

**THE EFFECTS OF COLLABORATIVE WRITING ON EFL STUDENTS'
ATTITUDES, SCORES AND PAPER READABILITY**



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JUNE 2020

**THE EFFECTS OF COLLABORATIVE WRITING ON EFL STUDENTS'
ATTITUDES, SCORES AND PAPER READABILITY**

**A THESIS SUBMITTED TO THE
GRADUATE SCHOOL OF EDUCATIONAL SCIENCES
OF
BAHÇEŞEHİR UNIVERSITY**

BY

Behçet ERDEN

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN THE DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

JUNE 2020

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ABSTRACT

THE EFFECTS OF COLLABORATIVE WRITING ON EFL STUDENTS' ATTITUDES, SCORES AND PAPER READABILITY

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Master's Thesis, Master's Program in English Language Education

Supervisor: Assoc. Prof. Kenan Dikilitaş

June 2020, 94 pages

The purpose of this study is to explore the effects of using collaborative writing techniques and activities on EFL students' attitudes towards writing along with their scores. Moreover, the study aimed to reveal whether collaborative writing has an effect on the readability levels of students' paragraphs. A total of 100 pre-intermediate university students, 62 of whom were male and 38 of whom were female, participated in this study. The participants were assigned into two groups; one as the experimental group which subjected to the actual collaborative writing process, and the other as the control group. In this study, quantitative research method was utilized. In order to measure attitude levels of the participants, a pretest/post-CWT was run, to grade students' paragraphs, a rating scale was utilized, and finally, readability formulas were benefitted to show the effect of collaborative writing on readability levels of the paragraphs composed by the students. The findings of this study revealed that using collaborative writing techniques and activities had a positive effect on EFL students' writing scores as well as their attitudes towards writing. The results of this study shed light on the effectiveness of collaborative writing techniques and activities in L2 writing classrooms.

Keywords: Collaborative Writing, Collaborative Dialogue, Writing Attitude

ÖZ

İŞBİRLİKÇİ YAZMANIN YABANCI DİL OLARAK İNGİLİZCE ÖĞRENEN ÖĞRENCİLERİN TUTUMLARI, SKORLARI VE KAĞIT OKUNABİLİRLİĞİ ÜZERİNE ETKİLERİ

Erden, Behçet

Yüksek Lisans, İngiliz Dili Eğitimi Yüksek Lisans Programı

Tez: Yöneticisi: Doç. Dr. Kenan Dikilitaş

Haziran 2020, 94 sayfa

Bu çalışmanın amacı, işbirlikçi yazma tekniklerini ve aktivitelerini kullanmanın yabancı dil olarak İngilizce öğrenen öğrencilerin yazmaya karşı tutumları ile birlikte skorları üzerindeki etkilerini araştırmaktır. Ayrıca çalışma, işbirlikçi yazmanın öğrencilerin paragraflarının okunabilirlik düzeyleri üzerinde bir etkisi olup olmadığını ortaya koymayı amaçlamıştır. Çalışmaya 62'si erkek, 38'i kadın olmak üzere toplam 100 üniversite öğrencisi katılmıştır. Katılımcılar biri gerçek işbirlikçi yazma sürecine tabi tutulan deney grubu, diğeri ise kontrol grubu olmak üzere iki gruba ayrılmıştır. Bu çalışmada nicel araştırma yöntemi kullanılmıştır. Katılımcıların tutum düzeylerini ölçmek amacıyla ön test / son test uygulanmış öğrencilerin paragraflarını değerlendirmek için bir derecelendirme ölçeği kullanılmış, ve son olarak da işbirlikçi yazmanın öğrencilerin paragraflarının okunabilirlik düzeyleri üzerine etkisini göstermek için okunabilirlik formüllerinden yararlanılmıştır. Bu çalışmanın bulguları, işbirlikçi yazma tekniklerinin ve etkinliklerinin kullanılmasının yabancı dil olarak İngilizce öğrenen öğrencilerin yazma puanları ve yazmaya karşı tutumları üzerinde olumlu bir etkisi olduğunu ortaya koymuştur. Bu çalışmanın sonuçları yabancı dil yazma sınıflarındaki işbirlikçi yazma tekniklerinin ve aktivitelerinin etkinliğine ışık tutmuştur.

Anahtar Kelimeler: İşbirlikçi Yazma, İşbirlikçi Diyalog, Yazmaya Karşı Tutum



To My Family

ACKNOWLEDGMENTS

I wish to express my deepest gratitude to my supervisor Assoc. Prof. Kenan Dikilitaş for his guidance, advice, criticism, encouragements, and insight throughout the research.

I would like to thank my lovely wife, Duygu, who has always encouraged me to carry on with patience and helped me through tough times. Without her understanding, and continuous support, I could have never been able to come over this stressful process.

Finally, I would like to thank my friends, colleagues and those who have participated in this study and helped me without expectation.

TABLE OF CONTENTS

ETHICAL CONDUCT.....	iii
ABSTRACT.....	iv
ÖZ.....	v
DEDICATION.....	vi
ACKNOWLEDGEMENTS.....	vii
Chapter 1: Introduction.....	1
1.1 Statement of the Problem.....	2
1.2 Purpose of the Study.....	3
1.3 Research Questions.....	3
1.4 Significance of the Study.....	3
1.5 Definitions.....	4
Chapter2: Literature Review.....	5
2.1 Writing	5
2.2 Approaches to Writing	7
2.2.1 Product-Based Approach.....	7
2.2.2 Process Based Approach.....	7
2.3 L2 Writing.....	9
2.4 Theoretical Background.....	11
2.5 Collaborative Learning	14
2.5.1 Conditions for Collaborative Learning.....	17
2.5.1.1 Positive interdependence.....	17
2.5.1.2 Face-to-face interaction.....	18
2.5.1.3 Individual accountability/ Personal responsibility.....	18
2.5.1.4 Interpersonal and small-group skills.....	18
2.5.1.5 Group processing.....	19
2.6 Collaborative Writing.....	19
2.6.1 Types of Collaborative Writing.....	21
2.6.2 The Procedure of Collaborative Writing.....	21

2.6.3 Roles of Students in Collaborative Writing.....	23
2.6.4 Collaborative L2 Writing.....	24
2.6.5 Collaborative Dialogue and Languaging.....	26
2.7 Effects of Collaborative Writing.....	28
2.8 Collaborative Writing Attitudes.....	31
2.9 Benefits of Collaborative Writing.....	32
2.10 Challenges of Collaborative Writing.....	33
2.11 Previous Studies.....	34
Chapter 3: Methodology.....	38
3.1 Research Design.....	38
3.2 Setting and Participants.....	39
3.3 Procedures.....	41
3.3.1 Data Collection Instruments.....	41
3.3.2 Data Collection Procedures.....	41
3.3.3 Data Analysis Procedures.....	43
3.3.3.1 Readability.....	45
3.3.3.1.1 Flesch Reading Ease Score.....	45
3.3.3.1.2 Flesch-Kincaid Grade Level.....	46
3.4 Reliability and Validity.....	48
3.5 Ethical Considerations.....	49
3.6 Limitations.....	50
Chapter 4: Findings.....	51
4.1 Learners' Attitudes Towards CW.....	51
4.2 The Potential Effects of CW on Students' Writing Scores.....	56
4.3 The Relationship Between Attitude Levels of Students and Their Writing Scores.....	59
4.4 Collaborative Writing and Readability.....	60
Chapter 5: Discussion and Conclusions.....	64
5.1 Discussion of the Findings for the Research Questions.....	64
5.1.1 RQ1: What are learners' attitudes towards collaborative writing?.....	64

5.1.2 RQ2: What are the potential effects of collaborative writing on students' writing scores?.....	66
5.1.3 RQ3: Is there a relationship between students' writing scores and their attitudes.....	67
5.1.4 RQ4: Does collaborative writing lead to more readable papers?.....	68
5.2 Pedagogical Implications.....	69
5.3 Conclusions	70
5.4 Recommendations for Further Study.....	71
REFERENCES.....	72
APPENDICES.....	90
A Consent Form.....	90
B Questionnaire.....	90
C Writing Rubric.....	92
D Rubric of Equivalence.....	92
E Permission Letter.....	93
F CV.....	94

LIST OF TABLES

TABLES

Table 1 Summary of Data Collection and Data Analysis	39
Table 2 Gender Distribution.....	40
Table 3 Test of Normality	44
Table 4 Definitions of Scores in Flesch Reading Ease	46
Table 5 Comparison of Flesch Reading Ease and Flesch-Kincaid Grade Level	47
Table 6 Reliability and Factor Analysis.....	48
Table 7 Pre-CWT and Post-CWT Scores of the Control Group.....	52
Table 8 Pre-CWT and Post- CWT Scores of the Experimental Group.....	53
Table 9 Pre- CWT Comparison of the Groups.....	54
Table 10 Post- CWT Comparison of the Groups	54
Table 11 Writing Attitudes of Groups.....	55
Table 12 Pre- CWT and Post- CWT Writing Scores	57
Table 13 Pre- CWT and Post- CWT Writing Scores of the Group.....	58
Table 14 Attitude Levels and Writing Scores	59

LIST OF FIGURES

FIGURES

Figure 1 Structure of the Writing Model.....	9
Figure 2 Flesch Reading Ease Formula	46
Figure 3 Flesch Kincaid Grade Level	47
Figure 4 Flesch Reading Ease for Experimental Group	60
Figure 5 Flesch-Kincaid Grade Level for Experimental Group	61
Figure 6 Flesch Reading Ease for Control Group.....	62
Figure 7 Flesch-Kincaid Grade Level for Control Group	62



LIST OF ABBREVIATIONS

AR	Action Research
CW	Collaborative Writing
CWT	Collaborative Writing Training
EFA	Exploratory Factor Analysis
EFL	English as a Foreign Language
ELT	English Language Teaching
KMO	Kaiser-Meyer-Olkin
LRE	Language Related Episodes
SCT	Sociocultural Theory
SLA	Second Language Acquisition
WAQ	Writing Attitude Questionnaire
ZPD	Zone of Proximal Development

Chapter 1

Introduction

Languages consist of several subsections known as language skills which are closely interrelated to one another. These skills are divided into two as receptive skills (reading & listening) and productive ones (speaking & writing). However, writing as a productive skill is considered to be the most difficult one for second language learners because generally most of the students are asked to produce their writings individually without allowing them to brainstorm ideas in collaboration with their peers or groups.

However, in spite of the difficulties and problems, the general opinion in literature is that collaboration is a beneficial strategy in L2 classroom settings, particularly in L2 writing. Savaşçı & Kaygısız (2019) claim that considering the challenges that individual writing bring, collaborative writing might provide several opportunities for L2 students to improve their writing skills. One solution to the mentioned problems is by Irwin and Knodle (2008) who state that it is important to help students to see the writing as a decision-making process. They should be encouraged to understand the aim of writing as an activity to express their ideas and thus, their writing skills increase. According to Lantolf & Thorne (2007), an effective way to improve writing skills is active student participation in the whole process, which can be done by working collaboratively. They claim that through collaborative work, the environment necessary for learners to learn from each other is formed. Wilhelm (1999) states that collaboration “helps students build fluency, confidence and motivation while engaging them in functional practice and extracurricular use of English” (p. 14). When learners interact while studying on a given topic, they have the opportunity to compare their writings with others, and most importantly give feedback or receive feedback from an actual reader so that as Wirtz (2012) claims, they develop confidence on their writing abilities as well as seeing their weaknesses, which in turn

helps them become better writers. In addition, Storch & Wigglesworth (2007) assert that by giving students the chance to reflect on their language use and interacting with each other, collaboration in writing mediates foreign language learning. To support the opinion, Zhang (2018) reveals that among the other benefits of collaborative writing, the most important one is that it increases learning opportunities. When learners are supported with collaborative writing, their writing may become better and they may feel more confident as they share the responsibilities as well as compensating for each other's gaps or shortcomings, and herewith, their attitudes towards writing may turn to positive. It should be considered as important as other skills and, in order not to cause stress on students about writing, more attention must be paid on the instruction of this paramount skill.

1.1 Statement of the Problem

Reviewing the pertinent literature, by far the most common problem in writing is perceived as not being able to transfer the thoughts and ideas to the paper in a meaningful way no matter how valuable and creative they are. Silva (1993) states that writing is a complex and demanding activity that imposes a number of problems on language learners. Among these problems as Glenn (as cited in Irwin & Kondol, 2008) highlights are traditional teaching methods, time constraints. Due to these drawbacks, teachers and students have become more product focused and consequently the purpose of learning to write is overlooked. As Boshier (1998) asserts they are trapped in traditional modes of writing cause-effect, description, definition, classification, exemplification, comparison and narration. Even at the initial stages of writing, when students write individually, they feel the pressure of these drawbacks more. They have problems in generating ideas mostly when they have no background information about the topic given. In addition to that, during the actual writing, they may also not write fluently, and they cannot use the time efficiently. Moreover, as a natural result of such problems that students have to cope with during all the writing process, they also build negative attitudes towards writing.

1.2 Purpose of the Study

The study was carried out to receive empirical data about whether collaborative writing is an effective method to improve students' writing skills. Moreover, the researcher sought an answer to the question whether collaborative writing has a positive effect on students' attitudes, writing scores as well as readability levels of their papers.

1.3 Research Questions

Four research questions were formed for the present study and quantitative data collection instruments were utilized to seek answers to the questions. The following research questions were used in the present research:

1. What are learners' attitudes towards collaborative writing?
2. What are the potential effects of collaborative writing on students' writing scores?
3. Is there a relationship between students' writing scores and their attitudes?
4. Does collaborative writing lead to more readable papers?

1.4 Significance of the Study

The findings will be hopefully beneficial for the English instructors who work at the preparatory schools of both state and private universities. Thus, they might be able to benefit from this study and design their lessons in alignment with the results of this study. Apart from this, researchers could be inspired from this study and they might be able to conduct further research in the related area by updating and enhancing this study in this field. Another significance is that the studies conducted related to collaborative writing are scarce. In other words, this is one of the rarely studied areas

of ELT. From this perspective, this study will increase the number of studies implemented in the field of collaborative writing.

1.5 Definitions

Collaborative Learning: The term is defined as the processes which help people interact together in order to accomplish a specific goal or develop an end product which is usually content specific (Pantiz,1996).

Collaborative Writing: The term is expressed as the writing process that involves two or more people committed to a jointly composed text (Ede & Lunsford, 1991).

