




Muhammad Jamil¹, Maria Anwar² & Muhammad Jafar Ali³

¹Lecturer, Department of Education, GC Women University Sialkot, Pakistan

²Visiting Lecturer, Education & Rural Development, University of Agriculture, Faisalabad, Pakistan

³PhD (Education), Controller, Board of Intermediate & Secondary Education, Faisalabad, Pakistan

KEYWORDS	ABSTRACT
Critical Thinking, English Language Teaching, Secondary Education, Teacher Perceptions	<p>This quantitative, descriptive research study investigated English teachers' perspective of critical thinking at secondary level. Sample of 100 participant (50 male, 50 female) was selected through random sampling. The data was collected using self-developed, 5-point Likert scale questionnaire. The data was analyzed using SPSS-20 software, with frequencies calculated for each response option. The results indicated that majority of respondents (92.4%) had knowledge about critical thinking, viewed it as important for teaching English (92%), and considered it crucial for 21st-century learning (91%).</p> <p>Most of teachers (90%) reported using different techniques, particularly questioning (95%), to develop the students' critical thinking skills. However, only 14% believed students were good at the critical thinking, while 44.7% disagreed with this notion. This highlighted a perceived gap between their efforts & students' abilities. It is concluded that English teachers have strong theoretical understanding of critical thinking and recognize its significance. Still, concerns exist about use of the current practices in fostering students' critical thinking skills. Addressing these areas could help bridge gap amid teachers' aspirations for critical thinking development & observed outcomes in their students.</p> <p> 2024 Journal of Social Sciences Development</p>
ARTICLE HISTORY	
<p>Date of Submission: 28-01-2024</p> <p>Date of Acceptance: 03-03-2024</p> <p>Date of Publication: 05-03-2024</p>	
Corresponding Author	Muhammad Jamil
Email:	m.jamil@gcwus.edu.pk
DOI	https://doi.org/10.53664/JSSD/03-01-2024-07-76-85

INTRODUCTION

The critical thinking skills have become indispensable in modern society, enabling individuals to analyze information, evaluate arguments, synthesize perspectives and form the reasoned judgments (Miller, Camarda, Mercier, Burkhardt, Morisseau, Vinchon, Landais & Mourey, 2023; Sun, Wang & Wegerif, 2020; Abrami, Bernard, Waddington, Wade & Persson, 2015). Therefore, cultivating critical thinking alongside subject knowledge has become a priority across disciplines (Rios, Golde

Tractenberg, 2019). It is especially relevant in language education, where critical thinking allows learners to interpret texts, construct arguments & navigate intercultural complexities (Sun, Wang & Wegerif, 2020). As such, English teachers play a pivotal role in integrating the critical thinking instructions to empower the analytical, reflective learners (Andiliou & Murphy, 2010). However, effectively doing so requires a profound understanding regarding the critical thinking and suitable pedagogical approaches. The critical thinking skills have long been evaluated as an important educational outcome. Developing the learners' capabilities for invention, evaluation, and analyzed judgment permits lifetime learning in a complex world (Ghanizadeh, Hoorie, Jahedizadeh, Hoorie & Jahedizadeh, 2020).

Through knowledge mushrooming exponentially across the disciplines, the ability to assess ideas and make deep judgments has become fundamental for connected citizenship, employability, and problem-solving. In reply, research upon critical thinking teaching has grown, clarifying concepts, modelling curricula, as well as originating assessment instruments to meet growing social demands (Chinooneka, 2020). While research affirms benefits of critical thinking instruction for enhancing language proficiency, reading, writing, and academic achievement (Roomy, 2022; Okasha, 2021; Salameh, Salameh & Emami, 2019), few studies have explored secondary school English teachers' perceptions and experiences. In this linking, this study aimed to investigate teachers' knowledge, views on importance, employed strategies, perceptions of student abilities, and professional needs regarding critical thinking. Thus, it is hoped that insights in these areas can inform practices and initiatives to bridge the gap between aspirations of critical thinking development and observable student outcomes (Roomy, 2022; Okasha, 2021; Salameh et al., 2019), equipping learners with the necessary cognitive skills.

