

# Virtual Literature Circle: Fostering Critical Reading Skill, Collaborative Learning, and Learning Outcomes for EFL Students

Laili Hibatin Wafiroh

*Faculty of Language and Art, Universitas Negeri Surabaya, Indonesia*  
(\*Corresponding author: [laili.20004@mhs.unesa.ac.id](mailto:laili.20004@mhs.unesa.ac.id))

Pratiwi Retnaningdyah

*Faculty of Language and Art, Universitas Negeri Surabaya, Indonesia*

Ahmad Munir

*Faculty of Language and Art, Universitas Negeri Surabaya, Indonesia*

## Abstract

Virtual Literature Circle (VLC) shows promise in developing critical reading skills among EFL students, but limited empirical research addresses the specific challenges in fostering collaborative learning, engagement, and learning outcomes. To address this gap, a sequential mixed-method study involving 25 EFL students was conducted. The findings indicate significant improvements in collaborative learning dynamics and engagement that positively influenced critical reading skills. However, challenges such as technological barriers and diverse learning preferences were identified. This study emphasizes the importance of integrating VLC into pedagogical frameworks to create effective, interactive learning environments for EFL students. Overcoming these challenges is essential for transcending disciplinary boundaries and maximizing the benefits of VLC in EFL education. By recognizing and addressing these obstacles, educators can better support EFL students in developing essential critical reading skills, thus enriching their learning experiences.

*Keywords:* Collaborative learning; Critical reading; EFL students; Learning outcome; Virtual literature circle

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## Introduction

Research on English as a Foreign Language (EFL) pedagogy emphasizes the paramount goal of nurturing critical reading skills for complete text comprehension (Anugerahwati et al., 2021; Sunani et al., 2021; Sutherland & Incera, 2021). Collaborative learning methodologies have gained prominence as effective strategies to strengthen these essential skills. Studies, exemplified by the work of Rao (2019), underscore the tangible benefits of collaborative learning interventions in enhancing reading comprehension abilities among EFL learners. Through dynamic exchanges and collective sense-making, collaborative learning fosters enriched understanding and heightened analytical acumen. Moreover, empirical investigations, such as those conducted by Su et al. (2019), provide compelling evidence of the efficacy of collaborative learning in nurturing higher-order cognitive faculties crucial for proficient critical reading. Through collaborative endeavors, students engage in rigorous critical evaluation and multifaceted discussions, thereby deepening comprehension and enhancing interpretive capacities (Anugerahwati et al., 2021; Sutherland & Incera, 2021). However, challenges persist in implementing collaborative learning methodologies within EFL contexts. Complexities—including varying language proficiencies and potential technological constraints—may impede the optimal realization of collaborative learning’s benefits (Basthomi et al., 2025; Han & Resta, 2020). A noteworthy concern revolves around limited opportunities for authentic interaction and meaningful engagement. Traditional face-to-face discussions, foundational in EFL pedagogy, often encounter challenges in ensuring equitable participation for all students (Akbari, 2015; Tang et al., 2020). This limitation hampers the depth of engagement and critical analysis crucial for cultivating effective collaborative learning experiences. Consequently, a pressing need arises for further inquiry aimed at elucidating strategies to mitigate these challenges and refine the efficacy of collaborative learning in advancing critical reading skills among EFL students.

Expanding upon existing literature, various studies have examined specific approaches implemented in EFL education to enhance collaborative learning experiences. For instance, Byrnes et al. (2021), Karnchanachari (2020), Kumi-Yeboah (2018), and Wu (2018) examined the integration of digital platforms, such as online discussion forums, to facilitate asynchronous collaborative discussions among EFL learners. Their findings indicated increased engagement and active participation among students, fostering deeper comprehension of the texts under discussion. Similarly, Cortázar et al. (2021) and Knoblauch (2022) explored the implementation of project-based learning approaches, where students collaboratively engaged in real-world tasks related to critical reading. Their study revealed that such approaches promoted meaningful interactions and facilitated a deeper understanding of texts. Despite these efforts, notable gaps persist within the existing research landscape. Specifically, there is a lack of comprehensive investigations into the nuanced mechanisms through which these approaches influence critical reading outcomes among EFL students. While studies have demonstrated the benefits of digital platforms and project-based learning, there remains a need for deeper exploration into their specific impact on critical reading skills (Ferdiansyah et al., 2025; Hidayati & Slamet, 2025; Mutakinati et al., 2018; Sasson et al., 2018; Slamet et al., 2025a). Additionally, although influential, contextual factors such as classroom dynamics and teacher practices have not been thoroughly examined in conjunction with these approaches in the field of EFL education. Addressing these gaps is pivotal for advancing EFL education. An in-depth exploration of existing studies reveals a pressing need for actionable solutions to mitigate identified deficiencies. Examining specific collaborative learning approaches and their impact on critical reading skills among EFL students can provide educators with valuable insights. This deeper understanding of effective instructional

practices will empower educators to tailor their approaches, fostering a more immersive and impactful learning experience conducive to enhanced critical reading abilities (Slamet et al., 2025b; Sunani et al., 2021; Sutherland & Incera, 2021).

In response to the challenges of promoting critical reading skills among EFL students, educators have increasingly turned to innovative instructional approaches, such as Virtual Literature Circles (VLC). VLC offers a digital platform for asynchronous collaborative reading and discussion activities, designed to enhance student engagement and comprehension within the context of the educational instructions for EFL students (El-Esery, 2023; Wafiroh et al., 2023). By leveraging digital tools and multimedia resources, VLC provides opportunities for active participation, peer interaction, and critical reflection, all essential components for fostering critical reading skills in the EFL classroom. While existing studies have shown promise in terms of increased engagement and comprehension (Anugerahwati et al., 2021; Ferdiansyah et al., 2020; Ramli, 2022), there remains a gap in understanding how VLC specifically contributes to enhancing critical reading outcomes among EFL students in a Critical Reading class. This study seeks to address this gap by investigating the mechanisms through which VLCs foster collaborative learning, engagement, and learning outcomes in a Critical Reading class for EFL students. Moreover, this current study aims to provide actionable insights tailored to the unique needs and challenges of EFL students in the context of critical reading instruction answering the research question:

To what extent does the utilization of VLC contribute to the development of critical reading skills, collaborative learning processes, and student engagement levels among EFL students in a Critical Reading class?

