



DOI: <https://doi.org/10.38035/gijlss.v3i2>
<https://creativecommons.org/licenses/by/4.0/>

The effect of Critical Thinking in Academic Reading: How Students Build Their Cognitive Skills – A Study case in Bulukumba, Makassar

Guntur Aditya Joko Susanto Putro¹, Basikin²

¹Master of English Education, Yogyakarta State University, Yogyakarta, Indonesia, gunturaditya.2021@student.uny.ac.id

²Master of English Education, Yogyakarta State University, Yogyakarta, Indonesia.

Corresponding Author: gunturaditya.2021@student.uny.ac.id¹

Abstract: This study aimed to find out how students' perceptions of translanguaging practices in EFL classroom. This study used a qualitative research approach. The data for this study was gathered through interviews using a qualitative descriptive method. The interview process was conducted with five students from class IX.2 SMPN 4 Bulukumba. The findings showed that students believed translanguaging makes them learn English more easily, feel comfortable in class, communicate with the teacher effectively, be more interested in learning, and add new vocabulary. Some students explained that they experienced difficulty during the use of translanguaging by the teacher, but most of them realized the importance of translanguaging in developing their English skills. Based on the results of the research, it can be concluded that the implementation of translanguaging has a positive impact in the process of teaching and learning English in EFL classroom. So, for English teachers, it is recommended to use translanguaging in classes where students' English ability is still low with the aim that students can understand the material better, create a supportive environment, and encourage students to be active in class. Therefore, the use of translanguaging should be balanced and not replace the use of English as a whole.

Keyword: Translanguaging, critical thinking, cognitive skills, academic reading

INTRODUCTION

Students pursuing postsecondary education now need to be proficient in critical thinking. It makes it easier to examine theories, synthesize information, and develop problem-solving skills—all of which are essential for succeeding academically (Ashimova & Turekhanova, 2022; Svetlana Antonova et al., 2021). Furthermore, it is thought that one of a student's core competencies is having a thorough understanding of the subject. Furthermore, one might recognize the development of a critical thinking-focused learning environment as a worldwide educational endeavor. (Lincoln & Kearney, 2019). Critical thinking is a significant factor in enhancing academic progress, according to another researcher (Bekbayeva et al., 2021; Fahim & Masouleh, 2012). In the context of the learning process, the ability to engage in critical

thinking is seen to be vital. This is explained by the fact that it is seen as a crucial element of the 21st-century capabilities (Dwyer et al., 2014). These skills fall into the categories of critical thinking, creativity, communication, and teamwork. These competencies equip pupils with the skills necessary to successfully navigate the difficulties that come with developing in the twenty-first century (Pineida, 2011; van der Zanden et al., 2020).

Students in higher education institutions must be cognitively capable to build critical thinking abilities (Abdul Latif et al., 2018; Plotnikova & Strukov, 2019). This prerequisite results from the complex cognitive processes that underpin critical thinking. These fundamental cognitive skills also encompass explanation, inference, analysis, evaluation, and interpretation. Evaluation is the process of critically assessing the veracity, applicability, and usefulness of data or claims (Dwyer et al., 2014; Mumford et al., 2017). Moreover, inference refers to the ability to derive logical conclusions from facts that may not be stated directly. Lastly, explanation refers to the ability to convey concepts or information clearly and concisely in a way that is easily understood (Ali, 2022; Kirfel et al., 2022).

When it comes to higher education, critical thinking is the competence that is being prioritized the most. This emphasis comes from the underlying conviction that learners at this level of school use critical thinking inadvertently to aid in their learning (Partalo et al., 2019; X. Song, 2016). Therefore, it is imperative that higher education students have the chance to actively use their critical thinking abilities throughout the course of their studies (Saadé et al., 2012). Common obstacles that ordinary students have when trying to use critical thinking in reading include a lack of experience, a lack of background information, and a limited level of language competence (Velayati et al., 2017; Vozgova & Afanasyeva, 2019). Moreover, it is said that higher education teachers ought to use active learning strategies to help students develop critical thinking abilities so they may meet the demands of complex, modern cultures (Kusumoto, 2018; Partalo et al., 2019). Students will thereby gain the capacity to think creatively, solve challenging problems, make well-informed judgments, consider their prejudices and views, and take part in civic activities (Ahrari et al., 2016). Hence, in higher education institutions, students are required to possess cognitive abilities for the development of critical thinking skills (Dekker, 2020; Van Damme et al., 2023).

