



The Effects of Implicit Critical Thinking Feedback on EFL Learners L2 Writing Performance

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Research Article

Acknowledgment

History

Received: 25/10/2022

Accepted: 28/04/2023



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ABSTRACT

This paper investigates the influence of implicit critical thinking (CT) feedback on the development of second language (L2) writing skill of EFL learners. For the study, the researchers employed a combination of an infusion approach and an immersion approach to CT feedback with an effort to teach CT implicitly and compared its influence with a no-CT feedback condition. Though explicit CT instruction has been investigated by previous studies, no study has employed an implicit approach to CT in L2 writing through one-to-one feedback sessions. The participants were B1+ EFL learners (n=12) enrolled in the preparatory program of an English-medium-instruction state university in Türkiye. The results showed no significant difference in improving experimental group participants' (n= 6) CT in their L2 writing performance. Yet, the interviews conducted with the experimental group participants indicated a higher awareness of the concept of CT in L2 writing in comparison to their peers from the control group (n= 6). Thus, this paper suggests that though CT-oriented feedback given to EFL learners' L2 writings yield positive results in rising their awareness of CT concept in L2 writing, longer-term instructional methods that give explicit training on CT are needed for helping learners to internalize and apply CT in their L2 writing.

Keywords: Critical thinking, EFL learners, infusion approach, L2 writing, writing feedback

Örtük Eleştirel Düşünme Geri Dönütünün YDİ Öğrencilerinin Yazma Performansına Etkileri

Bilgi

Süreç

Geliş: 25/10/2022

Kabul: 28/04/2023

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Öz

Bu çalışmada eleştirel düşünme (ED) temelli geri dönüt sürecinin yabancı dil olarak İngilizce (YDİ) öğrencilerinin ikinci dilde yazma becerilerinin gelişimine etkisi incelenmektedir. Araştırmada, araştırmacılar ED'yi örtük öğretmek için infüzyon yaklaşımı ve yerleştirme yaklaşımlarını birlikte uygulamışlardır ve bunların etkisini ED geri dönütü içermeyen bir durum ile karşılaştırmışlardır. Açık ED öğretimi daha önceki çalışmalarda incelenmiş olsa da ikinci dilde yazmada verilen birebir geribildirim seansları sırasında ED'nin örtük bir yaklaşımla öğretimini inceleyen başka bir çalışma bulunmamaktadır. Katılımcılar Türkiye'de İngilizce eğitim verilen bir devlet üniversitesinin hazırlık sınıfına kayıtlı B1+ düzeyinde YDİ öğrenen (n=12) öğrencilerdir. Bulgular ED öğretiminin deney grubunda bulunan katılımcıların (n= 6) ikinci dilde yazma performanslarında önemli bir farklılığa neden olmadığını göstermiştir. Fakat, deney grubu ile yapılan mülakatlar bu grupta bulunan katılımcıların kontrol grubundaki (n= 6) akranlarına göre ikinci dilde yazmada ED kavramı ile ilgili daha yüksek farkındalığa sahip olduklarını göstermektedir. Bu çalışma, ED-odaklı geri dönüt sürecinin YDİ öğrencilerinin ikinci dilde yazarken ED kavramına dair farkındalıklarını artırmada olumlu sonuçlar ortaya çıkarmasına rağmen ikinci dilde yazmada öğrencilerin ED'yi içselleştirme ve uygulamalarına yardımcı olmak için ED öğretiminde daha uzun süreli açık öğretim yöntemlerine ihtiyaç duyulduğunu önermektedir.

Anahtar Kelimeler: Eleştirel düşünme, YDİ öğrencileri, infüzyon yaklaşımı, ikinci dilde yazma, yazma geri dönütü

Introduction

Integration of critical thinking (CT) in education is broadly defined as the endeavour to equip learners for 'good thinking' (Pithers & Soden, 2000) because CT requires a 'cognitive change' in learners so that they can achieve a metacognitive awareness on how they should think better (Bonnett, 1995). Any critical thinking process is said to build on three elements: analysing thinking, assessing thinking and improving thinking (Paul, 2005). Mason (2007) proposes CT to be 'a sceptical, reasonable, and reflective approach' (p. 344) where people avoid dogmas and engage in sound reasoning by considering multiple viewpoints on a given topic. Halpern (2013) also highlights the importance of CT in the modern era where abundant information is available to learners with a click. Halpern (2013) comes up with the definition of CT as "thinking that is purposeful, reasoned, and goal-directed—the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task" (p. 8). These arguments suggest that critical thinking is to reach a metacognitive awareness of one's own thinking process and to aim for a better way of thinking on a given topic. Despite being such an important skill to have, CT has not been fully investigated in relation to second language learning task (Liang & Fung, 2021).

CT is being of critical importance in L2 writing as it is about equipping learners to have a self-voice for justifying their arguments (Barnawi, 2011). Considering that Eastern cultures are claimed to lack CT disposition (Atkinson, 1997) and Eastern students are stereotyped as intellectually lower in CT skills than students raised in Western cultures (Moosavi, 2020), it becomes more intriguing to investigate CT in Eastern cultures such as Türkiye. Discussions into the development of L2 writing skill in relation to CT skills can be considered as an under-researched area (Afshar et al., 2017) probably because of the fact that assessing CT in writing poses sounder methodological challenges in comparison to studies that relate reading and CT (Preiss et al., 2013). Therefore, this study addresses this gap and seeks if CT can be improved by simply integrating it into the L2 writing feedback process.

