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Research Article

FROM CLICKS TO ANALYTICS: THE PROMOTION OF CRITICAL-CREATIVE THINKING THROUGH TEALL INTEGRATION

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Abstract
The promotion of critical and creative thinking through technology integration at once in English learning presents a large challenge. This study employs a qualitative approach to explore teachers' viewpoints of promoting students' critical and creative thinking through Technology-enhanced Active Language Learning; and the extent of teachers integrating TEALL into English learning at Junior High School (JHS) in Indonesia. Employing qualitative approach with purposive sampling, eight junior high school teachers from three islands of Indonesia were recruited. Research data were transcriptions of recorded interviews, teacher reflective journals, and Google Search Console (GSC) performance report. Triangulation was used to compare and cross-check findings and increase research credibility and validity. Findings show teachers emphasize the promotion of critical and creative thinking based on cognitive processes, linking critical thinking to receptive skills and creative thinking to productive skills. TEALL integration is viewed as supportive instead of transformative to the promotion. Such evidences as lengthy texts and complex sentences are considered the best input to facilitate students' critical analysis. The view stems from teachers' apprehension of evident infusion of critical and creative thinking into the instructions. The key to success of integrating TEALL is teachers' acceptance. Increasing teachers' self confidence and commitment can be the driving force underlying the learning outcomes. Strengthening their readiness can also be the lever for impactful practices. This study is limited by the diverse social and cultural differences present in Indonesia. Therefore, future research in education reform should take these as essential aspects and decide their position within.

Keywords: Creative Thinking, Critical Thinking, Myenglishstep, Qualitative Study, Technology Enhanced Active Language Learning.

INTRODUCTION

The promotion of critical and creative thinking can encourage higher level of English language proficiency with the provision of effective conditions (Dilekçi & Karatay, 2023; Li, 2023). However, both are often isolated due to the difficulties of embedding critical thinking in foreign language teaching and the lack of suitable conditions to increase students' creativity. The importance of embedding critical thinking in English learning is believed to improve students' success in other subjects (Nehru et al., 2024).

Referring to a finding from Physics learning, only 15% students achieved the minimum competency criteria (KKM) on critical thinking questions (Luzyawati, 2017; Mardiana et al., 2025). It is possible to infer that the same percentage surpass the KKM on English subject. On the other hand, the promotion of creative thinking has become a new task for teachers to fulfill. Only few teachers are found to have sufficient instructions to promote students' creative thinking (Alabbasi et al., 2022). This is on the contrary to the development of creative thinking which is considered the quality standards of English teaching (Liao et al., 2018; Alzahrani et al., 2022) and the ability to master for the students of 21st century (Yuan et al., 2021; Syutaridho et al., 2023; Yustitia et al., 2025).

Meanwhile, the initiatives of technology-driven education reform aim at integrating digital technologies from the level of policies to classrooms (Lee & Lee, 2024). Facts from previous research presents the improvement of critical thinking (Saputra & Kuswanto, 2019; Rogti, 2021) and creative thinking (Li et al., 2022) when learning is integrated to technology (Ley et al., 2022; Henke et al., 2023; Nehru et al., 2024). But, the most advanced technology can solely stand to improve critical and creative thinking. There are proper teaching methods to activate the students' endeavors so that the technology can bring positive effect for students (Lin, 2018). Hence, the meaningful integration should be understood (Mhlongo, 2023) and teachers' attitude toward the integration will influence the success (Villarama et al., 2025).

Moreover, although strategies used in the development of critical thinking are frequently discussed, very little is known about the integration of teaching strategies and technology for the development (Sönmez, 2021). Also, the negative effects of technology, such as distractions during learning and easy access to ready-made answers cause teachers reluctant to integrate technology to promote creative thinking (Bereczki & Kárpáti, 2021a). Not to mention, the integration is highly contextual with the regional development, along with the accessibility of the internet.

