

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

Lect. Hussein Abdul Kareem Yaqoob

Dept. of English , College of Arts , University of Basrah

Abstract:

Critical thinking (henceforth CT) is a debatable topic in all educational fields and, specifically, in the field of foreign language teaching. In the field of English Language Teaching (ELT), scholars have recently been investigating whether critical thinking skills (henceforth CTSs) predict language proficiency so that instructors can include CT activities in their lesson plans. Before conducting this paper, it was unknown if CTSs could predict Iraqi EFL learners' language proficiency, consisting of their productive skills (speaking and writing). Based on Krashen's (1982) language acquisition theory and Watson Glaser's Critical Thinking Appraisal (WGCTA) (2012), the researcher assessed the CTSs of the participants, who were 80 third-year EFL learners from the Department of English, College of Arts, University of Basra. Besides, the researcher measured the participants' speaking and writing skills. The results of the data that were collected showed that CTSs significantly predicted speaking skills ($B = 0.21, p = .002$), as well as writing skills ($B = 0.30, p < .001$). The results showed that a one-unit increase of CTSs increased the value of speaking scores by 0.21 and a one-unit increase of CTSs increased the value of writing scores by 0.3. To summarize, the findings showed that CT was a strong predictor of both speaking skills and writing skills.

Keywords: Critical Thinking skills; Krashen's theory, Watson Glaser Critical Thinking Appraisal, Speaking skills, Writing skills.

العلاقة بين التفكير الناقد ومهارات التحدث والكتابة لمتعلمي اللغة الإنجليزية كلغة أجنبية

م. حسين عبد الكريم يعقوب

جامعة البصرة - كلية الآداب - قسم اللغة الإنكليزية

ملخص البحث:

يعد التفكير الناقد أحد المواضيع الأكثر جدلا في مجال التعليم على وجه العموم وفي مجال تدريس اللغة الأجنبية على وجه الخصوص. فقد قام الكثير من الباحثين في مجال تدريس اللغة الإنكليزية كلغة أجنبية بدراسة إمكانية توظيف مهارات التفكير الناقد بالتنبؤ في تطوير كفاءة المتعلم لاستخدام اللغة الهدف وعلى ضوء ذلك يستطيع المعلم تضمين نتائج تلك البحوث في مناهجه ونشاطاته التعليمية. لم يكن معلوما قبل إجراء الدراسة الحالية ما إذا كان ذلك التوظيف يجدي نفعاً بالتنبؤ على تطوير مهارات المحادثة والكتابة للطلبة الجامعيين. حيث استندت هذه الدراسة على نظرية اكتساب اللغة لكراشن (١٩٨٢) وعلى اختبار تخمين التفكير الناقد لواتسن كلاسر (٢٠١٢). أجريت الدراسة على ٨٠ طالب لغة إنكليزية كلغة أجنبية، المرحلة الثالثة - قسم اللغة الإنكليزية، كلية الآداب، جامعة البصرة. أظهرت نتائج ان أدوات التفكير الناقد تستطيع التنبؤ وبشكل مميز في تطوير مهارات المحادثة والكتابة لدى الطلبة الذين أجريت عليهم الدراسة. احصائيا، ان زيادة وحدة واحدة من وحدات التفكير الناقد استطاعت ان ترفع من قيمة نتائج اختبار المحادثة ب ٠.٢١ وان زيادة وحدة واحدة من وحدات التفكير الناقد استطاعت أيضا ان ترفع من قيمة نتائج اختبار الكتابة بنسبة ٠.٣. ذلك يعني وبشكل مختصر ان التفكير الناقد هو أداة تنبئية قيمة في تطوير مهارات المحادثة والكتابة.

الكلمات المفتاحية: مهارات التفكير الناقد، نظرية كراشن، تقييم واتسن كلاسر للتفكير الناقد، مهارات التحدث، مهارات الكتابة .

1. Introduction

CT is an important component of effective thinking which primarily builds up the framework for the learning process and assesses what is learned and achieved in classes. CT is one of the educational issues to which researchers have begun to attach great importance in recent decades. It is one of the vital keys to ensuring effective cognitive development that allows learners to use their maximum mental energies to interact positively with the educational environment (Amin, Corebima, Zubaidah, & Mahanal, 2020). CTSs are those skills that every learner needs; hence, most experimental studies, through which programmes and experiences have been used to develop these skills, have demonstrated their benefits to learners in different ways. Among many, they lead to a deeper understanding of the content of the acquired knowledge. CTSs assess learners to think independently through encouraging the spirit of inquiry and research without accepting potentials lacking of the adequate investigation.