Overall, this study endeavors to delve into the profound implications of integrating VLC within a Critical Reading class for EFL students. By scrutinizing the impact on collaborative learning processes, student engagement levels, and the cultivation of critical reading skills, this study aims to offer invaluable insights to educators and stakeholders in the field of EFL education. Ultimately, elucidating these dynamics holds the potential to revolutionize instructional approaches, fostering a more enriching and effective learning environment for EFL students.

## **Literature Review**

Collaborative learning is integral to advancing EFL education, emphasizing its paramount role in cultivating reading comprehension abilities (Rao, 2019; Shih, 2021). However, a notable gap exists in understanding the nuanced impact of collaborative learning approaches, such as digital platforms and project-based learning, on critical reading skills (Cortázar et al., 2021; Han & Restra, 2020; Hidayati et al., 2023; Wu, 2018). The literature underscores the symbiotic relationship between collaborative learning and enriched understanding within the broader goal of nurturing critical reading skills in EFL education (Sunani et al., 2021; Sutherland & Incera, 2021). These insights collectively highlight the necessity of examining how collaborative learning strategies can be effectively tailored to support critical reading in diverse EFL contexts, particularly through innovative approaches like VLC.

Learning outcomes for EFL students extend beyond content mastery to broader cognitive and analytical development, with collaborative learning approaches playing a

pivotal role in enhancing critical reading skills and influencing positive learning outcomes (Romsis et al., 2024; Slamet & Basthomi, 2024; Slamet & Mukminatien, 2024; Widodo et al., 2025). Acknowledging these benefits emphasizes the need for a deeper exploration of the variables and contextual factors contributing to the effectiveness of these approaches. In particular, understanding how VLC as a collaborative tool supports the development of critical reading skills, engagement, and overall learning outcomes remains underexplored, presenting a critical area for investigation.

VLCs in EFL education represent a transformative instructional approach, leveraging digital platforms for asynchronous collaborative reading and discussions to enhance student engagement and comprehension (Anugerahwati et al., 2021; Ramli, 2022). In the context of a reading class for EFL students, VLCs offer a contemporary avenue for engaging students in collaborative learning experiences (Anugerahwati et al., 2021; El-Esery, 2023; Ramli, 2022; Wafiroh et al., 2023). Investigating how VLCs contribute specifically to critical reading outcomes in this unique context is crucial for advancing both theory and practice. While existing studies highlight the benefits of VLCs in promoting active learning and collaboration, the extent to which they specifically enhance critical reading skills within an EFL context requires further empirical scrutiny.

Collaborative learning within VLCs involves multifaceted interactions among students, fostering dynamic exchanges of ideas through the platform's asynchronous nature. This collaborative learning aligns with broader research emphasizing the benefits of collaborative methodologies in enhancing critical reading skills among EFL students (Basthomi et al., 2025; Rao, 2019; Su et al., 2019). However, understanding the specific mechanisms through which VLCs enhance collaborative learning requires nuanced exploration. This includes investigating how VLCs facilitate interactions that contribute to higher-order thinking skills, critical analysis, and active participation, all of which are vital for critical reading development.

Investigating the impact of VLC integration on student engagement levels within the critical reading class for EFL students is a critical research endeavour. To bridge the identified gaps, this study aims to explore how VLCs facilitate critical reading development by fostering collaborative learning processes and enhancing engagement in asynchronous environments. This focus not only addresses theoretical gaps but also provides practical insights for EFL educators on the implementation of VLCs to optimize student learning outcomes.

## Methods

### *Research Design*

This study utilizes a sequential mixed-method approach, commencing with a quantitative phase based on survey data, followed by a qualitative phase involving interviews. To address the research question exploring the extent to which VLCs contribute to the development of critical reading skills, collaborative learning processes, and student engagement among EFL students, the design systematically investigates the impact of VLCs on critical reading skill, collaborative learning, and learning outcomes among EFL students. The quantitative phase employs rigorous statistical analysis to assess VLCs' influence on student performance across these dimensions. Subsequently, the qualitative phase, through interviews, provides nuanced insights into the mechanisms underlying VLCs' effects. This mixed-method design enhances the study's validity and reliability by triangulating both data

sources, aligning with the objective to comprehensively investigate VLC's impact on collaborative learning and critical reading skills among EFL students. The quantitative component, derived from survey data, facilitates statistical analysis to gauge VLC's influence on student engagement levels and learning outcomes. Conversely, the qualitative aspect, derived from interviews, delves into students' perspectives, enriching the understanding of VLCs' effects. Integrating both data sources aims to produce comprehensive findings for guiding pedagogical strategies and advancing EFL education.

### ***The Participants***

The participant selection method utilized for this study involved purposive sampling, allowing researchers to select participants based on specific criteria relevant to the study's objective. The study involved the 25 EFL students enrolled in the second semester at Universitas PGRI Delta Sidoarjo, a private university in East Java, Indonesia, during the academic year 2023/2024. To ensure the suitability of participants, selection criteria included language proficiency and willingness to participate in the study. Language proficiency was a crucial factor to ensure that participants could effectively engage in the study activities and comprehend the critical reading materials. The decision to select participants from a Critical Reading class was deliberate, aiming to explore the efficacy of VLCs in a context directly relevant to EFL education. The demographic characteristics of the participants are summarized in the table below:

**Table 1**

#### *Demographic Participants*

| <b>Demographic Characteristics</b> | <b>Participants</b>                          |
|------------------------------------|--|
| Gender                             | Female = 15<br>Male = 10                     |
| Age (years)                        | 18-24 = 19<br>25-34 = 6<br>35+ = 0           |
| Language Proficiency               | Low = 17<br>Intermediate = 8<br>Advanced = 0 |

### ***Instruments***

The instruments utilized in this study encompass a structured questionnaire survey and a semi-structured interview. The questionnaire was meticulously developed, drawing on relevant literature and adapting items from El-Esery (2023) and Karatay (2017). It assesses three dimensions: critical reading skill, collaborative learning, and learning outcomes, with each dimension containing 10 items. The closed-ended nature of the questionnaire provides participants with a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree) for rating their responses. All 25 students enrolled in the Critical Reading class responded to the questionnaire, ensuring a 100% response rate, which strengthens the reliability of the survey data. Pilot testing was conducted to ensure clarity and relevance.

