LITERA
Vol. 23 No. 3, November 2024
https://journal.uny.ac.id/index.php/litera/issue/view/2773
DOI: https://doi.org/10.21831/ltr.v23i3.74118

The relationship between reading comprehension and critical thinking among EFL learners

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ABSTRACT

Having students think critically is essential to their achieving a successful life, and thus, to develop the society they live in. Reading and critical thinking skills, are essential to acquiring knowledge, especially with foreign languages. This study aims to explore the relationship between reading comprehension and critical thinking among EFL learners. Forty EFL learners were given two tests: a reading comprehension test and the Arabic version of the Watson-Glaser Critical Thinking Appraisal (1980). The survey's statistical results indicate a significant and positive correlation between reading comprehension and critical thinking, particularly in inference and interpretation skills. However, three critical thinking skills (argument, assumption and deduction) seemed to be insignificant compared to the participants' reading comprehension scores. The findings, therefore, suggest some pedagogical implications. The most important implication is integrating critical thinking skills in second language skills, like reading. EFL teachers can give learners some tasks to think of reading passages related to their life, and practices can be designed based on critical thinking skills. Teachers can implement guided reading sessions that concentrate mainly on interpreting texts and drawing inferences by using tasks such as real-world scenarios and problem-solving.

Keywords: Reading comprehension, critical thinking, EFL learners

Article history

Submitted:	*Accepted:*	*Published:*
4 June 2024	*21 November 2024*	*30 November 2024*

Citation (APA Style):
Alshehri, A. S. (2024). The relationship between reading comprehension and critical thinking among EFL learners. *LITERA, 23*(3), 309-318. https://doi.org/10.21831/ltr.v23i3.74118

INTRODUCTION

Modern information resources develop every day. Accessing a large amount of information is easier than before, regardless of age, gender, and ethnic or cultural background. The importance of thinking critically and evaluating this information is essential for our well-being (Facione, 1990). From the early stages, humans are born with the instinct to explore, wonder, solve problems, and recognize the world, which is vital to enhance through teaching and learning at all life stages (Thompson, 2011

Critical thinking is defined as "reasonable and reflective thinking focused on deciding what to believe or do" (Ennis, 1987, pp. 9-26). The focus on critical thinking in education has been a significant concern among authors and experts for many years. John Dewey (1933) introduced the concept of critical thinking in education. Robert Glaser (1980) conducted research in psychology, cognitive science, and learning and instruction, proposing a test to examine critical thinking skills. Robert Hugh Ennis's works (1987) revolved around critical thinking dispositions and abilities, emphasizing not only questioning or arguing existing ideas but also justifying them.

Three key perspectives in critical thinking have been discussed in educational contexts (Kurfiss, 1988): the first is argument skills, which "teach students to detect and avoid fallacious reasoning and to analyze deductive and inductive arguments" (p. 5); the second is the cognitive process, where a learner solves problems with solution-based reasoning and evidence; and the third is intellectual development, which refers to transforming a student's beliefs.

Educators have highlighted critical thinking as an important task in English as a Foreign Language (EFL) due to its efficiency in language learning and teaching (Shirkhani & Fahim, 2011). The relationship between critical thinking and reading comprehension is illustrated in previous theoretical works. Aloqaili (2012) affirmed earlier research, stating "an agreement…that there is a strong

relationship among reading comprehension, critical thinking, and prior knowledge" (p. 39). Researchers have explored how critical thinking enhances reading comprehension (Johnson, Archibald, & Tenenbaum, 2010), the effect of teaching critical thinking on reading comprehension (Fahim & Sa'eepour, 2011) and the relationship between critical thinking and language proficiency (Rashid & Hashim, 2008). However, more evidence is needed to determine the relationship between critical thinking and EFL reading comprehension, particularly in an Arab and Saudi university context.

This paper attempts to fill this gap by testing King Khalid University EFL learners in both reading comprehension and critical thinking. The research paper first reviews the literature on reading comprehension and critical thinking. It then presents the study's methodology, detailing the participants, instruments, and data analysis. After that, it reviews the study's results with a discussion and interpretation of the findings. Finally, it concludes with suggested implications and recommendations for future study.

Reading comprehension is the product of integrating readers' critical thinking, background knowledge and inferences as defined by Aloqaili (2012). Reading comprehension is facilitated by reading vocabulary and background knowledge, which use inferences (Sporer, Brunstein, & Kieschke, 2009; Duke & Pearson, 2009). According to this, a student knowing words individually without integrating them with prior knowledge, to comprehend the presented information, lacks reading comprehension ability. Aloqaili (2012) affirmed rich background knowledge means more comprehension.