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

In the past, foreign language teaching was largely teacher-centered. Nevertheless, with the developments in technology and recent approaches to teaching, the idea of effective teaching has turned out to be seen as more than transferring the knowledge teachers have to students. Rather, it has become important to see students not merely as passive receivers of information, but as co-creators of knowledge (Freire, 2000). Therefore, researchers have been working hard to discover how learners can be co-creators of knowledge and what teachers can do to help students be active learners. For today's graduates to compete and be successful in the current information era, they need to think critically and solve the different problems which they encounter in their daily life. Hence, most educators strive to promote their students' CTSs. In the field of English as a Foreign Language (EFL), recent researchers have been digging deeper to link CTSs to language domains: listening, reading, speaking, and writing. In other words, EFL educators and instructors are trying to find how CT activities, such as questioning, evaluating texts, or inferring, can be included in the classroom. Moreover, educators have been investigating the strategies on how to promote their students' CTSs. Alagozlu (2007), for instance, investigated the level of his EFL students' perception of their CTSs by examining their essays. Hashemi and Zabihi (2012) conducted a quantitative correlational study. They found that CTSs have strong links with their EFL students' speaking and writing skills. Similarly, Afshar, Movassagh, and Radi (2017) found that EFL students' success in their academic studies was attributed to their CTSs and that CT was a strong predictor of university achievement in the EFL Iranian learners.

CTSs have also been found to predict EFL learners' receptive skills as well. Recently, Abduljabbar (2019) utilized 'California Critical Thinking Skills Test' (CCTST) to measure his ESL college students' CTSs and found that these skills predict the participants' listening and reading comprehension. Earlier, Yousefi and Mohammadi (2016) conducted a quantitative study and they found that CTSs positively correlated with their EFL students' reading comprehension skills. In other words, including CT activities in the EFL classroom environment would facilitate the process of language learning. Meanwhile, these skills would enable students to solve various social problems they might encounter afterwards.

The purpose of this study is to investigate the predictive utility of CTSs on EFL learners' productive skills of speaking and writing. In view of the aforementioned studies, minimal research has been conducted to investigate if CTSs predict the speaking and writing skills of Iraqi EFL university students. WGCTA will be used to assess the participants' CTSs. Besides, the participants' speaking and writing skills will be assessed through their oral classroom participation and writing performance. Also, the researcher will run a simple linear regression analysis to ascertain whether CTSs predict each of the variables of speaking and writing skills. In addition, the simple linear regression analysis would potentially show how much variation in the predictor variable of CTSs causes a change in the values of each of the criterion variables of speaking and writing skills.

2. Aims of the Study

This paper aims to investigate the predictive utility of CTSs on Iraqi EFL learners' productive skills of speaking and writing. The relationship between CTSs and ESL learners' language skills has been investigated thoroughly by recent researchers. However, the relationship between CTSs and EFL learners' language skills in an Iraqi setting has been minimally investigated. The results of this research paper could be beneficial to the field of EFL because if CTSs are found to predict language skills, EFL instructors and curriculum designers would be motivated to include CT activities in their daily lesson plans.

3. Statement of the Problem

Before conducting this study, it was unknown if and to what extent CTSs predict the Iraqi EFL university students' speaking and writing performance. In the field of EFL, recent research has found that CT is the most important type of higher thinking skills in education from elementary to higher education levels as it plays a crucial role to enhance students' reasoning and guide them to their self-directed active learning process (Murtadho, 2021). Besides, it has been found that the receptive skills of language learners can be predicted by their CT ability (Abduljabbar, 2019, Afshar, Rahimi & Rahimi 2014, and Dong & Yue, 2015).

4. Theoretical Framework

4.1 Krashen's Theory

Krashen introduced his theory in the late 1970s and early 1980's in order to explain the process of second language learning and acquisition. The theory is built on five main hypotheses: 'Acquisition-Learning Hypothesis', 'Monitor Hypothesis', 'Natural Order Hypothesis', 'Input Hypothesis', and 'Affective Filter Hypothesis'. The current study is based on the Input Hypothesis which holds that language learners and acquirers focus on the meaning rather than the form of the intended message. Moreover, Krashen (1982) stressed that language learning would be facilitated if the learners were exposed to a comprehensible input that is slightly above their level of comprehension. This hypothesis applies very well in learning a foreign language because language input, which depends on speaking and writing as two unique productive skills, helps students to improve their language proficiency when this input is comprehensible enough and when it is slightly above their current language proficiency level. Furthermore, the input hypothesis holds that individuals understand the meaning before language structures and forms.

4.2 Watson-Glaser Critical Thinking

According to Watson and Glaser (2012:23), CTSs consist of five dimensions: 'inference', 'recognition of assumptions', 'deduction', 'interpretation', and 'evaluation of arguments'. They considered CT as a cognitive activity that entails the use of certain skills to arrive at making the right decisions. Earlier, Glaser (1941:56) states "the ability to think critically involves three things: (1) an attitude of being disposed to consider thoughtfully the problems and subjects that come within the range of one's experiences, (2) knowledge of the methods of logical inquiry and reasoning, and (3) some skill in applying those methods". Accordingly, to be a

critical thinker, it requires examining any conviction or form of knowledge based on evidence which supports this belief or form of knowledge. CT means the ability to recognize problems and find unstated information based on which these problems can be solved.

5. Review of Related Studies

This section aims to review studies on the relationship between CTSs and each of the productive skills of speaking and writing. It introduces topics, trends, and contradictions in related research methodology, design mode, and results. It incorporates a combination of almost recent existing literature, observes the contributions of the relevant studies, and provides an assessment of the inclusive methodological pros and cons of the research. With this amalgamation, the gaps in the research should become clear to the reader.

