

The Correlation Between Iraqi EFL University Students' Critical Thinking and Writing Performance

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Abstract

The aim of this study is to investigate the correlation between Iraqi EFL university students' critical thinking and their performance in writing skill. To achieve this aim, a random sample consisted of (360) university students at English Departments in three Iraqi universities during the academic year 2022/2023 was chosen. Florizsa Alolores's *Critical Thinking Assessment* test (2010) – comprised in 30-multiple choice items - was adapted to measure the subjects' critical thinking. Writing performance was assessed by constructing (250 words) essay-writing test. Statistical analysis was carried out using (SPSS) program. The study tools' dependability has been guaranteed by using Kuder-richarson-20 formula, and Alpha Cronbach equation. The core findings of this study can be summarized as follows: there is a significant correlation between the independent variable of critical thinking, and the dependent variable of writing productive skill. The results showed a high correlation coefficient between critical thinking and the subjects' writing performance.

Keywords: Critical Thinking, Writing performance, productive skills, independent and dependent variables, Correlational study, Iraqi EFL University students.

العلاقة بين التفكير النقدي والأداء الكتابي لطلبة جامعة اللغة الإنجليزية كلغة أجنبية في العراق

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الهدف من هذه الدراسة هو التحقق من العلاقة بين التفكير النقدي لطلبة جامعة اللغة الإنجليزية كلغة أجنبية في العراق وأدائهم في مهارة الكتابة. ولتحقيق هذا الهدف تم اختيار عينة عشوائية مكونة من (360) طالباً جامعياً في أقسام اللغة الإنجليزية في ثلاث جامعات عراقية خلال العام الدراسي 2023/2022. تم تكيف اختبار تقييم التفكير النقدي لفلوريزا ألوريس (2010) - الذي يتكون من 30 عنصراً متعدد الاختيارات - لقياس التفكير النقدي لدى الأشخاص. تم تقييم الأداء الكتابي من خلال بناء اختبار كتابة المقالات (250 كلمة). وتم إجراء التحليل الإحصائي باستخدام برنامج (SPSS) وتم ضمان اعتمادية أدوات الدراسة باستخدام معادلة كودر-

ريتشارسون-20، ومعادلة ألفا كرونباخ. ويمكن تلخيص النتائج الأساسية لهذه الدراسة فيما يلي: وجود علاقة ارتباطية ذات دلالة إحصائية بين المتغير المستقل للتفكير الناقد، والمتغير التابع لمهارة الكتابة الإنتاجية. وأظهرت النتائج وجود علاقة ارتباط عالية بين التفكير الناقد والأداء الكتابي لدى أفراد العينة. الكلمات المفتاحية: التفكير الناقد، الأداء الكتابي، المهارات الإنتاجية، المتغيرات المستقلة والتابعة، الدراسة الارتباطية، طلاب جامعة اللغة الإنجليزية كلغة أجنبية.

1.Introduction

1.1 The problem

The problem this study tackles can be expressed in this question: i.) Is there a correlational relationship between Iraqi EFL university students` critical thinking and their writing performance?

On the basis of the above statement of the problem, the present study aims to achieve the aim of finding out the correlation between Iraqi EFL university students` critical thinking and their writing performance.

1.2 The Importance of the problem

The productive skill of writing for foreign language learners can be affected by many different cognitive and psychological factors. One important cognitive factor in this connection is critical thinking, which is a widely recognized educational goal, realizable through the learners` attainment of careful, reflective thinking directed towards achieving the needful educational performance goal (Hitchcock, 2020). Such is the case simply because this a mode of thinking can have a high problem-solving potential in the learning process (Siegel, 1988).

Though critical to the process of educational learning in general and specifically to foreign language learning, there is a lack of academic studies conducted in Iraq that rigorously assess the correlation between critical thinking and writing performance by Iraqi EFL university students, a gap, which this study aims at attempting the first step in filling in. The goal of the current study is to identify the relationship between the critical thinking abilities of Iraqi EFL university students and their writing performance.

