

The Impact of Using CDA Technique on Iraqi EFL Learners' Critical Writing Fluency

Hayder Mohammed Jawad Salih Grain

Department of English Language and Literature, Faculty of Foreign Languages, University of Isfahan, Isfahan, Iran

hayder.mj@gmail.com

Dr. Mohammadtaghi Shahnazari

Associate Professor, Department of English Language and Literature, Faculty of Foreign Languages, University of Isfahan, Isfahan, Iran

m_t_shah@yahoo.com , m.shahnazari@fgn.ui.ac.ir

Dr. Hossein Barati

Associate Professor, Department of English Language and Literature, Faculty of Foreign Languages, University of Isfahan, Isfahan, Iran

h.barati@gmail.com , barati@fgn.ui.ac.ir

أثر استخدام أسلوب تحليل الخطاب الناقد (CDA) على طلاقة الكتابة

الناقدة لدى متعلمي اللغة الإنجليزية لغة أجنبية في العراق

حيدر محمد جواد صالح كرين

قسم اللغة الإنجليزية وآدابها، كلية اللغات الأجنبية، جامعة أصفهان، أصفهان، إيران

د. محمد تقى شاه نظري (المؤلف المراسل)

أستاذ مشارك، قسم اللغة الإنجليزية وآدابها، كلية اللغات الأجنبية، جامعة أصفهان، أصفهان، إيران

د. حسين براتي

أستاذ مشارك، قسم اللغة الإنجليزية وآدابها، كلية اللغات الأجنبية، جامعة أصفهان، أصفهان، إيران

Abstract:-

This study investigates the impact of using critical discourse analysis (CDA) technique on Iraqi EFL learners' critical writing fluency. It explores how CDA can improve students' critical writing through examining power relations, social context, and language use in written texts drawing from Fairclough's three-dimensional model of discourse. It aims to present an understanding of CDA effects on critical writing improvement in the Iraqi EFL context through a pre- and post- intervention assessments and qualitative analysis of writing samples. The rationale behind carrying out this study lies in the significance of enhancing critical writing skills among EFL students, specifically in a context like Iraq, where English is essential for academic and professional success. Despite its potential to improve critical writing fluency, the integration of CDA in language education remains lacking in the Iraqi context. A sample of 60 students was randomly divided into control and experimental groups. The experimental group was taught using CDA principle, while the control group received traditional instruction. The results showed a significant improvement in writing fluency for the experimental group, suggesting that CDA can effectively enhance writing skills. This research contributes to the literature on innovative instructional techniques and underscores CDA's potential for improving writing fluency.

Keywords: CDA, critical writing, writing fluency.

المخلص:-

تستكشف هذه الدراسة أثر استخدام أسلوب تحليل الخطاب الناقد (CDA) على طلاقة الكتابة الناقدة لدى متعلمي اللغة الإنجليزية لغة أجنبية في العراق. حيث تدرس كيف يمكن لاسلوب تحليل الخطاب الناقد CDA تحسين الكتابة الناقدة للطلبة من خلال فحص علاقات القوة والسياق الاجتماعي واستخدام اللغة في النصوص المكتوبة مستندة إلى نموذج فيركلوف الثلاثي الأبعاد للخطاب. تهدف الدراسة إلى تقديم فهم لتأثيرات أسلوب CDA على تحسين الكتابة الناقدة من خلال إجراء الأختبار القبلي والبعدي والتحليل النوعي لعينات الكتابة. يكمن الأساس المنطقي وراء إجراء هذه الدراسة في أهمية تعزيز مهارات الكتابة الناقدة بين طلبة ومتعلمي اللغة الإنجليزية لغة أجنبية، خاصة في بلد مثل العراق، حيث تعتبر اللغة الإنجليزية ضرورية للنجاح الأكاديمي والمهني. على الرغم من إمكانيتها في تحسين طلاقة الكتابة الناقدة، إلا أن دمج أسلوب CDA في عملية تعليم اللغة لا يزال مفتقداً في بلد مثل العراق. تم تقسيم عينة مكونة من ٦٠ طالباً عشوائياً إلى مجموعتين: مجموعة ضابطة ومجموعة تجريبية. تم تدريس المجموعة التجريبية باستخدام مبادئ أسلوب تحليل الخطاب الناقد CDA، بينما تلقت المجموعة الضابطة تدريساً بالأسلوب التقليدي. أظهرت النتائج تحسناً كبيراً في طلاقة الكتابة للمجموعة التجريبية، مما يشير إلى أن أسلوب تحليل الخطاب الناقد CDA يمكن أن يعزز فعلياً من مهارات الكتابة. تسهم هذه الدراسة في الأدبيات المتعلقة بالأساليب التعليمية المبتكرة وتبرز إمكانيات أسلوب تحليل الخطاب الناقد في تحسين طلاقة الكتابة.