Granting that speaking skills are among the most significant skills that language instructors try to develop, there is still a small number of research papers that scrutinize the relationship between CTSs and speaking skills among ESL as well as EFL students. To begin with, Guendouzi (2016) conducted a study to promote EFL learners to contribute to classroom discussions. Therefore, the researcher opted to utilize CT topics as a technique to assess the participants' speaking skills. The number of students involved in the study was 268 (male and female) whose ages ranged from 21 to 27 years. They were all studying at the University of Bejaia, Department of English/ Third year. The participants were randomly put into two groups: experimental group and control group. The researcher adopted a mixed method approach to collect the data: quantitative and qualitative. The former was conducted to collect the resulted data from the observation and treatment sessions administered in classes. However, the latter was employed to collect the resulted data from a questionnaire and a checklist designed by the researcher, as both resembled the tools of the study. The findings revealed that implementing CT in class discussions was an effective strategy that helped promote the subjects' speaking skills. Besides, after the treatment period, most of the participants in the experimental group were able to negotiate, give judgment, and succeeded in supporting and reasoning up their claims.

In the same vein, Bagheri (2018) investigated the connection between CT and autonomy in developing Iranian EFL university-level students' speaking ability. The study was primarily quantitative. The researcher applied 3 different instruments in collecting her data: Zhang and Lie's (2004) 'Learner Autonomy Questionnaire' to assess the participants' autonomy; 'Watson Glaser's (2012) Critical Thinking Appraisal' for evaluating the students' CT levels; and a posttest administered to collect the subjects' speaking performance results. The number of participants was 100 (males and females) undergraduate university students whose ages were from 19 to 30 years old. The study indicated that there was a strong connotation between autonomy and speaking ability. It additionally found that there was a significant relationship between CT utility and the participants' speaking performance which was gradually developing along the experiment period.

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

Not far from the above study results, Arfae (2020) conducted a quasi-experimental study, aiming to examine the influence of CT on teaching speaking skills to EFL learners. The study included 44 participants who were studying at Respina Talk Institute for English language training in Iran. The participants' ages ranged from 20 to 35 years. They were all assigned to CT treatment, being considered as one experimental group. A 'Preliminary English Speaking Test' was first piloted, then they processed a designated treatment for about 10 sessions; two hours for each. The researcher utilized Halverson's (2005) techniques in his experiment: 'debate analysis of media' and 'problem solving' to stimulate the subjects' CT ability which would serve the aim of the research. The result of the study proved a strong correlational relationship between CT and the participants' speaking skills enhancement. The study also found that CT had a strong positive impact on promoting the learners' foreign language efficiency.

The literature that investigated the relationship between CTSs and speaking skills of language learners was reviewed in this section. Most of the recent studies found a positive correlation between CT and speaking skills of ESL/EFL learners. Moreover, teaching EFL students how to think critically improved students' oral performance. Other quantitative, qualitative, and mixed-methods studies were conducted to examine such a relationship. However, few of these studies was conducted in an Iraqi university setting; therefore, there has been a need to conduct similar studies in Iraq.

One of the most important language skills that all students should principally master is writing. Also, writing is connected to almost every aspect of our lives. Writing is important to ESL/EFL students because "the ability to write properly gives one power and opportunity to share thoughts, ideas, and opinions with others" (Nino, 2013:210). Writing is also important because students generally, and ESL/EFL students specifically, are required to use their higher CTSs when they put their ideas in writing (Ahour & Golpour, 2016). Besides, effective writing requires skills that not every person acquires naturally. It is not surprising that learning writing is more difficult and more complicated than learning speaking or reading simply because people start to read before they start to write. Since writing has such significance, it is of utmost importance to examine the factors that can affect students' writing skills in which CT is one of the parameters that need further investigation and consideration.

Indah (2017) piloted a quantitative study to investigate the relationship between CT, writing performance, and topic familiarity. The participants were pre-advanced level students in the English department of an Indonesian university. The study consisted of 121 students who were enrolled in a critical writing course. Among the 121 students, 48 were males and 73 were females, with ages ranging from 20-22 years. Indah investigated participants' CTSs as reflected in their argumentative writing, with no treatment given to the participants, nor was the relationship between topic familiarity and CT clarified. Indah hypothesized that student-initiated topics would result in better argumentative writing than topics initiated by the teacher because student-initiated topics were chosen according to the students' interests and

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

knowledge. Furthermore, Indah stated that although CT is essential to the learner's success, it seemed that for EFL learners, language competence was as essential because, without language, students would be unable to communicate and defend their viewpoints. CTSs in the study were assessed through the participants' argumentative writing, using rubrics designed by the researcher. The study results showed that topic familiarity was positively related to students' writing performance. In other words, when students were asked to write on a familiar topic, their writing was better than writing on a less familiar one. Furthermore, Indah stressed that there was a substantial positive correlation between CT and writing performance.

