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Critical Reading Strategies Used by Vietnamese EFL University Students in their English Reading Comprehension

Nguyen Thi Bich Thuy[1]✉, Trinh Thi Hang[2]

[1] thuy.nguyenthibich@phenikaa-uni.edu.vn
Phenikaa University
Nguyen Trac, Duong Noi ward, Hanoi, (Vietnam)

[2] hang.trinhthi@phenikaa-uni.edu.vn
Phenikaa University
Nguyen Trac street, Duong Noi ward, Hanoi, (Vietnam)

✉ Corresponding author

ABSTRACT: *Critical reading is widely recognized as an essential skill in both general education and foreign language learning; however, its actual practice among students remains limited. This study investigates undergraduate students' use of Critical reading strategies in English reading at a Vietnamese university. A mixed-methods design was adopted, combining the Survey of Critical Reading Strategies (SOCRS) administered to 799 students with semi-structured interviews conducted with 16 participants. The questionnaire collected demographic data and Likert-scale responses on pre-, while-, and post-reading strategies, while interviews provided deeper insights into students' perceptions and challenges. The findings reveal a clear hierarchy in strategy use: at the category level, pre-reading strategies were used most frequently (M = 3.18, SD = 1.07), followed by while-reading strategies (M = 3.09, SD = 1.08), whereas post-reading strategies were least frequently employed (M = 2.83, SD = 1.07). Meanwhile, at the individual strategy level, several while-reading strategies received the highest mean scores, particularly checking unfamiliar vocabulary (M = 3.45, SD = 1.14) and guessing meaning from context (M = 3.36, SD = 1.12). In contrast, higher-order post-reading strategies such as comparing texts (M = 2.75, SD = 1.09), analysing and interpreting texts (M = 2.78, SD = 1.06), and questioning textual content (M = 2.79, SD = 1.07) were used less frequently. These results suggest that although students acknowledge the importance of Critical reading, their engagement with deeper analytical practices is insufficient. The study highlights the need for explicit instruction, structured scaffolding, and targeted training to enhance higher-order Critical reading skills, particularly in post-reading stages, thereby supporting the development of Critical literacy in EFL contexts.*

KEYWORDS: **Critical reading strategies, SOCRS, university students, reading comprehension**

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1. Introduction

Reading comprehension is widely recognized as a fundamental skill in second and foreign language learning, serving not only as a foundation for academic achievement but also as a means of developing higher-order thinking skills. In contemporary academic contexts characterized by an abundance of information, learners are increasingly required to critically analyse, evaluate, and interpret texts rather than merely understand surface meanings (Wallace & Wray, 2011). Accordingly, critical reading has become an essential competence for university students, particularly in English as a Foreign Language (EFL) setting where learners must engage with diverse academic materials in a second language.

Despite its recognized importance, empirical evidence suggests that EFL learners tend to rely predominantly on comprehension-oriented strategies, while higher-order evaluative and reflective strategies remain underutilized (Le et al., 2024). This imbalance raises concerns about students' development of critical literacy, especially in higher education contexts where analytical engagement with texts is crucial.

In the Vietnamese context, although English reading plays an increasingly important role due to globalization and academic integration, research has largely focused on general reading strategies or surface-level comprehension. Limited attention has been paid to how students employ critical reading strategies across different stages of the reading process, particularly using validated instruments. Furthermore, existing studies often highlight students' moderate proficiency and reliance on lower-order skills but provide insufficient large-scale empirical evidence on strategy use patterns across pre-, while-, and post-reading phases.

Therefore, a clear research gap exists in understanding how Vietnamese university students systematically employ critical reading strategies in English reading comprehension. This study aims to address this gap by investigating the extent to which students use critical reading strategies across three stages (pre-, while-, and post-reading).