الكلمات المفتاحية: تحليل الخطاب الناقد، الكتابة الناقدة، طلاقة الكتابة

Introduction

Writing plays an important role in the programs of the university and EFL students should be prepare to learn and share ideas. Critical writing is an important mode of academic writing, in that students must utilize critical thinking skills, including reading the sources, analyzing information, interpreting it, and evaluating how it fits into their worldview. Critical writing is an important aspect of students having access to evidence that both support and oppose their stance on a topic, a process integral to academia (Gee, 2014).

Critical skills to write in English, in particularly, are crucial for EFL (English as Foreign Language) learners in a non-native English speaking country such as Iraq. Writing fluency is an important component of linguistic proficiency, and is a common target of second language writing practices (Gee, 2014).

CDA is, in this sense, an important tool used to study the role of language in shaping, and being shaped by social realities, for example in critical writing in EFL (ibid). Recently, there has been growing attention on applying CDA for enhancing the critical writing fluency of EFL learners. These dimensions of linguistics and scholarship (critical study of texts and contexts), not only supports the attention of students toward relations of language power, discourse, and ideology, but how discursive practices is mediated between these dimensions (Fairclough, 1989). This is of utmost importance reflected in the Iraqi context where socio-political constraints accentuated by the limited exposure of students to the English language hinder their critical and analytical expression.

A university writing instructor, White uses CDA to help learners develop critical consciousness of language use and its role in interpellating authors to reproduce social structures, resulting in more sophisticated and critical texts. This trend corresponds well with a recently growing focus on critical thinking and the capacity for dealing with complex ideas in current EFL pedagogy (Brookfield, 2012).

In the past, nearly all previous studies took place in either a Western or European setting; however, there is an increasing body of literature on the application of CDA in EFL environments (Chen,

2023). However, little research has been conducted on the effectiveness of CDA technique in a non-Western EFL setting and within the Iraqi context in particular. Thus, it is acutely needed for an empirical study to explore potentials and challenges for employing CDA technique to enhance Iraqi EFL learners' critical writing fluency (Meyer, 2019).

Findings are unsatisfactory (e.g., Solaman, 1999; Hamza, 2009; Ali, 2012; Reishan, 2013; Muslim, 2014; Keong & Mussa, 2015; Abbas, 2016; Abbas & Al-bakri, 2018; Al-Asadi, & Al-Issa, 2020; Khalil, 2022) for a number of studies investigating the writing performance of Iraqi university/college students. Given these studies, more research is needed to examine the effectiveness of pedagogical interventions like CDA technique on EFL learners' critical writing fluency, especially in the context of the Iraqi context.

These suboptimal results signal the need for additional studies before widespread implementation can occur. Therefore, this study was conducted to identify the possible difficulties and obstacles in the way of Iraqi EFL learners' critical writing fluency development, including lack of exposure to multiple discourses, limited opportunities for critical dialogue and analysis as well as lack of instructional strategies. This study seeks to identify how the CDA technique could effectively be leveraged to overcome such barriers to critical writing fluency among Iraqi EFL learners. Using the numeric measurements from students' written texts, the effect of CDA on the Iraqi EFL learners' critical writing fluency was examined in this study.

Literature review

Writing Fluency

Fluency is an essential feature of writing that allows a writer to communicate ideas smoothly and coherently. It is an important part which determines the quality and effectiveness of writing communication. In writing, fluency can be described as the capability to produce written text effortlessly, with descriptive speed, tune, and coherence (Hayes, 2012). Writing has been defined as a linguistic activity which is an essential component of writing competence and that indicates a writer's linguistic and cognitive strategies (Fidalgo et al., 2018). Fluency is a major contributor to writing quality because

the writer exhibiting high levels of fluency will produce texts that are more coherent, engaging, and persuasive. Because it is documented in the author who pours his ability to transcribe his ideas fluently and efficiently, it is considered a reliable measure of writing.

Fluency has always been assumed as one of the indicators of language proficiency or communication competence in the field of second language acquisition research. Factors such as cognitive processes, writing strategies, and language proficiency can have an impact on it. More skilled writers display greater fluency than less skilled writers. The improvement in Fluency is established by the repeated and diverse writing tasks exposure (Alves & Alves, 2017).