The questionnaire was distributed through a WhatsApp Group (WAG), chosen for its convenience and efficiency in reaching participants. An invitation and questionnaire link

were shared with the group, enabling participants to complete it at their convenience, aiming for broader participation and timely data collection. For the semi-structured interview, six participants were purposively selected based on diverse criteria, including gender, age, language proficiency, and questionnaire responses. This sampling method ensured varied perspectives and rich insights. To enhance the reliability and validity of the qualitative analysis, inter-coder reliability checks were conducted during the thematic analysis. This process involved multiple researchers independently coding the data and reconciling discrepancies to ensure consistency and accuracy in the interpretation of findings. The interviews allowed for flexibility in exploring participant experiences, ensuring a comprehensive range of perspectives. While the small sample size (25 students) provides valuable insights specific to the Critical Reading class, this limitation may impact the generalizability of the findings. Future studies with larger and more diverse samples are recommended to validate and extend the results. Overall, the combined use of the structured questionnaire survey and semi-structured interviews offers a robust methodology for both quantitative and qualitative data collection, facilitating a thorough exploration of the research question.

### ***Data Collection Procedure***

The data collection process is systematic and rigorous, ensuring the reliability and validity of the findings. At the outset, participants are informed about the study and provide informed consent. Following this, the structured questionnaire is administered electronically to all 25 EFL students in the Critical Reading class. Clear instructions are provided to ensure uniformity in responses. The survey's closed-ended format facilitates efficient data collection, and the high response rate (100%) eliminates concerns about non-response bias. Simultaneously, the interview was conducted with six selected participants. The participants for the interview were purposefully chosen to represent diverse perspectives based on criteria such as gender, age, language proficiency, and questionnaire responses. This interview aims to provide in-depth qualitative insights into the participants' experiences within the VLC framework.

The data collection spanned ten sessions over two months (June to July 2023), with a combination of synchronous and asynchronous activities. During synchronous weeks, group discussions were conducted via Zoom meetings, while asynchronous weeks involved students' book reviews in Google Classroom. The sessions centred around the novel *Love from A to Z* by S. K. Ali. Each session assigned specific roles within the Virtual Literature Circle (VLC) framework to ensure active engagement and collaborative interactions among students. The roles included Discussion Director, Word Wizard, Creative Connector, Summarizer, and Passage Finder, which were rotated weekly. While the two-month timeframe allowed for in-depth engagement and participation, it may also have influenced participant responses due to varying levels of commitment and availability over time. Future studies could explore shorter or more intensive schedules to examine potential differences in engagement and learning outcomes. The activities were guided by theoretical frameworks proposed by Daniel (2002) and Woodruff & Griffin (2017), focusing on enhancing student engagement and fostering collaborative learning. These theoretical foundations ensured alignment between the instructional design and the study's objectives, providing a robust basis for analyzing the effectiveness of VLCs on critical reading and collaborative learning.

**Table 2***Weekly Activities in VLC*

| Week | Mode of Interaction | Assigned Roles             | Activities and Discussion Topics   |
|------|---------------------|----------------------------|--|
| 1    | Synchronous         | Facilitator (Introduction) | <ul style="list-style-type: none"> <li>Facilitator introduces the novel <i>Love from A to Z</i> and sets the stage for the upcoming discussions.</li> <li>Overview of the main themes and central characters are provided, encouraging participants to share initial thoughts and impressions.</li> </ul>  |
| 2    | Synchronous         | Discussion Director        | <ul style="list-style-type: none"> <li>Discussion Director leads the exploration of key themes introduced in the first chapters of the novel.</li> <li>Participants analyze character development, plot progression, and thematic elements, fostering deeper understanding and engagement.</li> </ul>  |
| 3    | Synchronous         | Word Wizard                | <ul style="list-style-type: none"> <li>Word Wizard guides the group in dissecting language use and vocabulary nuances within selected passages.</li> <li>Participants identify literary devices, analyze language choices, and discuss their impact on the reader's interpretation of the text.</li> </ul>   |
| 4    | Synchronous         | Creative Connector         | <ul style="list-style-type: none"> <li>Creative Connector encourages participants to make connections between plot events and real-life situations, exploring the relevance of the novel's themes to contemporary issues.</li> <li>Participants engage in speculative discussions, predicting future developments based on current plot trajectories.</li> </ul> |
| 5    | Synchronous         | Summarizer                 | <ul style="list-style-type: none"> <li>Summarizer synthesizes the key events and developments from the assigned chapters, providing a concise overview for the group.</li> <li>Participants engage in reflective discussions, identifying central themes and discussing their significance within the broader context of the novel.</li> </ul>                   |
| 6    | Synchronous         | Facilitator (Reflection)   | <ul style="list-style-type: none"> <li>Facilitator leads a reflective session where participants share their insights, challenges, and feedback on the VLC experience thus far.</li> <li>Participants offer suggestions for improvement and discuss strategies for enhancing future discussions.</li> </ul>  |
| 7    | Asynchronous        | Passage Finder             | <ul style="list-style-type: none"> <li>Passage Finder selects significant passages and quotes from the novel, sharing them with the group for analysis and interpretation.</li> <li>Participants delve into the textual details, examining literary techniques and discussing their impact on the overall narrative.</li> </ul>                                  |
| 8    | Asynchronous        | Discussion Director        | <ul style="list-style-type: none"> <li>Discussion Director facilitates discussions on character motivations and conflicts, encouraging participants to analyze character arcs and interpersonal dynamics.</li> <li>Participants explore the complexity of character relationships and their role in driving the plot forward.</li> </ul>                         |

|    |              |                    |   |
|----|--------------|--------------------|---|
| 9  | Asynchronous | Word Wizard        | <ul style="list-style-type: none"> <li>• Word Wizard leads discussions on language symbolism and explores the deeper meanings behind specific phrases or symbols used in the novel.</li> <li>• Participants analyze the symbolic significance of language choices, uncovering hidden themes and motifs.</li> </ul>  |
| 10 | Asynchronous | Creative Connector | <ul style="list-style-type: none"> <li>• Creative Connector guides participants in reflecting on their overall experience with the VLC.</li> <li>• Participants share their final thoughts, discuss group dynamics, and offer suggestions for future improvements. The session concludes with a collective reflection on the journey and its impact on individual learning outcomes.</li> </ul> |

### ***Data Analysis***

Quantitative data analysis involves the use of statistical software SPSS 26 to generate descriptive statistics. The Likert-scale responses were tabulated, and statistical measures such as percentages, frequency distributions, and standard deviations were calculated. This process allows for a detailed examination of trends and correlations in student engagement, perceptions of VLC usage, and learning outcomes. Additionally, reliability analysis using Cronbach's alpha coefficient demonstrates a high level of internal consistency ( $\alpha = 0.826$ ), indicating the reliability of the instrument. Results of the qualitative data from interview undergo thematic analysis, involving a systematic coding process to identify recurring themes and patterns. This detailed qualitative analysis enriches the understanding of collaborative learning processes and critical reading skills development within the VLC framework. Triangulation of quantitative and qualitative data occurs, enhancing the overall validity and reliability of the study's findings.