Collaborative Dialogue: The term is clarified as the dialogue in which speakers are engaged in problem solving and knowledge building (Swain,2000).

Languaging: This term is defined as a process of making meaning and shaping knowledge and experience through language (Swain,2006).

Language Related Episodes: The term is explained as the parts in the learners' dialogues where they have discussions only about language such as the choice of lexical categories and the use of accurate grammar.

Chapter 2

Literature Review

2.1 Writing

Writing is undoubtedly one of the most difficult skills to acquire in second language learning settings. Frequently, it is seen as an individual-based skill and considered to be redundant and time-consuming especially among state schools in Turkey. Most of the writing sections in course books are either totally left out or not covered entirely. It is literally one of the two productive skills that represents other skills which are acquired in target language; therefore, it is widely accepted to be difficult for language learners. Furthermore, it is perceived as a productive skill since the writer not just interprets the information in existence but creates an original language. According to Chiu (2006) as well as being a thinking process, writing is perceived as a tool for language learners to state their ideas and feelings in language education. To put it another way, through writing, it is possible for the writer to convey communicative and informative messages to various readers. Productive skills are benefitted greatly while portraying the current level of a language learner. Since becoming proficient at the skill is seen so crucial, teachers often put considerable emphasis on grammar structures, and as a result, students place more effort to master grammar, thus, the requirements of writing, such as content and organization matters are ignored. It is a well-known fact that writing requires conscious preparation including planning and organization of ideas. Therefore, it is not realistic to expect one to write automatically, without any preparation.

Rao (2007) states that writing is not only a mean to express oneself, ideas, and feelings; however, it facilitates the acquisition of other study skills the students need in their academic settings such as synthesizing, analyzing and criticizing. In order to reach communicative competence, learners are to have good levels of writing skills. As Lerstrom (1990) asserts that personal success requires the mastery of many skills; among these are good writing skills. Therefore, it will not be false to interpret that, in

addition to other three language skills, which are reading, listening, and speaking, writing is a must-have skill not only for daily life but for academic contexts as well. It is apparent that being a good reader is not enough to master in all walks of life. Learners should be aware of the fact that they will be asked to produce various kinds of written work ranging from informal paragraphs to academic papers through the years they spend as students. Writing is a sophisticated procedure that requires combining various mechanisms of language fruitfully, so it takes time to be proficient at. According to Nunan (2003), writing acts as the most proper, but the difficult way because the outcome, visible language, pleases just by perpetual record of ideas and feelings. It is also the cognitive work of making up ideas, trying to find ways to express them, and regulating them into sentences and paragraphs that will be explicit to the audience. It should be considered as important as other skills and in order not to cause stress on students about writing, more attention must be paid on the instruction of this paramount skill. In this context, as Graham and Perin (2007) state, together with reading comprehension, writing itself is an indicator of academic achievement and considered a basic exigency to attend social life. Furthermore, as Zemelman, Daniels, and Hyde (1998) confirm, writing provokes learners into thinking, so it can be used to facilitate the learning of any other subject.

What makes writing to be perceived as a burden is its isolated and solitary nature. Henschen & Sidlow (1990) assert that since the grades that students get in return for their writing is seen as the actual source of motivation, writing is considered to be a passive activity. Moreover, writing is generally conducted in its conventional way: students are given a topic and asked to write about it, submit their papers to the teacher and get a grade, and if they are lucky enough, they are given feedback. Powell (1984) asserts that writing instruction should not be conducted in a fixed manner. The methods used by the instructors are so rigid that they do not even seem to adjust them in teaching writing. As a result, all these drawbacks affect students' writing performance and their attitudes towards writing.

2.2 Approaches to Writing

Through the last decades, some pedagogical approaches that take writing from a different angle have emerged. The two majors of these are mentioned below.

2.2.1 Product-Based Approach. Product-based approach is an approach in which the emphasis is mostly put on the characteristics of written texts. It is totally about the final result of the writing process. The classroom is a traditional setting where the teacher assigns a task and evaluates the final products. Badger and White (2000) claim that writing through this approach is contemplated as pertaining to teaching the existing knowledge about the structure of language through imitating a text provided by the teacher. From a pedagogical aspect, the stress is, to a great extent, on form. Initially, as the focus is on sentence level, the teacher strives to sustain well-structured sentences. Thus, the process of writing is strictly controlled in order to avoid errors and sustain accuracy. Then, with the realization of the importance and the need of producing broader texts, the paragraph pattern approach is engendered, which characterizes product-based approach together with controlled writing practice. However, Prodromou (1995) alleges that such an approach decreases the significance of the learners' individualistic and linguistic potentials. As a result, the change in teaching writing was seen inevitable, and in the late 1970s and the 1980s, the process-based approach came into existence.

2.2.2 Process Based Approach. The process-based approach values the writing itself while the end result and the product is the subaltern interest. What makes this approach preferable is its repetitive nature. Sympathizers perceive the approach as recursive rather than being linear. Speck (2002) claims that it is the repetitiveness that enables writers to go forth and back during the writing process in order to brainstorm, plan, draft, revise whenever they feel dissatisfied. However, if writers are pleased with their products, they proceed to the following steps until they accomplish the whole task.

Flower and Hayes (1981) assert another model that better exemplifies the cognitive process of writing (Figure 1), and include three principal processes which are planning, translating, and reviewing the products being produced. By taking all these steps into consideration, writers are able to reach their long-term memories where they preserve the needed information to be used in their writing. In this approach, instructors are advised to provide incentive and supportive classroom environment. It is also necessary for writers to interact with others; therefore, adequate timing and minimal intervention should be provided to allow students to work in collaboration and assist each other through the writing process. From a different standpoint, it is visible that writing, in this approach, turns out to be a social activity that is full of communication and interaction with other writers (Ferris & Hedgcock, 2005; Kitao & Saeki, 1992; Matsuda, 2003; Silva & Matsuda, 2002).

It is apparent that different views on writing have brought up different approaches over the last five decades. Even if they focus on distinct aspects of writing, it is possible to blend the approaches depending on the aims of the lesson. The occurrence of such writing approaches in different periods can be pondered as an evidence of the writing development in L1 and L2 contexts and puts emphasis on the importance of teaching writing no matter how agonizing it is (Kitao & Saeki, 1992). In sum, it is necessary for any language user to learn to write in order to be proficient at this skill.

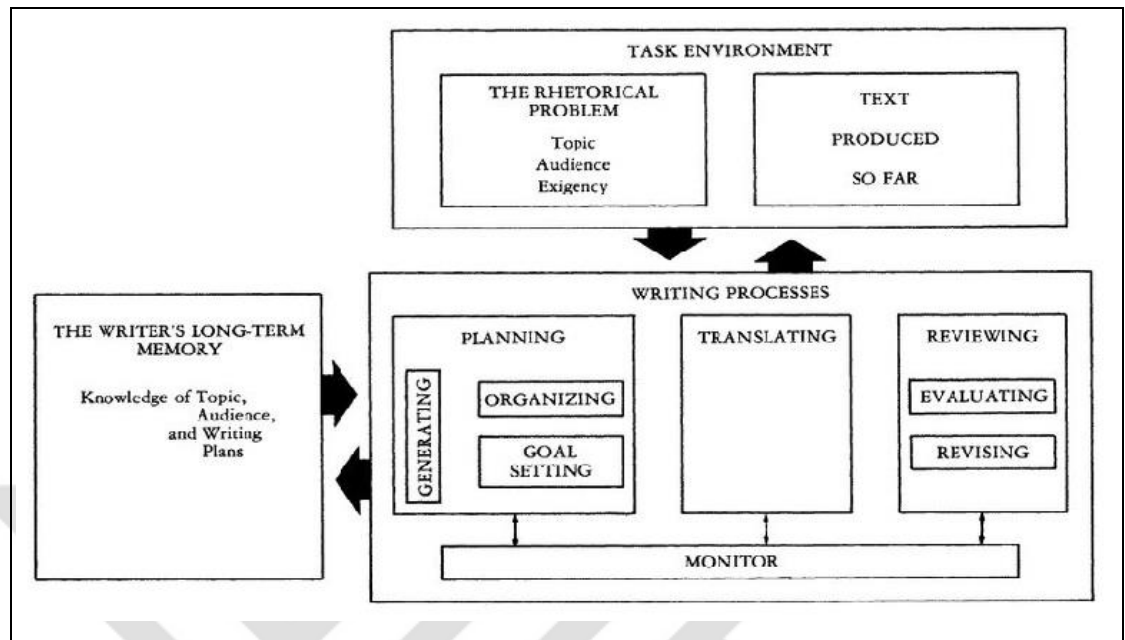


Figure 1. Structure of the writing model. Adapted from "A Cognitive Process Theory of Writing," by L. Flower, and J.R. Hayes, 1981, *College Composition and Communication*, 32, p.370. Copyright 2008 by National Council of Teachers of English (NCTE).

2.3 L2 Writing

Since writing is accepted as a tool for communication, writing in L2 has attracted considerable amount of attention. To scaffold the resolution, Leki (2001) asserts that English is getting more significant in professional writing as well as in non-English speaking countries. In many EFL contexts, writing is not regarded as a continuous activity; contrariwise, as Kern (2000) and Hyland (2002) support, it cannot be considered independent from the context in which it is generated. However, it should be blended in both institutional and cultural settings. Rao (2007) also states that learners get benefit from writing in EFL as it enhances their thinking skills by letting them develop and plan ideas, criticize these gathered ideas in analytical scopes prior to summarizing them. It is obvious that when learners are enrolled in such writing practices, they will naturally acquire these skills to a great extent.

Writing in L2 is accepted to be a far more formidable cognitive activity compared to writing in L1. Because learning to write needs a vast amount of time in

order for writers to be able to put words into meaningful and readable texts by considering the characteristics of writing, such as, spelling, punctuation, and word formation. Moreover, since it is one of the two productive skills and, as the name suggests, learners are expected to produce an end product in compliance with the rules and requirements that writing involves. Silva (1993) and Olsen (1999) approve that because of their limited grammatical and lexical competence, it is troublesome for L2 to produce proper texts and it is not reasonable to expect L2 writers to produce influential texts without grammatical and lexical knowledge. From this point, Weigle (2002) supports that on no consideration can learners write properly and fruitfully if they do not have the necessary grammar and vocabulary knowledge. In addition, it is an undeniable fact that, besides the drawbacks highlighted, learners' poor L2 competence can be mentioned as another significant challenge to the problem Silva (1993) asserts. As she puts it, it is not just the global aspects of L2, such as, strategic, rhetorical and cultural levels that L2 writers are supposed to bear in mind, but localized viewpoints that cope with syntactic and lexical choices. In addition to the difficulty in cognitive perspective, the difficulty in both L1 and L2, as Lee (2005) claims, arises from the affective aspect which is writing anxiety. Mcleod (1987) employs the term anxiety to define the distressed and negative feelings that ruin the writing process. It is also associated by Daly & Miller (1975a) with the tendency of people to sidle or avoid writing.

As L2 writers are to write in a language which is less familiar, they develop writing anxiety much easier than L1 writers. Homstad and Thorson (1996) argue writing in L2 is a discouraging and challenging activity for learners which results in student unwillingness to engage in such activities neither in classroom settings nor outside. In a more cultural sense, Çakır (2010) studied the reasons why writing in L2 is seen challenging by L2 learners and attained the following conclusions:

There is need for good grammar.

It is difficult to tell the thoughts in a written way.

There are many specific rules that should be followed while writing.

The person must have enough knowledge about the topic that he is supposed to write.

The target language must be well-known for effective writing.

It is difficult to apply punctuation marks as needed.

It is necessary to establish meaningful statements (p.171).

Over and above these, L1 interference is another factor which prevents writers to engage in L2 writing activities. Wang and Wen (2012) state that as L1 affects the use of L2, it is natural for L2 writers to confuse the systems of two languages and, as a result, get lost within the writing activity. Thus, such confusion prevents them from writing meaningful sentences. In order to overcome all these challenges, Seow (2002) proposes the process-based approach through which learners are involved in different phases of writing which are mentioned in Figure 1. Reppen (1995) also discusses the genre-based approach in which the stress is on the significance of using variety of text types. He further states that learners will be able to produce better writings since they are put through different types of texts as they get used to the structures of these texts. Considering the issue in these ways, writing in L2 is more challenging than writing in L1 and it is doubtless to say that, the eagerness that L2 writers have depends on their mastery of the language.

2.4 Theoretical Background

The role of interaction has been investigated in the related literature for nearly three decades. Early research in this area mostly considered a cognitive-interactionist approach to SLA, viewing SLA as “an internalized, cognitive process” (Zuengler & Miller, 2006, p.36) which arises from verbal interaction (Ortega, 2007). Lantolf (2000) mentions that the most basic aspect of SCT is that the human mind is mediated. According to Kozulin (1995) and Lantolf (2000) in SCT, there are three forms of mediation which are mediation by others (in social interaction), mediation by the self (through private speech) and mediation by cultural artifacts. In all means, language has a principal role; thus, it is perceived as a powerful mediational tool. Vygotsky

(1962) asserts that as learning is both socially and culturally mediated, development cannot be figured out when separated from its social and cultural context. Vygotsky's argument that suggests learning is locally situated is also reflected in the notion of "distributed cognition." According to Salomon (1993), this notion refers that human knowledge and cognition may be distributed across the individuals, artifacts, and the persons with whom they are interacting, rather than confined to the individual. While students are writing together, they are forming a text with the help of each other and mediational tools, rather than thinking and writing individually separated from the socio-cultural context.

However, Vygotsky (1978) states that not all interaction leads to development. For development to occur, interactions need to operate within a ZPD, which Vygotsky (1978) described as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p.86). Even though the term 'zone' seems to designate a place, it is not a place or context. A number of researchers have attempted to conceptualize the notion. It is a dialectic (balanced tension) unity of "learning-leading-development" (Dunn & Lantolf, 1998, p. 420). According to Newman & Holzman (1993), it is "a transformational knowledge-creating activity" (p.63) where the mediator and learner are equally involved in the construction of the zone.

The ZPD is negotiated between the mediator and the learner as they engage in dialogic interaction. In this process, the assistance in the learners' ZPD needs to be "graduated" (the level of help gradually moves from more implicit to more explicit), "contingent" (offered when needed), and "dialogic" (Aljaafreh & Lantolf, 1994, p. 468). Therefore, if the expert, the teacher in this case, provides too much help or the task is too easy, the formation of the learners' ZPD is unlikely to occur (Ohta, 2000; Schinke-Llano, 1994). Since the ZPD is negotiated, both the teacher and the learner need to contribute to the collaborative activity. As Poehner (2008) reveals, "successful collaboration in the ZPD is dependent upon both the quality of mediation and learner reciprocity" (p. 40).