Duke and Pearson (2009) assumed good readers are active, have a goal of reading to evaluate what is read, look at the passage's structure before reading, predict the next main passage topic, decide what is important in the topic and what can be read fast without much attention, ask question about the meaning, predict the meaning of new words, use background knowledge to explain or compare, think about the writer and his beliefs, examine their understanding, evaluate the passage and its value, read various kinds of texts, sympathize with characters in narrative text and summarize when reading expository text. They believe good readers think about what they read even after finishing as they, readers. passionately read and consider it a productive activity. Duke and Pearson (2009) also indicated teaching students to read effectively and develop reading comprehension is possible by instructing students to engage in the above strategies of good readers.

Moreover, Duke and Pearson (2009) asserted reading comprehension needs time and practice. Students must integrate knowledge and strategies developed in their reading classes while reading. For more comprehension skills, students need to read both inside and outside classes. In addition to that, reading only one genre of reading will not expand knowledge and comprehension, so they must be exposed to different forms, stories, newspaper and scientific articles and books. Teachers, then, should allow students to speak about what they understand and interpret a given passage orally so it enhances comprehension thoroughly.

Duke and Pearson (2009) presented effective and specific reading comprehension strategies for all ages. First, Prediction strategy, means predicting meaning, topics and next texts by taking advantage of prior knowledge to facilitate understanding the new one. Second, think-Aloud strategy, refers to speaking thoughts out loud while doing a reading task. When a teacher thinks aloud, he communicates task strategies to students. When students think aloud, they improve their reading comprehension by communicating what they understand and their process in performing a task. Third, Text-Structure strategy, means to look at a text as a structure not content. This help improve reading comprehension. In reading stories or defining a text's main ideas, a student can look at the story elements: problems, solutions, characters, themes and settings, to better comprehend it. Fourth, Visual Representation strategy, indicates representing a text visually. A reader might visualize a text using charts to organize main points in a visual representation. This transformation from text into visual representation helps one comprehend and recall information. A teacher may ask students to draw a process chart of a given passage and how the outcome is reached after a number of phases. Finally, Summarization strategy, that is an indicator of comprehending a text. Summarizing important points is not always easy, and practice is needed to improve. It also helps develop the ability to delete what is unimportant, infer from a text and generalize ideas. Questioning means asking questions while reading to awaken comprehension.

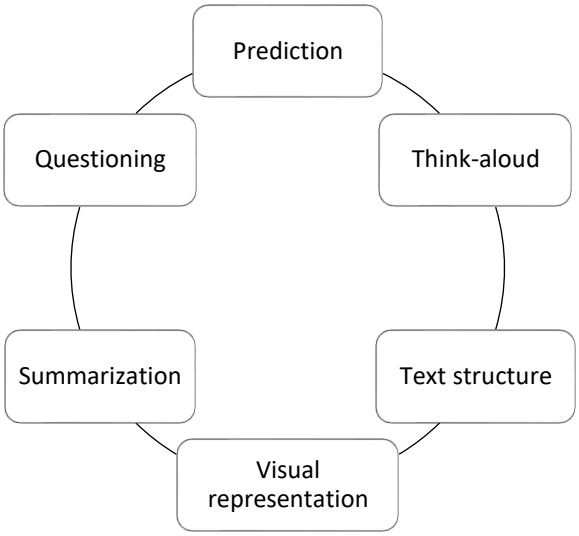

Figure 1. Reading comprehension strategies (Duke and Pearson, 2009)

Piaget's (1952) work on the development of cognition, as referenced by Aloqaili (2012), illustrates three processes that contributes to comprehension, starting with assimilation, where leaners' old information expands and grows by new information. Here they are not expected to add completely new cognition categories, but add more experience to their current knowledge, including teaching EFL learners how to use vocabulary. Second, is accommodation which, unlike assimilation, is not knowledge expansion. It is creating new categories, not integrating old knowledge with new, like learning unfamiliar vocabulary while reading. Third is equilibrium, the harmony between assimilation and accommodation. This is how learners expand knowledge and add new categories at the same time, like using familiar and unfamiliar words to create a sentence. The awareness of these processes might help one figure out how to go further in comprehension, where to start and how to develop.

Almeida and Franco (2011) indicate "critical thinking appears to be a higher-order type of reasoning, employing cognitive skills and directed by a motivational component in problem solving (p.182)." Paul (2018) defied CT as the cognitive discipline process entails the active and proficient construction of concepts, the utilization of knowledge, the examination and synthesis of information, and/or the assessment of data acquired through observation, experience, reflection, reasoning, or communication. This progression functions as a guiding principle for beliefs and actions. When demonstrated, it is built upon intellectual principles that transcend the confines of specific subjects: lucidity, precision, accuracy, consistency, relevance, substantial evidence, valid justifications, depth, breadth, and impartiality.