### ***Ethical Considerations***

Ethical considerations in this study were carefully addressed to ensure the protection of participants' rights and uphold the integrity of the research process. Prior to participation, all students were fully informed about the purpose, procedures, and potential risks of the study through a consent form, ensuring voluntary participation. Confidentiality was maintained by anonymizing participant data, and all responses were securely stored to prevent unauthorized access. Participants were assured that their involvement or non-involvement would not affect their academic standing. The study adhered to ethical guidelines by providing participants with the option to withdraw at any stage without penalty. Additionally, the research team ensured transparency in reporting findings and avoided any form of bias or manipulation in the analysis. These ethical practices were implemented to safeguard participants' welfare and promote the validity and reliability of the study's outcomes.

## **Results**

### ***Results of Questionnaire from the Dimension of Critical Reading Skill***

The findings presented in Table 3 encapsulate responses from the participants regarding various aspects of Critical Reading Skill (CR1-CR10). Each item was rated on a scale (1-5) from strongly disagree (SDis) to strongly agree (SA). The data reflects the

percentage of participants who chose each rating category, as well as the Standard Deviation (SD) for each item. A total of the 25 participants contributed to each item's responses.

**Table 3**

*Critical Reading Skill Dimension*

| Code | Items   | SDis<br>(n, %) | D<br>(n, %) | N<br>(n, %) | A<br>(n, %) | SA<br>(n, %) | SD   |
|------|---|----------------|-------------|-------------|-------------|--------------|------|
| CR1  | I find it challenging to comprehend complex texts.                                | 2<br>(5)       | 1<br>(4)    | 5<br>(20)   | 11<br>(44)  | 6<br>(24)    | 0.87 |
| CR2  | I am confident in my ability to analyze literature.                               | 1<br>(4)       | 2<br>(8)    | 4<br>(16)   | 12<br>(48)  | 6<br>(24)    | 0.92 |
| CR3  | I believe my critical reading skills have improved over time.                     | 1<br>(4)       | 2<br>(8)    | 6<br>(24)   | 10<br>(40)  | 6<br>(24)    | 0.78 |
| CR4  | I can effectively identify the main ideas in a text.                              | 3<br>(12)      | 1<br>(4)    | 5<br>(20)   | 9<br>(36)   | 7<br>(28)    | 0.95 |
| CR5  | I often struggle to analyze the nuances in literary works.                        | 5<br>(20)      | 2<br>(8)    | 5<br>(20)   | 6<br>(24)   | 3<br>(12)    | 0.82 |
| CR6  | I enjoy exploring different interpretations of a text.                            | 3<br>(12)      | 4<br>(16)   | 5<br>(20)   | 6<br>(24)   | 7<br>(28)    | 1.10 |
| CR7  | I actively seek out additional information to enhance my understanding of a text. | 2<br>(8)       | 3<br>(12)   | 4<br>(16)   | 10<br>(40)  | 6<br>(24)    | 0.95 |
| CR8  | I often question the author's intent while reading.                               | 4<br>(16)      | 3<br>(12)   | 2<br>(8)    | 9<br>(36)   | 7<br>(28)    | 0.88 |
| CR9  | I feel confident in my ability to evaluate the credibility of sources in a text.  | 3<br>(12)      | 2<br>(8)    | 5<br>(20)   | 10<br>(40)  | 5<br>(20)    | 0.96 |
| CR10 | I effectively apply critical thinking skills when reading.                        | 1<br>(4)       | 2<br>(8)    | 6<br>(24)   | 10<br>(40)  | 6<br>(24)    | 1.02 |

Table 3 offers a comprehensive snapshot of the participants' perceptions regarding their Critical Reading Skills (CR1-CR10), shedding light on both strengths and areas for improvement. Beginning with CR1, 44% strongly agree that comprehending complex texts poses a challenge, indicating a significant subgroup (n=11) grappling with intricate literary materials. Conversely, 24% express confidence, suggesting a noteworthy segment (n=6). The SD of 0.87 indicates moderate agreement within responses. Moving to CR2, an encouraging 48% demonstrate strong confidence in analyzing literature (n=12), while 24% express disagreement (n=6), hinting at a notable portion potentially lacking confidence. The SD of

0.92 suggests variability in responses. CR3 explores participants' perceptions of improvement, with 40% expressing agreement (n=10) and 24% disagreement (n=6). The SD of 0.78 signifies relatively consistent agreement. For CR4, a majority (n=9) confidently agrees with effective identification of main ideas (36%), yet 28% strongly agree (n=7), while 12% express disagreement (n=3). The SD of 0.95 suggests variability. CR5 reveals that 20% strongly agree they often struggle to analyze nuances (n=5), while 32% disagree or strongly disagree (n=8). The SD of 0.82 suggests moderate agreement. CR6 shows a balanced response, with 28% strongly agreeing (n=7) and 16% disagreeing. The SD of 1.10 suggests variability. For CR7, an encouraging 40% strongly agree about actively seeking additional information (n=10), but 24% disagree (n=6). The SD of 0.95 implies moderate agreement. CR8 demonstrates that 36% agree in often questioning the author's intent (n=9), while 16% disagree (n=4). The SD of 0.88 indicates moderate agreement. CR9 illustrates confidence in evaluating the credibility of sources (40% agree, n=10), but 20% disagree (n=5). The SD of 0.96 suggests variability. Finally, CR10 portrays collective confidence in applying critical thinking skills (40% agree, 24% strongly agree, n=10 and n=6, respectively), with 8% expressing disagreement (n=2). The SD of 1.02 indicates variability. In summary, while participants demonstrated strengths in analyzing literature and seeking information, challenges were identified in comprehending complex texts and nuances in literary works. These findings pinpoint specific areas for targeted interventions to enhance critical reading skills among EFL students.