In Indonesia, technology integration in learning is believed to expand the scope of curriculum reform and rejuvenation (Wang et al., 2023). Despite the challenges and difficulties encountered in the integration, the Ministry of Education, Culture, Research, and Technology of Indonesia is confident that learners will be equipped with two of the 21st-century skills, i.e., critical and creative thinking. With the reform of the national education curriculum, Indonesia has committed to equip learners with the knowledge, information, skills, and competencies needed in the future by incorporating technology to execute recent educational policies (Gouëdard et al., 2020; Wang, 2023). Further, the high potential of technology integration is mobilized to drive reform in Indonesia, which has an expansive geographical size.

Previous research emphasizes the need for education stakeholders to integrate technology and pedagogical practices (Hasumi & Chiu, 2024). Technology integration is believed to bring significant developments in the trends of English Language Teaching (ELT) (Wang & Kabilan, 2024), and consequently, advance the classroom instruction effectiveness. Among many models and terms of technology integration in language classrooms, such as CALL, TELL, MALL, DCALL, another new term named TEALL (Technology-Enhanced Active Language Learning) has emerged to signify another development of technology enhancing active learning. This term emerges from the research conducted by Hashim et.al (Hashim et al., 2023). The term "active" refers to students' level of participation and collaboration in the lesson encouraging students to engage more during learning (Özkan & Bademci, 2020).

TEALL integration can offer potential support for teachers to provide a more inclusive learning environment (Johler, 2022; Sandberg, 2022). It goes without saying that students are now exposed to technology on a regular basis. This then inevitably makes the integration a comfort zone for students in the classroom, thus opening up and widening learning opportunities (Carstens et al., 2021). Based on the above discussion, the researchers are confident that TEALL can drive the reform necessary for the promotion of critical and creative thinking in Indonesia. Concerning the promotion of critical and creative thinking at once in English learning presents a large challenge, this study employs a qualitative approach

to explore 1) teachers' viewpoints of promoting students' critical and creative thinking through technology; and 2) the integration of TEALL in the promotion of critical and creative thinking into English learning at Junior High School (JHS) in Indonesia.

RESEARCH METHOD

This study employs a qualitative approach and was done for 8 months from October 2024 to May 2025. The primary goal of the study (Merriam & Tisdell, 2016) is to investigate the affordances of https://www.myenglishstep.com/new-home, the TEALL to promote critical and creative thinking and to what extent its integration into English learning in JHS in Indonesia by exploring multiple sources of information i.e., the focus-group interview, teachers' personal documents (reflective journals), and students' learning behavior toward the TEALL taken from Google Search Console (GSC).

There are three phases of data processing: data condensation, data display, and conclusion drawing and verification (Miles, 2014). Data condensation was done by sequencing particular words and phrases to find concepts in the research data. Selected participant utterances are displayed to facilitate conclusions and verification. Examining, comparing, and contrasting teachers' reflections led to verify conclusion. Triangulation was used to compare and cross-check findings, and to increase the credibility and validity of research.

Eight English teacher users were recruited through purposeful sampling as participants for the interview and shared their reflective journals (Table 1). The use of limited sample is meant to provide thick description and relevant information needed (Creswell & Poth, 2018). They were based at three different islands of Indonesia (Sumatra, Java, and the Maluku Islands) and each had over two years of experience in integrating the TEALL. All participants agreed to take part in the research. Their names, however, were replaced by codes from T1 to T8 to correspond with the number of participants and confidentiality. Informed consents were obtained from participants prior to the interview (Flick, 2018).

Table 1. Interview Participants

No.	Gender	School Location
T1	Male	Bandung, West Java
T2	Male	Dumai, Riau Kepulauan
T3	Male	Semarang, Central Java
T4	Female	Kei Kecil, Maluku Islands
T5	Female	Bandung, West Java
T6	Female	Agam, West Sumatra
T7	Female	Bandung, West Java
T8	Female	Bandung, West Java

The focus group interview is used to generate "unique" data from the participants' interactive discussion, which might not be acquired individually. The interview was then transcribed for thematic analysis to relate their utterances to reflect their thoughts, beliefs, and knowledge. The analysis was done manually using printed transcripts, reading, highlighting and organizing utterances to infer meanings, and finally generating subthemes.