Alsaleh (2017) defines CT as "the ability to present an argument by presenting and evaluating different claims, providing evidence to support or deny these claims and providing a personal opinion about the main argument (p.29)." Fahim and Pezeshki (2012) illustrated that CT is a combination of cognitive and personal competencies interacting with each other. Cognitive competencies can be classified as the ability to analyse, interpret, evaluate, synthesize, summarize and extract inferences. Personal competencies are independent thinking, determent, motivation, curiosity and creativity.

Four elements of critical and creative thinking were presented by Sellars et al. (2018). The first element contains identification, exploration and organization of information. The second element is the production of ideas, thinking of possibilities and doing actions. The third element is reflection on the process. The fourth element is combining information in meaningful contexts and evaluating processes.

CT's history can be traced back to the Greek scholar Socrates, whose method proposed questions and asked people to think about what they took for granted (Gagren, 2011, as cited in Sellars et al, 2018). Sellars et al. (2018) commented on the rationality and justification of this method. The authors, particularly, stated "individuals confidence and the ownership of living a self-examined life: a life of quality (p.3)" are this method's advantages on individuals. This approach honours individuals as they question and evaluate values in their culture and society.

Thompson (2011) suggested CT, as a cognitive skill, was considered by traditional (progressivism, idealism) and modern theories (information processing, Bloom's Taxonomy (1976)).

Information processing theory deals with how students use new information to interact with or recall previous information and understand the new. This theory studies memory, the store and engine for more complex cognitive activities like comprehension and analysing and synthesizing information. Baddeley (2007) suggests the notion of repetition to facilitate life-long learning is inefficient if not integrated with new information.

According to Bloom's Taxonomy, thinking skills are categorized into lower and higher order skills. High order skills include more complex cognitive skills like analysis, creation and evaluation, which are parts of critical thinking's definition.

Developing CT is one of the most important life-long skills. With the large amount of information available in our world today, it is important to analyse and evaluate what is presented in the media and to be integrated in complex cognitive skills like CT (Sellars et al., 2018). They also indicated that in the 21st century, CT is needed for all issues concerning the human life and environment. An issue requiring problem solving and critical thinking is climate change. CT aims to prepare children who create their wellbeing, make good decisions, act with good intention (Sellars et al., 2018). This century's challenge is building critical, creative, flexible, and current cognitive skills. Students must be prepared for more complex and challenging future contexts.

Several studies have been done to test CT's efficiency in EFL. El-Soufi (2019) found CT skills in higher education students can be developed if presented by explicit CT instructions. Students in her study asserted CT helped them examine information sources.

Zheng, Zhang, and Liu (2017) investigated the relationship between CT and argumentative writing. They referred to it as the process of choosing a topic, a statement and writing a coherent discourse. They suggested writing in a foreign language is not CT because students mostly follow a fixed template to avoid more linguistics mistakes than they express in their own language. However, they found students with good argumentative writing have higher CT test scores. They can express their own ideas freely with coherence and logic. In contrast, they concluded English majors have no relation with strong CT skills. Kaviani and Mashhadi (2020) recently showed CT can greatly contribute in learning EFL productive skills, writing and speaking. Fahim, Bagherkazemi, and Alemi (2010) encourage integrating CT in EFL reading courses. They indicated there is a correlation between students who have high TOFEL reading scores and CT scores.

Grosser and Nel (2013) advocated teachers' language proficiency should be high to enhance their students' thinking ability after they found there is a correlation between language proficiency and CT in teachers. The same finding is presented in students by Rashid & Hashim (2008) who illustrated there is a relationship between critical thinking and language proficiency in undergraduate EFL learners.

Aloqaili (2012) theoretically studied the relationship between reading comprehension and critical thinking. He affirmed reading comprehension can be reached by activating prior knowledge, the core of critical thinking and inferences. Critical thinking shows a relation with reading in reasoning, or the ability to identify problems (Farley & Elmore, 1992).

In reading comprehension, brainstorming is a useful strategy to develop CT (Ghabanchi & Behrooznia, 2014). CT can be enhanced through blog mediated feedback (Novakovich, 2016) and website-based activates (Alsaleh, 2017). Hosseini, Khodaei, Sarfallah, and Dolatabadi (2012) found well-formed activities with CT guidance are indicators of reading comprehension skills. Fahim, Barjesteh and Vaseghi (2012) explained training in CT affects reading comprehension skills. Hashemi and Ghanizadeh (2012) asserted Critical Discourse Analysis (CDA) has a positive effect on EFL students' CT.