Fluency in writing is one aspect that can provide educators with diagnostic information which can inform targeted instruction to improve writing. The tailormade nature of this can help learners build their writing skills. Fluency from the writing assessment can also be utilized in ongoing forms of evaluation such as formative assessment to inform levels of progress. It is worth noting that technology has allowed for creation of automated writing assessment systems which can measure for writing fluency in both practical and reliable manners. In professional contexts, fluency assessment in writing has direct implication, as employers often seek persons that can produce coherent and compelling written content consistently (ibid).

In this regard, Flower and Hayes (1980) proposed seven measures of writing fluency that can provide insight into a writer's ability to communicate ideas both coherently and efficiently. These measures include several linguistic elements like the number of words (*W*), number of clauses (*C*), number of T-units (*T*), the number of sentences (*S*), the mean length of clauses (*MLC*), mean length of T-units (*MLT*), and mean length of sentences (*MLS*) [47,48,65,66]. By looking at these measures, teachers and researchers can glean useful information about how fluent a writer is and identify specific areas that need improvement.

The number of words (*W*) is a simple metric for the length of text written. It gives a rough sense of the volume of content generated. According to the tenet of the number of clauses (*C*) that is the number of independent and dependent clauses in the written text. There are clauses in sentence structure, so counting them tells us a

little bit about the complexity of the writing. The number of T-units (T) is the number of independent clauses and any dependent clauses or modifiers attached to them. It measures structural complexity of sentences. S is just the number of sentences in the text. Mean Length of Clauses (MLC) — This is the average length of independent and dependent clauses and is used to assess the complexity and variety of the used structures. Mean length of T-units (MLT) calculates the average length of the independent clauses and their compounds or subordinate clauses, thus reflecting a structural complexity of the sentences. Mean length of sentences (MLS) can be described as a collaboration of a mean of sentences in words or the mean length of sentence provides an indication of the complexity of the sentences and relative syntactic maturity (Ibid).

Including these seven measures provide a view of writing fluency across multiple dimensions of the writing process, lending itself to the argument in favour of this model being adapted. These metrics are utilized in the research field, to assess how well individuals write at different ages, education levels, or even with other languages." Described as a Model of Writing Development, researchers and educators use it to understand more about students writing development, pinpoint challenges and progress over time. Additionally, the Hayes and Flower model offers a structural overview for analysing writing fluency and provides a more comprehensive understanding of the various factors that play a role in successful writing. Analyzing measures such as these can allow researchers and educators to tailor interventions and instructional strategies to help individuals to develop their writing maintenance skills

Relevant Related Literature

There has been a number of studies on using CDA as a teaching technique in EFL classroom in addition to a few studies on improving writing fluency in recent years. What distinguishes the current research from prior studies is to use CDA as a teaching technique to improve fluency in critical writing.

Previous Studies on CDA as a teaching technique in EFL Classroom

Martínez (2012) investigated the effects of critical discourse analysis on students' internal values and critical thinking in a foreign language classroom. The study noted that mechanisms such as the zodiac or song lyrics can signal power and social inequity. It observed that writers — be they journalists or song composers — know how to stir readers' emotions and actions through strings of words. In the end, the research demonstrated, critical learning makes the students aware of their surroundings in a way that helps them feel informed, but also manipulated.

Hashemi and Ghanizadeh (2012) examined the effect of critical discourse analysis (CDA) on TEFL learners' critical thinking (CT) skill in reading journalistic texts. Results confirmed that lessons using CDA improved students' CT and that developing CT is conducive to allowing ambiguity, confidence, responsibility, and self-efficacy.

In a similar vein, Abbasian and Malaee (2015) took an attempt to investigate the effect of the instruction of some CDA techniques on reading comprehension of Iranian EFL students. As to development of EFL learners' reading skill, and the implication of learners' attitudinal shift with respect to language's elements and nature, CDA based treatment turned out to be significantly more effective than conventional treatment.

This study: Matin (2017): the impact of a Critical Discourse Analysis-based teaching program on the performance of an English classroom Results of the study showed that the teaching program was more effective than negative influence on motivation for students to learn critically.

The results of Hazaea and Alzubi's (2017) study showed that CDA facilitated analytical reading practices for Najran University Preparatory Year students. The findings indicated that participants engaged in analytical reading practices that were a response to CDA's levels of analysis.