There are also studies reporting the standing of critical thinking and utilizing various instructional approaches to foster it (Andiliou & Murphy, 2010; Sun et al., 2020). However, a perceived disparity exists between teachers' efforts and students' actual critical thinking abilities. Moreover, teachers expressed a strong desire for professional development to enhance their competencies in this area more effectively (Abrami et al., 2015). The teachers play a pivotal role in fostering critical thinking among students, as they guide and facilitate learning process. While secondary English teachers acknowledge the value of critical thinking and employ certain strategies, they perceive room for improvement in students' mastery and their skills. Addressing the professional development needs could empower the teachers to nurture the critical thinking more effectively, equipping language learners with essential cognitive abilities. Consequently, further research into secondary students' critical thinking trajectory and teachers' specialized training is warranted based on these findings. In this regard, this study was conducted to investigate the English teachers' perspectives on critical thinking skills development.

Objective & Question

1. To investigate English teachers' perspective on the critical thinking skills development in English at the secondary level
2. What are the perspectives of English teachers about the development of critical thinking at the secondary level?

LITERATURE REVIEW

The critical thinking has become buzz word and is widely interpreted as an important 21st-century skill, driving new research into valuable instructional approaches (Miller et al., 2023). It is a vital skill among the 4Cs (communication, collaboration, critical thinking & creativity). Extensively this investigation has considered teacher task in promoting higher-order skills in English. As important implementers of educational initiatives, teachers greatly influence adoption success. Their views and capabilities adjoining critical thinking thus merit in-depth analysis (Paul & Elder, 2019). The secondary English teachers play a vital but composite role in improving the students' higher-order capabilities. There are key factors that affect the motivations, capabilities, and identified obstacles around critical thinking. Further research in teachers' advancing views would significantly deepen application guidance. Mostly, fostering critical dispositions and skills necessitates a multilayered scaffold across systemic and individual domains. The researchers have different ideas about what critical thinking is in language learning. Sun et al. (2020) suggests that it is a mix of skills, attitudes, and understanding of how you learn. They think critical thinking in language learning means being able to analyze language, judge trustworthiness of sources, make good arguments, and think about what you're learning.

Many studies show that critical thinking helps individuals learn languages better and do better in school. Zare, Barjesteh and Biria (2021) did a study where they tested how well students read after using method that focuses on critical thinking. Results showed that students who used this method did better than students who didn't. Liu (2019) did a study to see effect of questioning and reflection on students' learning regarding an online class. In same way, Singh, Gopal, Ong, Singh, Mostafa and Singh (2020) explored different aspects of the teaching of critical thinking skills as an example of writing. The researchers have used different methods and techniques of teaching that help students in thinking critically about language class. The study also found that project-based learning also helps EFL students for improvement of writing skills. The results showed that project-based learning made big change in how well students wrote. Andiliou and Murphy (2010) examined an instructor's practices teaching components of critical thinking in language classroom. Their qualitative study highlighted importance of explicit instruction in critical thinking skills, like analyzing arguments, evaluating evidence, and drawing inferences. The researchers emphasized the need for teachers to decisively include critical thinking activities into their lessons and provide chances for students to practice these skills.

While numerous studies have explored pedagogical strategies for fostering critical thinking, there is growing recognition of importance of understanding teachers' perceptions, beliefs & professional development needs in this area. Roomy (2022) investigated teachers' beliefs and practices related to critical thinking in higher education. Their findings revealed that teachers consider it important to teach critical thinking at university and mainly for students to become good professionals in a complex world. Teachers believe it is possible to teach it, as long as active methodologies are used, universities' lack of interest is overcome, and students bring a minimum critical thinking level from previous educational stages. In another study by Suh (2023), there was comparative analysis amid English language learners who had low achievement scores on the state achievement mathematics test scores. A study conducted by Aimah et al. (2020) regarding pre-service teachers of English

related to their pedagogical content knowledge focusing on critical thinking skills. Regarding the importance of critical thinking skills integrated into English from China (Ma & Liu, 2023). Novice and experienced teachers were the respondents about integration of critical thinking in teaching foreign languages. A self-developed questionnaire was used for the measurements of the teachers' beliefs. The findings explored that teaching beliefs were affected by the experience, and teacher education programs.