Furthermore, reading is crucial for students in higher education since it helps them learn new material and hone their critical thinking abilities (Li & Ren, 2020; Yildirim & Söylemez, 2018). This importance stems from reading's practical function in critical thinking processes, which include interpretation, analysis, evaluation, and the synthesis of conclusions based on textual data (Arifin, 2020). However, children must demonstrate strong language abilities to absorb reading texts properly (White, 2019). Moreover, a strong foundation in language and knowledge helps readers comprehend texts better and makes interpretation, drawing conclusions, engaging with the content, and information retention easier (Cervetti et al., 2016; Mihaylov & Frank, 2018).

Nonetheless, several crucial problems with methods intended to encourage critical thinking and enhance reading comprehension in college students have been found. First of all, there are students who struggle to come up with ways to improve their critical thinking abilities in the context of academic reading comprehension (Loaiza Zuluaga et al., 2020). This is demonstrated by the finding that many students still struggle with advanced reading assignments, such as journal reviews and journal writing, even after trying a variety of techniques and strategies (Zaim et al., 2021). This process includes tasks like material analysis, evaluation, synthesis, and effective conclusion drawing (Kuhn, 2018). Third, some students still encounter difficulties trying to complete assignments that call for reading materials to be evaluated and analyzed. This implies that these students would struggle with critical thinking, which would hinder their memory retention, compare and contrast, data interpretation, and explanation of academic literature (Bråten & Braasch, 2017; Y. Song et al., 2017). This article's goal is to

investigate the function of critical thinking in the development of academic reading comprehension, which is derived from the previously described difficulty. In addition, it is imperative to examine the ways in which critical thinking enhances students' abilities to comprehend academic reading texts and to grasp the methods by which students develop their critical thinking abilities.

METHOD

The investigator utilized a qualitative, phenomenological research approach to gain an understanding of the individual experiences of students in cultivating critical thinking abilities to improve their academic reading comprehension. Because it can provide a thorough and in-depth insight of students' experiences, this research approach was chosen. It is argued that qualitative research involves data analysis to investigate problems and achieve a comprehensive understanding of a central phenomenon (Ravindran, 2019; Sale & Thielke, 2018). As a result, the data gathering method used in this study was interviews. In order to enhance students' understanding of academic texts, the interviews were utilized to identify trends in the formation of critical thinking methods. To determine the participants' reading skill levels, the researcher additionally included the ProTEFL reading score as an extra data source. As a result, individuals with a range of reading competence levels provided the data.

The study was carried out between June 9 and August 24, 2023. Based on the research objectives, the researcher started creating a research plan, which included choosing the kind of data devices. The validation procedure was then finished. Six people were then chosen at random. Participants were split into morning (08:00-09:30) and afternoon (13:30-15:30) sessions, with two interviews done daily, in order to maximize the interview schedule.

Additionally, in-depth interviews and reading assessments were used to collect data. The ProTEFL exam was used to conduct the test, which evaluated the participants' reading proficiency. The researcher wanted information on methods for raising reading comprehension across a range of skill levels, therefore this phase was crucial. The number of right answers in the ProTEFL reading session was used to calculate reading proficiency. Six students enrolled in the English language education master's program participated in the interview process. They were chosen through purposive sampling from the ProTEFL reading score list, which was created in accordance with the researcher's predetermined standards.

RESULT AND DISCUSSION

Six volunteers, ranging in reading competence from high to low, were recruited from a public university in Yogyakarta for this study. The ProTEFL exam, finishing the second semester satisfactorily, and being enrolled as graduate students in English education were among the criteria used to choose the participants.

Participants' reading level

The researcher used reading scores from the ProTEFL exam obtained through ULB, Yogyakarta State University, to assess the participants' reading levels. Table 1 displays the reading scores of the participants. The reading scores of TOEFL test takers showed significant variation, as Table 1 shows. Two individuals in the first group received the maximum score of 49, which denotes almost flawless answers to the reading questions with only one mistake. Participants' scores were lower in the second group; two people scored 35 and 37, respectively. This suggests that even if the text they read had errors, they still understood it quite well. However, the group with the lowest reading scores was the one that came under the most scrutiny. Of the four individuals in this group, two had scores of 29, and the other two received scores of 28. These results imply that the group's members had difficulty understanding the

reading materials. The researcher divided the participants into three groups based on their reading skill levels using the previously provided data: high, medium, and low.

Table 1. The students' reading level groups

No	Initial	Reading Score	Level
1.	MM	49	High
2.	SA	49	
3.	SI	35	Medium
4.	NK	37	
5.	QF	29	Low
6.	MI	28	

Data for this qualitative study were gathered via score analysis and interviews. The text's topics were found, examined, and reported using thematic analysis techniques. Because it can recognize patterns in both types of data, this technique aids in the organization of qualitative research data, including data gathered from score analysis and interviews. While score analysis data reveals patterns and trends in the data, interview data sheds light on the experiences and viewpoints of informants. Thus, researchers can gain a deeper understanding of the research issue by merging these two data kinds.