Wells (1998) further claims that these studies have contributed to the notion of the ZPD –from the unidirectional help of the expert to the novice providing an opportunity for potential learning for all learners. With this regard, Ohta (2001) developed a definition of the ZPD suitable for the SLA context, which is “the distance between the actual developmental level as determined by individual linguistic production, and the level of potential development as determined through language produced collaboratively with a teacher or peer” (p. 9). Therefore, based on the definition of Ohta (2001), it is not wrong to expect collaboration to reveal better results in terms of writing.

Constructive help within the ZPDs is referred as scaffolding. Wood, Bruner and Ross (1976) first introduced the term scaffolding as a metaphor for the process of assistance that allows “a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (p. 90). Wood et al. (1976) proposed six functions of scaffolding based on their research findings, examining the interaction between a tutor and a child, as follows: (a) recruiting interest in the task; (b) simplifying the task; (c) maintaining the directed goal; (d) marking critical features and differences between the learner’s solution and the correct one; 5) controlling frustration; and 6) demonstrating solutions to a task (p. 98). As it can be clearly seen from the definition and the functions, the aim is to direct the learners to the correct path in the to reach the correct information by themselves.

While the notion of scaffolding is accepted to be a useful concept for understanding the processes of cognitive development, several criticisms have been raised against the traditional definition, one of which is posed by Daniels (2001) who pointed out that the term scaffold can be construed as a one-direction process, experienced by the expert alone, rather than negotiated interaction among the participants of an activity. Mascolo (2005) further claimed that the concept views development as a fixed and pre-defined process rather than a dynamic, emergent, and open-ended one.

2.5 Collaborative Learning

There is a need to enlighten what is meant by collaborative learning to better understand the features and effects of it in language learning since the terms cooperative and collaborative are used reciprocally. Dörnyei (1997) and Horwitz (1997) argue that notwithstanding the fact that group work, interaction and motivation are included in each term, there are still some aspects to distinguish them. What collaborative learning means is much broader than what cooperative learning refers to. In collaborative learning, besides the group interaction in the classroom, learners are supposed to be in relation with the community as “learning occurs while people participate in the socio-cultural activities of the learning community” (Oxford, 1997, p.448). Since collaborative learning is highly based upon social constructivist theory, the amount of interaction among the learners cannot be restricted in the classroom; interaction must be between the learner, the environment and the world (Vygotsky as cited in Oxford, 1997). In cooperative learning, the importance of the classroom and its organization, the teacher, learners and the exchange of information among group members is emphasized (Oxford, 1997); whereas, collaborative learning emphasizes what cooperative learning brings into focus, including the culture of the community and regards “learning as construction of knowledge within a social context” (Oxford, 1997, p. 443).

In introducing the notion of cooperative learning, the most accurate definition is summarized by Pantiz (1996) as:

It is the processes which help people interact together in order to accomplish a specific goal or develop an end product which is usually content specific. It is more directive than a collaborative system of governance and closely controlled by the teacher (p. 1).

What is perceived from this definition is that the goal in such a learning is to lead learners to fulfill a given task through working together in groups being aware of the fact that everyone is responsible of their own learning as well as the success of the

group. However, Myers (1991) reveals that, in lieu of the processes which learners go through while cooperating, the notion concentrates on the outcome.

However, Rockwood (1993 as cited in Pantiz 1996) also warns that, in this type of learning, there is a risk to disturb the level of enthusiasm that the learners have as the teacher has the power and authority during the task performance even s/he acts just as the facilitator. Furthermore, Straus (2007) emphasizes that what paves the path to L2 development is collaborative work, not the cooperative one. The rationale behind this distinction is that while members complete each other's gaps while building the end product in the former, it is not a matter of attention in the latter.

On the other hand, collaborative learning is used to describe a situation when learners are organized in groups to discuss issues and work on problem-solving activities. Smith and MacGregor (1992) define Collaborative learning as:

... an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together. Usually, students are working in groups of two or more, mutually searching for understanding, solutions, or meanings, or creating a product. Collaborative learning activities vary widely, but most center on students' exploration or application of the course material, not simply the teacher's presentation or explication of it (p.1).

What makes such learning so efficient is the technique which lets students learn by discovering and taking the responsibility of their own learning. In addition, collaboration leads to better interpersonal skills, which, in turn, results in more fruitful task accomplishment. Learners develop their own learning styles as they are to interact with other learners; therefore, they will gain better comprehension as a natural result of critical thinking and motivation. Barkley et al. (2005) claims that the reason why collaborative learning became popular is that it has the potential to aid in solving numerous problems associated with teaching and learning. They further state that learners are motivated to put themselves in the learning process and as a result, are better off with their learning. Within this pattern, learners are encouraged to listen

carefully and think critically, and they work together to address problems. As Pantiz (1996) asserts:

“Collaborative learning is a classroom technique. [...] People come together in groups, it suggests a way of dealing with people which respects and highlights individual group members' abilities and contributions. There is a sharing of authority and acceptance of responsibility” (p. 1).

Myers (1991) asserts that collaborative learning stresses on group processing instead of the final result. What is also important is that teachers are not expert knowledge providers anymore, but they are “expert designers of intellectual experiences for students” (Belenky, Clinchy, Goldberger, and Tarule, 1985; Schön, 1983, 1987; Whipple, 1987; as cited in Leigh and MacGregor, 1992, p. 11). To clarify, teachers act as guides and observers, it is the learners who take the control of their own learning process by modifying what they perceive through the process of writing. Slavin (1995) also states:

Collaborative learning is a variety of teaching methods in which students work together in small groups to help one another learn academic content. In CL classroom, students are expected to help each other to discuss and argue with each other to access each other's current knowledge and fill in gaps in each other's understanding (p.2).

Collaborative learning undergoes a systematized procedure. The first phase is grouping in which students are randomly assigned to groups to maintain heterogeneity (Smith, 1986; Flechtner, 1992) or free to make their own choices to form groups (Azmitia, 1988; Cooper, 1990), or high graded students are diversified to groups (Walvoord, 1986). In the second place is determining group size. Smith (1986); Cooper (1990); Johnson, and Smith (1991) support groups of four or five since large groups hampers active student participation. Third, in order to sustain active productivity, groups are kept together (Walvoord, 1986; Doise, 1990). Fourth, help is

provided in order to demonstrate teams how to proceed. Each group is supposed to commence an action plan. At this phase, each group member is assigned a task to perform. Fifth, regular checks within the groups are seen essential. At this stage, members are expected to present assignments for group discussions. Sixth, uncooperative members are checked. This is for making group members aware of the consequences of dormant participation. According to Walvoord (1986), this option works only when groups have the chance in the middle of the process to detect any members who are inactive and not participating. Walvoord (1986) and Connary (1988) claim that the best way to ensure comparable effort among group members is to plan activities with clear distribution of work, and then if the group is eager to reach its goal, each member must contribute.

Furthermore, according to Gillies and Ashman (2003), acolouthic studies such as the one conducted by Watson (1928) who substantiated that the group's thinking is stronger compared to the ideas of the best group member, Shaw (1932) who figured out that group work is much more fruitful than isolated one, Mead (1937) who observed that members in a group work in dependence when they become aware that they need each other to accomplish a common goal, and May and Doob (1937) who stressed that cooperation to achieve a shared objective occurs when members of the group are in close contact. All of the works mentioned put emphasize on the efficiency and the efficacy of collaboration because "collaborative learning has as its main feature a structure that allows for student talk: students are supposed to talk with each other....and it is in this talking that much of the learning occurs" (Golub, 1988 as cited in Leigh and McGregor, 1992, p. 12).

2.5.1 Conditions for Collaborative Learning

2.5.1.1 Positive interdependence. Tom Morton (as cited in Chisholm, 1990) claims that "group members sink or swim together" (p. 90). This means that in order to accomplish the given task, each member of the groups is expected to do their best for the sake of group success as well as their own success. Such interdependence can

be settled via positive resource, objective, and role interdependence. In so doing, members share a common responsibility while achieving the intended goal.

2.5.1.2 Face-to-face interaction. It is the interaction among group members that brings task achievement. They should mitigate and urge on each other's endeavor and duties while studying on the task. Hereof, Gillies and Ashman (2003) depending on the studies of Webb (1985) argues that:

“It was the explanations which children received in response to requests for help that were related positively to achievement, whereas giving non-elaborated help did not facilitate higher than expected outcomes” (p. 9).

Based on the argument, it can be interpreted that the more face to face request for help, the more possibility to reach the desired level of achievement both individually and intragroup.

2.5.1.3 Individual accountability/ Personal responsibility. As Rodger and Johnson (1994) claims, “among the early settlers of Massachusetts there was a saying, ‘If you do not work, you do not eat.’ Everyone had to do their fair share of the work” (Individual Accountability, para. 1). Therefore, what was expected from group members is to dedicate themselves to the headed objective and be personally responsible for the group by doing their bits of the work rather than expecting to get the same grades or results without a sign of active participation. Not a member is expected to lean on others to do the entire work to accomplish the task.

2.5.1.4 Interpersonal and small-group skills. It is incontestable that building close relationships among group members is a prerequisite in all sorts of group works. However, not every member is willing to collaborate either just because of reluctance and/or the lack of motivation, or because they do not possess the necessary interpersonal skills which enables them to interact. Precisely because of this reason, having such skills is so crucial. To support this belief Rodger and Johnson (1994)

quoted John D. Rockefeller: “I will pay more for the ability to deal with people than any other ability under the sun.”

2.5.1.5 Group processing. The term *process* refers to an array of events which happen over time. It is an aspect of group work as the members need to adjust their processing according to what they experience through the stages. Rodger and Johnson (1994) mention that “the purpose of group processing is to clarify and improve the effectiveness of the members in contributing to the collaborative efforts to achieve the group’s goals” (group processing, para. 1). Thus, processing has an impact on fostering interaction between group members.

2.6 Collaborative Writing

A review of related literature reveals that there are various conceptions and definitions of collaborative writing. Saunders (1989) feels the need to differ “co-writing” and other types of such collaborative activities as “co-publishing” and “co-responding.” Ede and Lunsford (1990) use “group writing” instead of collaborative writing and explain it as any kind of group writing activity which is carried out in collaboration with others. It is necessary to highlight that in their study, planning and revising were done in collaboration, but drafts were not. Louth, McAllister and McAllister (1993) define it as “group members interact during the writing process and the group is responsible for the final product” (p. 217). Bosley (as cited in Ede & Lunsford, 1990, p.15) defines collaborative writing as, “two or more people working together to produce one written document in a situation in which a group takes responsibility for having produced the document.” More recently, Storch (2011) also qualifies it as “the joint production or the co-authoring of a text by two or more writers” (p. 275). What makes this definition distinct from the others is her emphasis on “joint ownership” and the group members’ collaboration during the whole writing process. She further states that “the defining trait of collaborative writing is the joint ownership of the document produced. Thus, collaborative writing is distinguished from the group-planning or peer feedback activities that are often manifest as part of the process

approach to writing instruction (p.275). According to Hernandez (2005 as cited in Grgoric, Raden, & Emmons, 2005), collaborative writing is a method of writing which facilitates cooperation, analytical thinking, peer learning with active participation to achieve an outcome. According to Hossein and Quinn (2013), collaborative writing permits learners to consider issues from different angles and figure out the details which may have been overlooked by the group members. Jake (2010) claims that learners have the opportunity to be in an in-depth conversation in which they discuss all significant points, and even direct questions to clarify the given task. Bruffee (1984, as cited in Inglehart, Narko, & Zimmerman, 2003) reveals that building knowledge through conversation requires tasks that “must involve engaging students in conversation among themselves” (p. 191), for “the way they talk with each other determines the way they will think and the way they will write” (ibid). Ede & Lunsford (1991) put forward a more covering definition:

Collaborative writing is a process that involves two or more people committed to a jointly composed text. Negotiation begins early in the process and includes exploring topics; challenging; supporting; and pointing out omission; while addressing content, structure, style, or form. Collaborators do not assume co-authorship but acknowledge the impact, insights, and voice of others (pp. 67-68).

They also divide CW into two parts: dialogic CW and hierarchical CW. The former refers to employing dialogues in each step of the process and the latter stands for assigning each member a role. Similarly, Storch (2013) emphasizes that the main element of collaborative writing which separates it from other types of writing such as cooperative writing is that every student is responsible to participate in the brainstorming and production of the entire text. Consequently, collaborative writing assists “the sense of a shared ownership of the text produced” (p. 170).

Considering all the definitions mentioned so far, collaborative writing is a communicative activity and it requires student collaboration in creating a written

product. It is highly related to the concept of “collaborative learning” which is based on the constructivist view developed by Vygostky, Piaget and Dewey among others.

2.6.1. Types of Collaborative Writing. Louth, McAllister and McAllister (1993) also divide collaborative writing into two as “interactive writing” and “group writing”. In the former, group members are in close interaction with each other during the writing process; however, while writing individually, writers are only responsible for their own works. Peer editing can be given as an example for this model. On the other hand, in group writing, members also interact as well. However, they are only accountable for the final product. For such a writing model, co-authoring a report can be given as an example.

In a more detailed manner, Farkas (1991) mentions collaborative writing in four segments. The first is two or more people’s completing the entire text together such as co-authoring a report. Second, two or more participants contribute to sections of an existing document. Writing separate parts of a text is an example of this type of collaborative writing. Third, one person or more people edit or review the written work of others. Peer feedback or peer editing exemplifies such a collaborative writing. The final one is the type in which one person works with one or more people and drafts documents in accordance with the ideas of the others such as group brainstorming.

Saunders (1989) also propounds four categories of collaborative writing which are co-writing, co-publishing, co-responding, and helping. In co-writing, peers collaborate on every task during the writing process. Co-publishing is co-publishing a collaborative text based on individual ones. In co-responding, peers interact only within the revision process and as for the helping type of collaborative writing, writers voluntarily help each other during the process in a particular manner.

2.6.2. The Procedure of Collaborative Writing. Mulligan and Garofalo (2011) summarize the procedure of conducting collaborative writing in a series of steps:

- Students choose their partners themselves, and exchange information to meet outside of the class.

