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Research Article

EFL Undergraduate Students' Critical Thinking Ability and Reading Comprehension Performance

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Abstract

The current study examined the relationship between critical thinking ability and EFL university students' reading comprehension at a university site in Iran. The main purpose of the study was to determine whether there is any statistically significant correlation between critical thinking skills and reading comprehension performance of Iranian EFL students at the university level. More specifically, it was the intention of this study to specify whether there is any statistically significant correlation between the two groups (males vs. females) regarding their reading comprehension and critical thinking test scores. To this end, 143 EFL juniors (24 male and 119 female) majoring in English language teaching were selected through convenience sampling (intact groups). The participants were from the University of Mazandaran, Iran. This study examined this relationship with the help of the participants' scores gained from (i) the translated version of Cornell Critical Thinking Test-Level Z, and (ii) their reading comprehension scores obtained from their reading course. A correlational analysis was carried out running Pearson's Product Moment Coefficient (Pearson *r*) and Partial Correlation. The results showed that a positive relationship existed between the students' critical thinking ability and their EFL reading comprehension. Additionally, no statistically significant difference was found in the correlations between male and female participants' critical thinking and reading comprehension. This study has some implications for EFL learners as well as curriculum developers and EFL instructors to apply critical thinking skills in the class to help make EFL reading more effective and purposeful.

Keywords: critical thinking ability, reading comprehension, Cornell Critical Thinking Test-Level Z, Iranian EFL university students

Introduction

In life, individually and professionally, it is necessary to think skillfully in order to make decisions and solve problems. One of the most influential tools anyone can always have is the ability to think. One of the oldest and most generally recognized approaches to intelligence skills is known as critical thinking (Ennis, 1985; Beyer, 1995). Critical thinking has been added as one main goal in educational systems worldwide (McPeck ,2016; Tseng, 2020; Zhang et al., 2020). It is a form of learning that could be called as "multiple" instrument for knowledge manipulation; in other words, it is a tool for the generation of new knowledge by assessing existing knowledge and concepts through applying the instruments of knowledge manipulation by, for instance, analysis, understanding, and synthesis (Moon, 2008). Caceres et al. (2020) as well as Davies and Barnett (2015) emphasized that critical thinking as an active process is in contrasting position to the passive method of receiving knowledge and ideas. Hence, critical thinkers ponder things, bring up questions, and seek information individually.

As a method to learning, critical thinking is regarded significant in EFL education which is increasingly receiving more attention from scholars owing to its probable impact on language education (Vaseghi et al., 2012). In a perfect English program in an academic context, the main goal of a syllabus is not limited to just linguistic factors, but it can also encompass developing the skill of critical thinking (Brown, 2004, p. 25). Regarding this issue, Seferoglu and Akbtyik (2006) asserted that promoting critical thinking is taken as one of the substantial objectives of the present curriculum, though there is no consensus on the ideal method of teaching it in EFL context.

Among the main English language skills, reading is likely used most by English learners in academic context (Dörnyei, 2019; Vaseghi et al., 2012; Muslem et al., 2017). Reading presents a multifaceted path to develop the ability to contemplate and deep understand the text meaning (Indriyana & Kuswandono, 2019; Lumbantobing et al., 2020). Ahmadi (2013) claimed that reading comprehension involves the stages of understanding a text, discovering the meaning, objective, and message conveyed in a text. It is of high importance for readers to have the ability to examine and assess what they have read analytically so as to experience good reading comprehension. For the purpose of wholly comprehending what we read, we need to apply a combination of text and text reader. Thus, being involved in critical thinking while reading is essential for refining learner comprehension ability. The necessity for learning and using methods of promoting reading

and critical thinking skills is increasingly felt in teacher training programs (Din, 2020; Indriyana & Kuswandono, 2019; Muslem et al., 2017).