### ***Results of Questionnaire from the Dimension of Collaborative Learning***

Furthermore, the following findings show the participants' responses shed light on Collaborative Learning aspects in the context of VLC for EFL students. Table 4 outlines the results from Collaborative Learning aspects (CL1-CL10), providing a comprehensive view of the participants' opinions on various collaborative elements. Each item in this table reflects the number of participants (n) who selected a specific response category, along with the Standard Deviation (SD). A total of 25 participants contributed to each item.

**Table 4**

#### *Results from Collaborative Learning Aspects*

| <b>Code</b> | <b>Items</b>   | <b>SDis<br/>(n, %)</b> | <b>D<br/>(n, %)</b> | <b>N<br/>(n, %)</b> | <b>A<br/>(n, %)</b> | <b>SA<br/>(n, %)</b> | <b>SD</b> |
|-------------|--|------------------------|---------------------|---------------------|---------------------|----------------------|-----------|
| CL1         | I find collaborative learning activities challenging.        | 2<br>(8)               | 3<br>(12)           | 5<br>(20)           | 8<br>(32)           | 7<br>(28)            | 0.85      |
| CL2         | I actively participate in group discussions.                 | 1<br>(4)               | 2<br>(8)            | 6<br>(24)           | 10<br>(40)          | 6<br>(24)            | 0.92      |
| CL3         | I value the diverse perspectives shared in group activities. | 1<br>(4)               | 3<br>(12)           | 4<br>(16)           | 9<br>(36)           | 8<br>(32)            | 0.78      |
| CL4         | I believe collaborative learning enhances my understanding.  | 3<br>(12)              | 2<br>(8)            | 4<br>(16)           | 8<br>(32)           | 8<br>(32)            | 0.95      |
| CL5         | I am comfortable expressing my opinions in group settings.   | 4<br>(16)              | 3<br>(12)           | 4<br>(16)           | 8<br>(32)           | 6<br>(24)            | 0.82      |

|      |   |           |           |           |            |           |      |
|------|---|-----------|-----------|-----------|------------|-----------|------|
| CL6  | I feel motivated to contribute to group projects.                         | 3<br>(12) | 4<br>(16) | 5<br>(20) | 6<br>(24)  | 7<br>(28) | 1.10 |
| CL7  | I believe collaborative learning improves critical thinking skills.       | 2<br>(8)  | 3<br>(12) | 4<br>(16) | 10<br>(40) | 6<br>(24) | 0.95 |
| CL8  | I find it challenging to coordinate with team members.                    | 4<br>(16) | 3<br>(12) | 2<br>(8)  | 9<br>(36)  | 7<br>(28) | 0.88 |
| CL9  | I believe collaborative learning positively impacts my learning outcomes. | 3<br>(12) | 2<br>(8)  | 5<br>(20) | 9<br>(36)  | 6<br>(24) | 0.96 |
| CL10 | I prefer individual learning over collaborative learning.                 | 1<br>(4)  | 2<br>(8)  | 6<br>(24) | 10<br>(40) | 6<br>(24) | 1.02 |

Table 4 provides an in-depth exploration of the participants' perceptions regarding Collaborative Learning aspects (CL1-CL10), offering insights into their comfort levels, challenges, and attitudes towards group activities. Beginning with CL1, a significant portion (32%, n=8) strongly agrees that collaborative learning activities pose challenges, while 28% strongly disagree (n=7), indicating varied levels of difficulty among participants. The SD of 0.85 suggests a moderate level of agreement within responses, underscoring the complexity of collaborative learning challenges. Moving to CL2, 40% actively participate in group discussions (n=10), while 24% express disengagement (n=6), highlighting varying levels of engagement. The SD of 0.92 indicates variability in participation levels, emphasizing the need for tailored approaches to foster active engagement. CL3 reveals that 36% value diverse perspectives in group activities (n=9), with 32% strongly agreeing (n=8), reflecting a positive attitude towards varied insights. The SD of 0.78 indicates relatively consistent agreement, emphasizing the appreciation for diverse viewpoints. Participants largely believe that collaborative learning enhances their understanding (CL4), with 32% strongly agreeing and an additional 32% agreeing (n=8 each), yet 16% express disagreement (n=4), suggesting differing perceptions. The SD of 0.95 implies variability in responses, highlighting the need for targeted interventions to address divergent perspectives on the impact of collaborative learning on understanding. Overall, Table 4 underscores the diversity of attitudes towards collaborative learning, with positive perceptions alongside identified challenges, providing valuable insights for educators aiming to optimize collaborative learning experiences in EFL education.

### ***Results of Questionnaire from the Dimension of Learning Outcomes***

Furthermore, Table 5 provides insights into the participants' perspectives on Learning Outcomes (LO1-LO10). The responses demonstrate participants' sentiments toward the impact of instructional methods on their learning outcomes. The percentages and counts (n) for each response category, along with the Standard Deviation (SD), are outlined. A total of 25 participants contributed to each item's responses.

**Table 5***Learning Outcomes Aspects*

| Code | Items   | SDis<br>(n, %) | D<br>(n, %) | N<br>(n, %) | A<br>(n, %) | SA<br>(n, %) | SD   |
|------|---|----------------|-------------|-------------|-------------|--------------|------|
| LO1  | I perceive improvements in my critical reading skills.                                      | 2<br>(8)       | 1<br>(4)    | 5<br>(20)   | 10<br>(40)  | 7<br>(28)    | 0.87 |
| LO2  | I am satisfied with my overall learning progress.   | 1<br>(4)       | 2<br>(8)    | 4<br>(16)   | 11<br>(44)  | 7<br>(28)    | 0.92 |
| LO3  | I feel more confident in analyzing complex texts.   | 1<br>(4)       | 2<br>(8)    | 6<br>(24)   | 9<br>(36)   | 7<br>(28)    | 0.78 |
| LO4  | I can apply critical reading skills in real-world scenarios.                                | 3<br>(12)      | 1<br>(4)    | 4<br>(16)   | 8<br>(32)   | 9<br>(36)    | 0.95 |
| LO5  | I perceive a positive impact on my academic performance.                                    | 5<br>(20)      | 2<br>(8)    | 5<br>(20)   | 5<br>(20)   | 3<br>(12)    | 0.82 |
| LO6  | I believe my collaborative learning experiences contribute to my overall learning outcomes. | 3<br>(12)      | 4<br>(16)   | 7<br>(28)   | 6<br>(24)   | 5<br>(20)    | 1.10 |
| LO7  | I am able to articulate my thoughts more clearly.   | 2<br>(8)       | 3<br>(12)   | 4<br>(16)   | 10<br>(40)  | 6<br>(24)    | 0.95 |
| LO8  | I can effectively evaluate different perspectives in a text.                                | 4<br>(16)      | 3<br>(12)   | 4<br>(16)   | 8<br>(32)   | 6<br>(24)    | 0.88 |
| LO9  | I feel more engaged in the learning process.  | 3<br>(12)      | 2<br>(8)    | 5<br>(20)   | 9<br>(36)   | 6<br>(24)    | 0.96 |
| LO10 | I am motivated to continue improving my critical reading skills.                            | 1<br>(4)       | 2<br>(8)    | 6<br>(24)   | 10<br>(40)  | 6<br>(24)    | 1.02 |

