities, and discussions is

that these approaches are known to enhance student engagement and foster deeper understanding of critical reading concepts. This reflects the effectiveness of these methods in promoting critical thinking and application of knowledge (Toshpulatova & Kinjemuratova, 2020; Horváthová & Nad'ová, 2021). Thirdly, the reason EFL teachers emphasize using teaching in setting clear objectives and providing feedback in critical reading-related exercises and tasks is that these practices are crucial for guiding students and improving their critical reading skills. Providing clear objectives and constructive feedback helps students focus on their learning goals and enhances their ability to engage critically with texts (Surdyanto & Kurniawan, 2020; Yulian, 2021).

This assumption was supported by Olifant et al. (2020), who investigated the critical reading perceptions and practices of 166 Grade 8 English First Additional Language learners in Gauteng. Employing a survey and a comprehension activity, the data were analysed utilizing SPSS and Spearman's correlation. The results revealed a discrepancy between the learners' self-assessments and their actual reading performance. The findings revealed the reading crisis in South Africa, indicating that learners exhibited insufficient critical engagement during classroom reading activities.

Based on the needs analysis, EFL educators' feedback provided valuable insights. While EFL learners' self-perception highlighted their difficulties with reading strategies, educators offered a deeper perspective, identifying a need for targeted strategies. They confirmed issues like low reading proficiency, limited vocabulary, and reliance on word-by-word translation. They recommended incorporating strategies such as graphic organizers, predicting, and using contextual clues to improve comprehension. This aligns with previous research on effective reading strategies. Educators also emphasized the need for a localized reading module due to learners' struggles with unfamiliar texts. Despite some educators employing basic strategies, traditional methods often failed to develop critical reading skills. Therefore, integrating suggested strategies and addressing higher-level critical reading skills through a targeted and more engaging program is strongly recommended for the Chinese EFL context.

CONCLUSIONS

This study used Needs Analysis Questionnaires to investigate perceptions among Chinese EFL non-English major undergraduates and EFL teachers regarding their use of critical reading skills and practical instruction. The findings revealed that both learners and teachers rated the measurement at a medium level. Nevertheless, they collectively recognized the considerable significance of critical reading. This suggests a divergence between their self-reported usage or teaching of critical reading and the importance they attributed to critical reading.

Even with these difficulties, this study indicated that the issues could be effectively tackled by applying strategies that meet the recognized needs. Critical reading skills can be enhanced through progressive skill development, customized instruction, and more interactive teaching methods. By addressing these gaps, educators can better support students in developing the critical reading skills necessary for academic success and real-world applications.

The study had a few limitations. First, the data were collected at a public university in the central south part of China. Thus, care should be taken in generalizing the findings to other graduate students in public universities in the other regions in China, as well as all EFL undergraduate students in China. Secondly, even though this study diversified data sources and data collection methods, further methods could be used. For example, the researchers can observe the classes to get a better understanding of what is happening in the English classrooms, interview teachers, and learners. Gathering input from instructors could have provided a more comprehensive understanding of the teaching and learning challenges. Despite the aforementioned limitations, this study extended the current understanding of the needs of developing critical reading skills among Chinese EFL non-English major undergraduates and teachers in implementing critical reading in the EFL context. It identified the gaps between what the undergraduates need and what the current curriculum and instructional practices provide, and made suggestions to revise curriculum development to better address these needs.

ACKNOWLEDGEMENTS

This paper is under the Knowledge, Attitude and Practice (KAP) Research Group, Centre for the Promotion of Knowledge and Language Learning (PPIB), Universiti Malaysia Sabah (UMS), Malaysia.

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