Traditional instructional interventions are still used by EFL teachers in reading classroom (Arifin, 2020; Fathi & Afzali, 2020). These types of approaches not only discourage critical reading comprehension skills but also ignore a critical component to develop in the learning process, particularly at higher levels of processing. The reading instruction practices prevailing in the Iran EFL context do not do much to enhance students' reading comprehension especially at higher levels (Fathi & Afzali, 2020). The instructional practices prevailing therein emphasize surface-level information processing techniques such as memorization and rehearsal at the expense of deeper processing such as elaboration and critical thinking (Khonamri & Karimabadi, 2015; Yousefi & Mohammadi, 2016). In fact, the teaching of reading English as a foreign language (EFL) is primarily exam-focused, that is, it strives to fulfill the requirements of end-of-the-term examinations, which are mainly based on grammatical and vocabulary knowledge (Kazemi et al., 2020). Most EFL learners and instructors in the current Iranian system of the education, however, are not probably familiar with critical thinking in general and critical reading skills in particular (Bagheri Masoudzade, 2022; Barjesteh et al., 2016; Khonamri & Karimabadi, 2015; Marzban & Barati, 2016; Yousefi & Mohammadi, 2016).

Another important point that is worth discussing is that in most of the research reviewed in the past studies in EFL contexts in general and Iranian EFL context in particular, the researchers have employed the Watson-Glaser Critical Thinking Appraisal (Watson, 1980) and California Critical Thinking Skills Test (Facione, 1990) to measure critical thinking skills of EFL students' reading comprehension ability. The overuse and too much reliance on these two instruments can be a cause for concern among those working in this area of research. Therefore, the current research used Cornell Critical Thinking Test, Level Z (Ennis & Millman, 1985) as a well-established and stranded instrument to measure association between critical thinking skills and reading comprehension performance of EFL undergraduate students in the context of Iran. The concept of critical thinking, according to Ennis (1985), is "the stage of practically determining what to trust and do. The CCTT-Z was chosen due to its measurement objectivity, and accessibility of normative data on almost similar population. Other tools, like the Watson-Glaser Critical Thinking Appraisal Form YM, as depicted by Landis and Michael (1981), are seemingly suffering from less degree of reliability coefficient estimates or include subtests that do not have validity for appraising various dimensions of critical thinking. The current research had two main objectives. First and

foremost, the study projected to decide if there was any statistically significant correlation between critical thinking skills and reading comprehension performance of Iranian EFL students at the university level (as measured by CCTT-Z). Additionally, the present research wanted to determine if there was any significant correlation between reading comprehension scores and critical thinking test scores for male and female students separately. To fulfill the objectives of the research, the following research questions were posed:

1. Is there any statistically significant correlation between students' reading comprehension scores and their critical thinking test scores?
2. Is the correlation between students' EFL reading comprehension scores and their critical thinking test scores for males and females significantly different?

Method

Participants

The target population of the present research was EFL undergraduate students of Mazandran University. In order to examine the extent of relationship of learners' Critical Thinking ability and their reading comprehension, five Intact groups were selected.143 juniors [male (*n*=24) and female (*n*=119)] majoring in English language teaching were selected to take part in the study. To conduct the research, 143 students were considered to be justifiable. According to Ary et al. (2018), large samples are not needed for running correlational studies, and to find if there is a relationship, it will be clear enough in a moderate sample size of 50 to 100. In Iran's universities, English majors are offered three reading comprehension courses, each of which is 4 credits and offered in the first three semesters. In the case of the sample, they had all passed their English reading comprehension courses. They were in the age range of 19 to 22 years and majority of them were 21. Their mother tongue was Persian and they were studying English as a foreign language. The study was carried out at one of the major universities in the north of Iran.