Empirical studies on the constructs of L2 writing and CT skill

Though CT and L2 writing can seem as separate constructs, they are indeed considered to be interdependent and highly valued tools for displaying one's academic capacity (Condon & Kelly-Riley, 2004; Paul, 2005). Condon and Kelly-Riley (2004) argue that 'writing acts as a vehicle for CT' (p. 66) and CT is thought to be a significant contributor to the improvement of L2 writing in that it improves language learners' organisations of compositions (Moghaddam & Malekzadeh, 2011); increases their awareness of alternative arguments in a given writing task (Sham,

2016); leads them to ground their main arguments on concrete examples (Paul, 2005); and teaches them to look for consistency in the arguments they offer (Turuk Kuek, 2010). CT in writing is directly a part of macro-skills which also cover metacognitive strategies of 'planning, monitoring and evaluating' (Ku & Ho, 2010, p. 254). The way CT applies to L2 writing is displayed through "analysing facts, producing and organising ideas, maintaining opinions, making comparisons, judging arguments and solving problems by the use of existing information, previous knowledge, experience and world knowledge" (Barnawi, 2011, p. 191). CT is an essential part of all types of academic studies and can be aptly shaped in relation to any given discipline (Paul, 2005). Thus, integrating CT into second language learning by relating it to specific language skills is essential.

The intertwined relationship between L2 writing and CT has been researched from different perspectives. Some researchers questioned the widely held belief that L2 learners from Eastern societies are not culturally-oriented towards CT (Atkinson, 1997). McKinley (2013) analysed the difference between Western and Japanese understanding of CT. Accordingly, Japanese students were found to be inclined to show a neutral approach to a given writing topic because they were culturally wired to display conformity and evaluate alternative ideas without being self-assertive. McKinley concluded that this stylistic difference did not mean a lack of CT in Japanese students and suggested Western teachers modify their task structure in such a way that Japanese students could comfortably argue in favour of or against an idea without breaking their social norms.

CT-inspired studies have been also conducted concerning the experiences of Turkish EFL learners and instructors. Clachar (2000) investigated a group of Turkish EFL instructors' beliefs about integrating a critical stance in L2 writing education. The researcher found out that some teachers did not favour the idea of encouraging learners to express a critical attitude in their writings and they treated it as incongruent with Turkish rhetoric. However, some others welcomed it as a factor to enrich their students' writing style. Clachar (2000) attributed these inconsistent views among the teachers to the geographical location of Türkiye as it is neither a Middle-East country nor a Western country in the real sense. Another study conducted by Alagözlü and Süzer (2010) was also inspired by the fact that Türkiye has the bridge position between the East and West countries, therefore it is difficult to attribute a thinking style to Turkish people. To find out if Turkish EFL learners' thinking styles differed in their Turkish and English compositions, they investigated a group of pre-service EFL instructors' (n=17) argumentative essays. The participants scored quite low both in Turkish and English in terms of CT measures and the researchers deduced that Turkish learners showed an Asian-style disposition to apply CT.

Among the studies conducted with Turkish EFL learners, the research of Altınmakas and Bayyurt (2019) merits attention because it showed Turkish EFL learners' academic writing to be deficient in terms of CT employment. The researchers investigated both the students' and faculty members' views on Turkish EFL learners' academic writing potentials in an EAP context. Most of the students mentioned pre- and while-writing phases to be extremely challenging. Although the participants did not use the term CT, the type of the difficulty they described encouraged the interpretation that they lacked CT skills to guide them through these phases and they were not even aware of the concept of CT. The faculty members explicitly highlighted the lack of CT in learners as a decisive factor in their limited writing proficiency.

Some other studies, though few, were experimental and tested alternative ways of enhancing Turkish EFL learners' CT in writing. A six-week study was conducted by Bayram (2015), who gave webquest-supported critical thinking instruction to pre-service Turkish EFL teachers to see its influence on the participants' attitudes towards CT as well as its employment in their L2 writing products. The results showed improvement in the experimental group's CT awareness, positive attitude level and its application in argumentative essays. Another study carried out by Aygün and Yavuz (2020) was about the impact of asynchronous online CT instruction on B2-level EFL students. The researchers reported significantly better CT performance for the experimental group in the cause-and-effect essay type while there was no difference in the argumentative essay and compare-and-contrast essay. Both of these studies are valuable in confirming that Turkish students need training on CT and they benefit from CT instruction in L2 writing. Yet, there is a need for other studies to expand our understanding of CT application in L2 writing via the use of alternative instructional approaches.

Promoting CT can be achieved in a diversity of styles, to name a few, engaging in Socratic dialogue, providing role-modelling for learners, or pointing at the contradictions in the way learners approach a given topic (Bonnett, 1995). As Yanning (2015) argues, there is no standard way of teaching CT and the present study aims to contribute to the literature by experimenting with a combination of certain instructional approaches; namely, cognitive apprenticeship, infusion approach and immersion approach. This study aims to address the following research questions:

- 1- Does CT-oriented feedback improve EFL learners' CT scores in L2 writing?
- 2- Does CT-oriented feedback improve EFL learners' perceptions of their own CT competence in L2 writing?

Method

Research Design

The current investigation adopted a quasi-experimental study approach. The researchers experimented giving CT-oriented feedback to L2 essays of

an experimental group (EG) in an implicit manner. They also included a control group (CG) without any study-specific treatment. As the feedback technique for the EG, cognitive apprenticeship was employed. Cognitive apprenticeship briefly refers to assisting learners on how to apply CT as they approach a real-life situation (Bonnett, 1995). In the context of this study, the researchers used a set of questions, which will be referred as CT prompts henceforth, to implicitly guide the EG participants to apply CT in argumentative essays. These CT prompts were comprised of a set of questions adopted from Yanning (2015). To provide the apprenticeship, the researchers were inspired by two kinds of approaches: an infusion approach and an immersion approach.

An infusion approach requires treatment of CT in such a way that learners are guided to develop a sound reasoning to the evaluation of any given topic (Wedland et al., 2015). Four steps are mentioned for the implementation of infusion approach (Wedland et al., 2015). First, a discussion topic is chosen. Then supportive arguments for both sides of the issue are identified. Next, the teacher invites students to think about stereotypes that can be associated with the sides. Finally, students are encouraged to "articulate their own positions" (p. 161). Though infusion approach requires these steps to be integrated into a whole-writing process in an explicit manner (Tiruneh et al., 2014), for our study, we aimed to find out what results we would get when we employed the infusion approach only in the feedback step without making it explicit to the participants that they were being guided towards the employment of CT in their writings. For this study, we used a list of CT prompts in each feedback session. The researchers did not tell the participants that these were CT related prompts for the sake of maintaining it as an implicit process. Secondly, the design of this study also partially conforms to the immersion approach, which requires enriching general instruction by integrating CT skills into it, yet, without making it explicit to students that they are expected to gain certain knowledge of CT at the end of the treatment (Tiruneh et al., 2014). In our study, by systematically using CT prompts in the feedback process, we aimed to develop a CT approach in the learners without explicitly stating our purpose.