1.3 Relevant Related Literature

Ramezani et al. (2016) investigated the connection between EFL students' critical thinking skills and their speaking abilities at Payame Noor University of Rasht, Iran, in order to find out whether or not better critical thinking language learners fulfill better in their speaking performance. A sample of (100) students were selected by applying IELTS speaking test. To find out critical learners, Lauren Starkey Critical Thinking Test (2010) of 30-multiple choice items was administered to the students. The application of Spearman non-parametric correlation revealed a highly correlation between these two variables.

Yaqoob, H. A. (2021) investigated whether critical thinking skills predict language proficiency. Using Watson Glaser`s Critical Thinking Appraisal (2012) as well as speaking and writing tests, the researcher assessed the critical thinking skills of (80) third-year EFL learners from the Department of English, College of Arts, University of Basra, Iraq. Productive skills` measuring instrument was `Nelson English Language Proficiency test. The results revealed a one-unit increase of critical thinking skills enhanced the rate of speaking scores by (0.21) and the rate of

writing scores by (0.3). The study concluded that critical thinking was a strong predictor of both productive skills.

Beniche (2023) examined the relationship between effective writing and critical thinking in Moroccan Semester 4 and Semester 6 students (English department, Faculty of Languages, Letters and Arts, Ibn Tofail University, Kenitra. Morocco). A hundred students participated in the study: 50 students from semester 4, and 50 students from semester 6. A test was administered to assess the students' critical thinking. Next, the students were required to compose an argumentative essay concerning everyday communication and social media. SPSS software was used in data analysis and Pearson's correlation coefficient to find out the connection between argumentative writing and critical thinking. Data analysis resulted in a correlation coefficient of (0.683) for the first group, and (0.781) for the second one. The implication is that the correlation between critical thinking and argumentative writing is high and significant.

1.4 Research Question

This paper is geared to answering the question: Is there a correlation between the critical thinking of Iraqi EFL university student and writing performance ?

2. Method

This section describes the research design, the population and sample selection, and the instruments used. The validity, reliability, and other psychometric aspects of the instruments are also demonstrated and validated, and the statistical techniques employed to examine the gathered data are also considered.

2.1 Definitions of Basic Terms

2.1.1 Critical Thinking

The simplest definition of critical thinking is 'making reasoned judgments' (Beyer,1995, p.8). Researchers agree that it manifests the reflective information-processing activity involving many higher-order judgmental skills that guide both belief and action.

For the purposes of this study, the researcher adopts this operational definition of critical thinking: " is the deliberate and thoughtful process of evaluating data, criteria, and concepts in order to make informed decisions about what to believe or what actions to take. " (Facione, 2011, p. 22).

The concept of critical thinking is rich and complex, since it encompasses a combination of multi-faceted, self-directed and purposeful rational abilities. Written records show that the intellectual roots of critical thinking can be traced back to the dialogical method of Socrates (c. 470–399 BC) - known as ('elenchus' = questioning) (Guthrie, 1971). Socrates method established the fact that one must not accept an idea as worthy of belief before profoundly probing into one's thinking by seeking evidence and logical consistency, clarifying assumptions, analysing information, and tracing out the implications of what is said as well as what is done (Benson, 2011). During the 19th Century, critical thinking expanded to involve human social life, like the problems of capitalism: Karl Marx (1818-1883); the basis of biological life: Charles Darwin (1809-1882); the unconscious mind: Sigmund Freud (1859-1939). Applied to cultures and language, it led to the

establishment of the fields of anthropology and linguistics. Greater advances in the field of critical thinking were achieved during the 20th Century by William Graham Sumner (1840-1910) - who asserted the need for critical thinking in both life and education – and John Dewey (1859-1952), who commonly termed it ‘reflective thinking’ (Dewey, 1910, p. 6).

According to AL-Zahrani (2022, p. 349) critical thinking is “a mental process that involves many thinking skills which can be used to verify the thing or subject, and evaluate it so as to make a decision.”

Differences among the researchers centre mainly around its envisaged scope according the specialties among logicians, psychologists, biologists, and educators (Alosaimi, et al., 2014).

2.1.2 Writing

Writing is one core productive skill in Foreign language learning and acquisition, enabling learners to actively communicate the language in written form. It requires both physical and mental activities (Al-Kubaisy, 2018). In the classroom environment, testing this skill serves as a crucial measure of how much the learners have acquired the target language. Moreover, effective command of writing skill nurtures a sense of confidence and progress among foreign language learners.