Instrumentation

Ennis and Millman's critical thinking test called Cornell Critical Thinking Test, Level Z (1985) was used in this study. This test is an internationally used, standardized tool which is considered to be an effective measure of critical thinking among secondary school and university students, as reported by the author (Ennis, 1985). The test is a 52-item

multiple-choice test planned to be administered in a 50-minute period. Test items have three choices with one keyed answer. It contains seven sections and measures the examinees' ability to:

a. indicate whether a statement follows from its premises (Deduction),
b. detect equivocal arguments (Semantics),
c. evaluate reliability of observations and authenticity of sources (Credibility),
d. judge the direction of support, if any, for a given hypothesis Induction (Judging Conclusions),
e. focus on choosing of useful predictions for hypothesis testing Induction (Planning Experiments),
f. define terms (Definition and Assumption Identification), and
g. spot gaps in arguments (Assumption Identification).

Scoring

The formula used in this study was rights minus one-half the number wrong as a specific scoring formula proposed in the test manual by Ennis and Millman (1985). Then, in running the statistical analysis, the total number of right scores was used.

Validity and Reliability of Instrument

Validity and reliability of an instrument are vital measurement for any instrument. High validity degree of instrument is among the required traits of a credible instrument, and high degree of instrument reliability show the consistency of the scores gained through the instrument (Creswell & Creswell, 2017). The test has gone through the validation processes. Also, both validity and reliability of the test have been proved by many educational practitioners throughout the world. The reliability of the test was also determined in a pilot study done before the main study. The primary goal of the pilot study was to validate CCTT-Z which was to be used in this study to measure students' critical thinking ability in terms of the increase and improvement of their thinking skills.

As the literature shows, construct validity of the CCTT [the Cornell Critical Thinking Test (Level z)] has been established by calculating the degree of correlation between the CCTT and an already established test called Watson-Glaser Critical Thinking Test. Results have indicated that these two tests compare very well (Solon, 2003). The instrument was also found to be reliable by Ennis (1985) through Spearman-Brown and Kuder-Richardson 20 and 21 formulas. The reported reliability coefficients estimates were in the

range of 0.50 to 0.77. The content validity of the test was also rigorously discussed by the researchers of the Illinois Critical Thinking Project. Correlations with other critical thinking test ranged around 0.50.

Based on the manual for the CCTT, the degree of reliability of this instrument ranges between .49 and .87. Also, given the information provided in Alivandi-Vafa's (2005) study, the translated version of the CCTT exhibited nearly a high degree of reliability (Cronbach's alpha= .71, n=41, p<.0001) for the Iranian university-level students. However, to further ensure the reliability of the test for the intended population in this study, the reliability of the test was evaluated again in a pilot study that was mentioned before. In the pilot study, 32 participants who were similar to the intended population were tested by the CCTT in two different points in time (with almost a three-week interval).

Two sets of scores were obtained and correlated. The resulting coefficient was r= 0.83, indicating that the test showed neither ceiling nor floor effects. Thus, the test could be claimed to have the potentiality of differentiating students with various levels of the trait being measured (construct validity). The degree to which an instrument measures what is expected in the research, and the degree to which theory and evidence support the interpretations of test scores involved by the suggested application of the test is called construct validity (Ary et al., 2018).

Additionally, the internal consistency reliability of the test was calculated through Cronbach's alpha. The obtained Cronbach's alpha was 0.87, denoting that the measure had a strong degree of reliability. Also, it showed how all the items on the test related to all other test items and to the total test. Overall, it became evident that the CCTT was a valid and reliable instrument for the target population and its sample in this research study.

Procedure

In the current study, the learners were briefed on the main objective of the research. After collecting the data, the researcher entered them into SPSS Software. Participants' names were coded without numerical values to ensure their confidentiality. In view of the fact that there have so far been no available standard tests in Iran for measuring critical thinking abilities, it was, then, determined to collect data by means of the Cornell Critical Thinking Test, Level Z (Ennis & Millman, 1985). Hence, for determining the level of critical thinking ability of each learner, this test was administered. In the current research, the Persian translation of this instrument was used, in that students could understand concept of statements of the test easily. The reason was that the foremost aim of the study was assessing student's critical thinking ability, rather than their language proficiency.