2. Literature review

2.1. Critical reading strategies

Critical reading has been widely conceptualized as a higher-order process that extends beyond literal comprehension to include interpretation, analysis, evaluation, and reflection on texts (McWhorter, 2012; Pirozzi, 2003). Rather than passively receiving information, critical readers actively question the author's assumptions, assess the credibility of arguments, and relate textual ideas to prior knowledge and broader contexts. Wang and Gierl (2011) further emphasize the cognitive dimension of critical reading, highlighting inference, logical reasoning, and evaluative judgment as key components.

To support these processes, readers employ critical reading (CR) strategies, which refer to deliberate actions used to engage actively with texts and process information beyond surface comprehension (Larking, 2017). These strategies involve questioning assumptions, identifying bias, and recognizing how meaning is constructed within a text (Nasrollahi, Krishnasamy, & Noor, 2015; Le et al., 2022). Their primary function is to support critical thinking by enabling readers to evaluate arguments and reflect on textual meaning (Le et al., 2023).

The use of CR strategies is closely associated with higher-order thinking processes, including inference, synthesis, and evaluation. Halpern (2014) highlights that such strategies involve reasoning processes such as identifying causation, assessing evidence, and making judgments, which contribute to deeper comprehension and more analytical engagement with texts (Le et al., 2021; Le et al., 2024).

In this study, critical reading strategies are defined as observable and purposeful behaviours through which learners engage in critical reading. Within the EFL context, these strategies are examined across three stages, representing increasing levels of cognitive engagement.

2.2. Critical reading strategy classifications

Critical reading strategies have been classified in various ways, reflecting different perspectives on how readers engage with texts. Among these frameworks, the three-stage classification of pre-reading, while-reading, and post-reading strategies is one of the most widely adopted in EFL reading research (Khabiri & Pakzad, 2012; Nasrollahi et al., 2015).

Pre-reading strategies focus on activating prior knowledge and predicting content (Tovani, 2000; Carrigus, 2002). While-reading strategies support meaning construction and comprehension monitoring through practices such as questioning and recognizing textual structures (LeMaster, 2011). In contrast, post-reading strategies involve higher-order processes, including summarizing, evaluating arguments, and reflecting on the text's implications (Linkon, 2008; Anuar & Sidhu, 2017).

Although some studies classify critical reading strategies according to cognitive skill levels or rhetorical dimensions (Carrigus, 2002; Nasrollahi et al., 2015), the three-stage framework provides a clearer structure for examining how learners engage with texts throughout the reading process. Accordingly, the present study adopts this framework and applies the Survey of Critical Reading Strategies (SOCRS) developed

by Nguyen and Trinh (2025) to investigate students' use of critical reading strategies across these stages.

2.3. Previous studies

2.3.1. Studies on critical reading strategies in the Vietnamese context

Research on critical reading strategies in the Vietnamese context remains relatively limited, yet existing studies reveal several consistent patterns regarding students' critical reading performance and strategy use. For instance, Le et al. (2023), in a comparative study involving students from Malaysia and Vietnam, reported that participants in both contexts performed at a moderate level of critical reading. Similarly, Le et al. (2024), focusing specifically on Vietnamese English majors, found that students relied heavily on basic comprehension strategies, with relatively limited engagement in higher-order processes such as analysis and evaluation.

In summary, these studies suggest that Vietnamese learners' critical reading practices are characterized by a preference for comprehension-oriented strategies and a limited use of higher-order critical thinking skills. However, previous studies have mainly focused on overall critical reading performance or specific learner groups such as English majors, while limited attention has been paid to how learners employ strategies across different stages of the reading process. Moreover, although Nguyen and Trinh (2025) developed and validated the Survey of Critical Reading Strategies (SOCRS), empirical applications of the instrument in Vietnamese university contexts remain limited.