Nejmaoui (2019) explored the influence of CT on 36 Moroccan university EFL students. The study attempted to measure the participants' implementation of CTSs in their writing. The researcher equally put the students in two groups: 18 in an experimental group and the rest in a control group. The study subjects were 50 in the beginning, but the number was reduced to 36 after being submitted to a placement test to ensure the participants' homogeneous language proficiency. The researcher utilized a quantitative research mode for her data analysis. She later ran a writing test to estimate the subjects' CT level in writing. The same test administered to both groups before the pretest and after the posttest during which the researcher treated the participants' writing production to enhance their critical writing skills. She chose a different topic for each test (pretest and posttest). Also, the researcher implemented Illionis's (1993) 'Critical Thinking Essay Scoring Rubric' to correct the students' essays, trying to find whether or not the participants were capable of improving their writing CT skills. Nejmaoui (2019) also adopted 'Paired Sample T.Test' to process their scores to test her hypothesis. The result showed that those in the experimental group, who were instructed on how to apply CTSs in their writing, outperformed those in the control group. The study also found that L2 learners would be eligible to learn CTSs more efficiently if they were exposed to a wider range of guiding instructions.

A recent study that practically demonstrated the strong relationship between CTSs and students' productive skills was run by Kaviani and Davood (2020). They investigated the level of effectiveness of CT on enhancing Iranian EFL learners' writing. The study sample consisted of 80 participants in an English language institute. The subjects were equally put into two groups: experimental and control groups. Learners in the former group were taught how to manipulate CT instructions in their writing. The researchers adopted 'Oxford Placement Test' (OPT) as their study tool to ensure the participants' homogeneity. Based on Mahyuddin's model (2004), Kaviani and Davood (2020:7) indicate "Teachers focus on improving critical thinking by developing correlations, examination and contradicting, categorizing, assessing, ranking, recognizing right from wrong, facts from ideas, cause and effect, summarizing, interpreting, recognizing the main, supporting detailed ideas, making decisions, and solving problems". The participants processed IELTS pre-intermediate product tasks as a pre-test. After the treatment sessions, learners in the experimental group undertook the same test but as a post-test. The results showed that CT was of

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

high contribution to developing the test takers' writing performance. The results also found that those in the control group were lacking any significant development in their productive skills.

Since writing skills are important to all ESL/EFL learners, the relationship between writing skills and CTSs was reviewed in this section. Writing properly is not naturally obtained as is the case with speaking. Therefore, it is essential to examine the factors that can affect ESL/EFL students' writing and CT. Most of the literature that was reviewed in this section confirmed the positive correlation between CTSs and writing skills. Research also showed the importance of teaching CTSs by giving EFL students writing assignments about areas that are discussed in the classroom. Moreover, the section reviewed the importance of developing EFL students' writing performance through assignments designed to hone students' skills in analysis, comparison, validation, and reflection. The researchers of these studies recommended including CT activities when designing ESL/EFL lesson plans.

6. Methodology

This research paper utilizes a quantitative methodology because of the nature of the data collected. The data collected from WGCTA are numerical as the test produces an overall score ranging from 0-34. Similarly, the data obtained from 'Nelson English Language Proficiency Test' are numerical as well. Therefore, the quantitative methodology is found to fit the aim of this paper.

6.1 Research Design

The research design of this paper is predictive because the researcher aims at investigating the predictive utility of the predictor variable of CT on each of the criterion variables of speaking and writing performance. The analysis of the relationship between these variables was based on the data collected from WGCTA and Nelson tests. Pearson correlation was used to decide whether there was a significant correlation between CT and each of the criterion variables. However, the results obtained did not demonstrate causality because correlational quantitative designs might not necessarily indicate causality (Leedy & Ormord, 2015).

6.2 Research Questions

This paper seeks to answer the following research questions:

1. Do critical thinking skills predict the Iraqi EFL learners' speaking performance?
2. Do critical thinking skills predict the Iraqi EFL learners' writing performance?

6.3 Participants

This study was conducted in an Iraqi university that has EFL learners studying English as part of their curriculum. Eighty students participated in the current research paper; 19 males and 61 females. All participants were studying at the University of Basra, College of Arts, Department of English, Third year. All of the participants speak Arabic as their first language; therefore, English is a foreign language for them. Their ages ranged from 21 to 28 years. To make sure that the participants were homogeneous, they had to take the 'Nelson English Language

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

Proficiency Test'. The test results showed that all participants were of the same language proficiency level. In other words, the test results showed that there was no huge gap among the participants' language proficiency levels in general. The minimum score in the speaking test that the participants took is 5, while the maximum score is 9. According to Nelson English Language Proficiency Test, this score range places test takers into "Advanced" language proficiency level (see table 2). Similarly, the minimum score in the writing test that the test takers took is 5, whereas the maximum score is 9, which means that all participants are in the advanced level of English proficiency (see table 3). Therefore, this has eliminated the possibility of having other mediating factors that could have affected the results.

6.4 Instruments

To collect the data necessary for the current paper, two instruments were employed:

1. Watson Glaser Critical Thinking Appraisal

WGCTA (2012) has been widely used in different countries and different educational settings. The most recent version of WGCTA is the UK version, which was used in the current study due to its strong construct reliability and validity. The appraisal includes 34 item questions and it takes about 60 minutes to accomplish. The scores obtained from the test range from 0-34 and they represent the level of CT the test takers have.

2. Nelson English Language Proficiency Test

This test was run to assess the participants' speaking and writing proficiency levels. The subsets of the test included reading comprehension, grammar, written expressions, and vocabulary.