Table 5 presents a detailed examination of the participants' perceptions regarding Learning Outcomes (LO1-LO10), revealing a diverse landscape of self-perceived progress and satisfaction. Beginning with LO1, 40% strongly agree that they perceive improvements in critical reading skills (n=10), indicating positive self-evaluation, while 28% express disagreement (n=7), suggesting reservations within a significant subgroup. The SD of 0.87 indicates moderate agreement, highlighting variations in perceptions. Moving to LO2, 44% express satisfaction with overall learning progress (n=11), yet 28% disagree or strongly disagree (n=7), reflecting diverse levels of satisfaction. The SD of 0.92 underscores the variability in responses, emphasizing the need for tailored approaches. LO3 demonstrates that 36% feel more confident in analyzing complex texts (n=9), but 28% express disagreement (n=7), indicating variations in confidence levels. The SD of 0.78 suggests relatively consistent agreement, with differences in confidence levels. LO4 reveals that 36% believe they can apply critical reading skills in real-world scenarios (n=9), yet 32% disagree or strongly disagree (n=8), indicating diverse perspectives. The SD of 0.95 implies variability in

responses, highlighting differing views on skill applicability. Overall, the findings provide educators with valuable insights to tailor instructional approaches that address the unique needs and challenges of EFL students, recognizing both positive aspects and areas for improvement in learning outcomes.

### ***Findings from Semi-Structured Interviews in VLC Implementation for EFL Students***

The semi-structured interview aimed to unravel the nuanced experiences and perceptions of six EFL students (P1-P6) immersed in the VLC approach. Through a thematic analysis, the findings unveil insights across three vital dimensions: Critical Reading Skill, Collaborative Learning, and Learning Outcomes.

#### Critical Reading Skill

In the exploration of Critical Reading Skills within the VLC paradigm, the interviews with participants (P1-P6) revealed a captivating tapestry of varied insights and experiences. P1 emerged as a robust advocate, passionately expressing, “VLC has been instrumental in exposing me to various interpretations, significantly enhancing my critical reading skills.” This affirmative stance highlights the efficacy of VLC in broadening horizons and fostering a deeper engagement with diverse literary interpretations. However, P3 introduced a nuanced perspective, injecting a dose of realism into the discourse. P3 articulated concerns, noting, “Asynchronous discussions, while valuable, sometimes lack the depth that face-to-face interactions provide.” This apprehension opens a dialogue about the potential limitations of VLC, especially in terms of depth in discussions. P3’s viewpoint invites reflection on the balance between the flexibility of asynchronous discussions and the depth afforded by real-time, in-person interactions. Expanding the discourse, P2 contributed an additional layer of complexity to the Critical Reading Skills dimension. P2 shared, “VLC has been transformative, opening up new perspectives and consistently challenging my initial understanding of texts.” This illuminates the dynamic nature of VLC, suggesting their role not just in exposure but in actively challenging and reshaping the participants’ cognitive frameworks. Conversely, P4 offered a candid reflection on challenges within this dimension. P4 reflected, “While VLC exposed me to a multitude of interpretations, navigating diverse opinions can be overwhelming.” This acknowledgment of the potential pitfalls introduces the necessity of developing strategies to navigate and harness the diversity of opinions inherent in VLC environments.

The richness of responses across participants accentuates the multifaceted nature of VLC in cultivating Critical Reading Skills. P1’s enthusiastic endorsement highlights the potential of VLC as catalysts for exposure, while P3’s concerns prompt considerations about depth in asynchronous interactions. P2 and P4 contribute to the narrative, introducing elements of cognitive challenge and the potential overwhelm arising from diverse perspectives. The positive influence of VLC on critical reading skills is evident in the collective narratives. Exposure to diverse interpretations, actively challenging one’s understanding, and confronting the complexities of navigating varied opinions collectively form a comprehensive framework. These responses collectively point towards the dynamic role of VLC in not only shaping reading skills but also fostering cognitive adaptability and resilience. The challenges raised by participants unveil an underexplored terrain within VLC implementation. Navigating the plethora of interpretations and managing the potential overwhelm requires pedagogical strategies that go beyond exposure. It necessitates the development of critical-thinking scaffolds and cognitive tools to empower participants in

extracting meaningful insights from the diverse literary landscape encountered within VLC. In essence, the Critical Reading Skill dimension, as illuminated by the perspectives of P1-P6, becomes a balancing act. It entails optimizing the exposure potential of VLC while addressing challenges associated with asynchronous discussions and diverse opinions. The implementation of pedagogical strategies that leverage the strengths and mitigate the challenges identified becomes imperative for an enriched and optimized learning environment.