Previous studies show CT could influence language proficiency and language skills, like reading, writing and speaking. However, as shown earlier, focusing on linguistic competence is not related to CT. A student may have high writing score without CT. Learning another language does not enhance CT, but rather how language skills are taught. Studies show CT and reading comprehension affect each other. This study aimed to investigate if that relationship is found in Saudi Arabian EFL learners.

METHOD

The research utilized the Quantitative Method which "involves data collection procedures that result primarily in numerical data which is then analysed primarily by statistical methods (DonYei, 2007, p.24)." According to DonYei (2007), there are various methods to collect data quantitatively. It is possible to measure qualitative data after categorizing it into behaviours and frequency, so data can be

collected through measurers used to assess a certain situation, such as how many times it occurs. Another quantitative data collection method is using surveys or questionnaires. Tests are also a quantitative form of data collection, including proficiency, vocabulary, reading and psychological tests. This study uses tests. Sampling in the quantitative method targets participants representing the whole population, including gender, age and education. Participants where self-selected and invited to voluntarily participate in the study through a message in WhatsApp groups including the online test link.

Since the target participants were students who had completed all the required reading courses in their university curriculum, typically indicating they were in their final semesters, the researcher actively searched the campus for these students. Upon identifying potential participants, the researcher requested to join their WhatsApp groups as a researcher, not as a peer. Each semester, students usually form WhatsApp groups to discuss and share academic information. Once granted access, the researcher introduced the study to the group, explained its purpose, and invited them to participate. Since participation was voluntary, there is a possibility of selection bias, as EFL students with a particular interest in reading skill or students with high academic performance may have been more inclined to participate. This could limit the generalizability of the findings to the broader student population.

The quantitative data was collected via the Internet, considering the web-based study benefits mentioned by DonYei (2007). Using that is more economical than using paper-based data collection. It is easily administrated by controlling the test items any time. Coding automatically also saves time and effort. Participants are completely anonymous.

The participants of this study were EFL learners, majoring in the English Language, Faculty of Languages and Translation, King Khalid University, Abha, Saudi Arabia. There were 40 students participating. The sample was self-selected because learners in the high levels of their English learning are expected to develop reading comprehension skills and thinking abilities. They finished four reading courses, with other English Language skills like reading, writing, listening and grammar. Their native language is Arabic, and they use English as a foreign language in Saudi Arabia. Teaching and learning English in the Saudi Education system starts in the fourth grade and goes until High school.

The first instrument of this study was a test examining students in reading comprehension (the dependent variable). The test was adapted from the ReadTheory website supervised by educators with a degree in teaching. It originally consisted of a passage and seven questions with four choices. In this study, four questions are adapted with a statement, taken from the passage, for each question. The modified version had four statements with four questions. Each question had three choices. We reduced the number of questions because the test is accompanied by the critical thinking test. The first question provided an expression and participants were asked to choose the correct expression from the given statements. The participants were asked to infer the correct answer to the second question. The third question asked about a word's antonym. For the last question, participants should choose a statement's correct purpose.

In this study, the Watson Glaser Critical Thinking Test was adopted as the independent variable. It consists of five sections. Arguments is the ability to decide whether an argument is strong or weak based on a given question. A strong argument is related to all the question's parts, while the weak argument does not relate to the question or gives reasons beyond the question's parts. The second section is Assumptions. This section tests the ability to decide on a logical assumption based on a statement's evidence. The third section is Deductions, or the ability to deduce a conclusion from a statement. The fourth section is Inferences, or inferring a conclusion based on observed facts. This section presents inferences from a text, and participants are supposed to decide whether the inferences are true, probably true, need more information, probably false, or false. The last section is Interpreting Information. The participants are presented with a passage and a possible conclusion, and are asked to decide which conclusion logically follow the passage. The adapted test was 31 questions: 11 Arguments, 3 Assumptions, 6 Deductions, 5 Inferences, and 6 Interpreting Information.

The test was translated into Arabic, reviewed by a translation instructor at King Khalid University, and modified to fit the research purposes. We used an Arabic version because the critical thinking test was supposed to test thinking ability without the language barrier this as Abdul Rashid and Hashim (2008) tested their participants' critical thinking ability in their native language. They stated "in measuring critical thinking ability of individuals, the test administered to the individuals must be in the language that they have competence in so that the scores obtained on the test will not be distorted in any

way due to the test takers‘ deficiencies in the language (p. 376).” While the reading comprehension test was in the foreign language which is English as it is intended to test linguistics proficiency.