2.3.2. Studies on critical reading strategies in the global context

International research on critical reading strategies reveals patterns that are largely consistent with those observed in the Vietnamese context. Overall, studies indicate that EFL learners are generally aware of reading strategies but tend to rely more on lower-order, comprehension-oriented strategies, with less frequent use of higher-order critical practices. For example, Nasrollahi et al. (2015), in a study of Iranian EFL learners, found that commonly used strategies included skimming, scanning, note-taking, and questioning for clarification. Similarly, Larking (2017) examined both the theoretical foundations and the actual use of critical reading strategies among advanced EFL learners. His findings indicate that although learners do employ certain critical practices such as identifying main ideas and making inferences; these are still less frequent than comprehension-oriented strategies. This reinforces the broader pattern that learners tend to prioritize strategies that support immediate understanding rather than deeper critical engagement.

Overall, findings across both Vietnamese and international contexts consistently suggest that EFL learners tend to prioritize strategies that support immediate comprehension rather than deeper critical engagement. These recurring patterns highlight the continuing need to investigate how learners employ critical reading strategies throughout the reading process in different educational settings.

Therefore, the present study aims to examine Vietnamese EFL university students' use of critical reading strategies across pre-reading, while-reading, and post-reading stages through a mixed-methods approach.

3. Methodology

3.1. Participants

The study involved 799 participants from a university in Vietnam who differed in cohort membership, gender, years of English learning, attitudes toward English and reading in English, self-rated English language and reading proficiency, perceptions of the importance of critical reading, and prior training in critical reading strategies. Participants were recruited through convenience sampling from different cohorts at the university. Invitations to participate were distributed through classroom announcements and online student communication channels. Participation was voluntary, and only students who provided informed consent were included in the study. To provide a clearer understanding of the study context, the following section presents their demographic and educational backgrounds in detail.

Overall, the participant profile reflects a predominantly female (N=579= 72.5%) and highly experienced group of English learners, with most having studied the language for over four years and rating their proficiency at intermediate to high levels. The students' attitudes toward English and reading in English were generally positive, though a notable minority expressed neutral or low interest. While participants overwhelmingly recognized the importance of critical reading at moderate to high levels (Very important: 348 = 43.6%; Important: 406 = 50.8%), only about half had received explicit CRS training, creating a balanced foundation for investigating the relationship between training and the use of reading strategies across proficiency levels.

3.2. Instruments

3.2.1. The questionnaire

This study employed a mixed-methods design, combining a questionnaire and semi-structured interviews. The primary instrument was the Survey of Critical Reading Strategies (SOCRS) (Nguyen & Trinh, 2025) adapted from established frameworks (Mokhtari & Reichard, 2002; Wallace & Wray, 2011) and previous validated instruments such as the Metacognitive Awareness of Reading Strategies Inventory (MARSI) (Mokhtari & Reichard, 2002) and the Survey of Reading Strategies (SORS) (Sheorey & Mokhtari, 2001) and others by Zhang & Wu, 2009; and Nasrollahi et al., 2015.

The questionnaire developed to measure students' use of critical reading strategies consists of two parts:

- Part One was designed to gather the information about individual characteristics of the participants. It required the subjects to supply their ethnographic data, such as gender, age, time of English study, major, their self-assessment on English and English reading proficiency.

- Part Two included twenty statements appropriate to twenty different strategies categorized in three subscales applied in critical reading process: pre-reading, while-reading, and post-reading phases.

The Pre-reading stage which consists of four strategies helps readers approach a text thoughtfully and efficiently before diving into the actual reading process which sets the foundation for understanding and analysing the material critically.

The While-reading Phase with 11 strategies focuses on readers' active engaging with the text to deepen understanding, analyse arguments, and make meaningful connections.

Finally, 5 Post-reading strategies help readers consolidate understanding, evaluate the text's arguments, and reflect on its broader implications. These strategy groups are linked, interact, and support each other, helping readers to be proactive and focused to achieve the highest reading efficiency.

For each statement, five alternative choices were provided. Participants were asked to select one from among the following: (1). for Never or almost never true of me; (2). for Usually not true of me; (3). for Somewhat true of me; (4). for Usually true of me; (5). for Always or almost true of me. The higher the number that respondents indicate applied to them, the more frequent the use of the particular strategy was reflected. The strategy statements were in both English and Vietnamese for students' better understanding.