In the Pakistani context, there are several recent studies explored critical thinking development in Pakistani secondary schools, specifically within science and social studies curricula and teaching practices (Jamil et al., 2023b; Jamil & Muhammad, 2019; Jamil et al., 2021a, 2021b; Naseer et al., 2022). Key objectives across these studies included assessing teacher perspectives and observed practices related to critical thinking instruction (Jamil et al., 2023b; Jamil et al., 2021b); analyzing presence of critical thinking concepts in educational policies and curricula (Jamil & Muhammad, 2019) and evaluating critical thinking skill development prospects in textbooks. Major findings revealed that while teachers and policies espoused critical thinking as an important instructional goal, actual teaching practices and curricular content did not effectively promote critical thinking skills. For example, science lessons emphasized rote memorization over higher-order analysis (Jamil et al., 2021b), and social studies textbooks presented more factual information than the conceptual analysis/evaluative tasks (Naseer et al., 2022). In Pakistani context, there are diverse barriers faced during critical thinking skills development. Pakistan's education system exactly, critical thinking integration faces barriers like predominant teacher-centered pedagogies focused on rote learning (Anwar & Alvi, 2023).

RESEARCH METHODOLOGY

This study utilized quantitative, descriptive research design to investigate secondary-level English teachers' perspectives on critical thinking skills development. A sample of 100 English teachers (50 males and 50 females) selected through a random sampling technique from different schools in a district in Punjab participated in the study to ensure representativeness. Data was collected using a 5-point Likert scale questionnaire to assess teachers' views on the critical thinking, instructional strategies, student abilities, and professional development needs. Questionnaire was refined based on pilot testing feedback and distributed online and in paper format. Statistical package for social sciences, software was used for data analysis, focusing on descriptive statistics like frequencies and percentages. The ethical principles were followed, including obtaining informed consent, ensuring confidentiality over participant codes, upholding institutional review board guidelines (Joshi et al., 2015; Pallant, 2020).

RESULTS OF STUDY

The study looks at what high school English teachers think about the critical thinking. They use numbers and descriptions to do this research. The study checked what teachers know, and believe, how they teach, what they think about the students, and what they need to learn more about. This research can help us understand how critical thinking is taught in English classes better. The results of this study could help improve how teachers teach, design lessons, and plan training programs to boost critical thinking in students. By understanding teachers' views and experiences, this study can

help connect the goals of critical thinking with what the students learn, helping them develop the thinking skills needed to succeed in a complex world. The findings of the study have been described in following table:

Table 1 Secondary School Teachers' Perspective on CT Skills Development

Statement	SA	A	NO	DA	DS
Knowledge about critical thinking	53	38	8	0	1
Importance of CT in teaching English	50	42	5	1	2
Teaching CT for 21st-century learning	52	39	7	0	2
Use of different techniques for CT	82	8	3	4	3
Students' goodness in CT	2	12	42	41	3
Use of questioning for CT	19	76	2	2	1
Need of training for CT	51	44	2	1	2
Logical and decision-making students over CT	29	62	2	5	2
Importance of CT for conceptual understating	43	55	1	1	0
New concepts origination	11	71	7	10	1

The following aspects were explored through analysis of secondary school teachers' perspectives on the critical thinking skills development. In this liking, with respect to knowledge about critical thinking, over 90% of respondents reported knowing critical thinking, with 53.7% were strongly agreeing and 38.7% agreeing. Only 8% had no opinion, and a very small percentage (1%) strongly disagreed. About importance of critical thinking in teaching English, an overwhelming majority (92%) viewed critical thinking as important in teaching English, with 50% strongly agreeing and 42% agreeing, while just 5% had no opinion, while 3% disagreed to some extent. About teaching critical thinking for 21st-century learning, again, most respondents (91%) felt that teaching critical thinking is crucial for 21st-century learning, with 52% strongly agreeing and 39% agreeing. Only 7% had no opinion, and a minuscule 1.3% strongly disagreed. Similarly, use of different techniques for critical thinking, 82% strongly agreed that they use various techniques to develop the critical thinking while another 8% agreed, indicating that 90% utilize multiple approaches while 3% had no opinion, while 7% disagreed to some degree as evident from the results of the above-mentioned table of frequencies.

Similarly, regarding students' abilities in critical thinking, perceptions of students' critical thinking abilities were mixed. Only 14% felt students are good at it (2% strongly agreeing, 12% agreeing). In contrast, 42% had no opinion, and the largest group (44.7%) disagreed that students are skilled in this area. Likewise, use of questioning for critical thinking, 95% of respondents agreed that they use questioning techniques to develop the critical thinking, with 19% strongly agreeing and a vast majority (76%) agreeing. Just 2% had no opinion and 3% disagreed slightly. Likewise, need for training in critical thinking, most teachers (95%) felt they needed more training in teaching critical thinking, with 51% strongly agreeing and 44% agreeing while only 2% had no opinion, while 3% disagreed mildly. This reveals that teachers can select prose that challenges students' perspectives and encourages them to think critically about different themes, characters, and situations. Also, with respect to the critical thinking for logical and decision-making students, vast majority (91%) agreed that teaching critical thinking makes students more logical and better decision-makers.