- In class, as it is aforementioned, the teacher may also match students according to their levels, then pairs brainstorm ideas about the given topic and organize ideas.

According to Rao (2007, as cited in Widodo, 2013), learners have to be given the opportunity to activate their schemata for the sufficient information retainment that is necessary for the achievement of the assignment. Thus, learners come up with as many ideas as they can, organize them, and develop them in collaboration.

- Pairs meet outside of class to do research and gather information to assist their papers.
- In class, pairs outline, plan, and write the first draft. Teacher scaffolds during the process to provide support whenever needed. Students are to hand in a detailed outline before submitting their first drafts.
- The instructor hands back the outlines with relevant comments.
- Working on the first draft is started. One peer writes the first draft and completes a detailed checklist provided by the instructor. Then, the draft is sent as an email attachment to the other pair, responsible for editing the draft. After that, the second pair completes another checklist to make sure the work is proofread carefully. The detailed checklist is provided to help students in the writing and proofreading process. It helps students to eliminate simple grammar mistakes, spelling, and typographical errors, in addition to ensuring correct format, organization of ideas within paragraphs. Following that the first draft is then handed in.

Revision here is a significant step through which the peers review their drafts for errors, content, organization, style and voice. Based on the views of Lee & Schallert (2008) and Shin (2007), Widodo (2013) asserts that revision goes through “reading the text, detecting problems, selecting a strategy, and revising the text” (p.204).

In addition, according to Widodo (2013), peer feedback is advantageous as it enables text readability as the peers are also readers and helps the learners sustain a degree of intelligibility as they express ideas, and more importantly enhances autonomy and interdependence skills. Bruffee (cited in Henschen & Sidlow, 1990)

further states that “students see things in peers, that they would not have seen on their own; they begin to overcome private ways of thinking” (p. 31).

However, Carson & Nelson (1996); Rollinson (2005); and Tsui and Ng (2000) believe that peer feedback also has drawbacks though it is advantageous. It brings mistrust among peers, reveals hesitation to critique others, makes them think that the teacher is the only knowledgeable authority, and makes them discern only surface mistakes since they are not qualified enough to provide feedback.

- The instructor checks the drafts, highlights the errors, and provides feedback.
- Students start to study on their second drafts. Pairs switch roles and then the second draft is submitted.
- Students are given a single grade based on their effort and the quality of their written product.

At this stage, Weigle (2002), (as cited in Widodo 2013) reveals that the teacher assesses the final products through holistic approach regarding the final text and evaluates it via a rubric; or the entire process through analytical assessment where s/he rates the details of learners’ written performances such as content, organization and coherence. The teacher may also ask for either individually or collaboratively written reflections in order to “self-evaluate” their strengths and weaknesses of their writing and think further of how they will improve in their own writing skill” (Widodo, 2013, p. 204).

- For the next writing assignment, pairs swap roles again in order to maintain fairness.

2.6.3 Roles of Students in Collaborative Writing. There are several studies whose focus are solely on the roles that peers or members of the groups as writers take on within the writing process. In order to name the roles, Baecker, Nastos, Posner and Mawby (1993) interviewed those from different disciplines who actively participated in collaborative writing activities. They found that the roles undertaken by the group members writer, consultant, editor, and reviewer. A writer is the one who transforms ideas into text, records it and makes necessary modifications; a consultant works closer to the writer but does not participate in the actual writing, and has no ownership or

responsibility for producing content but provides feedback; an editor is the one who corrects the text, and the duty of the reviewer is commenting on the output and providing content feedback, but has no responsibility for making changes. In addition to the roles mentioned, Lowry, Curtis and Lowry (2004) added two other roles. The first role they added is the team leader, who plans the work of the group and motivates the members and may participate in writing and reviewing the content. The final role is the facilitator who is the external member of the group and does not provide content related feedback.

2.6.4 Collaborative L2 Writing. Collaborative writing is widely accepted to have various benefits for second language learners. McDonough (2004), for example, states that CW provides students with pedagogical gains in their second language learning which means that “learners first collaboratively construct knowledge as a joint activity, and then transform it into a mental one through the processes of approximation and internalization” (Shehadeh, 2011, p. 297).

Freire (1970); Wells (1990); Kramsch (2000), Storch (2005) mention that in classrooms where collaborative writing is utilized, students work together in pairs or small groups to accomplish a shared objective. It enables students and teachers to interact dynamically in the classroom. While interacting, they learn to give and receive information, develop new insights and views, and communicate interdependently in a social manner. Collaborative learning directs pairs or small groups of students into working together to boost one another’s learning potential.

Although majority of the research on collaborative tasks in SLA concentrates on oral tasks, communicative aspects, as Cumming (2009) and Ortega (2009) states, can also be considered in writing. Manchon (2009) and Storch (2013) mention that in addition to L2 acquisition, collaboration also fosters cognitive, linguistic and social development of students.

Writing in L2 has always been perceived as one of the most difficult problems since “it remains unclear how students acquire the skills needed to produce an effective piece of writing in another language” (Khanalizadeh, 2012, p. 334). Lantolf & Thorne (2007) stress that one way to develop students’ writing skills in L2 is to put students

at the center of the language learning process, which can be done by working in collaboration together with their peers so as to better acquire the language. By establishing such an environment, a teacher actually creates the environment for students to learn from each other. Rollinson (2004) asserts that in such activities, students are usually asked to provide suggestions for their friends' writing which, as a result, pushes the students to reflect on their own learning and, at the same time, students have to review the lessons that they have had.

According to Wirtz (2012), it has long been debated that reviews from peers intensify learners' awareness on their own writing; make them feel self-assured since they have the chance to compare their own work with the others'; allow them to see their written product from a reader's perspective and, thus, help them assess what generates good writing; and, help them become better writers via the feedback they receive and revision processes they follow during the peer review practice.

According to Manchon (2011), there are two aspects of writing which are "learning to write" and "writing to learn." Through the former aspect, students have the opportunity to express themselves by writing in L2. Hyland (2011) acknowledges three approaches to understand learning to write and how it promotes L2 classroom practice. The first one focuses on the writer and the cognitive process; which means learners are supplied with expert-level practices to assist them produce a text. The second approach is about the products of writing: one of these is the "text", which means applying the rules of writing to students; the other one is "discourse", which refers surpassing the surface structure to recognize our aims in certain situations. The final one focuses on readers role in writing; which means, as Hyland (2011) puts it, that "the idea of context beyond the local writing situation to the context of use and what writers do to address the reader" (p. 26).

On the other hand, in the second aspect of writing, which is writing to learn, learners concentrate on other functions of writing, such as the process itself, and dealing with different tasks and activities that learners undertake in their L2 writing. Hirvela (2011, p. 37) defines writing to learn as learning "how to use writing to mediate or enrich learning in another language." Emig (1977) mentions that this dimension of writing aids students to learn different courses being studied at school. The effect of

writing on learning is inevitable. Furthermore, Herrington (1981) strongly asserts that the rationale behind writing tasks is to learn. According to Newell (1998), writing enables learners to “know” and to “do” simultaneously.

These two distinguishing dimensions of writing have an important part in enhancing learning: both content knowledge and language knowledge can be improved (Hirvela, 2011; Swain, 2001; Williams, 2012) and can help improve their knowledge about language. Thus, when students write collaboratively, they learn a lot through the process of ‘linguaging’ and “language-related episodes” (LREs).

2.6.5 Collaborative Dialogue and Linguaging. According to Vygotsky (1987), productive aspects of language, which are speaking and writing, are utilized to complete and transform ideas. Applying this concept of language, which has a correlator role; the significant role, Swain propounds the concepts of “collaborative dialogue” (2000) and “linguaging” (2006a, 2010). Swain (2000) defines collaborative dialogue as the dialogue in which speakers are engaged in problem solving and knowledge building. Swain, Brooks, & Tocalli-Beller (2002) further state that as for the interactions of L2 learners, ‘it is the dialogue during which learners work jointly to find solutions to linguistic problems and/or co-construct language or knowledge about the language.

On the other hand, Swain (2006) introduces the concept of linguaging. She defines it as “a process of making meaning and shaping knowledge and experience through language.” We can understand from the definition that linguaging is not just a tool to develop meaning, but it also has a significant role in building meaning. Linguaging may also act as collaborative dialogue which is talking with others, or inner speech, which means talking with oneself. Suzuki & Swain (2008) claim that when learners explain a difficult task to each other or talk aloud to themselves, it is linguaging that enables thoughts and ideas to be transmitted into works which will be available for reflection. Moreover, Wigglesworth & Storch, (2012) assert that collaborative activities encourage learners to engage with language at the “conscious” level and that is the reason is why Swain (2000) emphasizes the “conscious focus on language form.”

Researchers have also proposed Language-Related Episodes (LREs), which can be briefly defined as the discussions about language as learners are working in collaboration. LREs are mostly employed as tools of a measurement and analysis. Swain and Lapkin (2001) define LREs as parts in the learners' dialogues where they have discussions only about language such as the choice of lexical categories and the use of accurate grammar. In an extensive manner based on Swain and Lapkin (2002), LREs are clusters of utterances or parts of dialogues through which members of the groups discuss about the language which are produced or have just been produced, correct their mistakes or others', or reflect on the language they use. Therefore, LREs are regarded as useful in understanding the process and product of L2 learning, and thus, they have been included in measuring language related problems. In addition to this, Swain & Watanabe (2012) mentions that while engaging in peer-talk on the language, as Antón & DiCamilla (1998) states, students also collaborate to implement the produced LREs into their L1, which is believed to serve numerous functions such as aiding learners to follow the task requirements, reflecting and reconstructing the language by serving as a facilitator.

Over the last decades, there have been various studies on LREs in the aim of finding out what types of LREs learners produce while languaging and what affects the way they are produced. Al Ajmi & Holi Ali (2014) conclude that there are four main factors that affect the LREs that students produce. The first factor is the type of collaborative task given to the students, the second is the students' proficiency level, as it affects both the quality and quantity of the LREs (Amirkhiz et al., 2013). The third factor which affects the LREs students produce is the relationship among the students in the CW group. Aldosari (2008) states that the relationships students build could have a greater influence on LREs compared to the proficiency levels of students. The final factor affecting the produced LREs is based on a recent study conducted by Amirkhiz et al. (2013). It shows that students with different cultural and learning backgrounds produce different LREs. They also point out:

“Learners possessing a similar level of proficiency, but with different cultural background and English learning histories could come up with totally discrepant sets of LREs” (p. 477).

However, Storch (2011) acknowledges the need of considering the fact that, in languaging, students with poor L2 competence are under the risk of having adverse effect as the LREs might be affected in terms of quality and quantity.

2.7 Effects of Collaborative Writing

Collaborative L2 writing has recently gained a lot of attention (Hu & Lam, 2009; Swain & Lapkin, 2013) as the positive effects of it become more visible. The findings of previous studies on collaborative writing mostly stress on positive effects, despite different kinds of writing. For instance, Storch (2005) concludes that peer collaborative L2 writing results in more sophisticated texts with higher grammatical accuracy. In another study, Storch (2007) reveals that taking grammatical accuracy into consideration, peer collaboration does not have any remarkable effect of the tasks of L2 text editing, but it promoted students’ L2 learning.

In terms of quantitative measures, Fernández Dobao (2012) concludes that fluency of the students does not increase through collaboration. He states that pairs and groups write shorter texts probably because of the lack of insufficient timing allocated for writing. However, there are also studies that reveal higher rates of accuracy for advanced and intermediate L2 learners, for their products (e.g. Storch, 2005; Storch & Wigglesworth, 2007; Wigglesworth & Storch, 2009; Fernández Dobao, 2012; McDonough & García Fuentes, 2015). Moreover, complexity analyses have yielded mixed results. Pallotti (2009) reports that lexical and syntactical complexity increase to the extent the task and its aims necessitate.

As for qualitative measures, in CW practices, the effectiveness is established mostly via discourse analytic measures and rubrics that are used as holistic qualitative scales. Panadero & Jonsson (2013) claim rubrics can affect learning positively when joined with such instructional interventions as peer-assessment, meta-cognitive or

scaffolding of writing. There are also contradictory results for holistic ratings. The reason for such results may be due to measuring different task types and components. While some scholars mention no differences in ratings (McDonough & García Fuentes, 2015; McDonough et al., 2018), others (Khatib & Meihami, 2015; Shehadeh, 2011) detect benefits for content, organization, vocabulary, mechanics and grammar following prolonged collaboration.

There are limited researches that delve into the effects of collaborative writing on the quality of texts. One of the studies that compare collaborative writings to the individual ones is by Nixon (2007) in which he investigates the effects of collaborative writing and independent writing on students' essays. As a result, no statistically significant differences between the global score and the writing aspect scores of the collaborative writing texts and the average scores of the independent writing texts were found; however, for learners with poor L2 competencies, the collaborative writing texts were significantly better compared to their individual texts on the global score. Based on the results, it is possible to interpret that collaborative writing may be more effective for learners with poor L2 proficiency.

Storch (1999) also carried out a study consisting of eleven adult ESL learners whose levels range from intermediate to advanced. They were included in writing tasks in which the focus was on grammar. They engaged in the activity twice. They completed the first set individually and the other was done in pairs (or in small groups). She found out that collaborative writing and the LREs generated during the process had a positive effect on grammatical accuracy. She states that pairs spent more time on the given task as they strived to solve the problems, and this resulted in improved performance.

Storch (2005) also studied the texts of pairs (9 pairs) and individuals (5 individuals). She concluded that pairs produced shorter but more superior texts. She stated that through collaboration students gathered ideas and provided feedback to one another.

In another study, Storch and Wigglesworth (2007) compare the written products of students working in pairs and individually. The researchers studied the learners' products in terms of accuracy measured in global units which are error free

T-units and error free clauses. Similar to Storch's result (2005), they reached a conclusion that pairs produced texts with further accuracy although there were no differences in the sense of complexity and fluency.

There have also been studies on the effects of collaborative writing on achievement, in this case, what refers as achievement is writing performance. Studies conducted by Clawson (1993), Hirvela (1999), Storch (2001) and Dale (1994) reveal collaborative writing have positive effects on achievement or performance in writing. In the study by Clawson (1993), she assesses achievement by comparing individually and collaboratively written texts. Prior to study, students were instructed on how to do collaborative writing, and then, they were given tasks to do in groups. After the assignments were submitted, the teacher compared the results with the previously obtained ones from individual writing. There was also an interview session with the learners, which was about the effects of collaboration. She asserts that "the students gained a breadth of perspective that they have not had before, and the writing was really improving by collaborative writing" (p. 55). She further states that "the collaborative writings were obviously more carefully worded and creatively written" (p. 57). In the end, according to the results of the study, it was revealed that following the collaborative writing periods, there were visible improvements in success and task achievement.