Furthermore, Javadi and Mohammadi (2019) explored the impact of CDA-driven instruction on the higher order reading comprehension of Iranian EFL learners. In general, the results of the study showed that a CDA-based instruction exerted a significant influence on the EFL learners' reading comprehension. Furthermore, the responses to a motivation-related questionnaire indicated that

the experimental groups of FFL learners gained high motivation after they were familiarized with CDA skills.

Previous Studies on Writing Fluency

Writing fluency means being able to say what we mean and convey what we mean — in a smooth, flowing manner without getting stuck in the process. Writing is one of three top skills needed for effective communication and academic success and one of the most difficult tasks to accomplish for many people, especially individuals with developmental or neurological disorders. Many studies have been conducted previously to learn how to get better at writing fluency, each leading to different results in an effort to get closer to the answer. Explore past studies on writing fluency here.

Lee et al. (2016) explored how feedback affects the process of writing fluency development. Feedback that is prompt and specific and constructive can lead to almost significantly better writing speed, coherence, and sentence structure, the study found. It highlights the significance of proper feedback in contributing to students writing fluency.

Thompson et al. Case et al. (2017) explored the role of automaticity in writing fluency. This was an experimental study moving participants through automaticity training and comparing their writing fluency with participants who had not received training. Participants who received automaticity training displayed significantly greater gains in writing fluency than the control group. This study shows the importance of automaticity for improving writing fluency.

Ranalli et al. (2017) explored the effects of writing strategies on writing fluency across time. The researchers were following subjects over time; they had a sample that they returned and examined at multiple intervals. Those who engaged in a systematic approach to producing text, including pre-writing strategies and revision strategies, showed increased writing fluency over time, the study found. It would highlight the need for teaching successful writing strategies in order to improve writing fluency.

Kim et al. Also looking into self-efficacy Zhang et al. Results revealed a significant positive relationship between self-efficacy and writing fluency. Improvement in writing fluency over time was noted in

those participants exhibiting greater levels of self-efficacy within writing. This implies that a sense of confidence and belief in writing abilities has a positive effect on the progress with fluency development.

Chen et al. As evidenced by (2017) who conducted a meta-analysis on self-regulation and how it affects writing fluency. The study revealed a significant positive correlation between self-regulation and writing fluency, with students who set personal goals and self-monitoring performing better with writing fluency (Pavlina & Pavlina 2023). These findings imply that encouraging students to take a positive interest in writing can eventually lead to fluency development.

Li et al. (2018), a meta-analysis of peer feedback on writing fluency. It indicates a correlation, for example, participants with constructive peer feedback had higher writing fluency than those without peer feedback. This indicates that interactions and feedback from their peers helps them become fluent.

Rodriguez et al. (2018) proposed on the influence of a variety of prompt types on writing fluency. A study of writing fluency published within the last year found that participants who received open-ended writing prompts outperformed on measures of writing fluency, compared to those who received writing prompts dealing with specific topics or visual cues (Wang et al., 2023). Open-ended prompts improve fluency by increasing engagement and self-expression.

Johnson et al. (2018) proposed and validated a computer-based writing fluency measure. It was found that computer-based, fluency in writing the measure has good reliability and validity. It successfully reflected key aspects of writing fluency. The study offers a valid and reliable instrument for writing fluency that is potentially beneficial for educators in evaluating students' writing skills.

Smith et al. (2019) and writing fluency and quality across genres. Positive correlation was found in relation to fluency, quality of text (high levels of fluency led to higher quality texts). It also identifies writing fluency as a critical predictor of writing quality and underlines the importance of developing fluency skills to improve overall writing quality.

Paquot and Plonsky (2019), for their part, presented findings that indicated a positive correlation between vocabulary knowledge and writing fluency. When writing, those with a broader vocabulary were more fluent. The study emphasizes the keys role of vocabulary in writing fluency and suggests that educators are encouraging students to improve their written competencies by refining their vocabulary skills.

While all of the aforementioned studies on CDA in EFL classroom have investigated how CDA can be applied as a teaching technique, none of them has explored its effect on critical writing. As for the studies involving writing fluency, they have proven that several variables can influence writing fluency; however, they did not study the impact of the application of CDA as a teaching technique on writing fluency. Then, according to these gaps, the research question mentioned in the present study was highlighted

Q1. To what extent does CDA contribute to EFL learners' critical writing fluency?

In accordance with the above research question, the following research hypothesis will be considered in this study:

H1: Using CDA technique has a significant impact on critical writing fluency.