29% strongly agreed, 62% agreed, while 2% had no opinion, and 7% disagreed to some extent as evident from results.

Similarly, with respect to importance of critical thinking for conceptual understanding, almost all respondents (98%) saw critical thinking as important for conceptual understanding rather than the rote memorization - 43% strongly agreed, 55% agreed, while just 1% each had no opinion as well as disagreed very mildly. About new concepts origination, 82% felt they could originate new concepts themselves, with 11% strongly agreeing and 71% agreeing. Thus, no respondents had no opinion, while 11% disagreed (10% disagreeing, 1% strongly disagreeing). Therefore, it reveals that engaging discussions around literature can help the students analyze and interpret texts, fostering critical thinking skills. Overall, the respondents generally viewed critical thinking very positively for the language learning and teaching but had concerns about the students abilities in this area as well as their own training needs in the diverse circumstances. In this linking, they reported utilizing various techniques, especially the questioning but differed on whether the students tangibly learn through the critical thinking diverse approaches that helps in reaching conclusion and making the desired decisions.

DISCUSSION

This study investigated secondary English teachers' perceptions of critical thinking, surveying 100 teachers (50 male, 50 female). Findings provide insights into teachers' knowledge, beliefs, practices, and challenges about critical thinking instruction, contributing to existing literature and informing pedagogical initiatives. Most of the respondents viewed critical thinking as essential for conceptual mastery rather than memorization. Teachers also showed confidence in their higher-order thinking, believing they could generate original concepts. Results revealed most teachers (over 90%) possess foundational knowledge of critical thinking, aligning with research emphasizing clear conceptual understanding (Jamil et al., 2023a; Jamil & Muhammad, 2019). An overwhelming majority (92%) viewed critical thinking as vital for teaching English, recognizing its role in enhancing 21st-century skills (91% agreement) (Abrami et al., 2015; Aghayani & Hajmohammadi, 2019; Roomy, 2022). It suggests an awareness of benefits of developing language proficiency and academic achievement. However, perceptions were mixed regarding whether the students genuinely learn through critical thinking lessons. While some agree students do gain from such instruction, it impacts the learning outcomes. This split perspective may reflect teachers' mixed experiences applying critical thinking in the classroom.

Substantially, all teachers (90%) reported using techniques to build critical thinking, especially questioning strategies (95%), resonating with research upon the strategy effectiveness (Jamil et al., 2021b; Sasson et al., 2018). However, despite efforts, perceptions of student abilities were divided, explaining why most teachers (95%) expressed needing more training. This aligns with the research highlighting targeted professional development to enhance the understanding and equip teachers (Alsaleh, 2020; DuBois et al., 2019; Orrill, 2001). Key areas to address include building theoretical knowledge, exploring instructional strategies, assessing skills and fostering helpful environments (Abrami et al., 2015; Andiliou & Murphy, 2010). The professional development can aid teachers in disabling obstacles to improve critical thinking outcomes. Though identifying challenges, teachers

hold positive views on critical thinking instruction, awesomely agreeing it builds logic, decision-making (91%) & conceptual mastery (98%) rather than memorization. This concurs with literature on higher problem-solving, analytical skills and deeper understanding (Belecina & Ocampo, 2018; Wartono et al., 2019). While teachers endorse value of critical thinking, they desire more training to bridge gap between instructional approaches and observable student learning. Further research should explore enrichments in professional development & teaching practices to sharpen students' critical thinking abilities.

CONCLUSION

Keeping in view the above findings, the vast majority of respondents (over 90%) reported having knowledge and understanding of what critical thinking entails. This indicates that English teachers at the secondary level are generally well-versed in concept of critical thinking and its significance in education. Besides, overwhelming majority of respondents (92%) viewed critical thinking as an important aspect of teaching English. This result highlights value that teachers place on evolving critical thinking skills alongside language proficiency. They recognize that critical thinking is a crucial competency for students to cultivate, especially in context of 21st-century learning (91% agreement) by using the different nature of tools and techniques for effective learning. The survey results suggest that English teachers employ a range of techniques to foster the critical thinking in classrooms. Thus, 90% of respondents agreed that they utilize diverse methods for this purpose, with a staggering 95% specifically mentioning the use of questioning as a strategy to develop critical thinking abilities.