3.2.2. The validity and reliability of the research instrument

After collecting the data, a series of analyses based on SPSS 22 were conducted to assess the reliability and validity of the instrument measuring the use of pre-reading, while-reading, and post-reading strategies. These analyses included internal consistency (Cronbach's Alpha), assessment of normality (Skewness, Kurtosis, Kolmogorov-Smirnov, and Shapiro-Wilk tests), and exploratory factor analysis (KMO and Bartlett's Test).

The internal consistency of the instrument evaluated using Cronbach's Alpha shown in Table 1 indicates excellent reliability with the overall Cronbach's Alpha of 0.91 (George & Mallery, 2003). Subscale reliabilities were also high with $\alpha = 0.85$, 0.89 and 0.83 for Pre-reading strategies, While-reading strategies and Post-

Table 1. Internal consistency (Cronbach's Alpha)

Subscale	Cronbach's Alpha	Interpretation
Pre-reading Strategies	0.85	Good
While-reading Strategies	0.89	Excellent
Post-reading Strategies	0.83	Good Overall
Overall	0.91	Excellent

reading strategies, respectively, showing strong internal consistency across all subscales.

Skewness values ranged from -0.727 to 0.533 and Kurtosis values from -0.987 to 0.533, all within the acceptable range of -1 to +1, indicating approximate normality (Hair et al., 2010). The slight negative skew suggests generally higher reported use of reading strategies, while Kurtosis values near zero indicate balanced distributions without extreme outliers. Although the Kolmogorov-Smirnov and Shapiro-Wilk tests were significant ($p < 0.05$), this is expected given the large sample size ($n = 799$) and does not necessarily indicate serious non-normality (Ghasemi & Zahediasl, 2012).

This approximate normality supports the reliability of the scales, as the high Cronbach's alpha values (above 0.8) are unlikely to be inflated by distributional bias. Instead, the results confirm that the pre-, while-, and post-reading strategy scales demonstrate genuine internal consistency and reliably measure the intended constructs.

To examine the underlying structure of the scale and assess construct validity, Principal Component Analysis (PCA) with Varimax rotation was performed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.961, exceeding the threshold of 0.6 (Kaiser, 1974) and indicating that the sample size was adequate for factor analysis. Bartlett's Test of Sphericity was also significant ($\chi^2 = 10900.864$, $df = 190$, $p < .001$), confirming the suitability of the correlation matrix for factor extraction (Bartlett, 1954). The communalities after extraction ranged from 0.487 to 0.725, indicating that each item shared a moderate to high proportion of variance with the extracted components. Notably, items such as Post-reading 4 (0.725) and Post-reading 5 (0.715) demonstrated the strongest alignment with the factors (Nguyen & Trinh, 2025).

The figures demonstrated above provide strong empirical support for both the reliability and construct validity of the SOCRS in assessing university students' critical reading strategies. High internal consistency, as evidenced by Cronbach's alpha coefficients, indicates that the instrument demonstrates satisfactory measurement reliability. The Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity further substantiate the adequacy of the scale's underlying construct structure. Taken together, these results suggest that the SOCRS is a psychometrically robust instrument with considerable potential for evaluating students' strategic reading behaviours in educational research and practice.

3.2.3. Semi-structured interviews

To complement the questionnaire data, semi-structured interviews were employed as a qualitative instrument to gain deeper insights into students' use of critical reading strategies and their perceived difficulties. The interviews were designed to elicit rich, descriptive accounts of students' reading behaviours and to further explain patterns observed in the quantitative results . Sixteen participants purposively selected from the questionnaire respondents indicated willingness to participate in follow-up interviews. The selection aimed to ensure diversity in self-reported English reading proficiency and levels of critical reading strategy use, as reflected in their overall SOCRS questionnaire scores. To capture a broader range of experiences, participants with relatively high, moderate, and low strategy-use scores were included in the interview sample.