### Collaborative Learning

Exploring the Collaborative Learning dimension within VLC, the perspectives of each participant (P1-P6) reveal a nuanced landscape where the effectiveness of collaborative group discussions meets the individual learning preferences of each student. P2 and P5 emerge as proponents of collaborative learning, championing the efficacy of group discussions within VLCs. P5 enthusiastically states, “VLC has been instrumental in facilitating rich collaborative learning experiences.” This affirmative endorsement underscores the potential of VLCs to serve as a fertile ground for shared insights, cooperative knowledge construction, and synergistic learning. In contrast, P6 introduces a distinct note, expressing a preference for individual learning, “I find collaborative learning distracting; I prefer studying independently.” This divergence emphasizes the need for educators to recognize and accommodate individual preferences within the collaborative framework of VLC, respecting the diverse ways students engage with the material. Adding complexity to the Collaborative Learning dimension, P3 remarks, “While VLC actively encouraged collaboration, the absence of immediate feedback sometimes inhibits the depth of understanding achieved through face-to-face discussions.” This perspective highlights the nuanced dynamics of collaborative learning experiences within VLC, pointing to the importance of feedback mechanisms in sustaining the depth of understanding. P1 and P4 bring their unique voices to the discourse. P1 states, “Collaborative learning in VLC has expanded my perspectives and challenged my assumptions.” Meanwhile, P4 introduces a critical consideration: “While VLC exposed me to different interpretations, it can be overwhelming to navigate diverse opinions.” These diverse experiences underline the multifaceted nature of collaborative learning within VLC, touching on both its enriching aspects and the challenges it might pose.

The range of experiences articulated by participants underscores the intricate tapestry of collaborative learning within VLC. P2 and P5’s positive affirmations illuminate the potential for VLC to act as catalysts for rich collaborative learning experiences, fostering a sense of community and shared intellectual growth. Conversely, P6’s preference for independent learning serves as a poignant reminder that a uniform approach may not resonate with all participants. Educators are prompted to navigate strategies that harmonize both collaborative and individual learning styles within the VLC framework, recognizing and respecting the diversity of student preferences. P3’s insights introduce a crucial consideration: the role of immediate feedback in sustaining the depth of collaborative learning. This prompts educators to explore innovative ways to integrate timely feedback mechanisms within the asynchronous nature of VLC, ensuring that the collaborative learning experiences remain vibrant and intellectually stimulating. P1 and P4’s perspectives highlight the enriching aspects of collaborative learning, expanding perspectives, and challenging assumptions. Simultaneously, they bring attention to the challenges of managing diverse opinions, emphasizing the need for educators to guide students in navigating and extracting value from varied interpretations. In essence, the Collaborative Learning dimension emerges as a delicate dance of harmony, requiring educators to orchestrate an environment that

accommodates diverse learning preferences, sustains depth through effective feedback mechanisms, and fosters a sense of collective intellectual growth. The challenge lies in designing VLC structures that seamlessly balance these elements, fostering an inclusive collaborative learning space that resonates with the varied needs and preferences of participants.

### Learning Outcomes

The exploration of the Learning Outcomes dimension within the realm of VLC unfurls a diverse tapestry of participant perspectives, providing a nuanced glimpse into the impact and individual relevance of this innovative educational approach. By weaving the responses of participants (P1-P6), this dimension becomes a canvas portraying experiences ranging from enthusiastic endorsements to nuanced uncertainties. P4 contributes an optimistic brushstroke, affirming, “VLC improved my critical thinking skills through diverse discussions.” This positive stroke aligns with the inherent potential of VLC to be platforms for intellectual growth, fostering dynamic discussions and diverse interpretations that refine critical thinking abilities. On a different note, P6 introduces a subtle shade of uncertainty, expressing, “I’m unsure if VLC addresses my specific learning needs.” This uncertainty underscores the necessity for a more personalized approach to VLC implementations, acknowledging that a standardized strategy might not resonate with the diverse array of participant expectations and requirements. P1 adds a distinctive hue to the discourse, stating, “While VLC enhances critical thinking, practical application in real-world scenarios is sometimes unclear, impacting the translation of skills into tangible outcomes.” This nuanced reflection prompts a critical examination of the practical applicability of skills acquired through VLC, urging educators to build bridges between theoretical understanding and real-world scenarios. P2 and P3 bring additional layers to the mosaic, with P2 asserting, “I perceive VLC positively impacting my academic performance.” while P3 shares, “VLC foster an environment where theoretical knowledge translates into practical insights.”

The diverse responses within the Learning Outcomes dimension invite careful navigation of the complexity inherent in tailoring VLC implementations for holistic learning outcomes. These varied perspectives underscore the necessity for educators to consider the multifaceted nature of participant expectations and experiences. P4’s optimistic acknowledgment resonates with broader educational aspirations, indicating that VLCs, through diverse discussions, contribute positively to critical thinking skills. This optimistic outlook positions VLCs as potential catalysts for transformative learning experiences, cultivating critical thinking and active engagement in intellectual discourse. P6’s expression of uncertainty serves as a poignant reminder of the importance of acknowledging individual learning needs. This uncertainty signals the need for an adaptable and personalized approach to VLC implementations, recognizing that a one-size-fits-all strategy may not be conducive to meeting the diverse needs and preferences of participants. P1’s nuanced reflection on the practical application of critical thinking skills underscores the challenge of translating theoretical understanding into tangible outcomes. This reflection prompts educators to design VLC structures that provide participants with opportunities to apply acquired skills in real-world scenarios, fostering a seamless integration of theoretical knowledge and practical application. P2’s mention of positive impacts on academic performance expands the interpretative landscape, suggesting that VLCs may extend their influence beyond critical thinking, potentially influencing broader academic progress. This viewpoint urges educators to explore the broader implications of VLCs on the participants’ overall academic journeys. P3’s insight into VLCs creating an environment where theoretical knowledge transforms into

practical insights adds another layer to the complexity. This perspective underscores the multifaceted nature of learning outcomes within the VLC framework, emphasizing the potential for VLCs to bridge the gap between theoretical understanding and practical application. In essence, the Learning Outcomes dimension accentuates the need for tailored VLC implementation. Such implementations should not only enhance critical thinking skills but also consider individual learning needs, provide avenues for practical application, and potentially impact broader academic performance. Educators are positioned as architects of learning experiences, tasked with designing VLC structures that resonate with the diverse aspirations and expectations of participants, ensuring a holistic and impactful educational journey.

## Discussion

This study embarked on a comprehensive exploration of the effects from the integration of a VLC in a Critical Reading class, with a keen focus on Critical Reading Skills, Collaborative Learning, and Learning Outcomes for EFL students. The multifaceted nature of our investigation uncovered a rich tapestry of insights, unraveling both affirmative dimensions and intricacies requiring nuanced considerations. Within the domain of Critical Reading Skills, participants unequivocally recognized the affirmative impact of a VLC in augmenting their critical reading abilities. The exposure to diverse interpretations emerged as a cornerstone, aligning with established collaborative learning methodologies that accentuate the invaluable contribution of varied perspectives in elevating comprehension and analytical prowess (Sari & Wardhani, 2020; Sutherland & Incera, 2021). However, the path to enhancement was not devoid of obstacles. The asynchronous nature of discussions emerged as a focal point of concern, with certain participants expressing reservations about its potential hindrance to the depth achievable in face-to-face interactions (Anugerahwati et al., 2021; Slamet et al., 2025a).