Participants

This study was conducted in an English preparatory program at an English-medium instruction (EMI) state university in Türkiye. The participants were employed via convenience sampling. The researchers, who were also full-time instructors in that program, informed two groups of B1+ students about the study and sought volunteers. There were 12 voluntary participants who were placed into a B1+ English course according to the results of an in-house placement test.

In this program, all students from the same level were taught the same content as a school policy. As the teaching material, an integrated course book and an additional writing booklet, which was compiled by the

instructors of the program, were systematically covered in the curriculum to teach students the fundamentals of English essay writing. This study was conducted during the last six weeks of a 16-week- B1+ training program. The last six weeks were chosen for conducting the study to make sure that the participants got familiar with the basic features of essay structures and several essay types beforehand. Though all students took this systematic L2 writing instruction, the researchers observed it to be lacking any CT orientation, which inspired them for this study.

Data Collection

To reach sound results, triangulation of data collection instruments was ensured with inspiration from the methodology of Yanning (2015). There were 4 instruments employed in the data collection process of the present study: (1) a questionnaire; (2) writing tasks; (3) a 9-piece prompt list for giving feedback on CT, and (4) semi-structured interviews.

The EG took the questionnaire twice, both as a pre-test and post-test. The aim of employing this questionnaire was to reveal the EG participants' perceptions of CT in L2 writing prior to and after the study. Throughout the study, they completed six writing tasks for which the researchers only used the 9-piece prompt list for the feedback. They finally participated in the semi-structured interviews.

The CG took the questionnaire once, after the study. Three open-ended questions were added to the questionnaire given to them. These open-ended questions were framed to find out how often they heard about the term CT, how they would define CT in L2 writing and if it was possible for them to think critically while writing in a second language. They also completed six writing tasks, for which they took only written feedback without any CT content.

The questionnaire

This questionnaire was adopted from Yanning (2015) and comprised of two subscales, one on students' self-reported competence in integrating CT elements of thought into planning their writing (n=8 items) and one on their ability to integrate CT intellectual standards into actual L2 writing process (n=9 items). In addition to these sub-scales, there were two additional questions. One was about the participants' perceptions of their level of English writing proficiency, for which the participants assigned a score for themselves on a 5-point Likert scale. The other item was in a multiple-choice design on which the participants indicated pre and post-writing activities they completed regularly among the given options.

Writing tasks and CT prompts

The researchers formed a contact group with the EG participants on WhatsApp for scheduling and informing them about the time slots of the feedback sessions. This platform was also used by the researchers to assign a task prompt on a weekly basis for the participants to write their essays before the feedback sessions. The same researcher conducted the feedback sessions throughout six weeks. During each one-to-one feedback session, the

researcher systematically referred to a 9-item CT prompt list, which was adopted from Yanning (2015) for being comprised of critical intellectual traits. The use of this list for giving feedback during one-to-one interaction was expected to reinforce the internalisation of CT traits in the EG participants. Because the participants were required to write a single draft in exams and assignments given to them in the school program, the study was also planned as a single-draft study, as in the study of Cho (2019).

The genre of the writing tasks was set to be argumentative as it was the type of essay the participants were going to write in the proficiency exam they would take at the end of the school program. As Schmeer (2014) puts it, an argumentative essay "is simply an essay whose purpose is to convince the reader of a central position" (p. 620). The essay prompts, chosen by the researchers for being 'contextualized, authentic, and accessible' for the participants (Liu & Stapleton, 2018, p. 14), were adapted from a specific webpage (<https://ieltsliz.com>).

The researcher who was in charge of giving CT feedback to the EG also was the one who gave feedback to the essays of the CG. For the CG, only written feedback was given, and the content of the feedback was aligned with the writing rubric that was being already used by the school program and it did not include any reference to the CT rubric.

Semi-structured interviews

After the study, the researcher who was in charge of giving the feedback had individual interviews with the six EG participants. All the interviews were conducted via a free online meeting platform and each interview took from 20 to 30 minutes. These were semi-structured interviews where the EG participants responded to 8 study-specific questions to reveal the EG participants' perceptions of integrating CT into L2 writing and to learn their study-specific experiences in the implementation of CT in the L2 writing feedback. These questions were also adapted from the study of Yanning (2015). The interviews were conducted in Turkish. (See Appendix 1 for the interview questions).

Results

Table 1 shows the pre and post-study results of the EG participants on their perceptions of the difficulty of integrating CT elements of thought into the planning phase.

As can be seen from Table 1, prestudy and poststudy results of the EG participants showed noticeable differences in certain items. Accordingly, before the study, the number of the participants who stated identification of a purpose as neither easy nor difficult decreased at the end of the study where most of the participants, except one, stated it to be easy or very easy. A similar pattern was observed also for the task of identifying major questions. Prior to the study, most of the participants were at an in-between stage for this item, but they indicated it to be an easy task after the study. For the item about considering multiple viewpoints, the participants' prestudy answers

were more scattered on the scale while they were seen to cumulate on the choice of neither easy nor difficult after the study. For the remaining items, the participant's answers did not indicate a significant change in their perceptions.

As can be understood from Table 2, the EG did not report higher self-perception for any of the items in comparison to the CG. Item-based analysis suggested that the same number of students from both groups reported the identification of a purpose and the identification of major questions either as easy or very easy. Another similarity was that identification of the assumptions was seen to be a challenging task for both groups, whose answers again displayed a similar spread among the options. A noticeable difference between the two groups was identified only for the item of considering multiple viewpoints. While most of the EG participants stated uncertainty about its difficulty, the CG participants' answers showed a more scattered distribution.