However, there appears to be a disconnect between the teachers' efforts and their perceptions of students' actual critical thinking skills. Only 14% of respondents felt that students are generally good at critical thinking, while the largest group (44.7%) disagreed with this notion. Interestingly, a significant 42% had no opinion on this matter, indicating uncertainty or a lack of clarity about students' proficiency in this area. Thus, the research revealed that questions should promote deeper understanding, enabling students to explore multiple perspectives and develop their own lookouts in diverse situations. The discrepancy between teaching approaches as well as student outcomes indicates current practices may be ineffective in building critical thinking skills. With 95% of teachers expressing the need for further training, there is a clear demand towards the professional development to boost competencies in this area. Accordingly, despite facing challenges, teachers overwhelmingly (91%) recognize the benefits of critical thinking instruction for improving logic & decision-making.

Implications & Recommendations

1. The comprehensive professional development programs should be designed to address the teacher conceptual thoughtful of critical thinking, explore evidence-based instructional strategies, and guide towards designing the assessments that accurately measure critical thinking skills.
2. The curriculum developers and educators should collaborate to integrate explicit critical thinking instruction into language curricula and lesson plans. Similarly, teachers should

strive to create the conducive classroom environment that fosters critical thinking of the concerned students.

3. The educators should review and refine assessment methods to ensure they accurately capture students' critical thinking skills that may further help them in attaining the desired leading outcomes.
4. The platforms for collaboration and knowledge sharing among English language teachers should be established to facilitate exchange of effective practices, instructional strategies, and resources related to critical thinking instruction.
5. Further research should be conducted to continue exploring the teachers' perceptions, experiences, and challenges related to critical thinking instruction in English language classrooms.

REFERENCES

- Abrami, P. C., Bernard, R. M., Waddington, D. I., Wade, C. A., & Persson, T. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research*, 85(2), 275-314.
- Aghayani, B., & Hajmohammadi, E. (2019). Project-Based Learning: Promoting Efl Learners Writing Skills. *LLT Journal: A Journal on Language and Language Teaching*, 22(1), 78-85.
- Aimah, S., Rukmini, D., Saleh, M., & Bharati, D. A. L. (2020). Microteaching guided by an expert secondary English teacher: The effect on pre-service English teachers' pedagogical content knowledge. *Pedagogika*, 139(3), 111-135.
- Al Roomy, M. A. (2022). Investigating the Effects of Critical Reading Skills on Students' Reading Comprehension. *Arab World English Journal*, 13(1), 366-381.
- Alsaleh, N. J. (2020). Teaching Critical Thinking Skills: Literature Review. *Turkish Online Journal of Educational Technology-TOJET*, 19(1), 21-39.
- Andiliou, A., & Murphy, P. K. (2010). Examining variations among researchers' and teachers' conceptualizations of creativity: A review and synthesis of contemporary research. *Educational Research Review*, 5(3), 201-219.
- Anwar, M., & Alvi, S. (2023). A Study of Critical Thinking as a Mainstream Pedagogical Problem in Pakistan: The State of The Art. *Southern Journal of Social Sciences*, 1(1), 16-30.
- Belecina, R. R., & Ocampo Jr, J. M. (2018). Effecting change on students' critical thinking in problem solving. *EDUCARE: International Journal for Educational Studies*, 10(2), 109-118.
- Chinooneka, T. I. (2020). School Heads' leadership practices in enhancing the quality education: perspectives from six Rural Day Secondary Schools of Masvingo District in Zimbabwe
- DuBois, B., Krasny, M. E., & Russ, A. (2019). Online professional development for environmental educators: Strategies to foster critical thinking and social interactions. *Environmental Education Research*, 25(10), 1479-1494.
- Ghanizadeh, A., Hoorie, A. H., Jahedizadeh, S., Hoorie, A. H., & Jahedizadeh, S. (2020). Higher order thinking skills. *Springer*.
- Jamil, M., Mahmood, A., & Masood, S. (2023a). Fostering critical thinking in Pakistani secondary school science: A teacher's viewpoint. *Global Educational Studies Review*, 8, 645-659.