As said before, a pilot study was conducted to further determine the reliability of the test and validate it prior to the main research. The test was administered to 32 participants including 7 males and 25 females. The obtained test reliability index was 0.83. The results of the pilot study led to a need to explain more to the participants about the content of the instrument as well as about the thinking skill, especially critical thinking before starting the main study. The pilot study aimed at:

a. Testing the applicability of the test.

b. Deciding on the suitability of the content of the translated version of the test for EFL students in this particular context.

c. Identifying problems and deciding on alternative solutions.

The data was collected during the Fall of 2022 in the middle of the first semester. Reading comprehension scores of students were obtained through the database of Examination's Center of the faculty by permission of Head of the Department. It is worth noting that the book was the same for all the participants. Before answering the CCTT test, it was briefed to the students, and general questions were replied. The tests were distributed during class time, and they were requested to answer and give them back after the session was over. The answer sheet also required the respondents to provide some demographic information.

Design

The present study followed a quantitative correlational design, which, as stated by Creswell and Creswell (2017), is applicable if a study examines the relationship of variables rather than appraising the impact of an independent variable on an outcome variable. In reality, along with evaluating the hypotheses, the major aim of the present research was to determine the relationships between these variables. In appropriate quantitative questions and hypotheses, the examiner might *relate* one or more independent variables to a thdependent variable (Creswell & Creswell, 2017). Correlational studies mainly pursue determining the existing relationships among variables and describing those relationships in order to inform future, more demanding investigations about the cause-and-effect nature of those associations (Creswell & Creswell, 2017). For that reason, the application of correlational design was justified for the present research, which investigated the relationship between the projected variables. The following figure illustrated the basic design for the present correlational research.

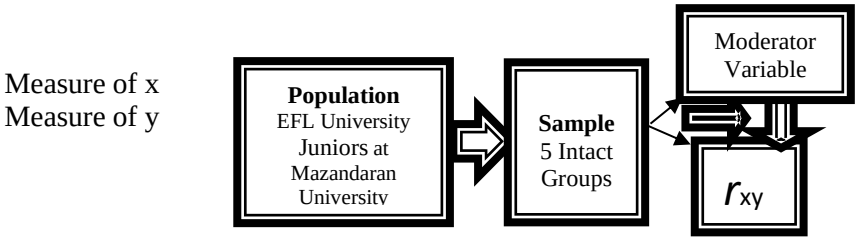

Figure 1. *Design of the Current Correlational Research*

x= critical thinking (independent variable)
y= reading comprehension (dependent variable)
r = correlation

In the current research, the independent and dependent variables were critical thinking ability of participants and EFL students' reading comprehension performance, respectively. More specifically, these variables were operationalized as the scores on the Cornell Critical Thinking Test (Level Z) and a teacher-developed reading comprehension test gained by Iranian EFL majors at Mazandaran University. In addition, the moderator variable in this study was students' gender, the role of which was determined in the central relationship between the dependent and independent variables.

Data Analysis

For testing the formulated null hypotheses of the current research, the data were analyzed through, first, checking the assumptions necessary for conducting the statistical tests. Then, the collected data were analyzed in SPSS Software (V.23), running correlation through Pearson product-moment correlation (Pearson *r*) and Partial Correlation, as the proper means for inferential statistics. More specifically, the scores of the critical thinking (CT) and reading comprehension (RC) tests was manually entered into SPSS software and also input into a spreadsheet. In addition, the sample correlation was calculated so as to decide if there was a significant relationship between the two studied variables. The Pearson *r* is usually applied when both variables have scores with both the RC test and CT test. The Pearson *r* uses raw data to ensure whether there is a relationship. A two-tailed test with an alpha level of 0.01 was applied in the correlation to determine whether variations existed in either direction from the value indicated in the null hypothesis; as stated by Ary et al. (2018), null hypothesis is rejected if the difference is large in either tail of sample distribution. Finally, the researcher included information about the *Z* score to determine whether the correlations for the two groups were caused by chance.