7. Data Collection

The data collection process began with the administration of WGCTA. The students took the pencil-and-paper version of the test because of the lack of a computer lab. The participants were informed of the purpose of the test and the obtained results would not be used for their academic evaluation. The time limit of the test was 60 minutes according to the test manual. Add to that, the participants were not allowed to use a dictionary when answering the test items. After all of the participants completed the test, the researcher generated an Excel sheet with the test takers' coded numbers and scores. As has been mentioned earlier, each test taker was given a unique number as an identification for the sake of confidentiality.

The participants also took Nelson English Proficiency Test to assess their speaking and writing performance. After the completion of the writing test, students' sheets were graded using the 'Writing Rating Scale', adjusted by Gassner et al (2007). This modified version includes four categories:

- a. task achievement,
- b. coherence and cohesion,
- c. grammar, and
- d. vocabulary

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

It is worth mentioning that the scoring process ranges from 0 for unsuccessful task achievement and unquantifiable language to 7 for achieving the above categories. For the speaking part of the test, the test-takers' performance was assessed based on their fluency, vocabulary, grammar, and pronunciation. The researcher asked the participants a set of questions to assess their speaking performance. Each area was given a score ranging from 0-5; where 0 was given for no response, 1 for a response with single words, 2 for a minimal response, 4 for almost perfect, and 5 for a perfect response. After all test takers finished the test, the researcher entered their scores in the Excel sheet to prepare for data analysis.

8. Data Analysis

To answer both research questions, a simple linear regression analysis was conducted to measure if CTSs predict the Iraqi EFL students' speaking and writing performance. The data collected were entered into SPSS software. Before that, the researcher ran data cleaning to make sure that all data were entered correctly and that there were no missing data. Besides, the researcher double-checked the Excel sheet to check if the data entered were within the range.

Table 1 below provides descriptive statistics regarding the variable of WGCTT. Out of the 80 participants who took WGCTT, 10 of them got 12 points. Also, ten participants scored 30 to 34 points, which indicates that these participants can think critically. Nineteen participants got points from 20 to 29, indicating strong CTSs; whereas 47 participants scored from 10 to 19, indicating moderate CTSs. Finally, 4 participants got from 1 to 9 points, which indicates low CTSs. Therefore, generally speaking, most participants (59%) have moderate CTSs, while very few of them (10%) have low CTSs. This is a good indicator that the EFL Iraqi learners in the University of Basrah can think critically, although this ability needs to be improved.

Table 1 WGCTT Frequency

		Frequency	Percentage	Valid Percent	Cumulative Percent
Valid	5.00	1	1.3	1.3	1.3
	7.00	2	2.5	2.5	3.8
	9.00	1	1.3	1.3	5.0
	10.00	6	7.5	7.5	12.5
	11.00	3	3.8	3.8	16.3
	12.00	10	12.5	12.5	28.7
	13.00	3	3.8	3.8	32.5
	14.00	5	6.3	6.3	38.8

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

15.00	3	3.8	3.8	42.5
16.00	5	6.3	6.3	48.8
17.00	2	2.5	2.5	51.2
18.00	4	5.0	5.0	56.3
19.00	6	7.5	7.5	63.7
20.00	2	2.5	2.5	66.3
21.00	3	3.8	3.8	70.0
22.00	5	6.3	6.3	76.3
23.00	3	3.8	3.8	80.0
24.00	1	1.3	1.3	81.3
25.00	2	2.5	2.5	83.8
26.00	1	1.3	1.3	85.0
27.00	1	1.3	1.3	86.3
29.00	1	1.3	1.3	87.5
30.00	4	5.0	5.0	92.5
31.00	1	1.3	1.3	93.8
32.00	1	1.3	1.3	95.0
33.00	3	3.8	3.8	98.8
34.00	1	1.3	1.3	100.0
Total	80	100.0	100.0	100.0

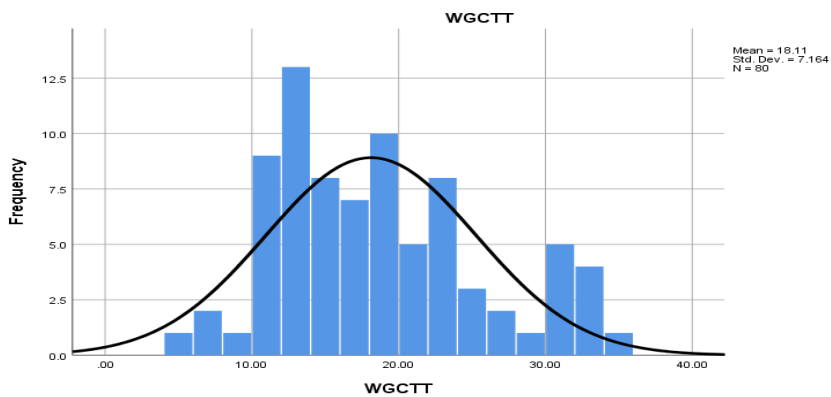


Figure 1. Histogram of WGCTT frequency

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

Table 2 below represents the frequency of the participants' performance in the speaking test. As it is obvious, 42 participants (52%) got less than 6. No participant got a full grade (10) in the test; however, 15 participants (38%) made good grades from 7 to 9. The speaking test results indicate that the Iraqi EFL learners at the University of Basra generally need to work on their speaking skills. Instructors can enhance students' speaking skills by including topics that are related to the students' personal lives.