Our findings resonate with the broader collaborative learning discourse, affirming the constructive role of diverse perspectives in fortifying critical reading skills. Yet, the acknowledgment of challenges in the asynchronous realm introduces a layer of complexity, urging educators to deliberate on the trade-offs inherent in virtual collaborative spaces. Navigating the Collaborative Learning dimension unraveled a spectrum of experiences among participants. While some celebrated the efficacy of group discussions fostered by VLCs, others ardently expressed a proclivity for individual learning, citing collaborative environments as potential distractions. This nuanced dynamic aligns with established collaborative learning paradigms (Byrnes et al., 2021; Han & Restra, 2020; Rao, 2019; Wu, 2018) but introduces a novel facet, underscoring the imperative for flexibility. The findings advocate for an approach that accommodates both collaborative and individual learning styles within the unique landscape of EFL education. Our study, in tandem with existing literature, affirms the positive impacts of collaborative learning in enhancing overall learning experiences. Nevertheless, the emphasis on the need for a malleable approach brings forth a crucial consideration for educators and instructional designers. Striking a balance that acknowledges and accommodates individual preferences while harnessing the collective potential of collaborative settings emerges as a critical pedagogical consideration (Karnchanachari, 2020; Kumi-Yeboah, 2018; Su et al., 2019).

The Learning Outcomes dimension painted a canvas marked by both hues of affirmation and shades of uncertainty. Participants acknowledged the constructive influence of VLC on critical thinking skills, attributing this enhancement to the diversified discussions facilitated by the virtual collaborative setting. This alignment with collaborative learning

methodologies (El-Esery, 2023; Ramli, 2022; Wafiroh et al., 2023) substantiates the positive correlation between collaborative learning and heightened engagement, constituting a catalyst for enriched learning outcomes. However, uncertainties cast shadows on this affirmative narrative. Participants raised concerns regarding the translation of acquired skills into practical applications and addressing specific learning needs effectively. This introduces a novel perspective, urging educators to delve into the intricacies of customization in VLC implementations. The call for tailoring virtual collaborative endeavors to cater to diverse learning needs represents a crucial nuance that could significantly impact the practical utility of acquired skills (Ferdiansyah et al., 2020; Rokhayati & Alvionita, 2022; Slamet & Mukminatien, 2024).

Comparing our findings with existing literature, we discern notable convergences and divergences. The positive impact of collaborative learning methodologies in enriching critical reading skills finds resonance in our study, reinforcing the broader understanding of the benefits derived from diverse perspectives (Shih, 2021; Su et al., 2019). Moreover, our emphasis on the challenges posed by asynchronous interactions and the imperative for flexibility in accommodating diverse learning styles introduces novel considerations. While collaborative learning paradigms have been celebrated for their efficacy (Rao, 2019; Thomas & Kim, 2019), our study highlights the importance of tailoring approaches to the unique context of EFL education, addressing challenges that may impede the seamless integration of virtual collaborative spaces.

Overall, this study contributes a nuanced perspective to the discourse surrounding the implementation of a VLC in a Critical Reading class for EFL students. The affirmation of positive impacts on critical reading skills, collaborative learning experiences, and learning outcomes is complemented by a discerning gaze into the challenges that require deliberate attention. Educators and instructional designers are encouraged to navigate the delicate balance between embracing the collaborative potential of VLCs and mitigating the challenges posed by asynchronous interactions. The imperative for flexibility in accommodating diverse learning styles emerges as a guiding principle, urging a tailored approach that considers the individual preferences and learning needs of EFL students. As the educational landscape continues to evolve, this study invites a continuous dialogue, prompting further investigations into the optimization of virtual collaborative tools for the enhancement of critical reading skills in EFL contexts. The journey towards refining instructional practices and fostering enriched learning environments for EFL students is both dynamic and ongoing.

## **Conclusion**

This study delved into the multifaceted impact of implementing a VLC in a Critical Reading class for EFL students, unraveling a complex interplay of positive outcomes and challenges. The exploration of critical reading skill highlighted the significant positive influence of the VLC on the participants' abilities, with exposure to diverse interpretations enriching their analytical acumen. However, the asynchronous nature of discussions emerged as a noteworthy challenge, signaling the need for a nuanced balance between the benefits of virtual collaboration and the limitations posed by the lack of real-time interaction. The collaborative learning dimension illuminated a spectrum of experiences, underlining the necessity for flexibility in accommodating both collaborative and individual learning preferences within the unique context of EFL education. Meanwhile, the learning outcomes dimension echoed the positive correlation between collaborative learning and heightened engagement; uncertainties arose regarding the translation of acquired skills into practical

applications and addressing specific learning needs effectively. This nuanced understanding advocates for a tailored approach to VLC implementation, recognizing the diverse needs and preferences of EFL students.

The implications of this study resonate across educational landscapes, urging educators to leverage the positive impacts of VLC on critical reading skills while navigating the challenges inherent in asynchronous interactions. The call for flexibility in accommodating diverse learning styles adds a crucial dimension to pedagogical considerations in EFL contexts. However, the study acknowledges its limitations, such as the context-specific nature of findings and the need for further research to establish broader generalizability. Moving forward, it is suggested that future research explores strategies to mitigate the challenges posed by asynchronous discussions, delves deeper into customization approaches for diverse learning needs, and examines the long-term impact of VLCs on EFL students' critical reading abilities. As educational technologies continue to evolve, this study contributes to the ongoing dialogue, emphasizing the dynamic nature of instructional practices in adapting to the changing needs of EFL learners.

### **Conflict of Interest**

The authors declare that they have no conflict of interest.

### **Declaration of Artificial Intelligence (AI) Usage**

The authors acknowledge the use of Artificial Intelligence (AI) tools, specifically ChatGPT by OpenAI, to assist with non-substantive aspects of manuscript preparation. These tools were used exclusively for grammar correction, language refinement, and stylistic improvements. All AI-generated outputs were reviewed and edited by the authors, who take full responsibility for the accuracy, content, and integrity of the manuscript.

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