Results

Assumption Testing

There are a number of assumptions that should be tested before calculating the Pearson product-moment correlation coefficient. Some of these assumptions were evaluated and found tenable prior to conducting the relevant statistical test mentioned above.

Level of the measurement: The scale of measurement for both independent variable (CT) and dependent variable (RC) were continuous.

Related pairs: Each subject provided a score on both independent variable (CT) and dependent variable (RC)

Normality: Scores on each variable were checked for their normal distribution. This was carried out by inspecting the histograms and Q-Q plot of scores on each variable (Figure 2-3).

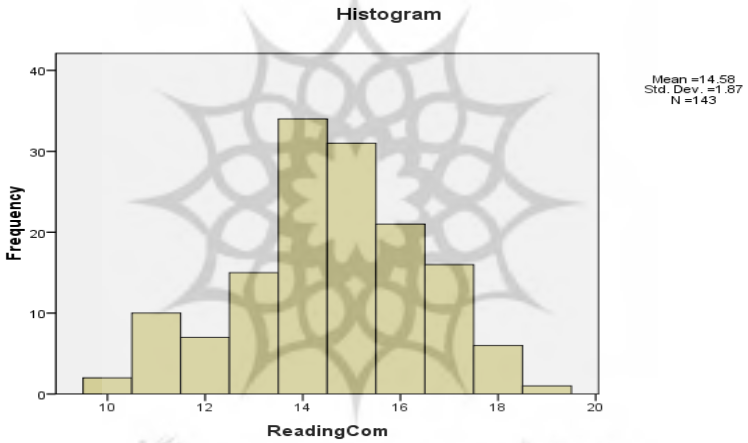

Figure 2: *Histograms of Scores*

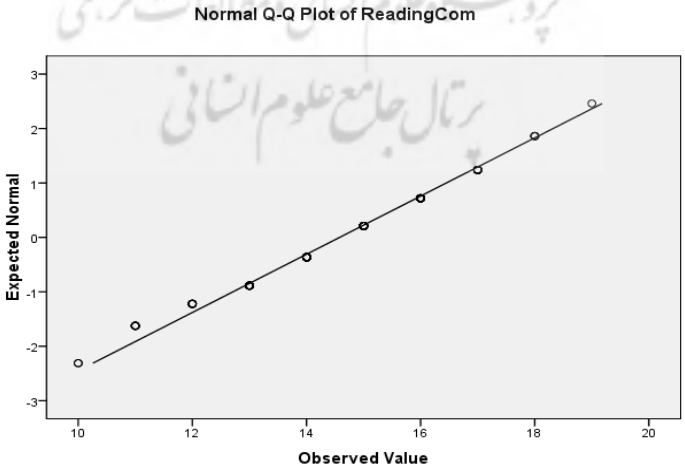

Figure 3: *Q-Q plot of Scores*

Linearity and **homoscedasticity**: A scatterplot was generated to check for violation of the assumptions of homoscedasticity and linearity. Both assumptions were upheld, as shown in Figure 4. The distribution of scores on the scatterplot also suggested that the relationship between the variables was roughly linear and the scores were evenly spread.