The reading comprehension test and WGCT were designed in an online form, starting with the reading comprehension test followed by the WGCT test with its five sections arranged from Arguments to Interpreting Information. The questions were administered in the order they were required to be answered, so there were no incomplete answers. Each section of the WGCT started with an introduction providing an explanation of the section’s meaning. Reading comprehension required a background in English Language, which all the participants have as EFL learners. The WGCT test did not require a background or training in Critical Thinking. The estimated time for answering the two tests was between 15 to 20 minutes. Data collection took place in March 2020 among King Khalid University’s EFL students.

To answer the research question, the non-parametric measure, mainly the Spearman rho correlation test in SPSS, was used to statistically evaluate the relationship between reading comprehension and critical thinking variables. The five variables of the critical thinking test, arguments, assumptions, deductions, inferences and interpreting information, were analysed individually to investigate their relationship with reading comprehension. The total score of critical thinking including its five variables was analysed to measure the relationship with reading comprehension.

RESULTS AND DISCUSSION

Results

This study aims to investigate the relationship between critical thinking and reading comprehension in Saudi Arabia’s EFL learners. As seen in the literature, critical thinking might have a significant impact on enhancing language learning skills, with the most important potentially being reading comprehension in the second language. This study focused on assessing the possible relationship between these variables. It was hypothesized that critical thinking skills, mainly *arguments, assumptions, deductions, inferences and interpreting information*, might have significant relationship with reading comprehension. A series of Spearman correlational coefficient analytical tests tested this hypothesis with *inference* and *interpreting information*. Then results of the correlations of *argument, assumption* and *deduction* and *reading comprehension* will be presented.

1) Correlation between Inference Skill and Reading Comprehension

The Spearman correlation coefficient for reading comprehension and inference shows a significant relationship between the two variables: r (40) = .430, p =.006 (Figure 2).

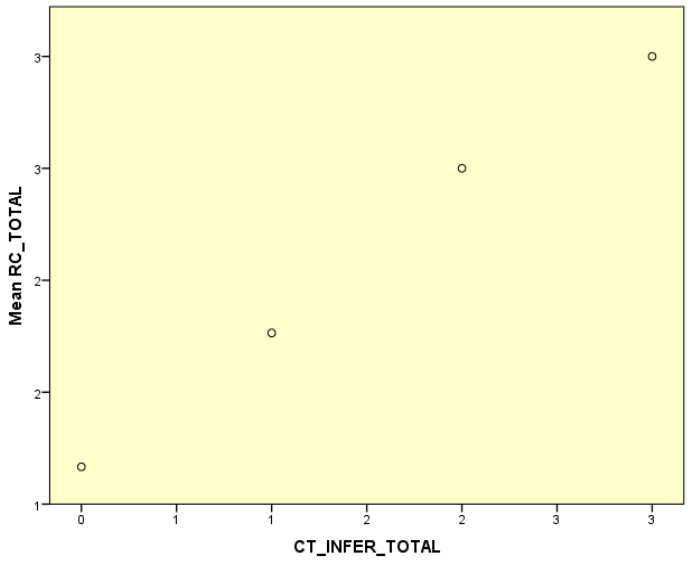

Figure 2. The correlation between Inference and Reading Comprehension

2) Correlation between Interpreting Information Skill and Reading Comprehension

The Spearman correlation coefficient found a significant relationship between reading comprehension and interpreting information: r (40) = .487, p =.001 (Figure 3).

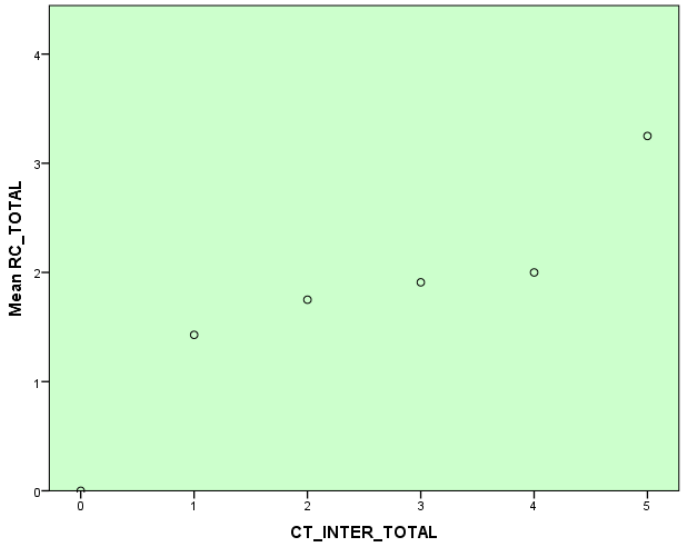

Figure 3. The Correlation between Interpreting Information and Reading Comprehension

3) Correlation between Critical Thinking and Reading Comprehension

The Spearman correlation coefficient reveals a significant relationship between reading comprehension and critical thinking: *r* (40) = .564, p =.000 (Figure 4).