Students' constructing strategy

One independent variable used in the analysis of how critical thinking skills are constructed is interviewing. The methodologies for knowledge construction, assessment, and analytical skill development are all covered by the interview data. The process of developing strategies, recognizing obstacles, and suggesting fixes for these strategies' execution is used to classify the data. It also includes the method of applying these techniques to improve critical thinking abilities.

The process in making strategies among students

The techniques that the participants employed are the main focus of this study, particularly those that pertain to their academic endeavors. Analyzing these methods is important because it helps the researcher understand how they think strategically, spot trends, and determine what matters most in terms of their academic success. Together with SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats), vision and mission are two essential elements considered in the formulation of a strategy. This is because they help people recognize the possibilities and threats that may exist outside of their control and affect their ability to achieve their educational objectives, in addition to their own internal strengths and shortcomings. Furthermore, by being aware of these elements, people are better able to create strategies that will help them capitalize on their advantages, solve their disadvantages, grab chances, and lessen risks. As a result, this procedure improves their capacity for learning and produces more effective and successful learning outcomes. This is the methodical approach that participants use to develop plans based on each element.

Vision and mission in making strategy

Important components of the strategic planning for students are the vision and mission. These two elements give pupils direction and clarity, which helps them comprehend the strategic path they want to take. In order to ensure that decisions, actions, and resource allocation are coherent and help the company achieve its goals, it is imperative that strategies are in line with the vision and purpose. Moreover, this alignment approach makes it easier to produce strategic decisions that support the long-term strategy. Therefore, having a clear vision and objective is essential to the process of developing a strategic plan. The following are the

interview findings, organized in descending order of reading proficiency, commencing with the highest:

.... "The vision and mission is for our guidance so that we stay on the track of the initial goal and the vision and mission is to control us whether .." (VMDS)

".... Oh important, important. The problem is that if we don't have a goal, sometimes there are people who just do what they do, (VMDS)

The importance of vision and mission statements is emphasized by both participants with strong reading comprehension skills, as they serve as guides for developing and putting into practice strategies. These vision and mission statements also help them stay motivated and focused while they carry out the plans they have developed. Participants with intermediate reading competence levels agree with this observation. According to the intermediate participants below, they have said that vision and mission statements help them deal with distracting situations that could otherwise cause them to lose concentration.

"..... It is very important, because if for example we don't have a goal, we will do it carelessly, it will be easy to be distracted, or unfocused, that's why goals are very important. So the goal, for example, task A must review 10 journals..." (VMDS)

"....because basically determining the vision and mission means we also determine the goals..." (VMDS)

Though the participants indicated above emphasized the importance of vision and mission statements in completing tasks, it is important to note that some of them simply created these statements in accordance with the tasks they were working on at the time. In essence, they created purpose and vision statements on the fly and customized them for the specific assignments they were assigned. The following answers were from people who struggled with reading.

"...I think it's important but I never developed a detailed vision and mission, just the core objectives and what I have to do based on the tasks at hand..." (VMDS)

"...yes, it is very important because when I want to develop a strategy, I have to make a vision and mission..." (VMDS)

To sum up, individuals with varying degrees of reading skill constantly emphasize the significance of having a well-defined vision and objective when developing and implementing initiatives. They also stress the importance of having a clear vision and mission statement to keep things motivated, focused, and in line with their intended goals. This highlights the need, for a number of strong reasons, to match tactics with the objectives of the learning process:

To begin with, resources are used effectively to accomplish the predetermined goals. Second, the organization, its clients, and individual employees all perform better when there is strategic alignment.

Working together to achieve common goals promotes motivation and unity. Moreover, the importance of value generation and organizational advantages is emphasized by strategic alignment. Prioritizing and choosing projects that will have the biggest effects on the company is made easier when they are in accordance with the overall plan. In the end, strategic alignment strengthens the organization's identity and encourages market agility. Through strategic alignment, organizations can efficiently adapt to changing learning trends while maintaining their identity and core principles. Organizations can accomplish their goals and maximize resource usage thanks to this alignment. The interview findings regarding the strategies employed by participants in formulating their vision and mission revealed various methods for establishing a vision and mission, as derived from the interview results.