An interview guide consisting of open-ended questions was developed to align with the study's analytical framework and research objectives. The questions focused on several key areas, including (1) students' background information and reading habits, (2) their approaches to dealing with English reading texts, (3) the difficulties they encountered during reading, and (4) their awareness and use of critical reading strategies. In addition, participants were asked to reflect on the usefulness of these strategies, identify which strategies they used most and least frequently, and suggest ways to improve their critical reading ability. Sample guiding questions included: how students approached a reading text, what challenges they faced, how often they practiced reading and critical reading, and how they coped with difficulties.

The semi-structured format allowed for both consistency and flexibility. While a common set of guiding questions ensured comparability across participants, follow-up prompts enabled the researchers to probe for clarification, encourage elaboration, and explore emerging themes in greater depth. This approach was particularly effective in capturing individual differences in strategy use and uncovering nuanced perspectives that could not be obtained through the questionnaire alone.

Overall, the interviews served as a complementary instrument, enriching the quantitative findings and providing a more comprehensive understanding of students' critical reading practices.

3.3. Research questions

The purpose of this study was to examine Vietnamese EFL university students' use of critical reading strategies, as measured by the SOCRS (Nguyen & Trinh, 2025), when reading English texts. It aimed to answer the question: "*To what extent do Vietnamese EFL university students use critical reading strategies in English reading comprehension*?"

3.4. Data collection and analysis

The researchers organized a meeting with students at the university, during which the objectives of the study were clearly explained. Participants were informed about the purpose of the research and assured of anonymity and confidentiality; pseudonyms were used in reporting the findings. Written informed consent was obtained from all participants prior to their involvement. Ethical approval for the study was granted by the relevant institutional body at Phenikaa University. Following this, all participants were asked to complete an online questionnaire via Google Forms. Incomplete responses were excluded prior to analysis.

Questionnaire data were then processed and analysed to provide quantitative answers to the research question and supported by the follow-up interview results. The Statistical Package for the Social Science (SPSS) version 22.0 was used to analyse the data from the questionnaires.

The scores for respective subscale were added up and divided by the number of items in each category (4 items for pre-reading strategies, 11 for while-reading strategies, 5 for post-reading strategies). The higher the averages the more frequently the participants used the strategy concerned. The scores were interpreted using the interpretation key based on the frequency scale delineated by Oxford (1990) for general learning strategy usage (Table 2).

Table 2. Frequency scale delineated by Oxford (1990)

No.	Mean score	Frequency scale	Evaluation
1	1.0-1.4	Low	Never or rarely used
2	1.5-2.4		Generally, not used
3	2.5-3.4	Medium	Sometimes used
4	3.5-4.4	High	Usually used
5	4.5-5.0		Always or almost always used

In the second phase, interview questions were first prepared based on the results of the questionnaire data analysis. Each of the 16 participants was then interviewed one-on-one in person. All interviewees were allowed to use Vietnamese so that they could express their opinions with ease. Moreover, the interview data were analysed using thematic analysis. First, all interviews were transcribed verbatim, translated into English for analysis and read repeatedly to ensure familiarity with the data. Initial codes relevant to the research questions were then generated from the transcripts. These codes were subsequently grouped into broader categories and refined into themes reflecting students' critical reading practices and perceived difficulties. To enhance the trustworthiness of the analysis, two researchers independently reviewed the coding process and discussed discrepancies until agreement was reached. The finalized themes were then compared against the original transcripts to ensure consistency and representativeness of participants' responses. Furthermore, the study used pseudonyms to report and discuss the findings with the aim of protecting the participant's privacy.

4. Results

To what extent do Vietnamese EFL university students use critical reading strategies in English reading comprehension?

To address the research question, participants' responses to the critical reading strategy questionnaire were analysed using descriptive statistics. Means and standard deviations were computed to examine overall strategy use, category-level patterns (pre-, while-, and post-reading), and individual strategies. Qualitative data from semi-structured interviews were used to support and interpret the quantitative findings.