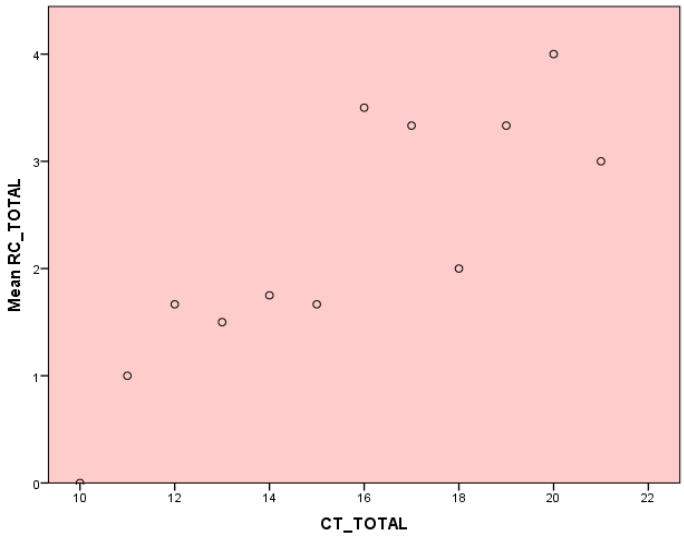

Figure 4. The Correlation between Critical Thinking and Reading Comprehension

4) Correlation between Argument Skill and Reading Comprehension

The Spearman correlation coefficient indicates no significant relationship between reading comprehension and argument in critical thinking: *r* (40) = .039, p =.812.

5) Correlation between Assumption Skill and Reading Comprehension

The Spearman correlation coefficient indicates no significant relationship between reading comprehension and assumption in critical thinking: *r* (40) = .200, p =.217.

6) Correlation between Deduction Skill and Reading Comprehension

The Spearman correlation coefficient indicates no significant relationship between reading comprehension and deduction in critical thinking: *r* (40) = .264, p =.100.

The study's hypothesis suggested a relationship between reading comprehension and critical thinking was partly confirmed. The results show only a significant relationship between inference and interpreting information with reading comprehension. There was a significant relationship between critical thinking and reading comprehension. There were no significant relationships found between argument, assumption, deduction with reading comprehension in the study's sample.

Discussion

This study was designed to investigate whether there is a relationship between critical thinking (CT) and reading comprehension in Saudi Arabian EFL learners. The results suggest there is a significant relationship between the two variables. Although not all sections of the critical thinking test (argument, assumption and deduction), show a correlation with reading comprehension, the overall score suggests a significant positive correlation. The correlation is clearly shown in inferences and interpreting information. The ability of students to observe facts and draw a reasonable conclusion, might influence their reading comprehension. If they are given information and are asked to reasonably interpret and judge its truth, their reading comprehension performance may be affected.

Judging whether an argument is weak or strong might not affect reading comprehension. An argument is more likely to be associated with the argumentative writing skill, as suggested in the textual analysis of Zheng, Zhang, and Liu (2017) of EFL argumentative essays. They found students with clear argumentative writing scored higher on the CT test. Thus, proposing an argument and supporting it with a reasonable assumption as a CT skill is used more in writing than reading comprehension. In the reading comprehension test, participants were given a passage explaining an expression used to describe something. They were then asked to choose from multiple answers, the statement placing the expression in its exact meaning. The ability to interpret information in a text might be related to critical thinking skills, mainly inference and interpreting information. This ability might explain the participants' ability to choose the right test answers. The findings of the study are in line with the findings of Fahim, Bagherkazemi, and Alemi's (2010) study who showed similar results for the relationship between critical thinking and reading comprehension. However, the researcher did not assume any causality between these variables.

This study has some limitations. The first is the length of both tests. The original version of the CT test was 86 items. I had to delete some items because the RC test was also included in the survey. Five to six questions were taken for each section. The CT test included 31 items and the RC test had four questions. Students performed the tests in about 20 minutes. The time for the test was shortened because students get bored easily. I am not their instructor, which made their participation voluntary. Another limitation is the language barrier. A student may perform well in the Arabic CT test but score low on the English RC test. For example, if a student did not know the meaning of the word "antonym," they would not answer correctly. The language barriers prevented them from knowing the right answer. Additionally, there were concerns regarding the internal consistency of the measurement scale, indicating that the items may not have reliably assessed the intended constructs. Due to time constraints and the challenges presented by the COVID-19 situation, I had to proceed with the study as planned. I suggest that this measurement scale be considered in future research focusing on critical thinking and reading comprehension.