To address the geographical disparities of the participants, the interviews were conducted by videoconference and lasted three hours. Videoconferencing was chosen because it allows for spontaneous speech and natural communication, which are similar to in-person encounters. The interviews were recorded and transcribed for the analysis. An interview guide is prepared in advance. There are two focal questions posed: 1) How do teachers view the promotion of students' critical and creative thinking through technology?; 2) Based on their experiences, how the integration of TEALL in the promotion of critical and creative thinking into English learning at Junior High School (JHS) in Indonesia

To support their viewpoints in TEALL integration, participants are encouraged to reflect on their classroom practices documented in teaching journals. There are several points highlighted in the journal: how teachers assess students' critical and creative thinking, and how the TEALL was integrated. The OECD critical-creative thinking rubric was employed to investigate the conjunction of teaching practice in the integration of the TEALL to promote critical and creative thinking. The OECD rubric involves four macro processes: inquiry, imagining, doing, and reflection, was chosen to examine the promotion of critical and creative thinking (Vincent-Lancrin et al., 2019).

The GSC performance report was employed to provide the performance of the CMS page: search results (impressions), how many times it is clicked (clicks), the click-through rate (CTR), and the average position on Google. These metrics can identify the traffic spikes or peaks in visits for a specific period of time. The downside is that there is no specific information about who clicked on the CMS or what actions they took afterward. However, since the data originates from educational technology rather than a commercial site, all the visitors are considered students, especially if there are periodic spikes during the learning period associated with the academic term.

RESULTS AND DISCUSSION

There are two themes determined prior to the analysis: teachers' viewpoints of promoting students' critical and creative thinking through technology integration and the integration of TEALL in the promotion of critical and creative thinking into English learning at Junior High School (JHS) in Indonesia.

Theme 1: Teachers' viewpoints of promoting students' critical and creative thinking through technology integration

Four subthemes were revealed for the first theme: (Subtheme 1) Participants conceptual definition of critical thinking; (Subtheme 2) Elements of Teachers' Absence in Providing HOTs-oriented Questions; (Subtheme 3) Participants conceptual definition of creative thinking; and (Subtheme 4) Teachers' viewpoint of integrating technology to promote critical and creative thinking.

Subtheme 1 presents participants' conceptual definition of critical thinking. Critical thinking is cognitively stimulated thinking process in which students are conditioned to respond using their logic by triggering them with problems to analyze so that they can evaluate ideas to create solution (Table 2). This is in line with the definitions proposed by (Atkinson, 1997; Toh et al., 2026) that teachers condition the promotion of critical thinking through an embedded event on learning. Subsequently, participants described in a more specific process at which students received teachers' stimuli such as several questions to answer, a case, or a problem to be analyzed in person or through a group discussion during the event. At this point, it can be inferred that it is essential for teachers to formulate inquiries that encourage higher-order thinking skills (HoTS). The inquiries can start with providing driving questions during the promotion. Therefore, it can be deductive that teachers view of promoting critical thinking is that the promotion should take place at the outset of learning.

In addition, critical thinking is mindset cultivation through on-going stimuli instilled through tasks, activities, and others by teachers. Hence, the importance of the cultivation since high school has been pronounced as students are preparing for their advanced education (Wen et al., 2024). Promoting the critical thinking is in fact students' affordances to prepare for any context of future professional demands (Silva et al., 2023).

Table 2. Subtheme 1

Source Utterances	Inferred Meaning	Elements of Critical Thinking Conceptual Definition
… *"the teacher has given several questions to analyse, then evaluate and create."* (T1) *"… obtained from questions that stimulate them to think at a higher level …"* (T2)	1. Critical thinking is activated by instructional or teaching stimuli. 2. Critical thinking is students' response to triggered questions or problem. 3. Through (problem) analysis, (ideas) evaluation and (solution) creation, critical thinking reflects the employment of higher-order thinking operation.	Critical thinking is cognitively stimulated thinking process as students' response to triggered questions/ problems using their ability to analyze ideas, evaluate ideas and create solution.
"Students have been conditioned to be critical, …." (T1)	4. Critical thinking is trained to use their logic, not innate.	Students are conditioned to be critical.