The study by Hirvela (1999), as in Clawson's (1993), lasted for seven weeks. The students were given a task that required collaboration and results showed that the students' performance was very effective. They produced better texts through collaborative work. Based on that, Hirvela concludes learning is done best through collaborative work.

Dale (1994) and Storch (2001) also conducted a study in which they assessed achievement. They utilized tape recording, group interaction, observation, and interview in their studies. They agree with that learners display better performance in writing tasks and write more successfully when they interact. Both of the researchers tape-recorded the talks during collaborative writing and then transcribed them to find out what factors have effects on the success collaborative writing groups. Storch (2001) employed observation notes and the written texts in order to learn what groups

did during the process and what they got as the final result. Dale (1994) also presented questionnaires and interviewed learners to get their views about collaborative writing. The results indicate that students have positive viewpoints about collaborative writing.

In sum, considering all the studies conducted on the issue, it can be concluded that as well as having positive effects on achievement, collaborative writing is also a very effective approach in teaching writing.

2.8 Collaborative Writing Attitudes

There have been a number of studies on learners' attitudes toward collaborative writing activities in second and foreign language contexts. Storch (2005) is one of the first to highlight the issue. In her study, five learners completed a writing task individually and 18 in pairs. Then the participants were interviewed about the experience in collaborative writing and most of these 18 students were seemed to be very positive. Students found that writing in pairs provided them the opportunity to gather their resources, observe each other, and learn to express the same ideas in different ways. They also claimed that collaboration was helpful in terms of grammatical accuracy and L2 vocabulary learning. Edward (2000) mentions that the activities which students are engaged in collaborative writing process result in positive attitudes. He claims that collaborative writing provides learners with "the opportunity to discuss with peers, brainstorm ideas, question, argue, defend, and explore" which expands "their minds to explore their potential in writing" (p. 15). According to Edward (2000), all those effects of collaborative writing turn the negative attitudes towards writing into positive.

Nixon (2007) also applied a questionnaire after each writing session and held a semi-structured interview on the basis of the responds of each participant. Like in Storch's study (2005), most responses were positive. However, the only negative comment related to collaborative writing involved was the difficulty they face when they fail to agree. Although it was mentioned that one of the best things about collaborative writing was that it allowed students to generate ideas, having disagreements led to negativity towards the collaborative writing.

Shehadeh (2011) conducted a questionnaire subsequently to a 12-week of collaborative writing session. Similar to the results that Storch (2005) and Nixon (2007) obtained, most participants of the writing sessions claimed that the experience was enjoyable, and they stated that it contributed to their language development. Learners also stressed that collaborative writing promoted self-confidence and enhanced both their writing and speaking abilities.

In short, taking the results of the studies on collaborative writing attitudes, it is obvious that most of the students who participated in collaborative writing activities seem to recognize the positive impact of working with a peer or other members of their groups on the content, organization, and/or linguistic accuracy of their texts, as well as learning its benefits to language development.

2.9 Benefits of Collaborative Writing

There have been many studies emphasizing collaborative writing to be highly beneficial. For instance, Dale (1997) states that collaboration converts writing into a social activity and minimizes the level of confusion during the process. It leads learners “interact with themselves and with the text” (p. 55). Besides, Hamlaoui (2009) asserts that group work results in “cooperative behaviors” (p. 9), and negotiation on the issue makes writing social. She also declares that collaborative work helps students “overcome inhibition and passivity” (p. 10).

In another context, Dobao (2012, as cited in Mutwarasibo, 2013) postulates by comparing achievements of individuals, pairs, and groups that learners build new knowledge, and become effective problem-solvers. In addition, the texts produced by groups and pairs were far more accurate than those written by individuals.

Moreover, O’Sullivan and Thomas (2007, as cited in Jong, 2009) presented the beneficial functions collaborative writing offers. It makes retrieving the knowledge required possible for learners, allows them to comprehend their peers’ strategies while defining the points that they are unsure about, and helps them to improve their readings as they are also the potential audience.

In another research study, Harris (n.d as cited in Oaks, 1995) outlined CW benefits saying that it “promote[s] interaction between reader and writer,” “promote[s] dialogue and negotiation,” “heighten[s] writers' sense of audience,” and “move[s] the student from the traditional passive stance of receiving knowledge from an authority to an active involvement which makes talk integral to writing” (p. 1). Thus, the importance of collaboration in writing is emphasized once more.

2.10 Challenges of Collaborative Writing

Although it has benefits, collaborative writing has challenges as well. Ghani (1986) and Sharples (1993) mention the negative sides of collaborative writing. Both argue that collaborative writing can be time consuming especially when training teachers and learners about the application of collaborative writing since it requires considerable amount of time. Speck (2002) claims that it takes time to learn how to implement the writing process in the classroom and evaluate the learning process and student outputs. Sharples (1993) also asserts that it is not easy to organize the setting, conditions, and students. What is suggested by Ghani in these cases is that students and teachers must be trained prior to collaborative writing sessions and they need to be made clear about the advantages of it. Moreover, if some students do not want to take part in collaborative writing, then, they must not be forced to do so.

According to Nor and Abd. Samad (2003), while working in pairs or in groups, participants are expected to have delightful and companionable interactions. Unfortunately, “most group writing fails because students do not know how to maintain effective social skills” (p.1). Smith and MacGregor (1992) declare that “a collaborative classroom can be a wonderfully rewarding opportunity, but it is also full of challenges and dilemmas” (p.8). They think that we need to change the roles of teachers and the syllabus as well. They also assert that it is agonizing for some instructors to move from the teacher-centered classroom setting to a learner-centered one where they uncover that “engaging students in group activity is a hard work” (p.8). Syllabus is also considered to be an additional problem. They presume that “group work requires a demanding yet important rethinking of our syllabus, in terms of course

content and time allocation” (p.9). Finally, they resolve that in collaborative learning “designing and guiding group work takes time to learn and practice” (p.9)

In addition, Chrisholm (1990) states that the challenges may be as a result of inexperience, interpersonal conflict, concerns of fairness, and concerns of inaccurate peer edits (Nelson & Murphy, 1993). Moreover, as Ede & Lunsford (1990) and Murray (1992) prevail, students may perceive the process of writing as a personal act; therefore, the role of the individuality in collaborative writing project may not be understood. Yet, with the help of developed technologies, greater accountability for participation in the writing process, and improved document sharing, it will be possible that the number of projects involving three or more participants grow in the future.

Also, Smith & MacGregor (1992) mention that most of the classrooms are suitable for lessons for limited to sessions with ranging from little to no opportunity permit interaction. In addition to this is the reality that the physical set-up of many lecture rooms does not allow students to work in pairs or groups. Moreover, not everyone may be comfortable about having to make collaborations through such activities.

According to Shea (1995), among other concerns expressed regarding the potential barriers to students’ willingness to collaborate with others are: a) those who are individualistic may refrain from working with others, b) weaker students may be overpowered by stronger students, and c) one member of the group may take too much responsibility, leaving others with little to do. However, for the challenges, fortunately, there are strategies to be utilized to minimize these drawbacks, and they are worth exploring as a means of reducing potential negative impacts and enhancing the collaborative process. In sum, in spite of the challenges of collaborative writing approach, the benefits still outweigh them.

2.11 Previous Studies

Both in L1 (e.g., Louth, McAllister, & McAllister, 1993; Sutherland & Topping, 1999) and L2 contexts (e.g., Fung, 2010; Gousseva-Goodwin, 2000; Jafari &

Ansari, 2012; Shehadel, 2011; Storch, 2001; 2005; Wigglesworth & Storch, 2009), there have been many researches conducted for the last two decades. The effects of collaborative writing on students' writing performance (e.g., Louth, et al, 1993; Gousseva-Goodwin, 2000; Jafari & Ansari, 2012; Shehadel, 2011) and on attitudes toward writing (e.g., Louth, et al, 1993; Sutherland & Topping, 1999), learners' involvement of writing in collaboration (e.g., Storch, 2005), the aspects of collaborative writing (Fung, 2010), and assessing performance of distinct collaborative writing pairs' performance are some of the subjects investigated.

Some researchers as Louth, et al. (1993); Shehadel (2011); Sutherland & Topping (1999) made learners fill out surveys or questionnaires or interviewed them following the completion of each collaborative writing tasks to investigate the influence of collaborative writing on students' attitudes. In addition to the research exploring the influence of attitudes toward writing, Fung, (2010) studied the aspects of collaborative writing which were specified by analyzing the extracts from collaborative writing groups or transcripts of pair talks. A study by Storch (2001) compared the performance of distinct pairs on a given task. The performance in these studies refers to both the writing performance and the performance of pairs as they were involved in collaborative writing. In researches like this, it is not only the collaborative products analyzed, but also the transcripts of pair talk, and the notes obtained through observation.

In a study Storch (2001) investigated the performance of three pairs of adult ESL students on a writing task. Transcripts of the pair talk, observation notes, and the written product by the pairs were utilized as the sources of data. The analysis of the data reveals that students working in pairs may not necessarily work in a collaborative manner. Storch states that the factors that cause such phenomenon is to do something with the learners' attitude towards pair work, and their motives, which requires further investigation. In addition, the data analysis also demonstrates collaboration have an effect on the writing performance if students participate actively.

In another study Storch (2005) explored collaborative writing in terms of product, process, and students' reflections on their experience of writing collaboratively. The students were given a graphic prompt and asked to write a short

text. All pair work was audio recorded, and all texts produced by pairs and by individual learners were collected. Students working in pairs were also interviewed after completing the writing task. Data-students' completed texts were analyzed using both quantitative and qualitative measures. The results showed that pairs tended to compose shorter texts than individual writers. However, texts produced by pairs were better than those produced individually in terms of accuracy and complexity. The qualitative analysis showed that the texts produced pairs got higher scores compared to individuals. As for the process of collaborative writing, the analysis of pair dialogues revealed that collaboration provided the students with the opportunity to interact on different aspects of writing. It enhanced students to collaborate while collecting ideas. Finally, the results of the students' interviews revealed that most students were positive about the experience of writing collaboratively despite some reservations about collaborative writing.

Wigglesworth and Storch (2009) investigated the effects of pair and individual writing on fluency, complexity, and accuracy. The pairs and the individuals were given 60 minutes and 40 minutes to complete the essay. After completing the task, the essays were analyzed in terms of fluency (i.e., length of production), complexity and accuracy. The comparison of individual and pair writings revealed that collaborative writing did not result in longer texts, and had no impact on grammatical complexity, but there were significant differences in the performance of the individuals and pairs in terms of accuracy. Pairs produced more accurate texts compared to those writing individually.

A study by Shehadel (2011) explored whether collaborative writing has any effect on the quality of students' writing in L2 and students' perceptions of collaborative writing in L2. One class was assigned as the control group, consisting of 20 students and the other class consisted of 18 students (9 pairs) and was considered as the experimental group. The writing tasks were carried out individually in the control group and in pairs in the experimental group. Both groups of students completed pre and post-CWT writing tasks and a survey with open-ended questions. Students' texts were evaluated in terms of content, organization, grammar, vocabulary, and mechanics of writing. The results showed that collaborative writing had a

significant effect in the areas of content, organization and vocabulary, but not mechanics or grammar. One possible reason that explains that the effect of collaborative writing varies with the specific language areas explored might be the learners' low proficiency in English which made them unable to help one another. The result also showed that almost all students in the experimental class had positive feelings about the collaborative writing activity.

In addition to writing performance, collaboration in both ESL and EFL contexts also has positive effects on students' affective responses. In Louth et al.'s study (1993), students writing collaboratively had more positive attitudes toward writing compared to the ones writing individually. In the studies by Storch (2005), and Sutherland and Topping (1999), students also had positive responses to their experience of writing collaboratively. Furthermore, in Shehadel's study (2011), students enjoyed the experience of collaborative writing. To give an end, on the basis of the research findings of Storch (2005) and Wigglesworth & Storch (2009), collaboration during the writing process brings opportunities to interact and focus on different aspects of writing, including planning, writing, and revision.

Chapter 3

Methodology

This chapter presents the methodology of the study and provides information on the research questions, research design, setting, participants, data collection instruments and procedures and limitations. The study follows a quantitative approach and the aim is to analyze scores of the writings of the students and their attitudes towards not solely writing as a skill, but collaborative writing as well.

3.1 Research Design

The purpose of this study is to figure out whether collaborative writing has any effect on students' writing scores and to find out learners' attitude towards writing and collaborative writing in a more specific perspective. In order to identify the attitudes of learners towards writing in general together with collaborative writing, quantitative research design was adopted, and a questionnaire called Writing Attitude Questionnaire (WAQ), which was previously adopted and used in a study by Gökçe (2001), was benefitted. In so doing, the researcher was able to reach much more participants in a short time while collecting data and make inferences about some characteristics of the participants of the study (Creswell, 2014). Accordingly, the writing papers of the students were graded by two instructors for inter-rater reliability. Data collected through learners' actual written works and the questionnaire were analyzed to reach a conclusion along with writing scores of the participants. In addition, the study had a type of quasi-experimental design, more specifically known as nonequivalent control group pretest-posttest design since both the control and experimental groups were included in research process. Despite the fact that both groups were given the questionnaire as pre-CWT and post-CWT, it was only the experimental group to receive the actual treatment. (Creswell, 2014).

Table 1

Summary of Data Collection and Data Analysis

Research Questions	Data Collection Tool	Data Analysis Method
1. What are learners' attitudes towards collaborative writing?	WAQ	Mann Whitney U Test Wilcoxon Sign Test Correlation Analysis
2. What are the potential effects of collaborative writing on students' writing scores?	Students' actual written works	Mann Whitney U Test Wilcoxon Sign Test
3. Is there a relationship between students' writing scores and their attitudes?	WAQ Students' actual written works	Mann Whitney U Test
4. Does collaborative writing lead to more readable papers?	Students' actual written works	Flesch Reading Ease Flesh-Kincaid Grade Level

In order to answer the first research question, data were collected through WAQ and the relevant analysis was done by using Mann Whitney U Test, Wilcoxon Sign Test and Correlation Analysis. For the second question, students' written works were benefitted as the data collection tool and the analysis was carried out by administering Mann Whitney U Test and Wilcoxon Sign Test. The data for the third research question was gathered by both WAQ and students' papers as the actual source of data, and the analysis was done by running Mann Whitney U Test. As for the final research question, papers composed by the students were benefitted as the data collection tool and Flesch Reading Ease and Flesh-Kincaid Grade Level formulas were used to figure out the level of readability.