Table 2. Speaking Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.00	3	3.8	3.8	3.8
	5.70	6	7.5	7.5	11.3
	5.75	18	22.5	22.5	33.8
	5.80	15	18.8	18.8	52.5
	6.00	13	16.3	16.3	68.8
	7.00	10	12.5	12.5	81.3
	8.00	11	13.8	13.8	95.0
	9.00	4	5.0	5.0	100.0
	Total	80	100.0	100.0	100.0

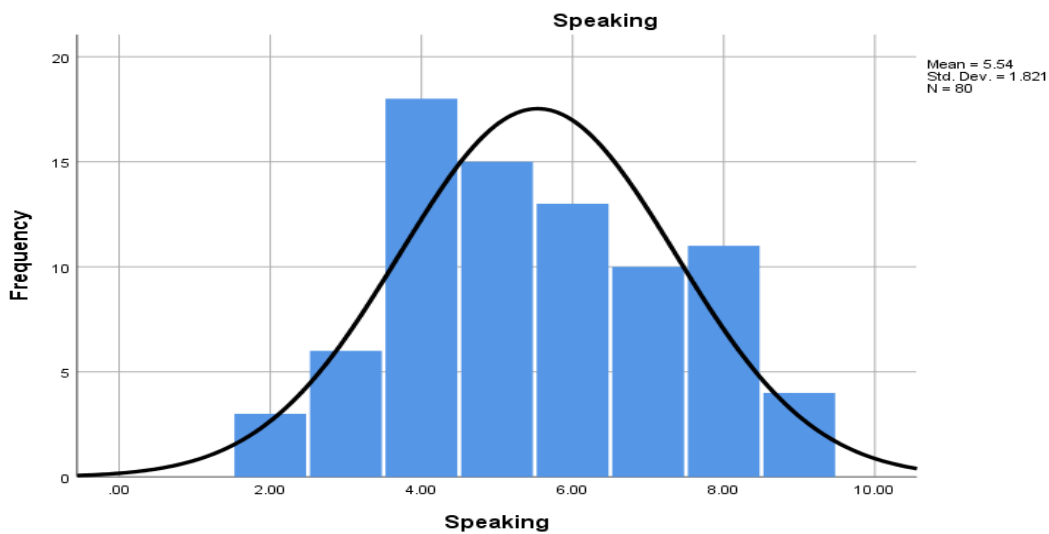


Figure 2. Histogram of the participants' speaking performance.

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

As for the participants' writing performance, Table 3 below shows a visual representation of how the participants performed. The table shows that 37 students (46%) got a passing grade of 6 to 9. No participant has achieved a full grade of 10, which is normal due to them being EFL learners. Forty-seven participants (54%) were not able to earn a passing grade.

Table 3. Writing Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.00	2	2.5	2.5	2.5
	5.50	9	11.3	11.3	13.8
	6.00	17	21.3	21.3	35.0
	7.00	15	18.8	18.8	53.8
	7.50	14	17.5	17.5	71.3
	7.75	11	13.8	13.8	85.0
	8.00	10	12.5	12.5	97.5
	9.00	2	2.5	2.5	100.0
	Total	80	100.0	100.0	100.0