Societies must have critical thinkers who make decisions for the good of people and the environment. It starts by producing a critical, risk taking, humble generation who want to learn more for themselves and the society they live in. Education is the key to promoting high order thinking skills in curriculums. The study's findings suggest that integrating critical thinking skills, particularly inference and information interpretation, can enhance reading comprehension in EFL courses. These skills are directly related to comprehension because they require students to connect ideas and derive meaning from the text. Although argument, assumption, and deduction skills did not significantly affect comprehension in this study, incorporating them may still provide value. These skills help students analyze arguments, evaluate perspectives, and understand complex structures in texts, which are essential for advanced language proficiency and critical engagement with texts. Therefore, while inference and interpretation should be prioritized, argument, assumption, and deduction could be included to foster a well-rounded critical thinking approach in reading comprehension instruction. EFL teachers give learners an opportunity to think of reading passages related to their life, and practices can

be designed based on critical thinking skills where learners reasonably and logically argue, assume, deduce, infer and interpret information.

CONCLUSION

This paper investigated the relationship between critical thinking and reading comprehension among EFL learners. Having students be decision makers, open to others' opinions, and drawing reasonable conclusions from given facts without bias are the general purposes of CT, which led this study to investigate how CT skills influence reading comprehension. It was hypothesized that there might be a relationship between these variables, and the findings supported that. Notably, inference and interpreting information emerged as the most strongly connected CT skills for enhancing reading comprehension, highlighting their significance as core components for EFL instruction. Although other CT skills like argument and deduction were not significant, inference and interpretation are key to building comprehension.

These early successes hope to deal with operating CT in EFL reading courses. A contemporary instrument to test CT needs to be established after investigating CT's current state in curriculums and in the academic context with both a quantitative and qualitative method. This may include analyzing students' life situations and investigating their beliefs and future plans. I recommend investigating the factors resulting in low critical thinking abilities and tracing them from childhood. A comparison between two countries would offer insights to see if the education system influences critical thinking abilities among EFL learners. These early successes may hope to deal with CT operations in EFL reading courses. Future work should concentrate on investigating the reasons behind low or high CT skills among EFL learners.

ACKNOWLEDGMENTS

Sincere thanks are extended by the author to Dr. Nada Alqarni for her important advice, perceptive feedback and constant encouragement during this research, particularly during the difficult pandemic conditions in 2020. Her knowledge, support, and commitment greatly influenced the course of this endeavor, and her efforts are greatly valued.

REFERENCES

Aloqaili, A. S. (2012). The relationship between reading comprehension and critical thinking: A theoretical study. *Journal of King Saud University-Languages and Translation*, *24*(1), 35-41

Alsaleh, N. J. (2017). *Social Networking Website-based Learning Activities to Develop Critical Thinking Skills Among Undergraduate Students in Saudi Arabia* (Doctoral dissertation, University of Leicester)

Baddeley, A. (2007). *Working memory, thought, and action*,*45*. OUP Oxford

Baker, L. (1985). Differences in the standards used by college students to evaluate their comprehension of expository prose. *Reading Research Quarterly*, 297-313

Bloom, B, (1976). Human characteristics and school learning. New York: McGraw-Hill

Chi, M. T., & Glaser, R. (1980). The measurement of expertise: Analysis of the development of knowledge and skill as a basis for assessing achievement. *Educational testing and evaluation*, 37-47

Da Silva Almeida, L., & Rodrigues Franco, A. H. (2011). Critical thinking: Its relevance for education in a shifting society

Dewey, J. 1933. *How We Think*, Rev. ed., Boston: D. C. Heath-Doyle, W. (1983). Academic work. *Review of Educational Research, 53*, 159–199

DonYei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press

Duke, N. K., & Pearson, P. D. (2009). Effective practices for developing reading comprehension. *Journal of education*, *189*(1-2), 107-122

El-Soufi, N. (2019). *Evaluating the impact of instruction in critical thinking on the critical thinking skills of English language learners in higher education* (Doctoral dissertation, Durham University)

Ennis, R. H. (1996). Critical thinking dispositions: Their nature and assessability. *Informal logic*, *18*(2).