"... students' thinking critically using their logic." (T6)		
"... is more of a receptive skill." (T2) *"... is more about setting students' mindset to think critically."* (T4)	5. The process of thinking starts from receiving teacher-intended stimuli to cultivate students' mindset to think critically. 6. The process persists when students actively receive the ongoing stimuli to be critical instilled through tasks, activities, and so on.	Critical thinking is shaped through cultivation of students' critical mindset from teachers' instruction simultaneously.

Subtheme 2 emerged as participants' simultaneous responses toward the triggered stimuli to promote critical thinking (Table 3). Teachers failed to promote students' critical thinking originates primarily from their dominant use of LoTS-oriented questioning rather than the HoTS ones. However, they admit that their lack of competencies to expose students to logic-stimulating prompts and problem-based questions. This indicates today's instructional questioning is not yet challenging. It is unfortunate that they realized this subsequently. They are also aware of the requirement to provide multi-step scaffolding for students to be critical but they still relied on recall-level questioning.

Based on the above discussion, it is inferential that teachers have not effectively chosen strategies that stimulate the improvement of HoTS. There is still a need to improve teachers' cognition of the components that form critical thinking (particular reasoning skills, dispositions, and relevant information). Improvements in cognition will expand the components of students' critical thinking that can be measured empirically by academic tests (Bensley, 2023). On this ground, it is decisive for teachers to find strategies to effectively stimulate the students' HoTS. and involving students in low-level cognitive activities does not boost their academic fulfillment (Shcheglova et al., 2025).

However, the failure to manifest critical thinking in English language teaching is not solely teachers' fault as the concept is elusive (Li, 2023). Among the concept raised are critical thinking is associative to communicative competence, therefore it should be promoted (Marin & Pava, 2017)e approach (Marin & Pava, 2017) or the promotion of critical thinking requires HoTS as mentioned by the participants, but there is an involvement of students' awareness of their learning process to make arguments, solve problems, flexibility and freedom (Li, 2016). This explain why findings from relevant studies only shows teachers' positiveness to the integration of critical thinking into English learning (Zhang et al., 2020). There is also finding stating that they taught to prepare students for linguistics knowledge acquistion instead of promoting students' critical thinking (Yuan et al., 2021; Zhang et al., 2020).

Despite the conceptual differences in the manifestion of critical thinking in English language teaching, the multi-steps involved in engaging students with critical thinking encompass questioning, analyzing context, and evaluating evidence (Darwin et al., 2024) are similar to what have been perceived. The scaffolding steps must be completed in a specific order and cannot be skipped. Skipping any of these key steps will end up in premature or incomplete thinking. It also implies that students' exposure to HoTS questions will bring students to the highest level of thinking, namely, evaluation. The more teachers present high-quality questions, the more opportunities students have to think critically about them. Further, teachers need to devise two or three steps for students to start to think critically. In this case, steps are understood as progressive activities or tasks for students to engage in so that the teacher's expectation shall be exceeded. In this case, teachers should recognize that critical thinking is a process skill, not a product (Gunawardena & Wilson, 2021).

Table 3. Subtheme 2

Source Utterances	Inferred Meaning	Elements of Teachers' Absence in Providing HOTs-oriented Questions
"LoTS … instead of HoTS questions are often used by teachers." (T1)	Teachers relied on recall-level questioning.	Teachers dominantly use LoTS questions during learning.
"… teachers can encourage students … by ... exposing them to HoTS questions." (T6)	Teachers still needs support to use HOTs questions to promote critical thinking.	Teacher lacks of competencies to expose students' to logic-stimulating prompts or problem-based questions.
By stimulating students' logic, they start analysing the problem or responding to the question posed." (T6)	There is a necessity for students' logic stimulation.	The logic stimulating or problem-based questions have not been provided sufficiently.
"For students to be critical, it takes not only one step but two steps or three steps to perform further." (T2)	It takes several steps for the promotion of critical thinking with teachers' structured prompts.	Teachers only design single task during learning.