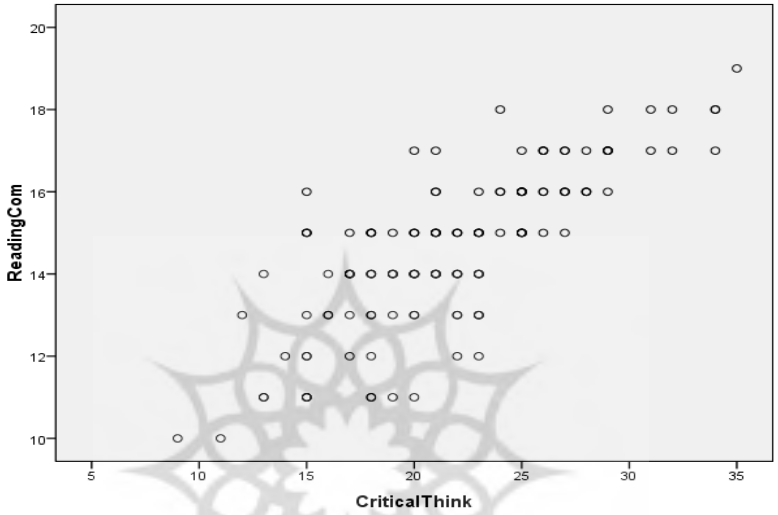

Figure 4: *Distribution of Scores on the Scatterplot*

Outliers: The scatterplot generated above (Figure 3) was also checked for outliers. No outlying case was observed. In sum, the data obtained for this study conformed to these assumptions, and it was decided that the relevant statistical analysis could proceed.

Correlation Analyses

In the present research, the two variables of critical thinking ability and reading comprehension were evaluated through validated instrument, and the obtained scores were comparatively analyzed. The researcher wanted to see if there was a correlation between the variables. To test the statistical support for existing relationship, the study included two null hypotheses.

Regarding the first null hypothesis of the current research, (i.e. ***H01:*** There is no statistically significant relationship between EFL students' reading comprehension scores and their critical thinking test scores) Pearson product-moment correlation coefficient was run to examine the relationship between critical thinking (CT) of Iranian university students (as measured by the CCTT) and their reading comprehension (RC) performance (as measured by their end-of-the-semester scores in reading comprehension

course). For ensuring no violation of the major assumptions of normality, homoscedasticity and linearity, preliminary analyses were performed. Considering Cohen's (1988) benchmarks for the interpretation of the correlation, it was documented that a strong, positive correlation existed between the two variables, r= .77, n= 143, p< .0005, while high levels of CT were associated with high levels of RC (Table 1). Therefore, based on the findings, the first null hypothesis was rejected.

Table 1
Correlations between Critical Thinking and Reading Comprehension

Correlations		Critical Thinking	Reading Comprehension
Critical Thinking	Pearson Correlation	1	.774(**)
	Sig.(2-tailed)	.	.000
	N	143	143
Reading Comprehension	Pearson Correlation	.774(**)	1
	Sig.(2-tailed)	.000	.
	N	143	143

**Correlation is significant at the 0.01 level (2-tailed)

Furthermore, the calculation of the coefficient was performed for estimating the shared percent of variance between the two variables. It was found that a significant overlap existed between the two variables; it meant that, the correlated CT and RC (r= .77) shared %59 of their variance. Hence, about %59 of the variance in subjects' RC scores was explained by CT. The obtained result in the present study depicted a deferential amount of variance in comparison with the relevant background studies, showing the existence of practically significant correlation.

Concerning the second null hypothesis (i.e. ***H02:*** There is no statistically significant difference in the correlation between students' EFL reading comprehension scores and their critical thinking test scores for the two groups), correlation coefficients for males and females were computed. In actual fact, Pearson product-moment correlation coefficients were re-calculated for males, r= .883, n= 24, p< .0005, and also for females, r= .755, n= 119, p< .0005 (Table 2).