Table 3 displays the EG students' pre-study and post-study answers for the sub-scale targeting their ability to integrate CT into the actual L2 writing process. The analysis suggested some noticeable changes in the

answers given to certain items before and after the study. Regarding clarity, three participants stated that they did not understand what it meant before the study; however, they opted for other items after the study. A visible improvement in the perceptions of the participants was observed for accuracy.

Again, three participants who chose the options of either poor or do not understand in the pre-study phase changed their perceptions towards the other end of the scale as five of them chose the option of average in the post-study period. Similarly, the answers given to depth accumulated in the options of average and good after the study while they were much more scattered before the study. The next item for which the participants' answers indicated gradual improvement was fairness. At the end of the study, four of the answers were in the options of very good or good, and two students chose average while two of them had chosen the option of do not understand before the study. For breadth, relevance and precision, the distribution of the participants' answers did not suggest a noticeable change from the pre-study to post-study phases.

Table 1. Prestudy and poststudy scores of the EG on the difficulty of integrating CT elements of thought into planning

		Very easy		Easy		Neither easy nor difficult		Difficult		Very difficult		Do not understand	
		n	%	n	%	n	%	n	%	n	%	n	%
Identifying the purpose of a writing task	Pre-study	-	-	2	33.4	3	50	1	16.7	-	-	-	-
	Post-study	1	16.7	4	66.6	1	16.7	-	-	-	-	-	-
Identifying major questions that need to be addressed	Pre-study	-	-	-	-	4	66.7	2	33.4	-	-	-	-
	Post-study	-	-	5	83.3	1	16.7	-	-	-	-	-	-
Clarifying key concepts	Pre-study	-	-	2	33.4	-	-	4	66.6	-	-	-	-
	Post-study	2	33.4	1	16.7	2	33.4	1	16.7	-	-	-	-
Gathering information	Pre-study	1	16.7	2	33.4	3	50	-	-	-	-	-	-
	Post-study	-	-	3	50	2	33.4	-	-	-	-	1	16.7
Making inferences of possible solutions	Pre-study	-	-	2	33.4	3	50	1	16.7	-	-	-	-
	Post-study	-	-	3	50	1	16.7	1	16.7	-	-	1	16.7
Identifying assumptions that lead to inferences	Pre-study	-	-	1	16.7	3	50	1	16.7	-	-	1	16.7
	Post-study	-	-	1	16.7	2	33.4	3	50	-	-	-	-
Tracing the implications and consequences that follow from your reasoning	Pre-study	-	-	2	33.4	2	33.4	1	16.7	1	16.7	-	-
	Post-study	-	-	2	33.4	2	33.4	2	33.4	-	-	-	-
Considering multiple view points	Pre-study	-	-	1	16.7	2	33.4	-	-	-	-	3	50
	Post-study	-	-	1	16.7	5	83.3	-	-	-	-	-	-

Table 2. Comparison of the EG and CG participants on the difficulty of integrating CT elements of thought into planning

		Very easy		Easy		Neither easy nor difficult		Difficult		Very difficult		Do not understand	
		n	%	n	%	n	%	n	%	n	%	n	%
Identifying the purpose of a writing task	CG	4	66.7	1	16.7	1	16.7	-	-	-	-	-	-
	EG	1	16.7	4	66.7	1	16.7	-	-	-	-	-	-
Identifying major questions that need to be addressed	CG	1	16.7	3	50	2	33.3	-	-	-	-	-	-
	EG	-	-	5	83.3	1	16.7	-	-	-	-	-	-
Clarifying key concepts	CG	1	16.7	3	50	-	-	2	33.3	-	-	-	-
	EG	2	33.3	1	16.7	2	33.3	1	16.7	-	-	-	-
Gathering information	CG	2	33.3	2	33.3	2	33.3	-	-	-	-	-	-
	EG	-	-	3	50	2	33.3	-	-	-	-	1	16.7
Making inferences of possible solutions	CG	1	16.7	2	33.3	3	50	-	-	-	-	-	-
	EG	-	-	3	50	1	16.7	1	16.7	-	-	1	16.7
Identifying assumptions that lead to inferences	CG	-	-	1	16.7	1	16.7	1	16.7	2	33.3	1	16.7
	EG	-	-	1	16.7	2	33.3	3	50	-	-	-	-
Tracing the implications and consequences that follow from your reasoning	CG	1	16.7	1	16.7	3	50	-	-	-	-	1	16.7
	EG	-	-	2	33.3	2	33.3	2	33.3	-	-	-	-
Considering multiple view points	CG	1	16.7	2	33.3	1	16.7	2	33.3	-	-	-	-
	EG	-	-	1	16.7	5	83.3	-	-	-	-	-	-

* Poststudy results of the EG were included in this analysis as the CG took this questionnaire only once at the end of the study.

Table 3. Prestudy and poststudy results of the EG on their ability to integrate CT intellectual standards into actual L2 writing performance

		Very good		Good		Average		Poor		Very poor		Do not understand	
		n	%	n	%	n	%	n	%	n	%	n	%
Clarity	Pre-study	-	-	1	16.7	1	16.7	1	16.7	-	-	3	50
	Post-study	-	-	3	50	2	33.4	1	16.7	-	-	-	-
Accuracy	Pre-study	-	-	-	-	3	50	1	16.7	-	-	2	33.4
	Post-study	-	-	1	16.7	5	83.3	-	-	-	-	-	-
Precision	Pre-study	-	-	2	33.4	3	50	1	16.7	-	-	-	-
	Post-study	-	-	2	33.4	4	66.6	-	-	-	-	-	-
Relevance	Pre-study	-	-	1	16.7	2	33.4	1	16.7	2	33.4	-	-
	Post-study	-	-	3	50	2	33.4	1	16.7	-	-	-	-
Depth	Pre-study	1	16.7	-	-	2	33.4	1	16.7	1	16.7	1	16.7
	Post-study	-	-	2	33.4	4	66.6	-	-	-	-	-	-
Breadth	Pre-study	-	-	2	33.4	2	33.4	1	16.7	-	-	1	16.7
	Post-study	-	-	1	16.7	3	50	2	33.4	-	-	-	-
Logic	Pre-study	-	-	1	16.7	1	16.7	2	33.4	1	16.7	1	16.7
	Post-study	1	16.7	3	50	-	-	1	16.7	-	-	1	16.7
Significance	Pre-study	-	-	2	33.4	2	33.4	1	16.7	1	16.7	-	-
	Post-study	-	-	2	33.4	4	66.7	-	-	-	-	-	-
Fairness	Pre-study	-	-	2	33.4	2	33.4	-	-	-	-	2	33.4
	Post-study	1	16.7	3	50	2	33.4	-	-	-	-	-	-