As shown in Table 3, the overall mean score for strategy use was $M = 3.06$ ($SD = 1.08$), indicating

Table 3. Participants' overall use of strategies

No.	Strategies	Number	Mean	SD	Level
1	While-reading 3 (I check the odd words, phrases, clauses in dictionary or ask from teacher.)	799	3.45	1.14	Medium
2	While-reading 2 (I guess the meaning of words or sentences based on information available.)	799	3.36	1.12	Medium
3	Pre-reading 4 (I predict the content of the text from the heading and subheadings.)	799	3.33	1.11	Medium
4	While-reading 11 (I reread for better understanding.)	799	3.32	1.13	Medium
5	Pre-reading 2 (I preview the text by focusing on headings, pictures, clauses, phrases, and words (in bold) to accustom generally.)	799	3.28	1.10	Medium
6	Pre-reading 1 (I determine the aim of my reading.)	799	3.16	1.07	Medium
7	While-reading 5 (I relate the ideas and concepts between paragraphs.)	799	3.16	1.03	Medium
8	While-reading 4 (I relate the ideas and concepts within a paragraph.)	799	3.15	1.07	Medium
9	While-reading 7 (I take notes the main points, synonyms, antonyms, and so on.)	799	3.06	1.11	Medium
10	While-reading 6 (I write some notes and connect the information from the text I read to my prior knowledge or experience.)	799	3.04	1.08	Medium
11	While-reading 10 (I monitor my comprehension of the text.)	799	3.02	1.04	Medium

No.	Strategies	Number	Mean	SD	Level
12	Post-Reading 2 (I make a summary of the key points/main ideas of the text.)	799	3.01	1.08	Medium
13	Pre-reading 3 (I pay attention to the generic structures and the language features of the text.)	799	2.96	1.01	Medium
14	While-reading 9 (I differentiate the relevant points from the irrelevant to comprehend the text more quickly.)	799	2.94	1.09	Medium
15	While-reading 8 (I work out the meaning of the text by considering its historical, biographical, and cultural contexts.)	799	2.91	1.09	Medium
16	While-reading 1 (I divide the text passage to meaningful parts.)	799	2.91	1.05	Medium
17	Post- Reading 1 (I find fact and opinion, cause and effect relationships, claim and support, premise and conclusion of the text.)	799	2.80	1.03	Medium
18	Post- Reading 3 (I ask questions about the content of the text.)	799	2.79	1.07	Medium
19	Post-Reading 4 (I restate, paraphrase, analyse, interpret, and argue about the text.)	799	2.78	1.06	Medium
20	Post- Reading 5 (I compare and contrast some related texts to know the similarities and differences among the texts to obtain a better reading comprehension.)	799	2.75	1.09	Medium
	Average	799	3.06	1.08	Medium

a moderate level of critical reading strategy use. Individual strategy means ranged from 3.45 (*SD* = 1.14) for *While-reading Strategy 3* to 2.75 (*SD* = 1.09) for *Post-reading Strategy 5*, suggesting variability in how frequently different strategies were employed.

Across the twenty strategies, some *while-reading strategies* were the most frequently reported. In particular, *While-reading Strategy 3* (*M* = 3.45, *SD* = 1.14) and *While-reading Strategy 2* (*M* = 3.36, *SD* = 1.12) ranked highest. This pattern is strongly reflected in the interview data, where students consistently emphasized vocabulary-related difficulties. For example, one student noted, "*There are many new words… I have to use a dictionary*," while another stated, "*I usually guess the meaning based on context*." Notably, some students also reported misinterpreting texts due to vocabulary limitations, suggesting that heavy reliance on lexical strategies may not always lead to accurate comprehension. These responses indicate that students' strategy use is strongly oriented toward lexical processing and local comprehension. While such strategies are essential for understanding the text, they may limit students' ability to move beyond surface-level meaning to engage in deeper critical analysis.