Table 2
Correlations between Critical Thinking and Reading Comprehension for Males and Females

Gender			Critical Thinking	Reading Comprehension
Male	Critical Thinking	Pearson Correlation	1	.883(**)
		Sig. (2-tailed)	.	.000
		N	24	24
	Reading Comprehension	Pearson Correlation	.883(**)	1
		Sig. (2-tailed)	.000	.
		N	24	24
Female	Critical Thinking	Pearson Correlation	1	.755(**)
		Sig. (2-tailed)	.	.000
		N	119	119
	Reading Comprehension	Pearson Correlation	.755(**)	1
		Sig. (2-tailed)	.000	.
		N	119	119

** Correlation is significant at the 0.01 level (2-tailed).

Apparently, as shown above in Table 3, the correlation between CT and RC was slightly higher for males than that for females. Although these two values seem different, it was decided to find out more about the difference. That is, it was decided to see whether the difference was big enough to be considered significant.

In order to determine whether the correlation for the two groups was significantly different, the *r* values were converted into *z* scores. Then, the *Z* obs equation was used for calculating the observed value of z. The value obtained i.e. *Z* obs = 1.76 was assessed using the set decision rules (Pallant 2020) to determine the likelihood that the difference in the correlation noted between the two groups were due to chance. As *Z* obs = 1.76 was inside the specified bounds of –1.96 and +1.96, it was concluded that there is no significant difference in the correlations between CT and RC for males and females. Namely, it was not clear whether CT ability in males could explain significantly more of the variance in RC as compared to females or vice versa. Therefore, the results did not provide enough confirmation for

rejecting the second null hypothesis, meaning that the second null hypothesis failed to be rejected.

Discussion

As mentioned before, Pearson's product-moment correlation coefficient between the CT test scores and the RC scores on this sample is $r = .77$, $n = 143$, $p < .0005$, indicative of a strong relationship between the two variables in the research. There was found a direct correlation between learners' EFL reading comprehension scores and critical thinking test scores. This finding resulted in the first null hypothesis to be rejected since the relationship between critical thinking ability and the EFL university students' reading comprehension performance was confirmed. Thus, it was concluded that the learners who had high levels of thinking ability had the ability to develop their reading comprehension performance.

This result was consistent with the previous studies (e.g., Din, 2020; Fahim et al., 2012; Khonamri & Karimabadi, 2015; Marzban & Barati, 2016; Indriyana & Kuswandono, 2019; Samelian, 2017; Yousefi & Mohammadi, 2016; Muslem et al., 2017; Zare & Biria, 2018) indicating that there existed a strong relationship between critical thinking and reading comprehension. The findings of the current research provided evidence to suggest that critical thinking skills can consistently and definitely influence the quality of learners' reading comprehension performance. The study conducted by Din (2020) examined the critical thinking ability of university students as reflected in their critical reading skills. The positive results of the study revealed that these students have a favorable attitude towards critical thinking, and it is a strong predictor of their reading ability. The findings of the study carried out by Zare and Biria (2008) also revealed that a significant and positive correlation between the levels of critical thinking ability of ESP learners and their reading comprehension. Additionally, they found that ESP students who were considered high critical thinkers performed significantly better on the reading comprehension test compared to those with lower levels of critical thinking. Likewise, Muslem et al. (2017) highlighted that The ability to think critically is of significant importance in enhancing reading comprehension, allowing students to better understand the material being read. Samelian (2017) states that critical thinking might improve understanding and support EFL learners in high-level thinking so to reinforce their reading comprehension. In the same vein, critical thinking skills are of high significance in comprehending the text by the learners who understand the reading text being read (Din, 2020; Indriyana & Kuswandono, 2019; Muslem et al., 2017). Therefore, the result

suggests that it is necessary for learners to experience a new methodology which might inspire EFL students to create ideas, developing a sense and need of productive thinking to substitute the current method of drilling them to experience the memorization of stated notes and detached methods and terms of concepts to satisfy the needs of the education system.

Regarding the second null hypothesis, Pearson product-moment correlation coefficients were re-calculated for males, r= .883, n= 24, p< .0005, and also for females, r= .755, n= 119, p< .0005. the result showed that male learners' total performance on the CCTT-Z was slightly higher than that of female learners. Hence, to further ensure whether the difference was as much as to be considered significant for two groups, the r values were converted into z scores. Additional analysis further revealed that there was no statistically significant difference in the correlations between CT and RC for males and females in this particular context.