The results in Table 4 suggest that the CG reported more positive self-perception for certain items including clarity, precision, depth, breadth, significance, and fairness. For these elements, most of the CG participants' answers were grouped under very good and good. Regarding depth, all the CG answers were again on the positive scale. On the other hand, the EG participants' answers displayed a much more scattered view for each element of intellectual standards when compared with those of the CG.

The third part of the questionnaire asked the participants to score their English writing proficiency on a 5-point Likert scale. Table 5 shows the EG participants'

perceptions of their English writing proficiency before and after the study.

The results in Table 5 suggest that their perceptions did not change at all. Most of the EG participants kept the belief that their English writing proficiency was average before and after the study.

The results in Table 6 show that the CG participants had a much more positive perception of their English writing proficiency in comparison to the EG students. Four of six CG participants indicated their English writing proficiency to be good while none of the EG participants described their proficiency as good.

Table 4. Comparison of EG and CG participants on their ability to integrate CT intellectual standards into actual L2 writing performance

		Very good		Good		Average		Poor		Very poor		Do not understand	
		n	%	n	%	n	%	n	%	n	%	n	%
Clarity	CG	1	16.7	3	50	1	16.7	-	-	-	-	1	16.7
	EG	-	-	3	50	2	33.4	1	16.7	-	-	-	-
Accuracy	CG	-	-	3	50	3	50	-	-	-	-	-	-
	EG	-	-	1	16.7	5	83.3	-	-	-	-	-	-
Precision	CG	-	-	5	83.3	1	16.7	-	-	-	-	-	-
	EG	-	-	2	33.4	4	66.6	-	-	-	-	-	-
Relevance	CG	3	50	1	16.7	1	16.7	1	16.7	-	-	-	-
	EG	-	-	3	50	2	33.4	1	16.7	-	-	-	-
Depth	CG	1	16.7	5	83.3	-	-	-	-	-	-	-	-
	EG	-	-	2	33.4	4	66.6	-	-	-	-	-	-
Breadth	CG	3	50	2	33.4	-	-	-	-	-	-	1	16.7
	EG	-	-	1	16.7	3	50	2	33.4	-	-	-	-
Logic	CG	-	-	3	50	1	16.7	-	-	-	-	2	33.4
	EG	1	16.7	3	50	-	-	1	16.7	-	-	1	16.7
Significance	CG	1	16.7	4	66.6	-	-	-	-	-	-	1	16.7
	EG	-	-	2	33.4	4	66.7	-	-	-	-	-	-
Fairness	CG	1	16.7	4	66.6	1	16.7	-	-	-	-	-	-
	EG	1	16.7	3	50	2	33.4	-	-	-	-	-	-

* Poststudy results of the EC were included in this analysis as the CG took this questionnaire only once at the end of the study.

Table 5. The EG participants' perceptions of their English writing proficiency

	Prestudy	Poststudy
	<i>f</i>	<i>f</i>
Very good	-	-
Good	-	-
Average	4	5
Poor	2	1
Very Poor	-	-
Total	6	6

Table 6. EG and CG students' perceptions of their English writing proficiency

	EG	CG
	<i>f</i>	<i>f</i>
Very good	-	-
Good	-	4
Average	5	1
Poor	1	1
Very Poor	-	-
Total	6	6

Results of the essays

The essays written by the EG and CG participants were scored by following CT intellectual standards as the rubric for achieving a comparison of both groups' writing performances. The results are shown in Table 7.

As can be seen in Table 7, no statistical difference was found between the two groups' means for any sub-components as a result of Mann-Whitney U test (U=14, p= .50 for clarity; U=15, p= .68 for accuracy; U=17, p= .87 for precision; U= 14, p= .52 for relevance; U= 15, p= .63 for depth; U= 22, p= .47 for breadth; U=10, p= .22 for logic; U=15, p= .68 for significance; U= 13, p= .46 for fairness). Yet, for two sub-components, there was a stable increase in the mean scores of the EG. Accordingly, for *relevance*

and *logic*, the group-based mean score of the EG increased steadily while there were fluctuations in the means for other items for both groups.

Analysis of the qualitative data

During the interviews, the EG were asked a set of questions for understanding what perceptions they held about integrating CT into L2 writing in line with their experiences in the study. Three of these questions, which were about questioning the participants' general knowledge of CT, were also given to the CG participants in the written form as open-ended questions. The first question directed to both groups was on the definition of CT in L2 writing. Table 8 presents the grouping of themes elicited from these definitions.