3.2 Setting and Participants

The study was conducted at school of foreign languages of a state university in the western part of Turkey. Purposive (non-probability) sampling, which is based on deliberate choice of participants, was administered in the selection of the participants for the present study since they were all expected to have enough writing competence to write a paragraph. Therefore, pre-intermediate classes were designated for the study. In addition, Creswell (2014) mentions, random (probability) sampling could be time-consuming and complicated with such a large population. The aim of the research study was solely to describe a small group of participants, rather than generalizing the findings of the study to a population. Therefore, the purposive sampling method was the most suitable method. The participants were the students in four pre-intermediate classes, consisting of 25 students in each. One of these classrooms was assigned as the control group and three others with 75 students were set as the experimental group. In total, 38 of the 100 students were female and 62 were male. Their ages vary from 18 to 25; however, as there are also engineering completion programs at school, the age of the students may range from 18 to 40+. The preparatory program of the school consists of classes from elementary to upper-intermediate level. Proficiency levels of the students are determined by a placement test at the beginning of the academic year. Unless the students pass the proficiency examination, they are supposed to attend compulsory classes before they begin their freshman year since the medium of instruction is English in most departments. Chi-Square (X^2) analysis was used to compare the ratios of gender of the study groups. The results of the test are given in Table 2.

Table 2

Gender Distribution

		Group				p
		Control		Experimental		
		n	%	n	%	
Gender	Female	7	28,0%	31	41,3%	0,06
	Male	18	72,0%	44	58,7%	

In the study, it was observed that the gender distributions in the experimental and control groups were similar. While 41% of the experimental group was women, 59% was men. In the control group, women were 28% and men were 72% ($p = 0.06$). In addition to gender distribution, it was observed that age group distributions were similar in the experimental and control groups. Both of the groups consisted of 18-25-year-old participants. In addition, all of the students subjected to the study stated that they had not participated in a collaborative writing activity before.

3.3 Procedure

This part includes data collection instruments, data collection procedures, data analysis procedures, validity and reliability of the tools, ethical considerations and limitations.

3.3.1 Data Collection Instruments. In the study, the questionnaire (Appendix B), conducted by Gökçe (2001) in a previous study, was utilized. The questionnaire is a Likert-type one and it consists of two parts. In the first part, in addition to the two questions used for demographic data such as age and gender, there is also a question that measures whether the participants have participated in a collaborative writing activity before. In the second part, there are 13 items divided into two dimensions, each measuring different aspects of writing. First nine items were aimed to understand learners' attitudes towards writing in general, and the other 4 were to figure out their attitudes towards collaborative writing. Prior to the study which lasted for 8 weeks, the questionnaire was applied as a pre-CWT in order to reveal the attitudes of learners towards writing in general and collaborative writing as well. At the end of the study, the same questionnaire was administered to find out whether there were any changes in terms of attitudes towards both aspects. Apart from these, students' writing papers were also used as a type of data collection tool since the study aims to evaluate the effects of collaborative writing on their writing scores.

3.3.2 Data Collection Procedures. This study was conducted in the fall semester of 2019 – 2020 academic year in Turkey and was restricted to a state university. The data were collected from only four preparatory classes of the school of foreign languages. The study lasted for eight weeks in total. In the first week, as aforementioned, a questionnaire called WAQ was administered in all these four classes, which make up the control and experimental groups, to be able to discover the students' attitudes towards both collaborative writing and writing as a skill. After conducting the WAQ, students in all groups were asked to write a paragraph individually at school. They were all given the same topic in order not to cause any bias. Accordingly, the researcher aimed to get all individually written works and use them as pre-CWT data together with the WAQ. Through the following six weeks, control group did not receive any treatment, they only had their writing lessons at school; however, the experimental group, comprising three classrooms, studied in collaboration together with their traditional writing lessons as the control group did. In the second week, which is the first of that six-week collaborative writing process, before the actual collaborative writing activity, the researcher asked students to make up pairs and groups of three or four. At first it was up students to choose their peers and group members freely. The aim in so doing was to increase group and peer cohesion. The researcher did not intervene that decision-making process as writing is perceived as a trouble among most of the learners. Then the researcher explained students what CW was and the roles that learners were supposed to undertake. After they agreed on the roles, and pairs and groups, all the decisions were written down in order not to let the students to have the same roles through the study as there was the risk of choosing not to collaborate and having the other peers or group members do the given task. Then a descriptive paragraph was assigned as the first collaborative writing activity. Through the whole process, the researcher acted as a facilitator and was always present in each classroom, so that questions from the students were directly answered in order not to cause misinterpretations. At the end of the first collaborative writing activity, the researcher collected the paragraphs and graded them according to the rubric which is also used in all writing classes at the school. After grading the papers, all the outputs were handed to a colleague to be graded in order to meet inter-

rater reliability. The next five weeks of collaborative writing were studied in the same way, but great attention was paid in changing the topics and student roles. At the end of the seventh week, the same questionnaire was applied to both control and experimental groups in order to detect any changes (if there are) in the attitudes of learners towards collaborative writing.

3.3.3 Data Analysis Procedures. Assessment of student outputs were put into practice by using a 16-point customized analytic rubric (Appendix C) with five categories, all of which were scored out of four points. In order to get the equivalence of this rubric to 100, another rubric was used. (Appendix D). The rubrics were both developed by the testing unit of school of foreign languages of the university where the study was implemented. Using the rubrics enabled objectivity.

What is more, since actual written works of the students were the principal source of data, inter-rater reliability was essential. In order to ensure inter-rater reliability, all the papers were graded by two teachers, one as the researcher. Inter-rater reliability is a must have component while grading written works. According to Wang (2009), such kind of reliability is the range of similarity between different examiners. Therefore, before commencing assessment of the papers, the researcher held a calibration meeting with a colleague to standardize the assessment procedure. After that, the papers were graded separately, and a second meeting was held to compare grades. Following each of the grading sessions, the same cycle continued through the process which lasted for six weeks. At the end of each week, for each student, the average of the grades given by the two teachers were determined as the score of that week.

The other method which was benefitted in analyzing the data was SPSS (Statistical Package for the Social Sciences) through which all the data including students' weekly writing scores given by two graders and the Likert-scale questionnaires were statistically and meticulously analyzed. WAQ and its 2 dimensions were tested by Kolmogorov- Smirnov tests to check if the scores of EFL students in the questionnaire show normal distribution or not. The results of Kolmogorov- Smirnov tests are given in Table 3.

Table 1

Test of Normality

	Kolmogorov-Smirnov ^a		
	z	df	p
Pre-CWT Writing Attitude	0,11	100	0,01
Pre-CWT Collaborative Writing	0,09	100	0,03
Post-CWT Writing Attitude	0,16	100	0,01
Post-CWT Collaborative Writing	0,15	100	0,01
Pre-CWT Writing	0,90	100	0,03
Post-CWT Writing	0,16	100	0,01

As is seen in Table 3, the data was found not to be normally distributed according to the Kolmogorov-Smirnov. According to the normality test results, it was determined that the distribution of the pre-CWT and post-CWT levels of the writing and collaborative writing attitudes in the experimental and control groups did not show normality assumption. In addition, it was observed that pre-CWT and post-CWT writing scores did not comply with normality assumption ($p < 0.05$). Parametric test assumptions are provided as a result of the Shapiro-Wilk test ($p > 0.05$). Shapiro-Wilk test is valid for the tests with 50 or less values in the group. Therefore, nonparametric tests were used in the analysis.

In addition, Mann Whitney U test was used in order to present whether there is a relationship between writing and CW attitude levels of the students and their writing grades.

Finally, students' papers were also analyzed with a view towards readability by running readability tests using an online software at <https://www.readabilityformulas.com>. Among other readability measurement

formulas, only Flesch Reading Ease and Flesch-Kincaid Grade Level are calculated as they are two of the leading formulas used in education.

3.3.3.1 Readability. Readability is generally known as a measure of how easy a piece of text is to read. It can include elements of complexity, familiarity, legibility, and typography. According to Crystal (1992) readability is being able to read and understand written language easily. Miller and Kintsch (1980) state that it is more related with the reader's own abilities, which means it is totally based on the reader's capability to interpret and understand the written material. There are numerous criteria in measuring readability, but Dubay (2004) states that the length of a sentence, frequency of words and number of syllable, grammar per word are accepted as general criteria which were also built on criterion passages taken from texts used in the U.S. educational system, referring to the American grade school level one needs to read a specific text.

Through the years since the concept became popular, there have appeared several linguists to create the easiest and most reliable readability measurement formulas, some of whom are Rudolf Flesch, Robert Gunning, George Spache and John P. Kincaid. Accordingly, these linguists came up with different measurement formulas, such as, Flesch Reading Ease, Flesch-Kincaid Grade Level, Dale-Chall, Fog, Fry Graph, and the Automated Readability Index. In the study, two of these aforementioned formulas, Flesch Reading Ease and Flesch-Kincaid Grade Level, are used as they are mostly benefited in educational settings.

3.3.1.1.1 Flesch Reading Ease Score. Flesch Reading Ease Formula is accepted as one of the oldest and most accurate readability formulas. The measurement score was invented by one of the well-known linguists Rudolf Flesch in 1948. The Flesch Reading Ease Formula is a simple approach to assess the grade-level of the reader. This scoring is done by giving the text a score of between 1 and 100. The following table is also helpful to assess the ease of readability in a document:

Table 4

Definitions of Scores in Flesch Reading Ease

90-100: Very Easy	50-59: Fairly Difficult
80-89: Easy	50-59: Fairly Difficult
70-79: Fairly Easy	30-49: Difficult
60-69: Standard	0-29: Very Confusing

The point here is, the higher the score of a text, the easier it is to understand it. The score between 60 and 70 is highly considered acceptable. To reach a conclusion from the Flesch Reading Ease Formula, the best text should also contain shorter sentences and words. Similarly, the American Psychological Association (APA) (2009) also notes that “short sentences are easier to comprehend than are long ones” (p.67). A challenge in using the Flesch Reading Ease is that test results are not immediately meaningful as there is always a need of a table to make sense of the score; therefore, another formula, a more practical one to interpret readability level was needed. The formula for the Flesch reading-ease score is given in Figure 2.

$$206.835 - 1.015 \left(\frac{\text{total words}}{\text{total sentences}} \right) - 84.6 \left(\frac{\text{total syllables}}{\text{total words}} \right)$$

Figure 2 Flesch Reading Ease Formula

3.3.3.1.2 Flesch-Kincaid Grade Level. Flesch Grade Level Readability Formula was improved upon the Flesch Reading Ease Readability Formula. Rudolph Flesch is also the co-author of this formula along with John P. Kincaid. That’s why it is called Flesch-Kincaid Grade Level. Originally formulated for US Navy purposes in collaboration with linguists, this formula is best suited in the field of education. The US Government Department of Defense also uses Flesch-Kincaid Grade Level formula as a standard test. The score generated by the Flesch-Kincaid Grade Level is equivalent to the US grade level of education that the reader would require to be able to understand that piece of text. With the Flesch-Kincaid Grade Level, if a piece of text has a grade level readability score of 8, this means the average reader has to have

a grade 8 level of reading, or above, to understand it. It can also mean the number of years of education generally required to understand this text. The grade level is calculated with the following formula:

$$0.39 \left(\frac{\text{total words}}{\text{total sentences}} \right) + 11.8 \left(\frac{\text{total syllables}}{\text{total words}} \right) - 15.59$$

Figure 3 Flesch Kincaid Grade Level

Both Flesch-Kincaid reading ease and grade level use the same core metrics: word length and sentence length, but they correlate inversely. A high score on the reading ease test, equals to a lower grade level score.

Table 5

Comparison of Flesch Reading Ease and Flesch-Kincaid Grade Level

Flesch Reading Ease Score	Flesch-Kincaid Grade Level	Education Level	Readability Level
100.00–90.0	5th grade and below	10-year-olds and below	Very easy to read.
90.0–80.0	6th grade	11-year-olds	Easy to read.
80.0–70.0	7th grade	12-year-olds	Fairly easy to read.
70.0–60.0	8th & 9th grade	13-15-year-olds	Plain English.
60.0–50.0	10th to 12th grade	High School Senior	Fairly difficult to read.
50.0–30.0	College	College	Difficult to read.
30.0–0.0	College graduate	College Graduate	Very difficult to read.

3.4 Reliability and Validity

While conducting research studies, one of the vital sources of data collection is incontestably questionnaires; therefore, as Richards & Schmidt (2002) emphasize, it is crucial to ensure the validity and reliability of the questionnaire being used. As it was mentioned previously, the questionnaire was directly taken from a study conducted by Gökçe (2001), who studied attitudes of university students towards collaborative writing. The results of the reliability and factor analysis are presented in Table 6.

Table 6
Reliability and Factor Analysis

Test	Explained Variation	Internal Consistency	Reliability	KMO
Pre-CWT writing attitude	46%	0,72	0,81	0,78
Pre-CWT collaborative writing	22%	0,70		
Post-CWT writing attitude	44%	0,72	0,83	0,80
Post-CWT collaborative writing	29%	0,76		

In order to check whether the number of participants adequate for factor analysis, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was calculated. Whether the data obtained from the study group is suitable for factor analysis can be explained by Kaiser-Meyer-Olkin (KMO) test. The KMO value means that each variable in the scale can be perfectly predicted by other variables. In the study, it was determined that the explained variance levels of the writing attitude items formed by the items 1,2,3,4,5,6,7,8,9 were 46% and the internal consistency level was 0,72. The items 10, 11, 12 and 13 in the study constituted the dimension of collaborative writing. It was determined that the variance levels of this dimension were 22% and the internal

consistency level was 0.70. The overall reliability for the pre-CWT scores of the questionnaire that measured two dimensions as writing attitude and collaborative writing levels consisting of 13 items was 0.81. In addition, it can be said that the general sample adequacy level for the pre-CWT results was sufficient in the explanation of the scale of 100 people whose $KMO = 0.78$ ($KMO > 0.70$).