This finding also supported by previous research (e.g., Fahim et al., 2012; Marzban & Barati, 2016; Yousefi & Mohammadi, 2016). The studies disregarded the role of gender on critical thinking. However, in the description of critical thinking skill, gender as a variable must be considered as a predictor of this skill. In contrast with result of this study, Zhou et al. (2015) have revealed the existence of a significant relationship between gender and critical thinking skills. They found that females had better performance in refining the opinions, discovering the related evidence, discriminating fact from opinion, and concentrating on the inferred meaning of the learner's opinion. Furthermore, the female learners had better performance in guessing and appreciating the implied conclusion from titles and settings compared to their counterparts. It might be concluded that CT ability in English reading is described by English itself; it means that, there is a definite type of correlation between learners' CT skill and English competence. Nevertheless, for examining the certain type of correlation, additional verification is required. Thus, instructors must teach based on learners' aptitude, and respect their gender dissimilarities in regular EFL reading class.

Conclusion and Pedagogical Implications

The findings of the study showed that there was strong relationship between critical thinking ability and EFL students' reading comprehension. In other word, the results of study indicate that consistently using critical thinking skills can have a positive impact on the quality of students' reading comprehension performance. The research also suggests that a new teaching methodology is needed to encourage EFL learners to generate ideas and develop their productive thinking skills, rather than simply memorizing

dictated notes and isolated terms. The study infers that incorporating critical thinking concepts and teaching skills into the curriculum is the most effective way to improve a student's ability to think critically. By utilizing critical thinking in an EFL context, learners can improve their ability to know, comprehend, apply, analyze, synthesize, and evaluate information, which can lead to both comprehension and appropriate application of knowledge. Moreover, based on the results, there was not found any statistically significant difference between the female and male in terms of their critical thinking ability and reading comprehension. Thus, it can be claimed that the gender is not as a conclusive variable in critical thinking ability.

In contemporary education, the topic of critical thinking is crucial and highly valued. Educators across disciplines are eager to teach critical thinking skills to their students. Academic departments often encourage their professors and instructors to become knowledgeable about effective strategies for teaching critical thinking, identify suitable areas within their courses to emphasize and teach these skills, and create exam questions that assess students' critical thinking abilities (Schafersman, 1991). According to this study, instructors who teach reading comprehension should help students apply critical thinking skills at various levels, including analysis, explanation, evaluation, interpretation, and self-regulation. As Schafersman (1991) suggests, the goal should be to teach students how to think, rather than what to think. By developing critical thinking abilities, students can more easily comprehend the texts they read, engage more deeply with the material, and gain a more precise understanding of the information presented in the text.

In conclusion, the combination of critical thinking and reading comprehension in EFL educational context boost EFL learners' reading comprehension performance. It can be argued that integrating critical thinking concepts and its educational skills into curriculum is the ideal method to enhance a learner's skill to experience critical thinking. Enabling learners to apply critical thinking skills will also necessitate EFL instructors to affect their opinions on how they present their instruction. It is significant to realize that both learners and instructors experience a change from being passive in learning to being active in learning process. All EFL lesson plans should encompass critical thinking skills. Syllabus should be designed so as for the learners to possess adequate opportunities for analyzing tasks, determine applicable objectives, observe, and make decisions regarding their learning development.

The present study is not exempt from limitations. Since the study was limited to all students in a junior level at a local university, the authors suggested that other researchers should consider the different levels and

other settings of EFL students. It is also suggested that a study should be carried out to assess the level of comprehension among teachers regarding the implementation of critical thinking techniques in their classrooms. Furthermore, further study should be conducted to investigate long-term effects of integrating critical thinking skills into the curriculum or investigate the effectiveness of different instructional methods to enhance critical thinking ability.

Declaration of interest: none

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