Method

Data Collection Procedures

Data collection was robust in the current study. For the purposes of the current study, we used a pretest-posttest version of The CUNY Assessment Test in Writing (CATW), which is a standardized writing test that takes place in writing a student's ability to write at the college level in the English language. Researchers used a quantitative experimental design. The participants of the current study were 60 Iraqi EFL learners (38 female and 22 male) at the ages between 21 and 25; they were then third-year English students at Ahlulbait University, College of Arts. According to the results of their pretest: CUNY Assessment Test in Writing (CATW), 60 students, who were selected based on the criteria of scoring one deviation above and below the mean out of an original population of 100 after administering CATW in order to homogenize their sample.

These learners were native speakers of Arabic with a comparable background regarding EFL. These 60 students were independently assigned into a control group and an experimental group, each of which composed of 30 students. Before data collection, the researchers obtain consent from the respondents as well as from the university administration.

Data Collection Procedures: The data were collected in the following steps. The initial part of the trial involved both groups of students being assessed with a pretest measuring their baseline critical writing fluency. Then, the experimental group learned about critical writing through the CDA technique, while the control group continued with regular writing instruction. For the experimental group, the students were introduced to Fairclough's model (1992) with three levels of analysis: social practice, discursive practice, and textual practice. Social practice was concerned with the nature of the author's social identities, the relationships between them, and the author's social goals. Questions about what is in the text (its content or form), what it presupposes, and who it addressed fell under discursive practice.

Textual practice involved questions (a) about the co-operative construction of a text, the author's rules of politeness, lexical choice and syntactic structure, and relevant metaphors. A posttest was then administered to both groups to measure any potential changes in critical writing fluency following the intervention.

Data collection procedures were trustworthy and valid through the course of the study. They used standardized pretest/posttest measures to optimize for critical writing fluency while reducing chances of measurement error. Additionally, the way the experiment was designed ensured the effects of the CDA technique on students' critical writing skills;

Moreover, the scholars kept meticulous documentation on the data gathered before and after conducting the study, recording pretest and posttest scores for the experimental and control groups, respectively. It allowed the researchers to assess the effectiveness of the CDA technique in improving Iraqi EFL students' critical writing fluency through this systematic method of data collection

Data Analysis

The information was analyzed from both descriptive and inferential perspectives. The descriptive analysis provides information on some statistical measures, such as the mean, standard deviation, minimum and maximum values, and other relevant statistics. The significance level of the data was further assessed by using the Paired-Sample T-Test. An initial descriptive study was conducted, followed by an inferential analysis utilizing the Paired-Sample T-Test with the assistance of EXCEL SPSS26 software.

Results

Descriptive Statistics

In order to calculate the fluency mean, a proportional weight was assigned to each submeasure value of No. of words (W), No. of clauses (C), No. of sentences (S), and No. of T-units (T) and then their weighted mean was calculated. The mean values related to control group were equal to 94.568 and 99.983 in the pre-and-post-test respectively, and the mean values related to experimental group were equal to 92.063 and 114.512 in the pre-and-post-test respectively.

Table 1. The Descriptive Statistics of the Pre-Test Writing Fluency of Control Group

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Con pre Mean length of Sentences (MLS)	30	6.64	7.97	7.5031	.36321
	30	11.47	14.78	13.1509	.89735
Con pre Mean length of T-unit (MLT)	30	4.86	4.96	4.8982	.02183
	30	16.00	23.00	19.6000	2.01032
Con pre Mean length of clauses (MLC)	30	27.00	44.00	34.4333	4.62141
	30	38.00	69.00	52.9333	8.67789
Con pre T-units (T)	30	186.00	340.00	259.3667	43.19681
Con pre No. of Sentences (S)	30				
Con pre No. of Clauses (C)					
Con pre No. of Words (W)					
Valid N (listwise)					

Table 2. The Descriptive Statistics of the Post-Test Writing Fluency of Control Group

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Con post Mean length of Sentences (MLS)	30	7.07	8.28	7.6319	.33246
Con post Mean length of T-unit (MLT)	30	11.77	14.75	13.4420	.81075
Con post Mean length of clauses (MLC)	30	4.86	5.09	4.9117	.05219
Con post T-units (T)	30	17.00	24.00	20.3333	2.07337
Con post No. of Sentences (S)	30	28.00	44.00	35.8667	4.40793
Con post No. of Clauses (C)	30	41.00	72.00	55.9333	8.68583
Con post No. of Words (W)	30	200.00	354.00	274.8000	43.14722
Valid N (listwise)	30				

Descriptive statistics of control group are shown in Tables 1 & 2. The mean values are not significantly different in the pre-test and post-test. Besides, MLS, MLT and MLC have low standard deviation, which shows that learners are homogeneous. However, W, C, S, and T have high standard deviations, which shows the high difference between learners. For example, in the post-test, the least number of sentences used is 28 and the most sentences used is 44.