"..... To compile a vision and mission, of course, you have to go back to yourself, what are our goals and what we are going to achieve, like that, and then determine if the vision and mission are within ourselves, so we have to go back." (FVM)

... "I usually read a lot, do a lot of research," (FVMA)

Participants with a high level of reading proficiency engage in reflection and seek pertinent sources related to their desired objectives prior to crafting a vision and mission. This approach aims to ensure that the vision and mission they create are practicable for implementation.

..."do research to find out the ins and outs of the task so that you know or estimate how long it will take..." (FVM)

"... if I do more reflection and review of the task at hand then I find my goals that I have to achieve first, ..." (FVM)

Moreover, in the course of developing a vision and mission, it becomes crucial to reflect upon the pre-established goals, taking into account the previously outlined task urgencies. Participants can choose a goal as a point of reference for their vision and mission once they have identified its priority. This approach closely aligns with the strategy employed by participants with lower reading proficiency levels.

... "I see what I don't understand and what I do understand. What I need to deepen and what I still lack to learn..." (FVM)

".... The trick is to write the list in a notebook or sticky notes to always remember and become a booster to achieve the vision and mission to be achieved..." (FVM)

Participants with varying degrees of reading skill developed their vision and goal using a similar methodology. High readers reflect and conduct in-depth study to guarantee successful implementation. In addition, this procedure heavily relies on the habit of reviewing pre-established goals and determining the urgency of tasks. In this way, participants with varying levels of reading skill employed a similar strategy to those with higher levels of proficiency.

SWOT (strength, weakness, opportunity, threat) in making strategy

Conducting a SWOT analysis—a comprehensive evaluation of one's strengths, weaknesses, opportunities, and challenges—is an essential step in developing a plan. During the educational process, students can more precisely identify solutions and plans by using SWOT analysis to help them evaluate intrapersonal and interpersonal aspects. Additionally, SWOT analysis gives students an understanding of possible roadblocks that could prevent them from moving forward with achieving their learning goals. As a result, using SWOT analysis to assess students' strategic thinking skills in developing and executing a plan becomes essential.

Strength and opportunity to support strategy

'Strength' in this study refers to students' innate abilities that can help them with task completion or strategy design. These talents include, but are not limited to, strong analytical ability, efficient time management, and multitasking aptitude. This research additionally reveals variables that may help students achieve their goals. These include opportunities to support their strategies, access to suitable facilities, and companions for conversations. The results of interviews pertaining to the opportunities and strengths noted by the participants are displayed as follows:

"...actually when talking about strengths, there are actually like being able to read critically and then after that I can multitask because I myself also work ... and for my academic work for this S2 is still fine ... if for facilities from the campus and from myself it is quite adequate ..." (SWDS)

"... I myself am not sure of the strengths or advantages I have but I am able to complete something that has become my target, regardless of the conditions, yes because I myself am an ambitious person so...." (SWDS). For internal and external things, until now it has been quite adequate and very supportive for me in doing my assignments..." (SWDS)

"...for my own strengths, I am able to make time to do assignments or read.. because sometimes it is also difficult if you can't make time to do assignments or read..and this is encouraged by other things such as adequate internet, there are laptops, smartphones, and on campus there are also adequate facilities. facilities are also available." (SWDS)

".. I myself am more about being able to prioritize things that I need to get done first mas... if that's the only advantage... for things that encourage like the facilities are very adequate... although there are some facilities that require sacrifice to get them like data packages that encourage facilitating the internet when at home... that's all mas..." (SWDS)

"... I myself am not too sure about the advantages but the facilities are quite adequate..." (SWDS)

"...In my opinion, I am quite able to manage my time, although sometimes I am lazy but at least I am quite able to manage my time..." (SWDS)

The answer from the interview above can be summarized in Table 2. The respondents' responses above make it evident that they have a range of characteristics, such as the capacity for critical thought, ambition, efficient time management, and the ability to set priorities. The availability of a multitude of facilities, both on campus and via privately-owned resources, is a major factor in the progress of their master's-level coursework and projects. Their utmost efforts, driven by the provision of adequate facilities, demonstrate their excitement and achievement in tackling academic problems.