Similarly, the same analysis was run for the post- test measurement since the same questionnaire was benefitted twice; one as a pre- CWT and the other as the post- CWT. Writing attitude and collaborative writing levels, consisting of 13 expressions, was found to have a reliability level of 0.83 for post-CWT scores. Moreover, explained variance level of the first dimension as writing attitude levels formed by the items 1,2,3,4,5,6,7,8,9 was found as 44% and the internal consistency level was 0.72. Items 10, 11, 12 and 13 constituted the second dimension which was collaborative writing. It was determined that the variance level of this dimension was explained as 29%, and the internal consistency level was 0.76. Finally, considering the post-CWT results, it can be said that the overall sample adequacy level of $KMO = 0.80$ was sufficient in explaining the scale ($KMO > 0.70$).

3.5 Ethical Considerations

In order to conduct an ethical study, confidentiality and informed consent was ensured by a consent form prepared by the researcher (Appendix A) and all the participants were informed by using consent form before the data was gathered. The consent form included data about the purpose of the study and confidentiality, and it was handed out with the questionnaire as hard copies. It was also explained to the students that their answers would be kept confidential and used only for research purposes. Furthermore, the participants were also informed that they had the right to withdraw whenever they wanted. All participants accepted the statement “I accept to respond to this questionnaire.” by putting a tick in the “Yes” box and hard copies of the consent form were also given to those who participated in the study. That is to say, participation in the study was voluntary. Confidentiality of the data and the participants were guaranteed in the study to keep the privacy of the participants.

In addition to the consent form, the researcher got permission from both the owner of the questionnaire called WAQ and the management of the school in which the study was conducted. The permission letter can be seen in Appendix E.

3.6 Limitations

The present study investigates the effects of collaborative writing on students' writing scores, their attitudes and readability levels of their written output. However, it has some limitations.

First of all, the study was conducted with several classes of students at the school of foreign languages of a state university in the western part of Turkey, pertaining to purposive sampling, which prevents the generalization of the results to the population. The next is time constraints. In traditional classroom settings where the actual lesson period is administered as 45 minutes per lesson, students may have problems in fulfilling the given task fruitfully. In addition, since the study was carried out through quantitative methods, the questionnaire benefitted was the only source of data collection tool in terms of attitudes. Another limitation might be the process of collaboration itself. Due to the opportunity of interaction it brings, some students may abuse such freedom. They may pretend to be studying on the given task without showing any active participation and they might also prevent their peers or group members from doing their tasks. The roles that students need to take on might also be a drawback. There may be students who intend to scrounge others' efforts. Therefore, it is very important to prevent students from playing the same roles every week, otherwise, some students may have to undertake the roles of their peers or group members. Finally, the study was only carried out through quantitative methods. There might have been interviews with the participants in order to gain more insights.

Chapter 4

Findings

This chapter presents the findings of the present study, which investigates the effects of collaborative writing on students' writing scores, attitudes of the students towards collaborative writing and the effects of collaborative writing on readability levels of the students' outputs. It presents the test results of the data gathered from the students at school of foreign languages of a state university. The following sections includes the results of the quantitative data obtained during the study. Regarding the analysis of data, descriptive statistics are presented with frequency, percentage, average and standard deviation values. X^2 (Chi-square) analysis was used to compare the ratios of gender and age variables of the study groups. Mann U test was applied in order to examine whether the values of writing and collaborative writing attitudes in experimental and control groups are different. The Wilcoxon Sign Test was used to examine the difference between writing and collaborative writing attitudes in experimental and control groups. Correlation analysis was used to determine the relationships between the pre-CWT and post-CWT scores of the groups. In the study, p values less than 0.05 were considered statistically significant ($\alpha = 0.05$). Analyzes were made with SPSS 22.0 package program.

4.1 Learners' Attitudes Towards CW

The first research question was expressed as "*What are learners' attitudes towards collaborative writing?*".

In order to answer the question, first of all Wilcoxon Sign Test was applied to examine pre-CWT and post-CWT scores for both groups. Following the analysis, Mann-Whitney U test was executed to compare the test results of the groups, and finally, correlation analysis was run to study the relationship between groups.

In the aim of analyzing pre-CWT and post-CWT scores for both groups, Wilcoxon Sign Test was applied.

Table 7

Pre-CWT and Post-CWT Scores of the Control Group

Group	Test	n	X	s.d.	p
Control	Pre-CWT Writing Attitude	25	1,99	0,57	0,07
	Post-CWT Writing Attitude	25	2,16	0,53	
	Pre-CWT Collaborative Writing	25	2,05	0,93	0,99
	Post-CWT Collaborative Writing	25	2,10	0,96	

According to the results of the analysis, it was observed that the control group pre-CWT and post-CWT writing attitude levels were not at different levels, and the control group students' writing attitude levels were similar before and after the experiment ($p = 0.07$, $p > 0.05$). It was also seen that the writing attitudes of the control group students who were not included in the activity did not change.

In addition, the control group pre- CWT and post- CWT collaborative writing attitude levels were not at different levels, and the control group students' collaborative writing attitude levels were similar before and after the experiment ($p = 0.99$, $p > 0.05$). It was found that the collaborative writing attitudes of the control group students who were not included in the activity did not change, either.

Table 8

Pre-CWT and Post- CWT Scores of the Experimental Group

Group	Test	n	X	s.d.	p	
Experimental	Pre- CWT Writing Attitude	75	1,97	0,71		
	Post- CWT Writing Attitude	75	2,27	0,57	0,01*	
	Pre- CWT Collaborative Writing	75	1,90	1,00		
	Post- CWT Collaborative Writing	75	2,80	0,98	0,01*	

In the study, it was observed that the experimental group pre- CWT and post- CWT writing attitude levels were not at different levels and writing attitude levels of the experimental group students before and after the experiment were at different levels ($p = 0.01$, $p < 0.05$). It was seen that the writing attitudes of the experimental group have developed in comparison to their initial levels.

It was also examined that the experimental group pre- CWT and post- CWT collaborative writing attitude levels were not at different levels, and the collaborative writing attitude levels of the experimental group students were at different levels before and after the experiment ($p = 0.01$, $p < 0.05$). The results made it visible that the collaborative writing attitudes of the experimental group students who were included in the study improved.

Table 9

Pre- CWT Comparison of the Groups

Dimension	Group	n	X	s.d.	p
Pre- CWT Writing Attitude	Control	25	1,99	0,57	0,25
	Experimental	75	1,97	0,71	
Pre- CWT Collaborative Writing	Control	25	2,05	0,93	0,65
	Experimental	75	1,90	1,00	

According to results, it was observed that the control and experimental group pre-CWT writing attitude levels were not at different levels and before the experiment, the writing attitude levels of the control group and experimental group students were similar ($p = 0.25$, $p > 0.05$).

As for the second dimension, it was seen that the control and experimental group pre-CWT collaborative writing levels were not at different levels, and prior to the study, the collaborative writing levels of the control group and experimental group students were similar ($p = 0.65$, $p > 0.05$).

Table 10

Post- CWT Comparison of the Groups

Dimensions	Group	n	X	s.d.	p
Post-CWT Writing Attitude	Control	25	2,16	0,53	0,01*
	Experimental	75	2,27	0,57	
Post-CWT Collaborative Writing	Control	25	2,10	0,96	0,01*
	Experimental	75	2,80	0,98	

In the study, for the first dimension which is writing attitude, it was observed that the writing attitude post-CWT levels in the experimental and control groups were statistically different. The post-CWT writing attitude levels of the experimental group

were higher than the control group writing attitudes. The level of writing attitude which was equal at the beginning was found to be high in favor of the experimental group after the study ($p = 0.01$, $p < 0.05$).

The collaborative writing attitude post-CWT levels in the experimental and control groups were statistically different. The experimental group post-CWT collaborative writing attitude levels were found to be higher than collaborative writing attitude levels of the control group. Collaborative writing attitude levels, which were equal at the beginning, were found to be higher in favor of the experimental group after the study ($p = 0.01$, $p < 0.05$).

Finally, in order to examine the writing attitude relationships between pre-CWT and post-CWT scores in the control and experimental groups, correlation analysis was run.

Table 11
Writing Attitudes of Groups

Group	Test	n	r	p
Control	Pre-CWT Writing Attitude & Post-CWT Writing Attitude	25	0,92	0,01*
	Pre-CWT Collaborative Writing & Post-CWT Collaborative Writing	25	0,95	0,01*
	Pre-CWT Writing Attitude & Post-CWT Writing Attitude	75	0,91	0,01*
	Pre-CWT collaborative writing & Post-CWT collaborative writing	75	0,62	0,01*

In the study, for the control group, a strong and significant correlation was found between the pre and post-CWT levels of writing attitudes in the control group

($r = 0.92$, $p = 0.01$). It was also seen that there was a strong and positive correlation between the pre- and post-CWT levels of collaborative writing attitudes in the control group ($r = 0.95$, $p = 0.01$). In the control group, it was observed that there was a strong and positive correlation between pre-CWT and post-CWT in terms of writing and collaborative writing attitudes. This situation made clear that the levels of change before and after the experiment did not differ.

As for the experimental group, a positive, very high and strong correlation was observed between the writing attitude pre-CWT and post-CWT levels ($r = 0.91$, $p = 0.01$). It was also analyzed that there was a positive and high-level strong correlation between the collaborative writing attitude pre-CWT and post-CWT levels ($r = 0.65$, $p = 0.01$). According to the pre-CWTs, there was a positive and very strong and significant correlation between writing and collaborative writing attitudes. After the experiment, it was understood that the relationship level decreased and as a result of the differentiation of attitude levels, the relationship levels changed.

In sum, considering the findings of the first research question, after analyzing both groups according to their levels of attitude, it was seen that both writing and collaborative writing attitudes of the experimental group changed positively.

4.2 The Potential Effects of CW on Students' Writing Scores

The research question was expressed as “*What are the potential effects of collaborative writing on students' writing scores?*”.

In order to answer this question, Mann Whitney U Test and Wilcoxon Sign Test were administered to analyze pre-CWT and post-CWT test scores of the participants.

Table 12

Pre- CWT and Post- CWT Writing Scores

Test	Group	n	X	s.d	p
Pre- CWT Writing	Control	25	70,72	12,66	0,32
	Experimental	75	73,00	11,19	
Post- CWT Writing	Control	25	74,36	12,57	0,02*
	Experimental	75	80,36	10,15	

According to the results of the test, it was determined that the writing pre- CWT results were not different in the experimental and control groups before the experiment. At the beginning of the study, it was seen that the writing success levels were similar in both groups ($p = 0.32$, $p > 0.05$).

As for the post- CWT results, it was determined that the writing success post- CWT results were at different levels in experimental and control groups after the experiment. In the study, the writing success levels of the experimental group were higher than the control group ($p = 0.02$, $p < 0.05$). At the beginning of the study, the control and experimental group writing grades were high. After the activity, the fact that the grades of the experimental group were much higher could be interpreted as the study improved the writing success.

Table 13

Pre- CWT and Post- CWT Writing Scores of the Groups

Group	Test	X	s.d	p
Control (n=25)	Pre-CWT Writing	70,72	12,66	0,26

	Post-CWT Writing	74,36	11,19	
Experimental (n=75)	Pre-CWT Writing	73,00	11,19	
	Post-CWT Writing	80,36	10,15	0,02*

In the study, it was observed that the control group pre- CWT and post- CWT writing success levels were not at different levels, and the writing test success levels of the control group students before and after the experiment were similar ($p = 0.26$, $p > 0.05$). Therefore, it meant that the writing success of the control group students who were not included in the activity did not change.

Considering the experimental group, it was seen that the pre and post- CWT success of the group were statistically different. The experimental group post- CWT writing success levels were found to be higher than the pre- CWT success scores. As a result, since the experimental group had high post- CWT scores, the activity performed was an effective method for the development of students' writing success ($p = 0.02$, $p < 0.05$).

In sum, the scores of both the control group and the experimental group were analyzed before and after the study. Regarding the findings of the second research question, it was seen that the scores that the experimental group gained after the study were much higher than those of the control group, which made the experimental group more successful.

4.3 The Relationship Between Attitude Levels of Students and Their Writing Scores

The third research question was expressed as *“Is there a relationship between students’ writing scores and their attitudes?”*

In order to answer the research question, Mann Whitney U Test was run to analyze the relationship between attitude levels and writing grades.

Table 14

Attitude Levels and Writing Scores

	Group	n	X	s.d	p
Writing Attitude (Δ)	Control	25	-0,24	0,33	0,01*
	Experimental	75	0,30	0,39	
Collaborative Writing Attitude (Δ)	Control	25	0,08	0,30	0,01*
	Experimental	75	0,90	0,86	
Writing Score (Δ)	Control	25	5,64	2,35	0,03*
	Experimental	75	7,36	1,79	

Δ = pre-CWT/post-CWT

In the study, it was seen that the writing attitude development levels in the experimental and control groups were at different levels statistically. Experimental group writing attitude development levels were found to be higher than the control group writing attitudes ($p = 0.01$, $p < 0.05$). Moreover, it was seen that collaborative writing attitude development levels in the experimental and control groups were also at different levels statistically. The experimental group collaborative writing attitude development levels were higher than the control group writing attitudes. ($P = 0.01$, $p < 0.05$) Finally, it was discovered that the development levels of the collaborative writing test in the experimental and control groups were statistically different. The experimental group collaborative writing test development levels were found to be higher than the control group writing attitudes. ($P = 0.03$, $p < 0.05$) In sum, considering the result of the analysis, obtained data revealed that as the students' attitudes towards writing and CW improved, they received higher scores.

4.4 Collaborative Writing and Readability

The final research question was expressed as “*Does collaborative writing lead to more readable papers?*”.

In order to answer the last research question, two types of readability formulas, which are Flesch Reading Ease and Flesch-Kincaid Grade Level, were benefitted as they are the two mostly used readability measurements in educational settings. The

tests were run by using an online software at <https://www.readabilityformulas.com>. Following the calculations, in order to better compare the results, the data were processed in bar charts with the help of an online software at <https://www.meta-chart.com>.

The figures below show the results of the calculations both for the experimental and the control group, respectively.