Writing is a fundamental skill of language that learners should be competent in order to fulfill the objectives of studying a foreign language (Abbas & Al-bakri, 2018).

Writing competence involves the appropriate usage of rhetorical and logical means to achieve the communicative functions of written texts; the thematic development of the main idea and the supporting ones, with exemplification and generalization. As such, its performance requires a specific subset of micro-skills: proper vocabulary knowledge; correct syntax, spelling, and punctuation; textual organization, coherence, expressing certain meaning via different grammatical forms, etc. (Brown & Abeywickrama, 2019). Writing is a process of building macrostructure from micro units (Mohammed & Jasim, 2022).

Noaman (2013, p. 127) says "Writing is both productive and interactive, it is productive , as when we write, we convey our thoughts to others, and it is interactive, as when we write we try to send a message to the reader who is already in our mind".

Despite its importance as a basic communicative skill, history of L2 teaching shows that it has been perceived differently by different educationalists (Djigunović, 2006). During the heyday of the Audio-lingual Method of teaching in the middle of the last century, writing was primarily seen as a supportive skill to ‘consolidate vocabulary, grammar, and to test reading comprehension’ (Reid, 1993). This position changed in the early 1980s, which saw an increasing attention to the significance of writing as process in foreign language learning by ‘integrating writing-based activities in a language program’ that offers ‘access to knowledge, power and resources’ (Zen, 2005, p. 10; Djigunović, 2006, p. 12).

2.2 Participant’s Characteristics

The subject of this study involves Iraqi EFL fourth year university students at the Colleges of Education/ Departments of English during the academic year 2022/23, their ages range between (22-25) years old, they are all studying English as a foreign language.

2.3 Population and Sample

The population of the current study stands at (3310). The researcher has selected a random sample of (360) students. This random sample comprised (10.87%) of the total population, which is quite representative; i.e., more than double the significance threshold of (5%).

2.4 Instruments

For the sake of investigating the correlation between the two variables, the following instruments have been piloted and then applied:

- Florizsa Alolore's (2010) 'Critical Thinking Test' has been adopted to assess Iraqi EFL university students' critical thinking ability. It comprises (30) multiple-choice questions, plus key answers.
- To assess the students' writing skill, the participants have been asked to write an essay of (250) words about the familiar theme of : "social media makes our life easier than before".

2.4.1 Validity

Test validity is one basic requirement in all research instruments, and has been assessed through face and construct validity.

The two tests' formats have been submitted for face validation to (20) applied linguistics and ELT professors, who approved the instruments' items and their scoring schemes, except for certain modifications, which were duly incorporated into the final tests' formats.

Construct validity of the two instruments has been confirmed by calculating: i.) test items' discrimination index; ii.) the correlation coefficient between item's score and the total score of each instrument; and iii.) tests items' internal consistency. The results obtained via the aforementioned measures have indicated that the correlational coefficients are statistically significant, meaning that the construct validity of the research instruments of this study is realized.

2.4.2 Reliability

By applying Kuder-Richardson-20 to the scores of the entire research sample of (360), the reliability of the critical thinking test has been assessed, and demonstrated a high reliability index of (0.93). And for the reliability of the writing production test, alpha Cronbach's formula has been used, which also showed a high reliability coefficient of (0.90).

3.5 Design of the Study

The present study has adopted a correlational design, which is a type of descriptive research that assesses an existing condition by collecting data to determine the

extent a relationship obtains between two or more quantifiable variables (Mills and Gay, 2019). Accordingly, it incorporates a statistical test to determine the propensity for critical thinking and the writing skill in order to find out the correlations among them (Creswell, 2012).

2.6 Data Analysis

Data statistics were measured using SPSS program Version 19. In order to examine the relationship between critical thinking and the writing performance of Iraqi EFL university students, the scores of the students' critical thinking test were compared with those of the writing test by applying Pearson correlation coefficient formula.

2.6.1 Statistical Indicators of Study Instruments

The Statistical Package for Social Sciences (SPSS), has been utilized to find out the statistical indicators of this study's instruments, as described in the following subsections.