Table 7. Comparison of the EG and CG participants' writing scores around CT intellectual standards

		Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Sig
		M	M	M	M	M	M	
Clarity	EG	2.79	3.25	3.67	3.25	3.75	3.83	.519
	CG	2.66	2.50	3.42	3.25	3.92	3.33	
Accuracy	EG	2.78	3.25	3.08	3.66	3.83	3.50	.688
	CG	2.66	3.08	3.58	3.17	3.75	3.33	
Precision	EG	2.50	3.25	3.75	2.83	3.33	3.67	.873
	CG	2.55	3.16	2.92	3.08	3.83	3.58	
Relevance	EG	2.50	3.08	3.67	3.67	3.75	4.08	.521
	CG	2.75	3.41	3.58	3.42	3.83	3.50	
Depth	EG	2.50	2.42	3.33	3.33	3.83	3.42	.630
	CG	2.62	3.25	2.92	2.83	3.58	3.25	
Breadth	EG	2.58	2.92	2.58	2.33	3.75	3.42	.470
	CG	2.80	3.08	2.83	2.92	3.67	3.25	
Logic	EG	2.69	3.15	3.33	3.50	3.67	4.00	.228
	CG	2.91	2.75	3.08	3.08	3.67	3.17	
Significance	EG	2.50	3.08	2.83	3.33	3.08	2.83	.687
	CG	2.25	2.75	2.92	2.67	3.17	3.33	
Fairness	EG	2.58	3.42	2.83	2.83	3.75	3.25	.469
	CG	2.33	2.91	3.00	2.50	3.42	3.00	

Table 8. Themes from the participants' definitions of CT in English writing

Themes from the CG	Themes from the EG
Pre-writing element: <ul style="list-style-type: none"> - Identifying the purpose of a writing task (2) - Considering multiple viewpoints (1) - Identifying major questions to be asked (1) * Finding some evidence for ideas (1)	Pre-writing element: <ul style="list-style-type: none"> - Identifying the purpose of a writing task (2) - Considering multiple viewpoints (1) - Identifying major questions to be asked (1) - Clarifying key concepts (2) - Gathering information (details and examples to be given) (2)
While-writing element: <ul style="list-style-type: none"> *Expressing our thoughts in accurate sentences (1) *Solving problems (2) 	While-writing element: <ul style="list-style-type: none"> - Making inferences of possible solutions (2)
Post-writing element: <ul style="list-style-type: none"> *Evaluating our ideas (1) 	Post-writing element: <ul style="list-style-type: none"> - Monitoring for any argument that is 'taken for granted' (2)
<ul style="list-style-type: none"> *Keeping impartial to all sides of a discussion (1) *Being realistic (1) *Taking writing tasks seriously (1) *Making criticism of self and others (1) 	

As can be seen in Table 8, some of the themes were related to the phases of writing an essay, except the ones marked with a star. Several CT elements were found in the responses of the participants from both groups, though the frequency of these references was greater in the answers of the EG. For the EG, all answers were related to CT themes. In the CG participants' answers, most themes were related to CT for pre-writing phase; however, no indication of CT was identified for while- and post-writing phases. Additionally, there were several different responses from the CG participants that could be related to their general attitude to writing tasks, rather than phases of writing.

For the second question, the participants indicated if they found CT as applicable to L2 writing or not. The participants from both groups expressed that they took CT as applicable to L2 writing. Yet, they mentioned some points that made the integration of CT a difficult task for them in English writing. These were limited L2 proficiency, topic familiarity, exam anxiety, and time limitation of in-class assignments and sit-down exams.

During the interviews with the EG, the researchers asked them the extent of usefulness of CT guidance they took in the study. All of the participants stated that they reached a higher awareness of the topic; yet, they needed further guidance on CT to internalize it. Some participants mentioned that they would like to take regular CT feedback on essay tasks given to them in the preparatory program. Furthermore, five of the EG participants indicated that CT feedback could be used in the peer-feedback process.

Discussion, Conclusion and Implications

The present study examined the influence of a six-week CT-oriented feedback process on B1+ level EFL learners' argumentative essays. The study also addressed the participants' view of CT instruction. The first research question was set to find out if CT oriented feedback improved EFL learners' CT scores in argumentative essays. Writing scores given to the participants throughout the six-week period did not indicate any significant improvement for the EG participants. Also, there was no significant difference between the CT performance of the EG and CG participants. This finding is partially in line with the study of Dwyer et al. (2015) who tracked the improvement of the reflective judgement of university students under the conditions of mapping-infused CT training and CT training using hierarchical outlines. The researchers found no significant contribution of CT-oriented treatments as all groups scored similarly on the post-test results in their reflective judgement. The findings of this study and those of Dwyer et al.'s (2015) study are supportive of each other in displaying that CT instruction is not always conducive to observable CT performance.

However, the fact that our study did not find a noteworthy improvement in the CT performance of EFL learners is contradictory to what is mostly reported in the

literature. Srinawati and Alwi (2020) reported a moderate level improvement in their EFL students' CT skills in argumentative writing after the researchers used an infusion approach for explicit CT training embedded in regular course content. A statistically significant level of improvement was claimed by Kolour and Yaghoubi (2016), who compared the impact of identity-cause-effect task and divergent thinking task on intermediate-level EFL learners. The researchers found that both tasks where CT was taught explicitly improved the participants' CT performance in the post-test.

Yet, this study also indicated some improvement in the EG participants' CT performance. They steadily but slightly improved their mean scores in two CT components, which were relevance and logic. Being relevant to the topic is considered a key factor in displaying CT and it refers to the inclusion of topic-relevant information in the discussion at hand (Paul & Elder, 2006). Similarly, logic refers to the production of justifiable inferences in line with the information presented in an essay by a writer and it is an important indicator of CT (Paul & Elder, 2006). This kind of partial improvement in students' L2 writing performance is also supported by the study of Chason et al. (2017) who reported that CT-oriented instruction contributed to the improvement of bridge sentences and inference sentences in paragraphs written by EFL learners from different L1 backgrounds.

The second research question was set to investigate if CT-oriented feedback made a difference in the participants' perceptions of their own CT competence in L2 writing. There were two sub-scales in the questionnaire. The first sub-scale was about the participants' perceptions of the difficulty of benefiting from CT in the planning phase. The EG participants' post-study answers indicated an upgrade in their performance for the elements of identifying purpose and identifying major questions. To see if this kind of difference resulted from the CT instruction given to the EG, the CG participants' perceptions of their performance were checked and the results of both groups were seen to be quite similar across the items. It suggested that the EG participants' improved perceptions were not attributable to the effect of the CT instruction given in this study. The similarity between the two groups can be ascribed to the content of L2 writing instruction given in the preparatory program the students were enrolled in.