Table 2. Table of opportunity and strength among participants

Codes	Opportunity/ Strength	list of the opportunity/ strength to support the strategy
SWDS	Strength	Proficient analytical skills Effective time management Multitasking abilities Supportive friends for discussions Access to adequate facilities Opportunities to support strategies Ambitious mindset Ability to achieve set targets Time management skills Ability to allocate time for tasks and reading Prioritization skills Well time management ability, even with occasional laziness
	Opportunity	Access to internet, laptop, smartphone, and campus facilities Adequate internal and external support Adequate facilities that support prioritization Acknowledges adequate facilities

The thread and weaknesses during implementing that strategy

Additionally, it is shown that student collaboration is typical in higher education. Whereas challenges are more like threats, coming mainly from outside sources, participants' vulnerabilities are mostly internal. The answers from the participants are shown in the next section, arranged according to their reading levels:

..... "The challenges that I have been facing so far are more maybe from myself, like for example, Wah baseball is not demanding or all kinds if for example it is too grandiose or how sometimes I review (PSI)

....." It's hard because I also work part-time, and my work is something that uses my brain. So the brain is already used for work" (PSI)

It is clear from the interviews with the two participants that above average reading ability presents difficulties when putting a strategy into practice. These include a propensity to execute ambitious plans without giving them enough thought, as well as difficulty with time management and mental organization that might impede the creation and execution of plans. It is important to highlight, nonetheless, that the aforementioned participants have a good reading comprehension level, demonstrating their capacity to successfully handle the shortcomings and difficulties that have been discovered. Students with intermediate reading levels, on the other hand, give different answers, as will be explained below:

... "The most internal problems are internal problems such as sometimes being lazy, lazy, lazy too. So actually I have the intention, I have opened a journal, I have opened several journals to read. I just read one or two pages, suddenly I'm sleepy, or lazy, or distracted by social media, like that (PSI)

"First in terms of comprehension problems, from the level of motivation to read which sometimes fades, and then still choosing what to read..." (PSI)

Students who read at an intermediate level need encouragement. They frequently become sidetracked from their academic obligations by engaging in hobbies like smartphone use that appeal to them more than doing their homework. To make matters worse, kids still need to get better at choosing reading materials, which makes it difficult for them to get better at reading.

....when I'm in a bad mental state or unhealthy I really have a hard time focusing and can't force myself to finish... (PSI)

....myself the problem is how I fight against myself, against my bad nature to be lazy and all kinds of things." (PSI)

These people recognize the significance of mental health in the context of strategy implementation, despite their poor reading abilities. This realization is a result of their comprehension of how much their mental health might impact their capacity to maintain concentrate and finish tasks. The difficulties the participants had putting the plan into practice are displayed in Table 3 below. In conclusion, master's degree students in higher education encounter a variety of difficulties while developing and putting plans into practice, most of which are caused by internal factors.

Table 3. The challenges during the implementation of strategy

Reading proficiency	Challenges during Strategy Implementation
High	Implementing ambitious strategies without considering abilities Difficulties in time management and thought organization
Intermediate	Easily distracted by non-academic activities (e.g., social media) Challenges in discerning and selecting reading materials
Low	Difficulty focusing and staying motivated in mental health issues Struggling against personal tendencies to be lazy

The process in solving problems during implementing strategies

This research emphasizes that individuals with different levels of reading proficiency have unique needs when it comes to addressing these challenges, leading to various approaches to problem-solving. This distinction is evident in the interview findings related to their respective problem-solving methods.

"....Let's say three strategies strategy one two three When aspect one is okay strategy two I want to run it turns out that it doesn't match anymore and the situation is allah finished, I have to review the vision again and the strategy is like before And still mas Guided by the vision (PSDIS)

..... "Usually, if I usually rest first, after that, if I'm a little fit, I usually start working on the assignment right away, if a friend invites me to play, I usually reject it ..." (PSDIS)

As mentioned earlier, participants with a high reading level contend that adhering to the vision and mission assists in resolving issues during strategy implementation. Furthermore, they emphasize the significance of organizing activities to minimize disruptions in their academic pursuits. Additionally, they underscore the importance of good health in maximizing the effectiveness of the strategy implementation process.

"... usually for me, it's more about trying to force myself... and seeing other people, I use it as motivation to move..." (PSDIS)

".... The way I use to overcome these problems is to take space or free time. Then I also do reflecting..." (PSDIS)

Based on the feedback received from participants with intermediate reading levels, it is evident that they recognize the necessity of self-discipline in addressing challenges that obstruct the completion of academic tasks. They find it imperative to exert effort in maintaining continuous focus. Additionally, they emphasize the importance of memory recall and having free time to facilitate their task completion.

".... I usually highlight and review..." (PSDIS)

"...avoiding various activities that can disturb my mood...and my mental health, such as refreshing for a while or exercising and so on..." (PSDI).

Based on the participants' responses, it can be concluded that the challenges faced during the execution of a strategy encompass both internal and external factors. Moreover, another response indicates that the solutions to these challenges entail reviewing and aligning with the vision and mission, as well as making adjustments to the strategies. This alignment ensures that the strategy remains consistent with the established goals.