2.6.1.1 Critical Thinking Test

The statistical indicators of this test are shown in Table (1) and Figure (1.1).

Table 1

Statistical Indicators of Critical Thinking Test

Statistical Indicators of Critical Thinking Test	
Mean	23.01
Median	23

Mode	24
Standard Deviation	2.369
Variance	5.61
Skewness	0.247-
Kurtosis	0.748
Minimum	14
Maximum	30
Range	16

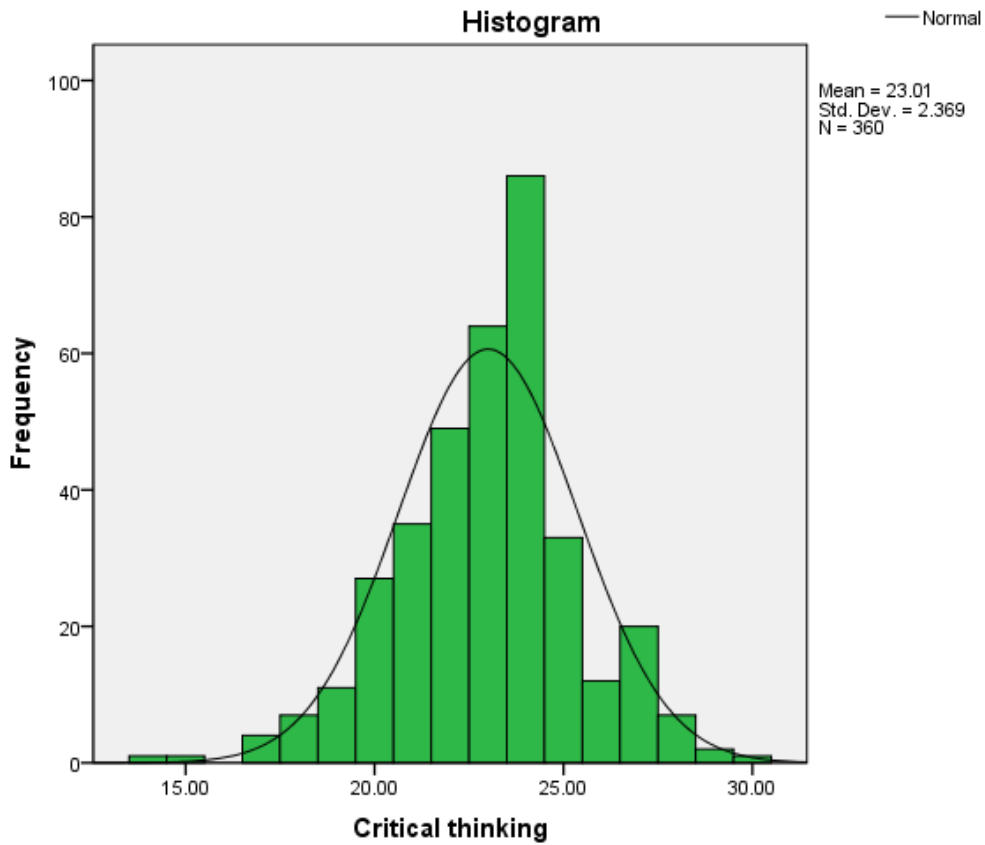


Figure 1.1 *Scores' Distribution of the Critical Thinking Test*

2.6.1.2 Writing Test

The analysis of this test has resulted in the statistical indicators shown in Table (2) and Figure (2.1).

Table 2

Statistical Indicators of the Writing Test

Statistical Indicators of Writing test
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Mean	18.66
Median	19.00
Mode	17
Standard Deviation	3.4
Variance	11.79
Skewness	0.117-
Kurtosis	0.887-
Minimum	11
Maximum	25
Range	14