Pre-reading strategies also featured prominently, with *Pre-reading Strategy 4* (*M* = 3.33, *SD* = 1.11) and *Pre-reading Strategy 2* (*M* = 3.28, *SD* = 1.10) among the top-ranked items. Interview responses further indicate that many students actively preview texts before reading. For instance, one participant explained, "*I pay attention to titles, subtitles, and bold words, and images.* " while another noted that they skim key elements to anticipate content. However, these strategies appear to function primarily as preparatory steps rather than as tools for deeper critical engagement. This finding suggests that students are relatively aware of the importance of activating prior knowledge and setting a purpose before reading, which may facilitate initial comprehension.

Table 4. Participants' use of each strategy category

Strategy category	Mean	SD	Level	Ranks
Pre-reading strategies	3.18	1.07	Medium	1
While-reading strategies	3.09	1.08	Medium	2
Post-reading strategies	2.83	1.07	Medium	3

In contrast, *post-reading strategies* consistently recorded the lowest mean scores, notably *Post-reading Strategies 5* ($M = 2.75$, $SD = 1.09$), *Post-reading Strategies 4* ($M = 2.78$, $SD = 1.06$), and *Post-reading Strategies 3* ($M = 2.79$, $SD = 1.07$). This limited use is also evident in the interview data, where only a small number of students reported engaging in post-reading activities. Notably, only one participant mentioned using Post-reading Strategy 5, stating that "*With prior knowledge, I can read faster and understand more deeply*." Similarly, higher-order strategies such as restating, paraphrasing, and analysing (Post-reading 4) were each reported by only two students. These findings show that engagement with post-reading strategies is both limited and uneven, indicating limited engagement with higher-order cognitive processes such as evaluation, synthesis, and reflection. The pattern reinforces the quantitative findings and suggests that critical reading, in its deeper sense, is not yet fully developed among the participants.

This distribution suggests that students tend to prioritize strategies that support immediate comprehension during reading, while engaging less frequently in post-reading processes that require evaluation and reflection. In other words, strategy use appears to be concentrated at the level of meaning construction rather than higher-order critical processing.

At the category level, a similar pattern emerged. Pre-reading strategies were used most frequently ($M = 3.18$, $SD = 1.07$), followed by while-reading strategies ($M = 3.09$, $SD = 1.08$), and post-reading strategies ($M = 2.83$, $SD = 1.07$) (Table 4). Although all categories fell within the medium range, the results indicate a clear hierarchy across the three phases of reading. The gap between pre-reading and post-reading strategies highlights an imbalance in strategy use across stages. This finding is also reflected in the interview data.

When asked about their strategy use, students most frequently referred to pre-reading practices, such as previewing titles and key elements to anticipate content ("I look at the title or illustrations to predict the content."; "I skim the title and subheadings to get the main idea."). While-reading strategies were also commonly reported, particularly guessing meaning from context and organizing text structure ("I usually guess the meaning of new words based on the context."; "I divide the text into sections and underline difficult words."). In contrast, post-reading only occasionally. A few students referred to summarizing or comparing texts ("I summarize the main points."), while more advanced strategies involving evaluation or reflection were rarely reported. This pattern reinforces the quantitative findings, indicating that students' strategy use is concentrated on pre- and while-reading stages, with limited engagement in post-reading processes associated with higher-order critical thinking.

Overall, the findings show a moderate but uneven distribution of critical reading strategy use. The convergence of quantitative and qualitative data suggests that students prioritize strategies supporting comprehension and preparation, while demonstrating limited engagement with post-reading strategies associated with higher-order critical thinking. This highlights the need for more explicit instructional support targeting post-reading strategies to foster deeper critical reading abilities.

5. Discussions

The findings reveal a clear hierarchy in the reported use of critical reading strategies across the three phases, with pre-reading strategies most

frequently employed, followed by while-reading and then post-reading. This pattern suggests that learners prioritize strategies that facilitate immediate comprehension, while engaging less frequently in reflective and evaluative processes after reading.