Subtheme 3 is meant to primarily focus on participants' conceptual definition of creative thinking (Table 4). Yet, it is not possible to define creative thinking without critical thinking. Hence, participants conceptualized creative thinking as a product of acquiring critical thinking or the logical consequence of acquiring critical thinking (Priyatni & Martutik, 2020). The concept is in harmony with several relevant studies such as creative thinking is inevitable a component of critical thinking (Park et al., 2023); or creative thinking and critical thinking are not identical but they are complementary (Wechsler et al., 2018).

The emergence of creative thinking occurs when critical thinking has been fully internalized. This implies that the promotion of creative thinking skills is coextensive with the development of productive skills. To infer, critical thinking is promoted in line with the development of receptive language skills. On the other hand, creative thinking is in line with the development of productive skills. There is an association between the increase in creative thinking and academic performance (Inuusah et al., 2019; Yang & Zhao, 2021).

As there should be evidence of its manifestation in English language teaching, students' creative thinking can be properly assessed. It is measurable (Syahrin et al., 2019). Also, it can be acknowledged that creative thinking is more likely to be manifested in English language teaching. Students' creative thinking mastery can be posited as their oral and written performance which are also the goals to achieve in English language learning (Litvinov & Bukovsky, 2021).

Table 4. Subtheme 3

Source Utterances	Inferred Meaning	Elements of Creative Thinking Conceptual Definition
"So, creative thinking is the product ...., the outcome of a process called higher order thinking learning." (T1) *Creative thinking it is an extension of critical thinking at which students generate new ideas from the things they learned."* (T6)	1. Creative thinking emerges as the product of critical thinking. 2. It is an extension process.	Creative thinking is conceptualized as the product-oriented extension of students' success of responding to HoTS questions.
Creative is more about the product created." (T4)	Creative thinking is evidenced through students' in oral performance or written product.	There is a clear evidence to properly assess students' creative thinking.

Subtheme 4: Teachers' viewpoint of integrating technology to promote critical and creative thinking are realized in three distinct elements (Table 5). First, teachers view the integration has successfully promoted critical thinking through its exercises. However, it takes a manual to promote creative thinking. Second, teachers' view relates to their belief of promoting critical thinking through longer texts and linguistic complexity for deep cognitive analysis. The last element is in relation to the provision of manuals to promote creative thinking.

At its core, teachers view learning which is enhanced by technology can promote students' critical thinking. Basically, the integration itself has promoted the critical thinking. Not only because of the instruction itself is analytic, but there are conventions and rules inherent in technology that cannot be violated (Haleem et al., 2022). However, increasing loads to students' input does not guarantee effective and improved learning (van Nooijen et al., 2024). Providing scaffolding aims to enable students to reduce complexity. Text complexity has negative influence toward students' proficiency (Spencer et al., 2019).

Disregarding the contradiction, teacher has positive attitudes toward the promotion of critical thinking through technology integration. The exercises can stimulate thinking process and the promotion has taken place at the outset of learning. The difficulties of embedding critical thinking have been overcome by the integration.

Yet, technology enhancing creative thinking are in different realm. Creative thinking when technology-enhanced are associated with two strategies of instructions: lecture and dialogues (Bereczki & Kárpáti, 2021). The association varies throughout different language levels of students' proficiency (Yang & Zhao, 2021). It influences proficient students in the middle level more than other levels. In addition, creative thinking is implemented in a dynamic interaction among students with heterogenous cognition. Technology enhances the learning environments (Du & Zhang, 2022) to mediate creative expression and production (Wulan et al., 2025).