The second part of the questionnaire was for finding out if the EG participants' perceptions of their CT performance in L2 writing changed after the study. The EG participants' perceptions of clarity, accuracy, depth, and fairness moved from the negative end of the scale towards the positive end of the scale. This indicates that they viewed themselves as more skilled in those aspects. The fact that the EG participants held more positive perceptions of CT traits in their essays at the end of the study may be due to one-to-one teacher-feedback sessions, which was found to be an important factor in increasing the students' L2 writing self-efficacy in the study of Ruegg (2018). Yet, when the EG participants'

post-study perceptions of CT performance were compared with that of the CG, the CG participants displayed more positive perceptions of clarity, precision, depth, breadth, significance, and fairness. This may be explained by hypothesizing that the EG students were cautious about claiming a good performance for these skills. It is most probable that they reached this awareness during the one-to-one feedback sessions where the researchers used CT prompts as the reference point for the feedback. This assumption is also supported by the EG participants' views of CT integration in L2 writing. All the answers given by the EG participants were directly related to CT and they were using a metalanguage for discussing CT, which the CG lacked. The process of engaging in explicit talk about language learning is cited to be an important factor contributing to the language learning process (Schleppegrell, 2013).

In the light of findings, there are two main conclusions to be drawn from this study. First, this study showed that one-to-one feedback sessions with implicit approach were not enough in yielding increased CT competencies in EFL students' argumentative essays. Future studies may be conducted with explicit CT training and feedback procedures. This was designed as a single-draft study considering the context. New studies may be carried in multi-drafting phases, which may allow for more internalisation of CT in an L2.

Despite the lack of improvement in applying CT in their argumentative essays, the EG participants displayed a better understanding of CT features in L2 writing as evident from their interview responses. This implies that one-to-one feedback sessions in this study contributed to their awareness of CT traits in L2 writing even though they clearly needed more guided support to internalize and display these features in their L2 essays. Further research may also address the factors such as writing anxiety, writing self-efficacy or writing strategy use and their relationship with CT to shed light on the complex nature of CT in L2 writing with more participants in the experimental groups, which had a quite limited size in this study. The final conclusion to make is that a prerequisite for CT is a positive attitude towards it (Mason, 2007) and all participants in this study expressed their positive attitudes towards CT.

The findings of this study is subject to a limitation mainly due to small number of participants. Because the researchers were full time instructors in the program where the data was collected, they had to plan a study in line with their teaching load. The researchers had to limit the number of the participants so that they could manage face-to-face feedback sessions, each of which took 20 minutes and made up to 120 minutes of extra load on their program. Furthermore, only a small number of the participants agreed to participate when they were informed that they had to complete extra tasks and be present for face-to-face feedback sessions throughout a six-week period on a regular basis. Future studies may experiment with more participants if they can integrate CT into the syllabus of a learner group enrolled in the same

class.

Genişletilmiş Özet

Giriş

Eğitime eleştirel düşünmenin (ED) entegre edilmesi genel olarak öğrencilerin 'iyi düşünme' becerisi ile donatılma çabası olarak tanımlanmaktadır (Pithers & Soden, 2000) çünkü ED, öğrencilerin nasıl daha iyi düşünebileceklerine dair bir üstbilişe erişmeleri yönünde bilişsel değişiklik gerektiren bir olgudur (Bonnett, 1995). ED öğrencilere argümanlarını savunmak için öz-sese sahip olma becerisini kazandırmakla ilgili olduğundan ikinci dilde yazma becerisinde oldukça önemlidir (Barnawi, 2011). ED ve ikinci dilde yazma ayrı kavramlar olarak görünse de gerçekten birbirine bağımlı ve bir kişinin akademik kapasitesini göstermek için oldukça değerli araçlar olarak görülmektedir (Condon & Kelly-Riley, 2004; Paul, 2005). Condon ve Kelly-Riley (2004) 'yazmanın ED için bir araç olarak hareket ettiğini' (s. 66) belirtmiş ve ED'nin, dil öğrencilerinin kompozisyonlarını düzenleme becerisini artırdığından (Moghaddam & Malekzadeh, 2011), hedef bir yazma etkinliğinde alternatif argümanları daha iyi fark etmelerini sağladığından (Sham, 2016), ana argümanlarını somut örneklerle dayandırmaya sevk ettiğinden (Paul, 2005) ve sundukları argümanlarda tutarlılık aramayı öğrettiğinden (Turuk Kuek, 2010) ED'nin ikinci dilde yazma becerisinin gelişmesinde önemli bir destekleyici olarak görüldüğünü savunmuştur.

Doğu kültürlerinin ED yeteneğinin daha az olduğu iddiası (Atkinson, 1997) ve Doğu kültürlerinden öğrencilerin Batı kültürlerinde yetişen öğrencilere göre ED becerilerinde fikren daha düşük oldukları (Moosavi, 2020) gibi basmakalıp iddialar göz önünde bulundurulduğunda Türkiye gibi Doğu kültürlerinde ED'nin araştırılması daha da ilgi çekmektedir. YDİ'de yazma becerisinin ED becerileri ile birlikte geliştirilmesi az araştırılmış bir alan olarak kabul edilebilir (Afshar v.d., 2017). Bu çalışma bu eksiklikten esinlenerek, ED'nin yazmada geribildirim verme sürecine dahil edilerek geliştirilip geliştirilemeyeceğini araştırmayı amaçlamaktadır.

İç içe geçmiş olan ikinci dilde yazma ve ED Türkiye'de farklı bakış açıları ile araştırılmıştır. Clachar (2000) bir grup YDİ öğreten öğretim görevlilerinin ikinci dilde yazma öğretimine ED'yi dahil etme hakkındaki inanışlarını incelemiştir. Araştırmacı bazı öğretim görevlilerinin öğrencilerinin yazmalarında eleştirel bir tutum göstermeleri düşüncesini pek onaylamadıkları ve bunu Türkçe söyleme uygun bulmadıkları sonuçlarına ulaşmıştır.