The highest use of *pre-reading strategies* indicates that learners valued preparatory actions such as previewing the text, setting a purpose for reading, or predicting content, all of which can reduce cognitive load and facilitate comprehension once the reading task begins. The relatively prominent use of *pre-reading strategies* in this study suggests that learners recognize the value of preparation, particularly in activating prior knowledge and establishing expectations for reading.

In addition, *while- reading strategies* represent students' reliance on active monitoring and comprehension-building practices during the reading process. The high scores in these categories demonstrate learners' preference for strategies that provide immediate benefits in constructing meaning, such as *making inferences, clarifying ideas*, or *adjusting* their reading pace when facing difficulties. Such strategies are instrumental in enabling learners to process texts effectively, which is particularly significant for students in English as a Foreign Language (EFL) context where linguistic barriers may otherwise impede comprehension. Taken together, the relatively high use of both *while-reading and pre-reading strategies* illustrates students' stronger emphasis on comprehension-focused approaches, with efforts concentrated on understanding texts before and during reading.

Nevertheless, the results show that learners were less inclined to engage in reflective or evaluative practices once they had finished reading. Such activities may include *summarizing information, synthesizing across sources, critically evaluating arguments,* or *applying insights* beyond the immediate text. The low reliance on *post-reading strategies* highlights a gap in learners' reading practices, as these strategies are closely associated with higher-order thinking skills and critical literacy.

This tendency can be partly understood in relation to curriculum design and instructional practices. In many EFL contexts, including Vietnam, reading instruction often emphasizes comprehension accuracy, vocabulary development, and task completion. Consequently, classroom activities tend to foreground strategies that support understanding during reading, such as predicting content or resolving lexical difficulties. In contrast, post-reading activities that involve synthesis, evaluation, or critical reflection may receive comparatively limited attention or explicit instruction, which may contribute to their lower reported use.

The findings are broadly consistent with prior research indicating that EFL learners tend to favour comprehension-oriented strategies (Anderson, 2003). At the same time, the limited engagement with *post-reading strategies* aligns with studies reporting a tendency toward lower-order cognitive processing rather than higher-order critical engagement (Nasrollahi et al., 2015; Le et al., 2024).

NematTabrizi and Saber (2016) asserted that Malaysian postgraduate students displayed only moderate readiness in applying critical academic reading skills, highlighting the need for more explicit pedagogical support. This was very similar to the current study when Vietnamese university students also reported only moderate use of critical reading strategies overall.

These findings should be interpreted in light of several limitations. First, the reliance on self-reported data may not fully capture actual strategy use in practice. Second, the sample was drawn from a specific cohort of university students, which may limit the generalizability of the results. Third, although the interview data provided valuable insights, the relatively small number of participants restricts the extent to which qualitative findings can be generalized.

In summary, the findings reveal a balanced but uneven distribution of critical reading strategy use: learners frequently apply comprehension-focused pre-reading and while-reading strategies, while post-reading strategies receive minimal attention. This imbalance suggests the need for targeted pedagogical interventions

6. Conclusions and recommendations

This study employed a mixed-method design to examine the utilization of critical reading strategies among Vietnamese university students. The findings show considerable reliance on pre-reading and while-reading strategies and a relatively limited use of post-reading strategies. This imbalance suggests that while students can build comprehension effectively, they are less engaged in reflective, analysing and evaluative processes that are essential for developing critical literacy and higher-order cognitive skills. To address these issues, it is recommended that educators should provide explicit instruction and modelling of post-reading strategies such as summarizing, paraphrasing, evaluating arguments, and comparing texts. The findings may also suggest the value of promoting a more balanced integration of strategies across different stages of reading instruction. Although the present study does not directly examine curricular design or teaching practices, future instructional planning and teacher development initiatives could consider ways to support students' critical literacy development more comprehensively. Such efforts may contribute to a more well-rounded development of critical reading abilities of EFL students. Moreover, students ought to be encouraged to reflect on their own strategies in order to enhance metacognitive awareness and autonomy in reading.

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