- Jamil, M., Mahmood, A., & Masood, S. (2023b). Fostering critical thinking in Pakistani secondary school science: A teacher's viewpoint. *Global Educational Studies Review*, 8(2), 645-659.
- Jamil, M., & Muhammad, Y. (2019). Teaching Science Students to Think Critically: Understanding Secondary School Teachers' Practices. *Journal of Research & Reflections in Education (JRRE)*, 13(2), 256-272.
- Jamil, M., Muhammad, Y., & Qureshi, N. (2021a). Critical thinking skills development: Secondary school science teachers' perceptions and practices. *SJESR*, 4(2), 21-30.
- Jamil, M., Muhammad, Y., & Qureshi, N. (2021b). Secondary School Science Teachers' Practices for Development of Critical Thinking Skills: An Observational Study. *Journal of Development and Social Sciences*, 2(4), 259-258.
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology*, 7(4), 396-403.
- Liu, Y. (2019). Using reflections and questioning to engage and challenge online graduate learners in education. *Research and Practice in Technology Enhanced Learning*, 14(1), 1-10.
- Ma, L., & Liu, N. (2023). Teacher belief about integrating critical thinking in English teaching in China. *Journal of Education for Teaching*, 49(1), 137-152.
- Naseer, H., Muhammad, Y., & Jamil, M. (2022). Critical Thinking Skills in Pakistan Studies textbook: Qualitative Content Analysis. *Pakistan Journal of Social Research*, 4(3), 744-755.
- Okasha, M. A. H. (2021). The effect of critical thinking techniques for improving EFL reading skills. *Journal of Research in Curriculum Instruction and Educational Technology*, 7(1), 141-157.
- Orrill, C. H. (2001). Building learner-centered classrooms: A professional development framework for supporting critical thinking. *Educational Technology Research and Development*, 49(1), 15-34.
- Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. *Routledge*.
- Paul, R., & Elder, L. (2019). A guide for educators to critical thinking competency standards: Standards, principles, performance indicators, and outcomes with a critical thinking master rubric. *Rowman & Littlefield*.
- Rios, C. M., Golde, C. M., & Tractenberg, R. E. (2019). The preparation of stewards with the Mastery Rubric for Stewardship: Re-envisioning formation of scholars and practitioners. *Education Sciences*, 9, 292,1-27.
- Salameh, L. A., Salameh, Z. A., & Emami, A. H. (2019). Measuring the Effect of Cognitive and Metacognitive Questioning Strategies on EFL Learners' Reading Comprehension in Understanding, Critical Thinking and the Quality of Schema at the University of Hail-KSA. *International Journal of English Linguistics*, 9(5), 12-28.
- Sasson, I., Yehuda, I., & Malkinson, N. (2018). Fostering the skills of critical thinking and question-posing in a project-based learning environment. *Thinking Skills and Creativity*, 29, 203-212.
- Singh, C. K. S., Gopal, R., Ong, E. T., Singh, T. S. M., Mostafa, N. A., & Singh, R. K. A. (2020). Esl teachers strategies to foster higher-order thinking skills to teach writing. *Malaysian Journal of Learning and Instruction*, 17(2), 195-226.

- Suh, D. (2023). Understanding Teachers' Perceptions of Pedagogy in Teaching Mathematics to English Language Learners [Walden University].
- Sun, M., Wang, M., & Wegerif, R. (2020). Effects of divergent thinking training on students' scientific creativity: The impact of individual creative potential and domain knowledge. *Thinking Skills and Creativity*, 37, 100682.
- Miller, B., Camarda, A., Mercier, M., Burkhardt, J.-M., Morisseau, T., Vinchon, F., Landais, M., & Mourey, F. (2023). Creativity, Critical Thinking, Communication, and Collaboration: Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. *Journal of Intelligence*, 11(3), 54.
- Wartono, Y. F. A., Batlolona, J. R., & Mahapoonyanont, N. (2019). Inquiry-scaffolding learning model: Its effect on critical thinking skills and conceptual understanding. *Inquiry*, 8(2), 245-255.
- Zare, M., Barjesteh, H., & Biria, R. (2021). Enhancing EFL learners' reading comprehension skill through critical thinking-oriented dynamic assessment. *Teaching English Language*, 15(1), 189-214.