Table 5. Subtheme 4

Source Utterances	Inferred Meaning	Elements of Teachers' Integration of technology
"…, there are many exercises that connect one with another. (T1) "… providing a manual … suggestions for ..." (T6)	1. Critical thinking is manifested in the exercises provided by TEALL. 2. Manual provision is a must for creative thinking.	TEALL provides exercises as multi steps to promote critical thinking but needs to provide manual for creative thinking.
"… extending the text a bit longer." (T3) "… more complex sentences, …. to think critically and creatively." (T4)	3. Longer input stimulates deeper cognitive process. 4. Complex sentences promotes critical analysis.	Textual extension for deep cognition and linguistic complexity for cognitive analysis.
"… somewhat difficult to infuse, …. because it is related to the rubric." (T1) "…teachers naturally have their own subjectivity." (T2)	5. Creative thinking is somehow difficult to infuse as the rubric to assess performance may vary.	Promoting creative thinking through the integration of TEALL is constrained by rubrics that may not meet students' language competency level.

Based on the interview, participants distinct the promotion of critical thinking and creative thinking based on the cognitive process. Dealing with stimulated thinking process, critical thinking is promoted in line with the development of receptive skills. Since creative thinking is viewed as the product, participants equate the success of its promotion with the achievement of productive skill development. At this point, participants do not differ whether or not technology has been integrated into learning. It can be

concluded that teachers view technology integration only as supporting tools but it has not yet driven the outcome. It is inferential that TEALL integration is also viewed in the same way.

This view stems from teachers' uncertainties over the infusion of critical thinking and creative thinking into the instructions. In their view, the promotion of critical thinking requires students' engagement with lengthy and complex sentences to facilitate students' deep analysis. Such view will hinder students' comprehension when they have not attained the requisite level of proficiency. Additionally, teachers view on creative thinking are somewhat biased. Sometimes, they see it as the product of language learning, while at other times, they see it as creativity resulting from critical thinking. Actually, this is not ambiguous. Indeed, creative thinking can overlap with creative thinking.

The integration of TEALL integration promote creative thinking in general has already reached its optimal capacity. The capacity of TEALL to condition the promotion of creative learning is different from the exact organization of scaffolding steps to promote critical thinking. The need for different rubric arises when teachers are ambiguous at determining the outcome of creative thinking itself.

Above discussion presents teachers view of promoting critical and creative thinking as a consequence of cause and effect. The ongoing acquisition of critical thinking serves as the initial foundation for the promotion of creative thinking. The promotion should also be in alignment with the development of English language skills. Figure 1 summarizes what has been perceived by teachers of promoting students' critical and creative thinking through the integration of TEALL.