Furthermore, students can identify errors by closely monitoring and evaluating the implementation process. Additionally, aside from exploring alternative strategies, it is imperative to observe, assess, and make necessary adjustments to the students' strategies. Therefore, the process of addressing challenges and aligning with the vision and mission can significantly enhance the implementation of strategies.

The process of overcoming problems during the implementation of strategies considering the participants' reading level can be shown in the Table 4 below.

Table 4. The participants' problem-solving during strategy execution.

Reading proficiency	The steps in overcoming the problems
High	Align with vision and mission
	Emphasize good health importance from others
	External factors and peer influence
	Utilize motivation from others
Intermediate	Self-discipline and continuous focus
	Exert effort in maintaining focus
	Memory recall and free times
	Utilize reflection and memory recall
Low	Review and realignment
	Strategies consistent
	Identifying personal tendencies
	Identify improvements

Based on the interview results related to the development of critical thinking skills in reading comprehension, researchers have identified several significant findings. These findings include the strategies employed by participants to promote critical thinking and improve reading comprehension, the challenges they face, and the corresponding solutions. The results indicate that students inherently recognize the importance of nurturing critical thinking while reading. This suggests that students cultivate their critical thinking skills through the act of

reading. The underlying rationale for this is rooted in the students' desire to improve their reading comprehension by honing their critical thinking abilities. The details of critical thinking in reading comprehension are further elucidated below.

Students developing inference skill in reading comprehension

In essence, students utilize a variety of strategies to improve their reading comprehension, influenced by various internal and external factors. The following section presents the findings from data inquiries regarding the strategies employed by the participants to enhance their reading comprehension:

...of course I read a lot, and the tasks from the lecturer such as analyzing journals and then writing papers indirectly give me the opportunity to read a lot...." (SDRC)

... "read a lot. That's it, the same as increasing knowledge...(SDRC)

The two participants with high reading levels share a common strategy for enhancing reading comprehension: reading a lot.

".... So I set a goal for the month, I have to read at least one journal. So I made that target, the strategy is through targets, one day at least one...." (SDRC)

"...like doing a reflection to see the strengths and weaknesses of the strategy and then make planning, more or less like that...." (SDRC).

An extensive vocabulary is also indispensable during the research process, as it is identified as a particular source of stress for students, as indicated by participants with a high level of reading comprehension.

.... In improving reading skills, I usually increase my vocabulary so that reading is easier for me to understand quickly when there are some unfamiliar words....(SDRC)

... "My way or strategy to understand the reading is usually I learn the vocabulary first. So when I already know various or many vocabulary, it will be easy for me to interpret a text, after that I am easier to understand..." (SDRC)

In summary, the interviewees mentioned that they improve their reading comprehension through various methods, such as closely scrutinizing the text, expanding their vocabulary, searching for synonyms, and consulting experts in the relevant field of the text. In the Table 5 below, the strategies used by participants to develop reading comprehension based on their reading level are summarized.

Table 5. The strategy for developing inference skill in reading comprehension

Reading proficiency level	The strategies in developing reading comprehension
High	Extensive reading
	Analyzing texts
	Reflecting on strategies
	Building extensive vocabulary
	Utilizing reflection
	Seeking feedback from peers and instructors
Intermediate	Reflective practices
	Exploring diverse materials
	Participating in discussions
	Revisiting materials
	Making comparisons with other works
	Engaging in discussions with peers
Low	Seeking support from instructors
	Utilizing reading techniques
	Personal strategies
	Collaborative approaches
	Utilizing various evaluation techniques

CONCLUSION

In summary, there is no denying the mutually beneficial relationship between the development of critical thinking abilities and reading comprehension. Interpretation, analysis, and assessment are all components of critical thinking, which is fundamental to deciphering long texts. Interpretive skills are greatly improved by the process of knowledge production, which is made easier by reading widely, having conversations, and expanding one's vocabulary. From the students' point of view, these abilities enable them to make sense of complicated texts, ask thoughtful questions, and determine the importance of various pieces of information.

In addition, the interaction between evaluation and decision-making abilities is essential for promoting ongoing introspection, acknowledging one's advantages and disadvantages, and making well-informed choices. Metacognitive tactics are weaved intricately throughout this story to highlight the significance of cognitive processes and holistic approaches in gaining deep reading comprehension. Students see a transforming effect from the continuous reciprocal interaction between critical thinking and reading skills. Students overcome reading difficulties and transform into perceptive people capable of incisive analysis and deliberate decision-making through active involvement, increased metacognitive awareness, and regular practice. By highlighting the long-lasting effects of critical thinking construction on the development of reading comprehension skills, this evolution helps to create a dynamic and intellectually stimulating learning environment.