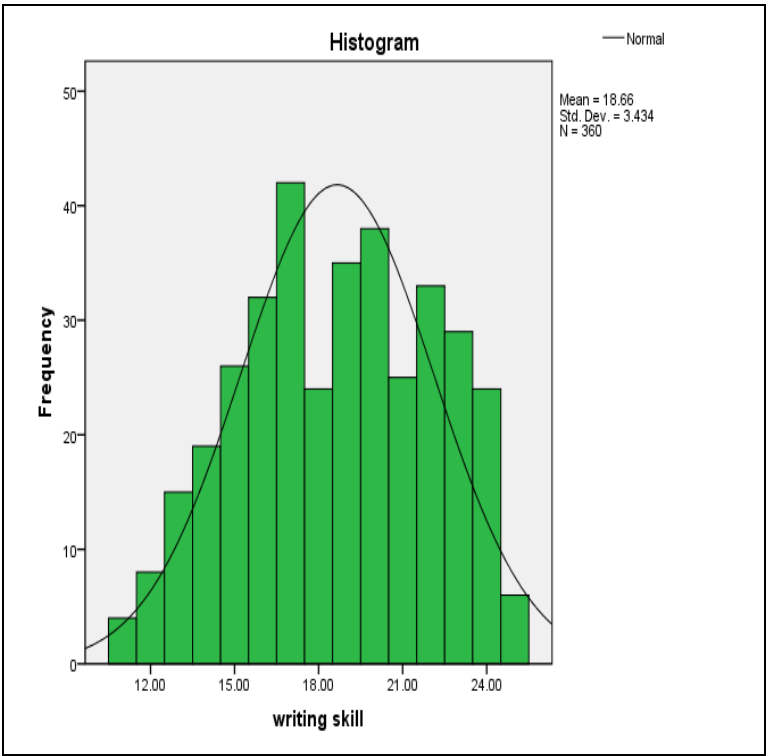


Figure 2.1 Statistical Indicators for Writing Test**2.6.2 Results of Statistical Analysis**

The statistical indicators of study's instruments have revealed that the scores approximate the normal distribution curve due to the closeness of the central tendency, and that they are consistent with most scientific instruments. The values of skewness in two instruments approach zero. Such indicators exhibit that the instruments are appropriate to be conducted in this study.

3. Results

The value of the correlation coefficient between critical thinking and writing performance has been at (0.740). To determine the significance of the relationship, a t-test has been conducted. The computed t-value is (20.555), which is much than the critical rate of (1.96), at the significance level of (0.05), with (358) degree of freedom. This t-value indicates that the connection between critical thinking and writing performance is a direct one.

Table 3.

Correlation between Critical Thinking and the Writing Performance

Correlation Between Critical Thinking and the Writing Performance					
Critical Thinking					
Writing Performance	No of Subjects	Correlation Coefficient	T-Value		Significance
			Computed	Critical	Level
	360	0.740	20.555	1.96	Significant

4. Discussion

The results of this study have revealed a significant correlation between critical thinking and students' writing performance. This finding agrees with those reported in Beniche (2023).

This study is limited to Iraqi EFLLs in the fourth year university students at the Colleges of Education in Iraq during the academic year (2022-2023).

5. Conclusions

1- Learners with critical thinking skills are independent thinkers who analyze, evaluate, and take decisions in many different contexts. They can perform good in writing skill and transfer the obtained knowledge to their daily life.

2- The independent variable of critical thinking is strongly correlated to the subjects' performance in the dependent variable of writing production. This result allows concluding that the relationship between the two variables is a direct, positive one.

6. Recommendations

On the basis of the previous discussion of this study's results, the following recommendations can be put forward.

1- Due to the direct, positive relationship obtaining between critical thinking and foreign language productive skill of writing, formal teaching courses geared to specifically enhancing practice in the independent variable of critical thinking need be compiled and implemented in the four stages of English Language Departments in Iraqi Colleges of Education.

2- In view of the lack of studies that evaluate the level of critical thinking by Iraqi EFL university students, further research in this variable is recommendable to corroborate the results of this study.

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References

Abbas, S. H., & Al-bakri, S. A. (2018). The Effect of Pair Writing Technique on Iraqi EFL University Students' Writing Performance and Anxiety. *Arab World English Journal*, 9(2).

DOI: <https://dx.doi.org/10.24093/awej/vol9no2.2>

Al-Bakri, Sh. & Mashaan, T. (2018). The Effect of CORT Program 1(Breadth) on EFL Preparatory School Students' Performance in Composition Writing. *AL-Ustath Journal for Human and Social Sciences*, No. 226(1).