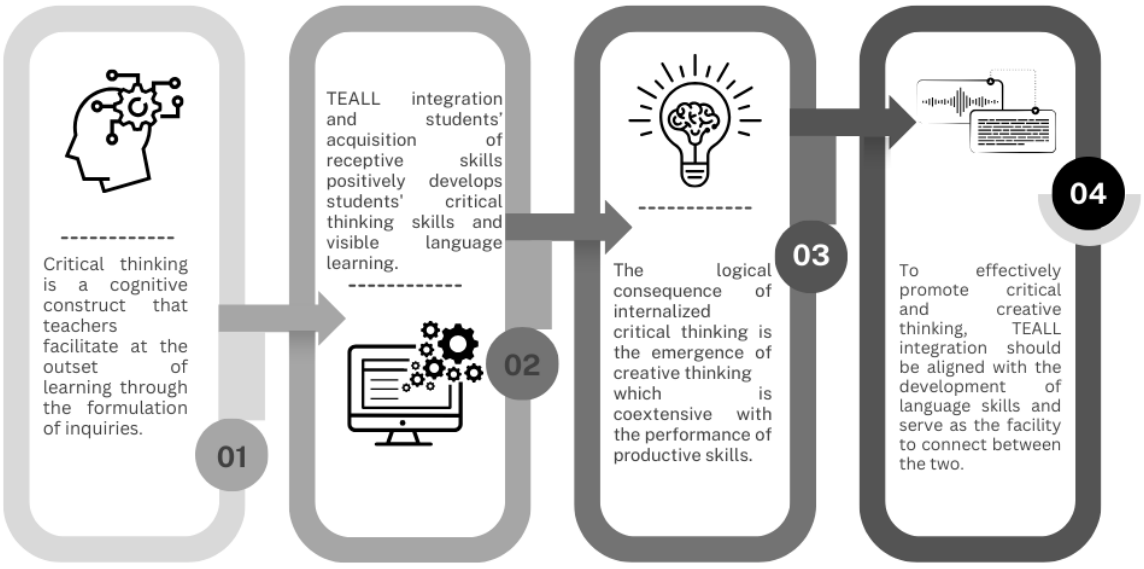

Figure 1. The display of teachers' viewpoints on TEALL integration to promote critical and creative thinking

Theme 2: The integration of TEALL in the promotion of critical and creative thinking into English learning at Junior High School (JHS) in Indonesia.

This theme dives deep to get recommendations for the TEALL integration using teachers' reflective journals. Two journals were used from participants T6 and T8. The journals took the same topic, *My Brother is Tall* from the TEALL. The main objective is: *Students are able to give oral information about family members, things, and animals, and to describe it in a series of simple sentences using common adjectives correctly*. In the exercise, students are directed to relate their description to things in their immediate environment. A dive-in exercise follows. Finally, students are expected to reflect on the topic from their learning.

Based on the journals, both participants used different enabling skills to promote critical and creative thinking. Participant T6 demystified the objective using the domain of understanding from Bloom's Taxonomy: *Students are able to recognize the information of personal relevance (family members) through a series of simple sentences linked with the connector "and"*. Next, students' inquiry to select the accurate descriptive adjective signifies the promotion of critical thinking. Then, students' creative thinking is assessed through their products, a short description of a favorite pet consisting of a series of sentences using descriptive adjectives. These activities can be done through collaborative or individual tasks. When accomplished, students reach the next level of Bloom's Taxonomy- Applying.

Moreover, participant T8 indicated that students could develop critical thinking skills by attempting to describe things beyond personal experiences. It appeared that students' ability to draw connections between people, things, etc, by using adjectives correctly in their descriptions. Additionally, students' success in creative thinking is evaluated based on their efforts to construct new and different sentences. Although similar in terms of assessing creative thinking, T8 can improve student achievement even further by analyzing. Table 6 displays the matrix of participants' enabling skills through indicators of critical and creative thinking and the recommended strategies.

It was found that inquiry was the most frequently used subskill to promote critical and creative thinking. This subskill serves as the foundation for acquiring other higher abilities of critical and creative thinking. This finding is complementary to the previous one. Teachers need additional manual to have alternatives in assessing creative thinking. Also, it verifies that teachers has infused critical thinking and creative thinking in the instructions.

Table 6. The matrix of TEALL enabling skills, indicators to promote critical and creative thinking, and recommended strategies

Enabling Objectives of the TEALL (Bloom's Taxonomy)	Indicators to Assess Students' Critical Thinking	Indicators to Assess Creative Thinking	Recommended Strategies
1. (T6) Students are able to recognize the information of personal relevance (family members) through a series of simple sentences linked with the connector "and".	*Inquiry* Students are able to identify accurate adjectives and provide reasons for the selection.)	*Inquiry* Students can combine adjectives to produce unique descriptions.	a. Collaborative Tasks b. Metacognition and Reflection
2. (T8) Students are able to generally identify personal descriptions from provided images (an idol, for instance) using common adjectives.	*Inquiry* Students are able to ask and give personal descriptions correctly.	*Imagining* Students are able to generate another object/ thing to be described using descriptive adjectives.	a. Mini Project Task (e.g., making profile cards). b. Role play (e.g., pairing students for question-and-answer activities of describing people/things.)

To determine the extent of "active learning", the GSC Performance Report is used. The report is the collection of impressions, clicks, CTR, and the average position of the TEALL on Google. Noticeably, the CTR for the queries "my english step" and "myenglishstep" is much higher than the overall average, indicating a high level of query recognition and loyalty among users, who are most likely junior high school students. These students deliberately search for this digital learning resource rather than stumbling upon it by chance. In online learning, students' behavioural engagement aligns with their high commitment to learning English through multiple participations.