REFERENCES

- Abdul Latif, N. E., Yusuf, F. M., Tarmezi, N. M., Rosly, S. Z., & Zainuddin, Z. N. (2018). The Application of Critical Thinking in Accounting Education: A Literature Review. *International Journal of Higher Education*, 8(3), 57. <https://doi.org/10.5430/ijhe.v8n3p57>
- Ahrari, S., Samah, B. A., Hassan, M. S. H. Bin, Wahat, N. W. A., & Zaremohzzabieh, Z. (2016). Deepening critical thinking skills through civic engagement in Malaysian higher education. *Thinking Skills and Creativity*, 22, 121–128. <https://doi.org/10.1016/j.tsc.2016.09.009>
- Ali, I. I. (2022). Logical inferences according to the Cognitive Development model among Preparatory school students. *International Journal of Health Sciences*, 59–72. <https://doi.org/10.53730/ijhs.v6nS9.12170>
- Arifin, S. (2020). The Role of Critical Reading to Promote Students' Critical Thinking and Reading Comprehension. *Jurnal Pendidikan Dan Pengajaran*, 53(3), 318. <https://doi.org/10.23887/jpp.v53i3.29210>
- Ashimova, N., & Turekhanova, A. (2022). Development Of Critical Thinking Of Students In The Learning Process. *InterConf*, 13(109), 110–115. <https://doi.org/10.51582/interconf.19-20.05.2022.013>
- Bekbayeva, Z. S., Galiyev, T. T., Albytova, N., Zhazykbayeva, Z. M., & Mussatayeva, A. B. (2021). Fostering post-secondary vocational students' critical thinking through multi-level tasks in learning environments. *World Journal on Educational Technology: Current Issues*, 13(3), 397–406. <https://doi.org/10.18844/wjet.v13i3.5948>
- Bråten, I., & Braasch, J. L. G. (2017). Key Issues in Research on Students' Critical Reading and Learning in the 21st Century Information Society. In *Improving Reading and Reading Engagement in the 21st Century* (pp. 77–98). Springer Singapore. https://doi.org/10.1007/978-981-10-4331-4_4
- Cervetti, G. N., Wright, T. S., & Hwang, H. (2016). Conceptual coherence, comprehension, and vocabulary acquisition: A knowledge effect? *Reading and Writing*, 29(4), 761–779. <https://doi.org/10.1007/s11145-016-9628-x>

- Dekker, T. J. (2020). Teaching critical thinking through engagement with multiplicity. *Thinking Skills and Creativity*, 37, 100701. <https://doi.org/10.1016/j.tsc.2020.100701>
- Dwyer, C. P., Hogan, M. J., & Stewart, I. (2014). An integrated critical thinking framework for the 21st century. *Thinking Skills and Creativity*, 12, 43–52. <https://doi.org/10.1016/j.tsc.2013.12.004>
- Fahim, M., & Masouleh, N. S. (2012). Critical Thinking in Higher Education: A Pedagogical Look. *Theory and Practice in Language Studies*, 2(7). <https://doi.org/10.4304/tpls.2.7.1370-1375>
- Kirfel, L., Icard, T., & Gerstenberg, T. (2022). Inference from explanation. *Journal of Experimental Psychology: General*, 151(7), 1481–1501. <https://doi.org/10.1037/xge0001151>
- Kuhn, D. (2018). A Role for Reasoning in a Dialogic Approach to Critical Thinking. *Topoi*, 37(1), 121–128. <https://doi.org/10.1007/s11245-016-9373-4>
- Kusumoto, Y. (2018). Enhancing critical thinking through active learning. *Language Learning in Higher Education*, 8(1), 45–63. <https://doi.org/10.1515/cercles-2018-0003>
- Li, J., & Ren, Y. (2020). The Cultivation of Critical Thinking Ability in Academic Reading Based on Questionnaires and Interviews. *International Journal of Emerging Technologies in Learning (IJET)*, 15(22), 104. <https://doi.org/10.3991/ijet.v15i22.18197>
- Lincoln, D., & Kearney, M.-L. (2019). Promoting critical thinking in higher education. *Studies in Higher Education*, 44(5), 799–800. <https://doi.org/10.1080/03075079.2019.1586322>
- Loaiza Zuluaga, Y. E., Gil Duque, G. M., & David Narváez, F. A. (2020). A study of critical thinking in higher education students. *Latinoamericana de Estudios Educativos*, 16(2), 256–279. <https://doi.org/10.17151/rlee.2020.16.2.13>
- Mihaylov, T., & Frank, A. (2018). Knowledgeable Reader: Enhancing Cloze-Style Reading Comprehension with External Commonsense Knowledge. *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 821–832. <https://doi.org/10.18653/v1/P18-1076>
- Mumford, M. D., Todd, E. M., Higgs, C., & McIntosh, T. (2017). Cognitive skills and leadership performance: The nine critical skills. *The Leadership Quarterly*, 28(1), 24–39. <https://doi.org/10.1016/j.leaqua.2016.10.012>
- Partalo, D., Skopljak, M., & Mihajlović, T. (2019). Stimulating critical thinking in higher education. *Nastava i Vaspitanje*, 68(2), 231–250. <https://doi.org/10.5937/nasvas1902231P>
- Pineida, F. O. (2011). Competencies for the 21st Century: Integrating ICT to Life, School and Economical Development. *Procedia - Social and Behavioral Sciences*, 28, 54–57. <https://doi.org/10.1016/j.sbspro.2011.11.011>
- Plotnikova, N. F., & Strukov, E. N. (2019). Integration of teamwork and critical thinking skills in the process of teaching students. *Cypriot Journal of Educational Sciences*, 14(1), 1–10. <https://doi.org/10.18844/cjes.v14i1.4031>
- Ravindran, V. (2019). Data analysis in qualitative research. *Indian Journal of Continuing Nursing Education*, 20(1), 40. https://doi.org/10.4103/IJCN.IJCN_1_19
- Saadé, R. G., Morin, D., & Thomas, J. D. E. (2012). Critical thinking in E-learning environments. *Computers in Human Behavior*, 28(5), 1608–1617. <https://doi.org/10.1016/j.chb.2012.03.025>
- Sale, J. E. M., & Thielke, S. (2018). Qualitative research is a fundamental scientific process. *Journal of Clinical Epidemiology*, 102, 129–133. <https://doi.org/10.1016/j.jclinepi.2018.04.024>
- Song, X. (2016). ‘Critical Thinking’ and Pedagogical Implications for Higher Education. *East Asia*, 33(1), 25–40. <https://doi.org/10.1007/s12140-015-9250-6>