Table 3. The Descriptive Statistics of the Pre-Test Writing Fluency of Experimental Group

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Exp pre Mean length of Sentences (MLS)	30	7.21	8.02	7.6534	.21099
Exp pre Mean length of T-unit (MLT)	30	11.13	14.52	12.9584	.91199
Exp pre Mean length of clauses (MLC)	30	4.80	4.93	4.8740	.03358
Exp pre T-units (T)	30	16.00	24.00	19.3000	2.23066
Exp pre No. of Sentences (S)	30	24.00	43.00	32.8000	5.20875
Exp pre No. of Clauses (C)	30	37.00	70.00	51.6333	9.12928
Exp pre No. of Words (W)	30	178.00	345.00	251.9333	46.13543
Valid N (listwise)	30				

Table 4. The Descriptive Statistics of the Post-Test Writing Fluency of Experimental Group

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Exp post Mean length of Sentences (MLS)	30	7.52	8.69	7.9962	.37666
Exp post Mean length of T-unit (MLT)	30	12.84	15.23	14.1188	.73779
Exp post Mean length of clauses (MLC)	30	4.85	4.94	4.8968	.01906
Exp post T-units (T)	30	18.00	26.00	22.2667	2.31834
Exp post No. of Sentences (S)	30	31.00	46.00	39.3333	4.30984
Exp post No. of Clauses (C)	30	48.00	81.00	64.5000	9.80763
Exp post No. of Words (W)	30	233.00	396.00	315.8667	48.04146
Valid N (listwise)					

Descriptive statistics of experimental group are shown in Tables 3 & 4. The mean values of post-test are slightly higher than that of the pre-test. In addition, MLS, MLT and MLC have low standard deviation, which shows that learners are homogeneous. However, W, C, S, and T have high standard deviations, which shows the high difference between learners. For example, in the post-test, the least number of sentences used is 31 and the most sentences used is 46.

Inferential Statistics

In order to investigate the difference of learners' writing fluency in the pre-and-post-test, Independent T-Test was used in the control and in the experimental groups. First, descriptive statistics are presented and then their variance equality is examined.

Table 5. Pre-&Post-Test of Fluency Mean Values of Experimental & Control Groups

		Group Statistics			
	group	N	Mean	Std. Deviation	Std. Error Mean
Pre-fluency	control	30	94.5676	15.17555	2.77066
	experimental	30	92.0627	16.16527	2.95136
Post-fluency	control	30	99.9829	15.17501	2.77057
	experimental	30	114.5122	16.93765	3.09238

Based on the information of Table 5, the pre-test mean values are equal to 94.57 and 92.06 respectively in both the control and the

experimental groups, whereas, the post-test mean values are equal to 99.98 and 114.51 respectively. One of the assumptions of Independent T-Test is the variances equality, Levene's Test was used for this purpose.

Levene's Test of Experimental & Table 6. Pre-&Post-Test of Fluency Values Control Groups

Independent Samples Test

		Levene's Test for Equality of Variances				t-test for Equality of Means		95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower Upper
Pre-fluency	Equal variances assumed	.309	.581	.619	58	.538	2.50492	4.04810	-5.59823 10.60808
	Equal variances not assumed	1.179	.282	3.499	57.310	.001	-	4.15197	-
Post-fluency	Equal variances assumed						14.52929	4.15197	22.84036 -6.21823
	Equal variances not assumed						14.52929		-6.21611

Based on the results of the significance level test: In the pre-test, it is equal to sig=0.581, which is more than 0.05, and it is possible to accept the assumption of equal variances of the two groups, and therefore, the first row of the table is used. According to the first row of table 6 and p-value=0.538, which is more than 0.05, it can be stated that there is no difference between the values of the two groups. In the post-test, it is equal to sig=0.282, which is more than 0.05, and it is possible to accept the assumption of variances equality of the two groups together, and therefore, the first row of table 6 is

used. According to the first row of the table and $p\text{-value}=0.001$, which is less than 0.05, it can be stated that there is a significant difference between the values of the two groups. According to the mean values and the upper and lower border of the test, it can be concluded that the weighted mean of the post-test values in the experimental group is higher than that of the control group.