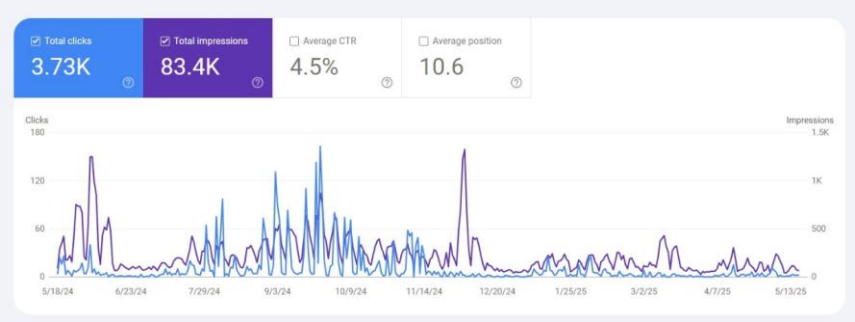

Figure 2. The GSC performance report of the TEALL

Based on Figure 2, the most noticeable peaks of impressions and clicks occurred in three months: June, September, and December 2024. In June, the sharp rises reflected the start of the academic term. During this month, it was possible that teachers introduced the TEALL to students and directly instructed them to have a quick tour. In September, there were several peaks indicating that students were undergoing mid-semester activities. These activities required them to complete exercises on TEALL. The last significant short spike in mid-December reported that students are completing tasks for the end of the academic term.

Although the performance report does not directly identify participation in TEALL, it can be seen from the number of clicks that grade 7 contributed the most with 808 clicks (grade 8 contributed 493 clicks, and grade 9 contributed 232 clicks). Their active participation was structured according to the modules designed for each grade level. This also shows that students directly accessed the materials for their grade level. To sum, student active participation is limited to the required task. This signifies that students' self-regulation has not yet developed among students. This could be because TEALL is not yet widely used in their area, or because their level of affordances is still in the process of substituting technology. Consequently, the efficacy of TEALL integration is largely influenced by the extent of teacher acceptance.

CONCLUSION

Teachers emphasize the promotion of critical and creative thinking based on cognitive processes, linking critical thinking to receptive skills and creative thinking to productive skills. Technology as well as TEALL integration is viewed as supportive instead of transformative to the promotion. The view stems from teachers' apprehension of evident infusion of critical and creative thinking into the instructions. Such evidences as lengthy texts and complex sentences are considered the best input to facilitate students' critical analysis. This belief should be reduced. It is factual that teachers need additional manuals to integrate TEALL in the promotion of critical and creative thinking. The manuals will offer wider ranges of alternatives to evidently assess critical and creative thinking in language learning. It can also clarify the indicators and expected outcomes. The key to success of integrating TEALL to promote critical and creative thinking into English learning at Junior High School (JHS) in Indonesia is teachers' technology acceptance. Increasing teachers' self confidence and their commitment is a necessity for teachers to integrate TEALL must be the driving force underlying the learning outcomes, not just a tool to achieve the goals. Strengthening their readiness can be the lever for impactful practices that meaningfully promote students' critical and creative thinking. There are several limitations of this study caused by the wide range of social and cultural differences in Indonesia. Therefore, less attention was given to the demographic aspects. In addition, this recent study takes insufficient internet access and digital competencies as the bounded system. Indeed, both of these challenges remain barriers for both teachers and students to have equal access to quality education in Indonesia. Future research in education reform should take these as essential aspects and decide their position within.

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AUTHOR CONTRIBUTIONS

The first author was responsible for conceptualization and funding acquisition. The second author handled methodology and software. The third author managed resources and investigation. The fourth author prepared the original draft, formal analysis, and the process of reviewing and editing. The fifth author handled data curation and project administration. The sixth author managed writing formal analysis, visualization, and supervision.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

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