Ennis, R.H. (1987). A taxonomy of critical thinking dispositions and abilities. In J.B. Baron & R.J. Sternberg (Eds.) Teaching thinking skills: Theory and practice (pp. 9-26). New York: Freeman

Facione, P. A. Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. Millbrae, CA, The California Academic Press: 19. (1990)

Fahim, M., & Pezeshki, M. (2012). Manipulating critical thinking skills in test taking. *International Journal of Education*, *4*(1), 153

Fahim, M., & Sa'eepour, M. (2011). The impact of teaching critical thinking skills on reading comprehension of Iranian EFL learners. *Journal of Language Teaching and Research*, *2*(4), 867

Fahim, M., Bagherkazemi, M., & Alemi, M. (2010). The relationship between test takers' critical thinking ability and their performance on the reading section of TOEFL. *Journal of Language Teaching and Research*, *1*(6), 830

Fahim, M., Barjesteh, H., & Vaseghi, R. (2012). Effects of Critical Thinking Strategy Training on Male/Female EFL Learners' Reading Comprehension. *English Language Teaching*, *5*(1), 140-145

Farley, M. J., & Elmore, P. B. (1992). The relationship of reading comprehension to critical thinking skills, cognitive ability, and vocabulary for a sample of underachieving college freshmen. *Educational and Psychological Measurement*, *52*(4), 921-931

Gagren, M. (Ed.) *The Oxford Encyclopedia of Ancient Greece and Rome*; Oxford University Press: Oxford, UK, 2010

Ghabanchi, Z., & Behrooznia, S. (2014). The impact of brainstorming on reading comprehension and critical thinking ability of EFL learners. *Procedia-Social and Behavioral Sciences*, *98*, 513-521

Grosser, M. M., & Nel, M. (2013). The relationship between the critical thinking skills and the academic language proficiency of prospective teachers. *South African journal of education*, *33*(2)

Hashemi, M. R., & Ghanizadeh, A. (2012). Critical discourse analysis and critical thinking: An experimental study in an EFL context. *System*, *40*(1), 37-47

Hosseini, E., Khodaei, F. B., Sarfallah, S., & Dolatabadi, H. R. (2012). Exploring the relationship between critical thinking, reading comprehension and reading strategies of English university students. *World Applied Sciences Journal*, *17*(10), 1356-1364

Johnson, T. E., Archibald, T. N., & Tenenbaum, G. (2010). Individual and team annotation effects on students' reading comprehension, critical thinking, and meta-cognitive skills. *Computers in human behavior*, *26*(6), 1496-1507

Kaviani, M., & Mashhadi Heidar, D. (2020). The Effectiveness of Critical Thinking on Enhancing Productive Skills among Iranian EFL Pre-Intermediate Learners. *Applied Research on English Language*, *9*(3), 303-324

Kurfiss, J. G. (1988). *Critical Thinking: Theory, Research, Practice, and Possibilities. ASHE-ERIC Higher Education Report No. 2, 1988*. ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Dept. RC, Washington, DC 20036-1183

Novakovich, J. (2016). Fostering critical thinking and reflection through blog-mediated peer feedback. *Journal of Computer Assisted Learning*, *32*(1), 16-30

Pei, Z., Zheng, C., Zhang, M., & Liu, F. (2017). Critical Thinking and Argumentative Writing: Inspecting the Association among EFL Learners in China. *English Language Teaching*, *10*(10), 31-42

Petek, E., & Bedir, H. (2018). An adaptable teacher education framework for critical thinking in language teaching. *Thinking Skills and Creativity*, *28*, 56-72

Piaget, J., 1952. The Origins of Intelligence in Children. International

Rashid, R. A., & Hashim, R. A. (2008). The relationship between critical thinking and language proficiency of Malaysian undergraduates

Scriven, M., Paul, R. Defining Critical Thinking. Available online: http://www.criticalthinking.org/aboutCT/define_critical_thinking.cfm (accessed on 7 November 2018)

Sellars, M., Fakirmohammad, R., Bui, L., Fishetti, J., Niyozov, S., Reynolds, R., ... & Ali, N. (2018). Conversations on critical thinking: Can critical thinking find its way forward as the skill set and mindset of the century? *Education Sciences*, *8*(4), 205

Shirkhani, S., & Fahim, M. (2011). Enhancing critical thinking in foreign language learners. *Procedia-Social and Behavioral Sciences*, *29*, 111-115

Spörer, N., Brunstein, J. C., & Kieschke, U. L. F. (2009). Improving students' reading comprehension skills: Effects of strategy instruction and reciprocal teaching. *Learning and instruction*, *19*(3), 272-286

Thompson, C. (2011). Critical thinking across the curriculum: Process over output. *International Journal of Humanities and social science*, *1*(9), 1-7. Universities Press, New York