- Song, Y., Deane, P., & Fowles, M. (2017). Examining Students' Ability to Critique Arguments and Exploring the Implications for Assessment and Instruction. *ETS Research Report Series*, 2017(1), 1–12. <https://doi.org/10.1002/ets2.12166>
- Svetlana Antonova, Tatyana Pletyago, & Anna Ostapenko. (2021). Fostering Critical Thinking Skills in European and Asian Higher Education Institutions. *MIER Journal of Educational Studies Trends & Practices*, 138–150. <https://doi.org/10.52634/mier/2020/v10/i2/1335>
- van der Zanden, P. J. A. C., Denessen, E., Cillessen, A. H. N., & Meijer, P. C. (2020). Fostering critical thinking skills in secondary education to prepare students for university: teacher perceptions and practices. *Research in Post-Compulsory Education*, 25(4), 394–419. <https://doi.org/10.1080/13596748.2020.1846313>
- Van Damme, D., Zahner, D., Cortellini, O., Dawber, T., & Rotholz, K. (2023). Assessing and developing critical-thinking skills in higher education. *European Journal of Education*, 58(3), 369–386. <https://doi.org/10.1111/ejed.12563>
- Velayati, N., Muslem, A., Fitriani, S. S., & Samad, I. A. (2017). An Exploration of Students' Difficulties in Using Critical Thinking Skills in Reading. *Al-Ta Lim Journal*, 24(3), 195–206. <https://doi.org/10.15548/jt.v24i3.298>
- Vozgova, Z., & Afanasyeva, O. (2019). Critical Reading Strategies in Language Learning: an Overview of Leading Approaches. *Proceedings of the 5th International Conference on Social, Economic, and Academic Leadership (ICSEALV 2019)*. <https://doi.org/10.2991/assehr.k.191221.182>
- White, A. M. J. (2019). *Information Literacy and Critical Thinking in Higher Education* (pp. 367–381). <https://doi.org/10.4018/978-1-5225-7829-1.ch020>
- Yildirim, S., & Söylemez, Y. (2018). The Effect of Performing Reading Activities with Critical Reading Questions on Critical Thinking and Reading Skills. *Asian Journal of Education and Training*, 4(4), 326–335. <https://doi.org/10.20448/journal.522.2018.44.326.335>
- Zaim, M., Zainil, Y., & Fitrawati. (2021). *Reading Assessment to Enhance Critical Thinking, Argumentative Thinking, and Higher Order Thinking Skills in Junior High School*. <https://doi.org/10.2991/assehr.k.211129.023>