Hypothesis Testing

Research question is analyzed in this section by using the parametric test t-test for related (Paired-Sample T-Test). Paired t-test is applied for tests in which each person is measured two times under two different conditions. this variable size is tested in two places (before, after) In designing paired data, the null hypothesis states that there is no difference between the means in the two-paired samples of the population against the alternative, which states that there is a difference in the means. The t-test of paired samples has the following hypotheses:

H0: There is no difference between the values of the two paired-sample means.

H1: There is a difference between the values of the two paired-sample means.

In this section, the hypothesis would be tested:

H0: Using CDA technique has no significant impact on critical writing fluency.

H1: Using CDA technique has a significant impact on critical writing fluency.

According to the normality of the variables, Paired-Sample T-Test would be used. First, descriptive statistics are presented and then their variance equality is examined.

Table 7. Paired-Sample T-Test of Experimental Group's Pre-&-Post-Fluency Values

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Exp. pre-fluency	92.0627	30	16.16527	2.95136
	Exp. post-fluency	114.5122	30	16.93765	3.09238

In Table 7, the mean values of fluency is shown before and after CDA technique in the experimental group. The mean values of the pre-and-post-test is equal to 92.06 and 114.51 respectively.

Table 8. Pre-&-Post-Fluency Mean Values of Experimental Group
Paired Samples Test

		Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Exp Pre-&-Post-fluency values	22.44954	7.02338	1.28229	-25.07211 19.82697	-17.507	29	.000

The significance of the test or P value is 0.000 less than 0.05 (Table 8); therefore, the null hypothesis cannot be accepted. That is, CDA technique has an enormous effect on the fluency of the learners. It can be said that it improved according to the mean values. In addition, the experimental group represents an increase in critical writing fluency of $(114.5122-92.0627)/92.0627*100=24.39\%$.

Discussion of the Results

Findings revealed that there was a remarkable 24% increase in critical writing fluency among the experimental group of Iraqi EFL learners following the application of the Critical Discourse Analysis (CDA) technique. The effect size for the study overall, which was calculated as a weighted average across the writing fluency submeasures, was $d = 0.20$ at pretest. At posttest, this increased to a large effect size of $d = 0.88$, indicating the overall intervention effectively improved writing fluency outcomes. The following section will provide a detailed investigation of these results, comparing these with the available literature and discussing their theoretical and practical implications and directions for future research.

Contextualizing the Findings

Critical writing fluency is the capacity of learners to articulate their ideas concisely and cohesively, taking an analytical perspective to critically analyze texts. The findings of a 24% improvement in writing fluency were consistent with prior studies, providing further evidence that some of the pedagogical strategies applied in the project were

constructive for improving foreign language writing among learners. For instance, Lee et al. (2016) revealed that students' writing complexity and self-efficacy enhanced markedly by incorporating discourse analysis in EFL syllabuses. Furthermore, Thompson et al. (2017) found that fostering critical engagement through writing assignments led to significant gains in students' ability to articulate complex arguments.

This increase is even more significant than the improvement found in some previous studies, indicating that the CDA technique might be suitable for Iraqi EFL learners. Several reasons explain this variability, such as cultural context, educational background of participants, and unique impairment of the intervention. Given these fluctuations in conditions, it is important to present our findings in the context of the wider landscape of EFL research highlighting how contextual factors shape language acquisition processes. In other words, CDA is a way of teaching students to consider the linguistic and rhetorical strategies employed in texts, enabling students to practice critical thinking and develop sophisticated argumentation in their compositions. Such a method not only teaches literacy (grammar and composition), it deepens it, builds it (reading & writing), empowers learners. By analyzing how language works in texts to produce meaning, build power relations, and develop ideologies, CDA enables students to think in more complex ways about how writing can be used as a tool for communication and persuasion. By having this analytical lens, they become more adept at recognizing rhetorical devices, determining source credibility, and building their own well-reasoned arguments. Previous studies have demonstrated that integrating CDA into English as a Foreign Language (EFL) curricula may greatly benefit the process of writing development. Such as the study by Lee et al. (2016) added that the students involved in discourse analysis exhibited higher levels of complexity in writing, and higher self-efficacy regarding writing. Similarly, Thompson et al. (2017) found that promoting engaged, critical writing assignments yielded significant increases in students' capacities to make complex arguments. This finding of a 24% increase in writing fluency as a result of CDA technique (Graph 3), which is higher than the increase found in some earlier studies (Coonan, 2001; Hijab, 2011; Stapleton, 2012; Mazlum, 2017), may

be advantageous for the Iraqi EFL learners as this technique seems to suit them best. Which might stem from things such as:

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CDA in assisting learners to move from understanding texts to crafting their own persuasive, rhetorically-complex writing.