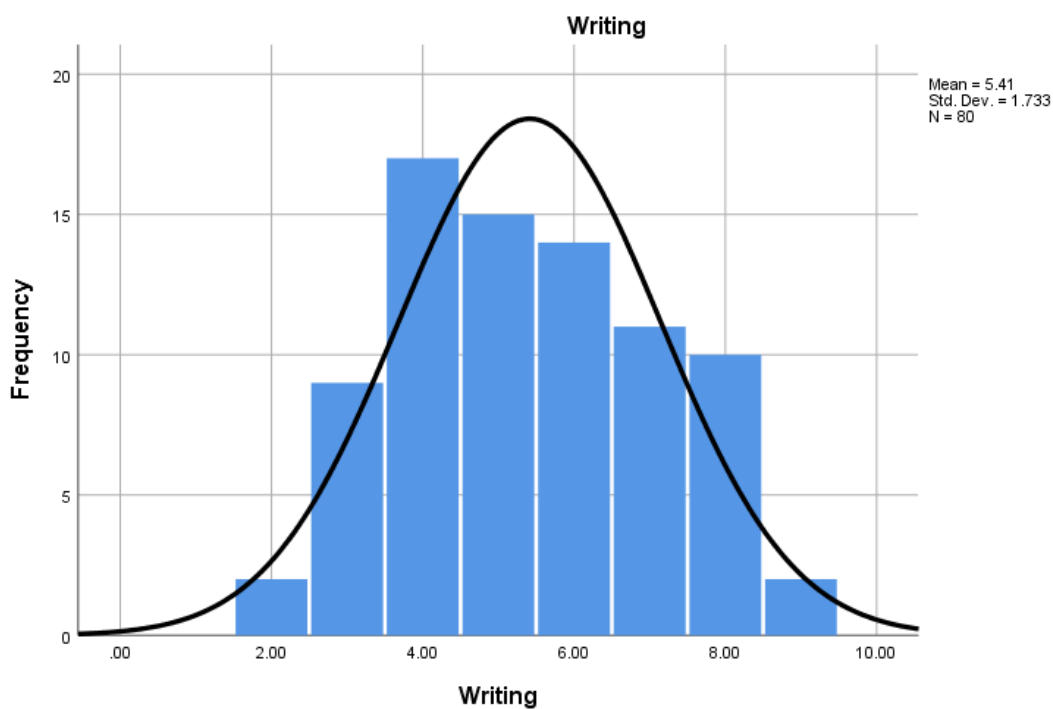


Figure 3. Students' writing performance

9. Results and Discussions

This section is dedicated to presenting the predictive utility of the predictor variable, the Iraqi EFL learners' CTSs, on each of the criterion variables, speaking and writing performance. The results are presented in the same order the data were analyzed. This order aligns with the order of both research questions. The first research question asks "Do critical thinking skills predict the Iraqi EFL learners' speaking performance?". To answer it, a simple linear regression analysis was conducted. The results of the linear regression model were found significant, $F(1,82) = 21.02$, $p < .001$, $R^2 = 0.23$, demonstrating that approximately 23% of the variance in speaking performance scores is explainable by CT scores. CT scores significantly predicted speaking performance scores, $B = 0.29$, $t(82) = 3.41$, $p < .001$. This describes that on average, a one-unit increase of CT scores increased the value of speaking performance scores by 0.29 units. Table 4 below summarizes the results of the regression model.

Table 4. Results for Linear Regression with CCTST Score predicting Speaking Scores

Variable	<i>B</i>	<i>SE</i>	<i>CI</i>	β	<i>t</i>	<i>p</i>
(Intercept)	16.95	1.20	[14.56, 19.33]	0.00	14.12	< .001
CCTST_Score	0.29	0.07	[0.17, 0.44]	0.45	4.61	< .001

The second research question asks "Do critical thinking skills predict the Iraqi EFL learners' writing performance?". To answer it, the results of the linear regression model are significant, $F(1,82) = 9.84$, $p = .001$, $R^2 = 0.11$, indicating that approximately 19% of the variance in writing performance scores was explicable by CT scores. CT scores significantly predicted writing performance scores, $B = 0.21$, $t(82) = 3.02$, $p = .001$. This indicates that a one-unit increase in CT scores increased the value of writing performance scores by 0.21 units. Table 5 below summarizes the results of the regression model.

Table 5. Results for Linear Regression with WGCTA Score predicting Writing Performance Scores

Variable	<i>B</i>	<i>SE</i>	<i>CI</i>	β	<i>t</i>	<i>p</i>
(Intercept)	18.31	1.32	[15.69, 20.94]	0.00	13.87	< .001
WGCTA_Score	0.21	0.07	[0.08, 0.37]	0.33	3.12	

10. Findings

EFL students, like others, need to be able to ask questions, create logical answers, and evaluate the information that is available to them. Recent research has shown that CTSs are necessary for every student in all fields of knowledge. In the field of English language learning, several research articles concluded that CT positively correlated with language proficiency. However, minimal research has been piloted in Iraq to investigate the predictive utility of CTSs on language skills. This research paper was conducted to fill this gap; the predictive utility of CTSs on Iraqi EFL students' productive skills.

The results of the linear regression analyses showed that CT is a strong predictor of both speaking and writing performance. This is supported by the results obtained from speaking data analysis conducted Guendouzi (2016), Bagheri (2018), and Arfae (2019). They are all found compatible with the current study speaking results in terms of the strong correlational relationship between CT and speaking skills enhancement. Furthermore, despite the variation in the results obtained from studies conducted by Indah (2017), and Nejmaoui (2019), they are found in line with the writing results of the present study which has confirmed the valid relationship between CT employment in class and students' writing performance.

11. Conclusions

The topic of CTSs has been investigated thoroughly in the field of education, in general, and in the field of ESL specifically. ESL educators and curriculum designers are more interested in all factors that can predict the development of ESL learners' language proficiency. Therefore, this paper aims at investigating whether CT skills predict ESL learners' productive skills of speaking and writing. The researcher utilized Krashen's theory of language acquisition due to its strong impact on the field of ESL in recent research. In addition, WGCTA was used to assess the levels of CT of the participants of the study.

Statistically, the findings showed that CTSs significantly predict both aforementioned skills. That is, a one-unit increase of CTSs led to increasing the value of speaking scores by 0.21. Similarly, a one-unit increase of CTSs led to increasing the value of writing scores by 0.3. These results indicate that CT is a solid predictor of speaking and writing. These findings are useful for all educators and curriculum designers in the field of ESL to include CT activities that can develop ESL learners' language proficiency in ESL curriculum and textbooks.

Researchers are recommended to process different test models for university-level students to take advantage of the best results that might be emerged. They are also advised to conduct similar tests for high school students to improve their language proficiency. This gives the chance to researchers to benefit from the findings that help modify school curriculums. The results of this study also call for future research on the predictive utility of CT on the language proficiency of students

in other departments in colleges. Furthermore, the results urge instructors and curriculum designers to include CT activities in their lesson plans and textbooks in order to facilitate the process of language learning.