Al-Kubaisy, I. R. M. (2018). New Perspectives in Teaching Writing Skill Communicatively. *Al-Ustath Journal for Human & Social Sciences*, 225(1), 137-146. <https://alustath.uobaghdad.edu.iq/index.php/UJIRCO/article/view/132/109>

AL-Zahrani, A. S. (2022). The Relationship between Critical Thinking and Achievement among Middle School Students in Makkah. *AL-Ustath Journal for Human and Social Sciennces*, 61(4), 347–363. <https://doi.org/10.36473/ujhss.v61i4.1945>.

Alolor, F. (2010). *Critical Thinking Assessment Practice Quiz*. https://www.academia.edu/39641830/Critical_Thinking_Assessment_Practice_Quiz

Alosaimi, K. H. (2013). *The Development of Critical Thinking Skills in the Sciences*. Ph.D. Thesis, University of Dundee. <https://discovery.dundee.ac.uk/en/studentTheses/thedevelopment-of-critical-thinking-skillsin-the-sciences>

Beniche, M. (2023). The Correlation between Critical Thinking Skills and Argumentative Writing Skills in Moroccan Higher Education : The Case of the Faculty of Languages, Letters and Arts, Ibn Tofail Universty, Kenitra.

- International Journal of Language and Literary Studies*, 5(1), 212–229.
<https://doi.org/10.36892/ijlls.v5i1.1226>
- Benson, H. H. (2011). Socratic Method. In D. R. Morrison (Ed.), *The Cambridge Companion to Socrates*. Cambridge University Press.
- Beyer, B. K. (1995). *Critical thinking*. Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Brown, H. D. & Abeywickrama, P. (2019). *Language Assessment: Principles and Classroom Practices*. (3rd ed.). Pearson.
- Creswell, J. W. (2012). *Educational research: planning. Conducting, and Evaluating quantitative and qualitative research* (4th Ed.). Pearson.
- Dewey, John (1910). *How we think*. D. C. Heath and Company.
- Djigunović, J. M. (2006). Role of Affective Factors in the Development of Productive Skills. *UPRT 2005 Empirical Studies in English Applied Linguistics*, 9-18.
- Facione, P. A. (2011). Critical Thinking: What It is and Why It Counts. insightassessment.com.
- Guthrie, W. K. C. (1971). *History of Greek Philosophy, Volume III: The Fifth-Century Enlightenment –Part 2: Socrates*. Cambridge University Press.
- Hitchcock, D. (2020). "Critical Thinking", *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/fall2020/entries/critical-thinking>
- Mills, G., & Gay, L. (2019). *Educational Research: Competencies for Analysis and Applications*. Pearson.
- Mohammed, H. A. & Jasim, A. A. (2022). The Impact of Group Testing as a Strategy on University Students' Writing Composition Development. *Alustath Journal for Human & Social Sciences*, 61(1), 669-689. Doi:<https://doi.org/10.36473/ujhss.v61i1.1913>.
- Noaman, N. (2013). Literature and Language Skill. *Alustath*, No. 204 Vol. 2 123-134. Baghdad University.
- Ramezani R., Larsari, E. I. & Kiasi, M. A. (2016). The Relationship between Critical Thinking and EFL Learners' Speaking Ability. *English Language Teaching*, 9 (6). Doi. 10.5539/elt.v9n6p189
- Reid, J. M. (1993). *Teaching ESL Writing*. Prentice Hall Regents.
- Siegel, H. (1988). *Educating Reason: Rationality, Critical Thinking, and Education*.
- Silva, T. (1990). Second language composition instruction: developments, issues, and directions in ESL. In B. Kroll (Ed.), *Second Language Writing: Research insights for the classroom* (pp.7-11). Cambridge University Press.
- Yaqoob, H. A. (2021). The Relationship between Critical Thinking and Iraqi EFL Learners' Productive Skills. *Journal of Basrah Research for Human Sciences*, 3(46), 71-87.
- Zen, D. (2005). Teaching ESL/EFL Writing beyond Language Skills. *3rd International Annual LATEFL China Conference*. Tonghua.