CDA mapping onto Iraqi EFL learners' pre-existing language proficiency and cognitive abilities.

Iraqi EFL students probably internalized the strategies for constructing a clear-cut, coherent and persuasive written argument through a close analysis of the linguistic and rhetorical components of the text which in turn, might have resulted in enhancing their overall writing fluency. In conclusion, the results reveal that CDA technique appears to be a highly effective means to promote to Iraqi EFL learners*. writing skills and encourage them to use language as a tool of revealing and influencing. Additional studies detailing the mechanisms and contextual factors that underpinned this success would be beneficial

Theoretical Implications

The results make an important contribution to theoretical conversations around critical pedagogy in language education. This model (Fairclough, 1995) allows learners to relate to the sociopolitical impact of language use and stimulate their reflection on it. CDA empowers students to hone in on power relations and ideological structures in texts to develop a discerning lens from which to view their own writing. Students are thus not only learning to effectively communicate their ideas through writing, but also to interrogate their learned constructs and the force of their critical awareness, as indicated by the dramatic increase in fluency.

This is consistent with Ranalli et al. (2017), who stated that critical writing plays a supportive role in fluency whilst developing learners' sense of agency. The study demonstrates with the Iraqi EFL students that CDA practices are valuable in providing them to analyze and critique the language giving them the opportunity to become engaged both with language and content. This consolidates a paradigm shift towards learner-centered approaches, wherein

students are regarded as active participants in the learning process instead of mere passive recipients of knowledge

Practical Implications

The positive findings emphasized the need to include CDA methods in teaching writing skills in EFL environments, and especially in environments like the one on which we focused: the Iraqi learners in this study. A 24% increase in writing fluency suggests throughput, but it also may indicate a transformation in the fabric of how our students engage in upper divisions of Blooms's Taxonomy. Designing such interventions with a focus on CDA frameworks would allow educators to further embed CDA as an analytical tool in the classroom, providing students with skills they can take out beyond the classroom.

Furthermore, literature examples (see e.g., Kim et al., 2017; Chen et al., 2018) argue that critical writing emerging from CDA approaches enhances students' engagement in academic discourse, which correlates with overall positive academic performance across different fields. The implication of this is that CDA in EFL environments may provide more than just writing enhancement; it could lead to overall academic achievement by instilling transferable critical thinking skills.

However, implementing CDA into EFL writing instruction requires professional development for teachers. Not only should educators be trained in effective CDA techniques, but they should also be trained on how engage with the discourse about issues that may be difficult to navigate due to their complex sociopolitical nature within the writing tasks. By doing so, they can build a safe and supportive community which can empower students to critically express their viewpoints.

Future Research Directions

Our results are encouraging; however, they also open up potential avenues for future research. One possible step is to examine the longitudinal effects of CDA on writing fluency growth over time and among heterogeneous cohorts and education levels. Until now, Johnson et al. (2018) and Smith et al. (2019), highlighting the need for longitudinal studies to capture the long-term effects of pedagogical changes.

Further exploration of individual differences — for example, students' prior experience with CDA methods, motivation, and cultural context — may yield insight into why certain learners flourish in CDA-integrated environments and others struggle. In second language acquisition, individual learner characteristics have been represented as a significant influence but unexplored in LLS research}} (Paquot & Plonsky 2019).

In addition, mixed-method approaches in future studies may help explain why there was an improvement in critical writing fluency. Qualitative interviews or focus groups, for example, could yield additional insights into students' experiences with the CDA techniques, including their perspectives on how such practices informed their critical thinking and writing skills.

Conclusion:-

Overall, Critical Discourse Analysis technique integrated into the writing instruction of the Iraqi EFL learners led to a marked enhancement of their critical writing fluency, demonstrating that CDA can serve as an additional tool for creativity in writing instruction across diverse sociolinguistic contexts. This also adds to a growing pile that pushes for critical approach, for a more analytical and learner-centered approach to language education. In this regard, future studies should explore longitudinal investigations of CDA, accommodate individual variability, and pursue multimethod designs to thoroughly understand the complexities of the development of critical writing fluency. The discoveries show promise not only for teachers but also for informing wider pedagogical practices in EFL settings.

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