References

- Abduljabbar, A. L. (2019). The predictive utility of critical thinking skills on language proficiency in adult English as second language learners. Grand Canyon University, Arizona, USA. Retrieved from <https://pqdtpopen.proquest.com/pubnum/27549264.html>
- Afshar, H., Movassagh, H., & Radi Arbabi, H. (2017). The interrelationship among critical thinking, writing an argumentative essay in an L2 and their subskills. *The Language Learning Journal*, 45(4), 419-433.
- Afshar, H.S., Rahimi, M. (2013). The relationship among critical thinking, emotional intelligence, and speaking abilities of Iranian EFL learners. *Procedia - Social and Behavioral Sciences*, 136, 75–79.
- Afshar, H. S., Rahimi, A., & Rahimi, M. (2014). Instrumental motivation, critical thinking, autonomy, and academic achievement of Iranian EFL learners. *Issues in Educational Research*, 24(3), 281–298.
- Ahour, T., & Golpour, F. (2016). Type of critical thinking and EFL learners' performance on argumentative and descriptive writing modes. *The Iranian EFL Journal*, 10(6), 528-543.
- Alagozlu, N. (2007). Critical thinking and voice in EFL writing. *The Asian EFL Journal*, Volume 9, Number 3.
- Amin, A. M., Corebima, A. D., Zubaidah, S., & Mahanal, S. (2020). The Correlation between Metacognitive Skills and Critical Thinking Skills at the Implementation of Four Different Learning Strategies in Animal Physiology Lectures. *European Journal of Educational Research*, 9(1), 143-163. <https://doi.org/10.12973/eu-jer.9.1.143>
- Arfae, A. M. (2020). The Impact of Teaching Critical Thinking on EFL Learners' Speaking Skill: A Case Study of an Iranian Context. *English Language Teaching*, 13(1), 112-123.
- Bagheri, N. (2018). Critical Thinking and Autonomy in Speaking Ability: A Case Study. *International Journal on Studies in English Language and Literature (IJSELL)*, 6(5), 73-83.
- Dong, T., & Yue, L. (2015). A study on critical thinking assessment system of college English writing. *English Language Teaching*, 8(11), 176–182.
- Freire, P. (2000). *Pedagogy of the oppressed* (30th anniversary ed.). New York: Continuum.

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

- Gassner, O. (2007). Testing Reading: Specifications for the E8- Standards Reading Tests. LTC Technical Report 2. Language Testing Centre, Alpen Adria-Universität Klagenfurt.
- Glaser, E. (1941). An Experiment in the Development of Critical Thinking, Teacher's College, Columbia University, USA.
- Golpour, F. (2016). Critical thinking and EFL learners' performance on different writing modes. *Journal of Pan-Pacific Association of Applied Linguistics*, 18(1), 103-119.
- Guendouzi, R. (2016). Promoting critical thinking topics to enhance EFL learners' speaking skills: beliefs and perspectives (Doctoral dissertation, University of Bejaia).
- Hashemi, M. R., & Zabihi, R. (2012). Does critical thinking enhance EFL learners' receptive skills? *Journal of Language Teaching & Research*, 3(1), 172–179. doi:0.4304/jltr.3.1.172-179
- Indah, R. N. (2017). Critical thinking, writing performance and topic familiarity of Indonesian EFL learners. *Journal of Language Teaching and Research*, 2, 229. doi:10.17507/jltr.0802.04
- 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.
- Krashen, S. D. (1982). Principles and practice in second language acquisition. Oxford: Pergamon Press.
- Leedy, P., & Ormrod, J. (2015). Practical research: Planning and design, (9th ed.), New York City: Merrill.
- Leggette, H. R., McKim, B., Homeyer, M., & Rutherford, T. (2015). Perspectives of writing related to critical thinking and knowledge creation. *NACTA Journal*, (4), 275.
- Miller, L. (2015). Sports communication as a way to develop critical competencies in the L2 classroom. *RELC Journal*, 46(1), 89-104. doi:10.1177/0033688215572004
- Murtadho, F. (2021). Metacognitive and critical thinking practices in developing EFL students' argumentative writing skills. *Indonesian Journal of Applied Linguistics*, 10(3).
- Nejmaoui, N. (2019). Improving EFL Learners' Critical Thinking Skills in Argumentative Writing. *English Language Teaching*, 12(1), 98-109.
- Nino, S. (2013). Working by projects: A way to enrich critical thinking and the writing process in a third grade EFL classroom. *Colombian Applied Linguistics Journal*. 15(2).

The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills

- Suacillo, C. I., Um, S. U., Velasquez, J. M., Villaflores, H. M., & Cequena, M. B. (2016). Critical reading strategies, reading comprehension, and writing performance of ESL college students: A correlational study. *International Journal of Advanced Research*, 4(9), 610-623. doi: 21474/IJAR01/1526
- Walter, D. (2017). The relationship of quality of work-life and organizational commitment: A correlational study of flight attendants in the United States. Retrieved from <https://search.proquest.com/openview/20d4e5374db69e0a4031ec84a4ff68f1/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Watson, G., & Glaser, E. M. (2012). *Watson-Glaser TM critical thinking appraisal*. UK: NCS Pearson.
- Yousefi, S., & Mohammadi, M. (2016). Critical thinking and reading comprehension among postgraduate students: The case of gender and language proficiency level. *Journal of Language Teaching & Research*, 7(4), 802–807. doi:10.17507/jltr.0704.23