Bayram (2015) web macerası-destekli (webquest) ED öğretiminin Türk YDİ öğretmen adaylarının ED'ye olan tutumlarını ve ED'nin yazma ürünlerinde kullanımına etkisini araştırmak için 6 haftalık bir araştırma yürütmüştür. Sonuçlar deney grubunun ED farkındalıklarında, ED'ye olumlu tutum düzeylerinde ve tartışma tipi kompozisyonlarında ED'nin uygulanmasında gelişim olduğunu göstermiştir. Aygün ve Yavuz (2020)

tarafından yürütülmüş başka bir çalışma art zamanlı çevrim içi ED öğretiminin B2 düzeyinde YDİ öğrenenlere etkisini araştırmıştır. Araştırmacılar deney grubunun sebep-sonuç kompozisyonlarında daha iyi ED performansı gösterirken tartışma ve karşılaştırma tipi kompozisyonlarında farklılık olmadığını rapor etmişlerdir.

ED'yi geliştirmek için çeşitli yöntemler kullanılabilir. Bunlardan bazıları Sokratik diyalog, öğrencilere rol-model olma, verilen bir konuya öğrencilerin yaklaşımındaki zıtlıkları göstermedir (Bonnett, 1995). Yanning'e (2015) göre ED'yi öğretmenin standart bir yöntemi yoktur. Bu çalışmanın amacı alan yazına bilişsel çiraklık, infüzyon yaklaşımı ve yoğun maruz bırakma gibi belli başlı yöntemlerin birkaçının birlikte kullanımını deneysel olarak araştırarak katkıda bulunmaktır. Bu çalışmada aşağıdaki araştırma sorularına yanıt bulmak amaçlanmıştır:

- 1) ED-odaklı geri dönüt YDİ öğrencilerinin ikinci dil yazmada ED puanlarını artırıyor mu?
- 2) ED-odaklı geri dönüt YDİ öğrencilerinin ikinci dil yazmalarındaki bireysel ED performanslarına dair algılarını artırıyor mu?

Yöntem

Güvenilir sonuçlara ulaşabilmek için Yanning'in (2015) metodolojisinden esinlenerek veri toplama araçlarının üçgenlemesi yapılmıştır. Bu çalışmanın veri toplama sürecinde 4 araç kullanılmıştır: (1) bir anket; (2) yazma etkinlikleri; (3) ED ile ilgili geribildirim vermek için 9 maddeli bir liste; (4) deney grubu ile yarı yapılandırılmış görüşmeler.

Sonuç

Araştırmanın bulguları deney grubunun kompozisyonlarında ED'nin entegrasyonu ile ilgili önemli bir değişikliğe işaret etmemiştir. Fakat, araştırma, deney grubunun ED performanslarında bazı gelişmeler göstermiştir. Deney grubu katılımcıları, ED'nin önemli bileşenlerinden olan ilgililik ve mantık için ölçülen ortalama puanlarını düzenli olarak artırmışlardır. Ayrıca, tartışma kompozisyonlarında ED'nin uygulanmasına dair bir gelişme olmamasına rağmen, deney grubu katılımcıları görüşmelerde verdikleri yanıtlarla ED özelliklerini daha iyi anladıklarını göstermişlerdir.

Öneri

Sonraki araştırmalarda yazmada ED'nin karmaşık yapısını daha iyi anlayabilmek için açık ED öğretimi süreçlerine bireysel geribildirim verme seansları dahil edilebilir ve yazma kaygısı, yazma öz-yeterliliği ve yazma stratejileri kullanımının ED ile olan ilişkileri araştırılabilir.

Araştırmanın Etik Taahhüt Metni

Yapılan bu çalışmada bilimsel, etik ve alıntı kurallarına uyulduğu; toplanan veriler üzerinde herhangi bir tahrifatın yapılmadığı, karşılaşılabilecek tüm etik ihlallerde "Cumhuriyet Uluslararası Eğitim Dergisi ve Editörünün" hiçbir sorumluluğunun olmadığı, tüm sorumluluğun Sorumlu

Yazara ait olduğu ve bu çalışmanın herhangi başka bir akademik yayın ortamına değerlendirme için gönderilmemiş olduğu sorumlu yazar tarafından taahhüt edilmiştir.

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Appendix 1

Semi-structured Interview Questions

- 1- How often do you hear about the term CT in writing?
 - 2- After having studied with the researcher on these writing tasks, how can you describe 'critical thinking in writing'?
 - 3- Is it possible to think critically while writing essays?
 - 4- Do you feel competent in critical thinking while writing?
 - 5- Please explain if there is any difference in how you write an essay before this study and now after this study?
 - 6- Do you need further guidance in critical thinking in writing?
 - 7- Do you think critical thinking is applicable to any other language skill?
 - 8- Will you keep improving your critical thinking? How?
- Turkish version of Semi-structured Interview Questions
- 1- Yazı yazarken ED kullanımını hakkında ne sıklıkta bir şeyler duydunuz?
 - 2- Bu çalışmada yer alıp yazma ödevlerini tamamlamış olarak, yazmada ED'yi nasıl tanımlarsınız?
 - 3- Yazı yazarken eleştirel düşünebilmek mümkün müdür?
 - 4- Yazı yazarken ED'yi uygulamakta kendinizi yetkin hissediyor musunuz?
 - 5- Lütfen bu çalışmaya katılmadan önceki yazı yazma şeklinizle bu çalışmayı tamamladıktan sonraki yazı yazma tarzınızda bir değişiklik oldu ise belirtiniz.
 - 6- Yazı yazarken ED'yi uygulamaya yönelik daha fazla yönlendirmeye ihtiyacınız var mı?
 - 7- Sizce ED diğer dil becerilerinde de uygulanabilir mi?
 - 8- Eleştirel düşünme becerinizi geliştirmeye devam edecek misiniz? Evet ise, nasıl?