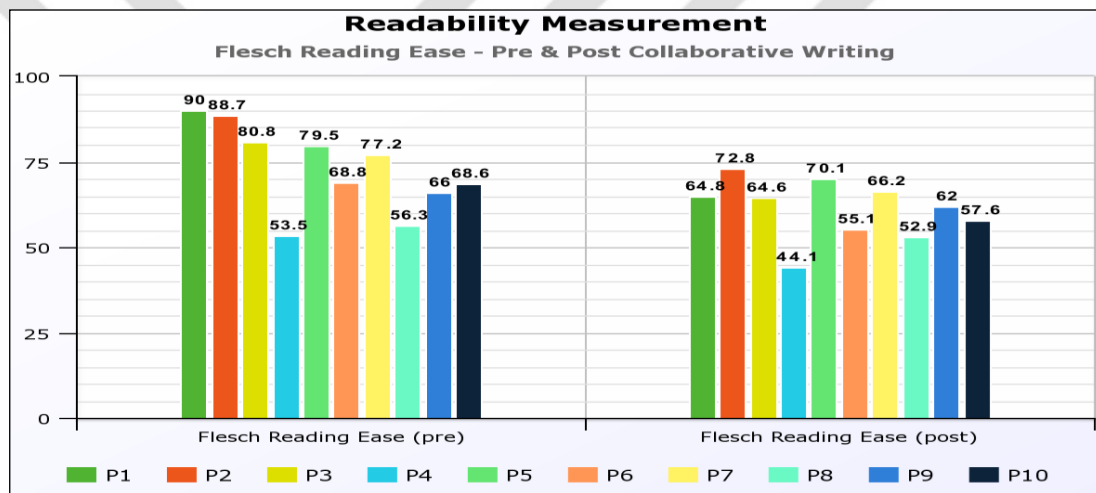


Figure 4 Flesch Reading Ease Measurement for Experimental Group

Figure 4 shows the results of Flesch Reading Ease measurement for the experimental group. As aforementioned previously, scores calculated according to Flesch Reading Ease display the easiness of the text. When the score is close to 100, it means that the text is very easy to understand. The acceptable score is considered to be between 60 and 70. Considering the results obtained from the calculation, comparing pre-CWT and post-CWT grades of 10 students, it is apparent that post-CWT scores of all participants are lower compared to their pre-CWT scores. As seen from the results, after the study, the readability levels of post-CWT outputs were much higher, which made the texts more difficult to be understood.

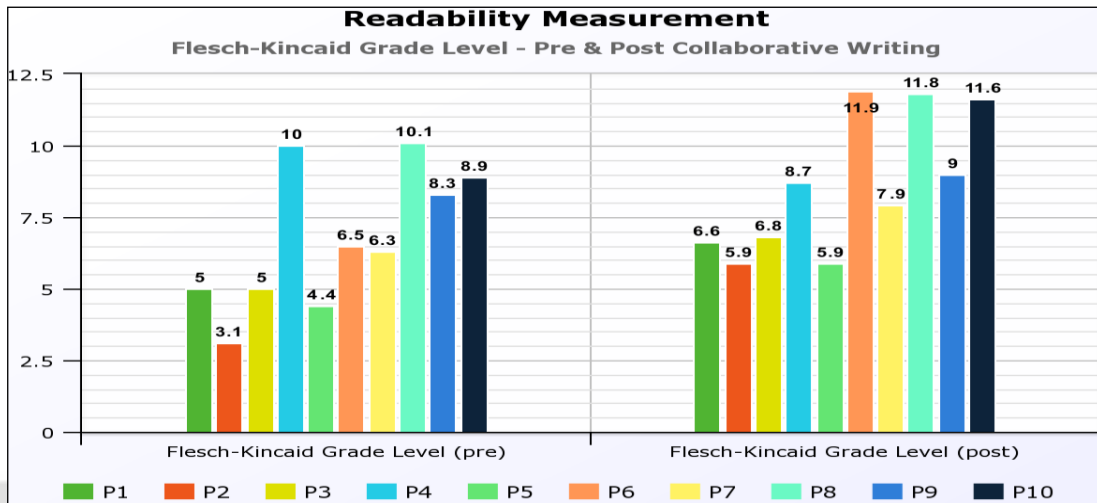


Figure 5 Flesch-Kincaid Grade Level for Experimental Group

Figure 5 shows the results of Flesch Kincaid Grade Levels calculated before and after collaborative writing process for the experimental group. The grade generated by the Flesch-Kincaid Grade Level is considered as equivalent to the US grade level of education. That is, if a text has a grade level readability grade of 8, the average reader has to have a grade 8 level of reading, or above, to understand it. Regarding the results illustrated in Figure 5, it is clear that post- CWT grades of all participants, except for P4, are higher than their pre- CWT grades, which means, after the research study, except for P4, the texts students produced can reach higher grades of readers.

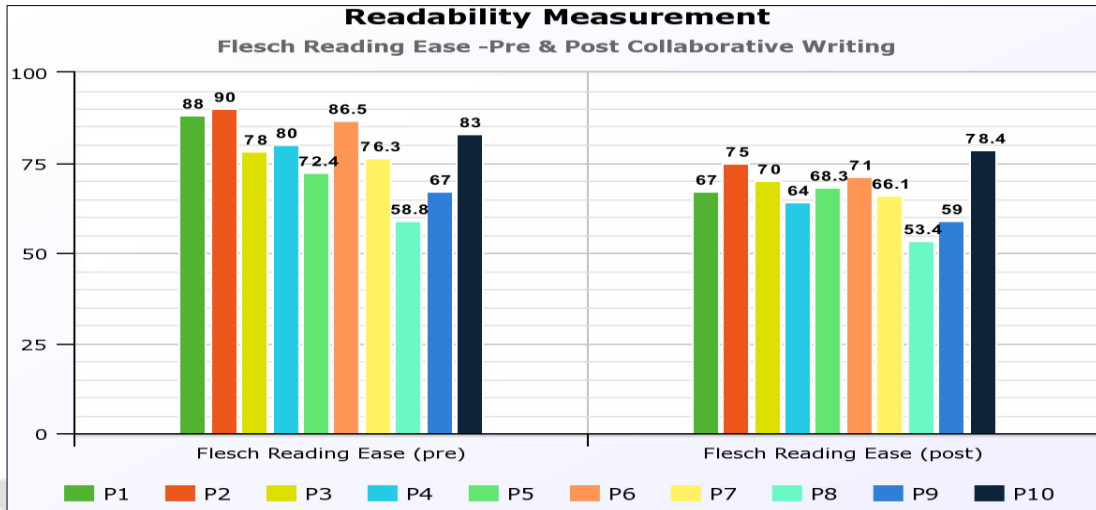


Figure 6 Flesch Reading Ease for Control Group

Figure 6 displays the results of Flesch Reading Ease measurement for the control group. Analyzing the results reached, comparing pre and post-CWT grades, it can be seen that post-CWT scores of all participants are lower compared to their pre-CWT scores, which means that the readability levels of post-CWT writings are slightly higher. As a result, it is clear that at the end of the time allotted to the study, the texts produced are slightly more difficult to be understood.

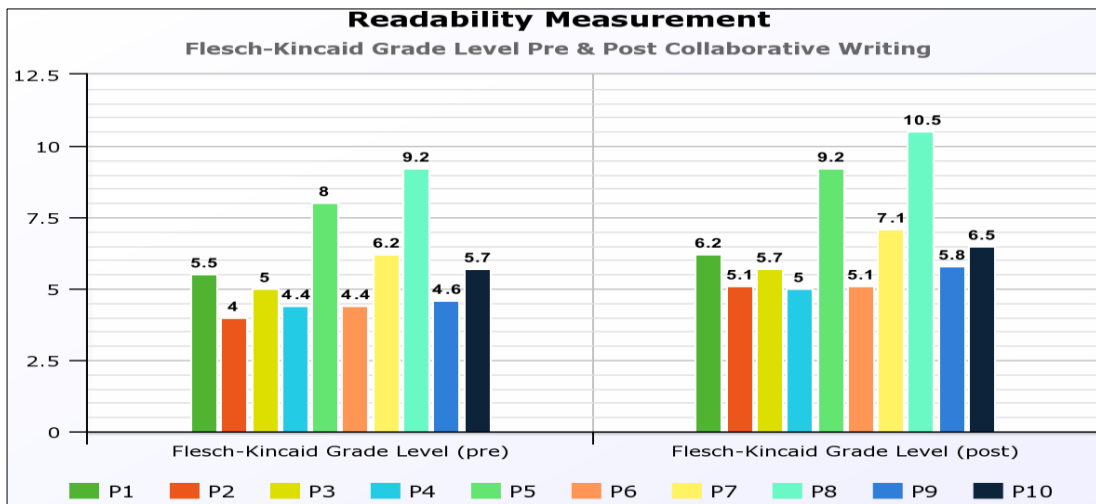


Figure 7 Flesch-Kincaid Grade Level for Control Group

Figure 7 shows the results of control group based on Flesch Kincaid Grade Levels calculated before and after collaborative writing process. Regarding the results illustrated in Figure 7, it is clear that post-CWT grades of all participants, are higher than their pre-CWT grades. As a direct consequence of the results, after the research study, even the control group had no treatment at all, the texts students produced can also reach higher grades of readers as the texts composed by the students in the experimental group.

In sum, as for the fourth and final research question, the papers obtained from the students were examined according to two of the leading readability measurement formulas, Flesch Reading Ease and Flesch-Kincaid Grade Level. The results indicated that the readability levels of both groups reached higher levels in the post- CWT compared to the pre- CWT, but the amount of increase was far more remarkable in the experimental group.

Chapter 5

Discussion and Conclusion

In this thesis, it was aimed to investigate the effects of collaborative writing on university students' writing scores and their attitudes as well as readability levels of their written outputs. Three main research questions were sought, and the answers found are discussed below with reference to studies in the literature.

5.1 Discussion of the Findings for the Research Questions

5.1.1 RQ 1: What are the learners' attitudes towards collaborative writing? Results indicate that the experimental group students had more positive attitudes towards writing than control group students. The two-dimensional questionnaire was benefitted to figure out the attitude levels of the participants in both groups. Students' responses were analyzed for the first dimension as the writing attitude and the second one as the collaborative writing attitude. The results indicate that the students' attitudes towards these two dimensions are positive. That is to say, collaborative writing, which changes students' attitudes in a positive way, is a good way to teach writing.

In the study, before the treatment, the students were found to have low attitude levels towards collaborative writing. However, after the treatment, experimental group had higher attitudes. This issue might be closely related to the nature of collaborative writing itself, because collaboration gives learners the opportunity to interact while studying on a given task. While studying collaboratively, they feel more relaxed and secure as they share the responsibility. They learn from each other and thus, their attitudes towards collaborative writing improve.

There are a number of research studies carried out in EFL and/or ESL contexts to explore students' attitudes towards collaborative writing. The findings of the study

are consistent with two other studies by Powell (1984) and Peyton et al (1994). They note that at the end of the study, the results indicated that learners' attitudes towards collaborative writing changed to positive. In addition, similar findings were also found by Shehadel (2011). Students who took part in the study were given a questionnaire consisting of eight questions in the aim of understanding their views of collaborative writing. The results showed that most of the students had positive views about the activity and they found it beneficial. The students also reported that CW helped them have self-confidence and improved their speaking abilities, because while studying collaboratively, they get benefit from "collaborative dialogue" and "languaging" and they produce their own LREs. Moreover, Clawson (1993) states that collaborative writing has the power to turn negative attitudes into positive ones. She further states that her students "gain a breadth of perspective that they have not had before" and they wrote more accurate texts (1993, p. 55).

In another study, Edward (2000) also claims that the activities fulfilled by students in collaborative writing sessions led to positive attitudes. He highlights that collaborative writing gives learners "the opportunity to discuss with peers, brainstorm ideas, question, argue, defend, and explore" which "expand their minds to explore their potential in writing" (p. 15). Similarly, Beseler and Qi (2014) state that collaborative writing had a positive effect on students both individually and as team members. Furthermore, in the study by Li et al. (2010), it was found that after collaborative writing activities, students showed improvement in writing attitudes, which confirms Storch's (2005) finding that most of the students who participated in the study were positive to CW practices.

Another point is that when students think that they do not have the writing skills necessary for writing, they may have negative attitudes towards writing. Students afraid of making errors may also build negative attitudes. In the study, the students were told to write for six weeks collaboratively and neither the papers were graded, nor their errors were corrected. Knowing that from the very beginning of the process, students felt free to write their ideas without worrying about the grades. Shehadeh (2011) maintain that "results of the study showed that CW had an overall significant effect on students' L2 writing" (p. 296). In the study, the students, who had negative

attitudes initially due to the misbelief that they did not have the required skills, changed the way they thought and began to notice the positive effects of working with others on the content, organization, and accuracy of their texts, together with other the learning benefits of CW.

Students who studied in collaboratively also stated that they were more satisfied with their classes and with their performance (Ong & Maarof, 2013). Most of them found out that the interaction they had helped them see the importance of improving their pieces. This also motivated them to utilize the skills while writing individually (Dobao, 2012; Ong & Maarof, 2013). In sum, all of the results discussed so far indicate that collaborative writing not only helped learners improve their writing scores, but also changed their attitudes towards collaborative writing in a positive way.

5.1.2 RQ 2: What are the effects of collaborative writing on students' writing scores? The results of the study show that implementing collaborative writing sessions in addition to traditional writing practices had a positive impact on the students' writing scores. Regarding the results, as a consequent of six-week collaborative writing process, the participants of the experimental group evidently showed better writing performance than the those of the control group did. This is supported by the studies of several researchers.

The fact that the students got higher scores is also in accordance with the research study conducted by Clawson (1993). She states that “the students gained a breadth of perspective that they have not had before, and their writing was really improving by collaborative writing” (p. 55). She also claims that “the collaborative writings were obviously more carefully worded and creatively written” (p. 57). In another study conducted by Hirvela (1999) learners were given collaborative writing tasks for seven weeks and the results indicated students' effective performance since they were far more successful in generating writings collaboratively. Therefore, Hirvela concludes that learning is done best through collaborative work. Therefore, the results of the research show that collaborative writing has a positive effect on students' writing scores.

The results also showed that the students of the experimental group wrote more accurate texts compared to the control group. This result is also in line with the study of Fernández Dobao (2012), who found the similar results. In Dobao's study, pairs gained better scores on measurements of accuracy. In addition, Storch and Wigglesworth (2007), and Wigglesworth and Storch (2009) concluded that the texts produced in pairs were found to be significantly more accurate compared those written individually. Another study by Nixon (2007) also supports the current results. Nixon found out that groups studying collaboratively received higher scores than individuals. From this point of view, the fact that the students got higher scores proves that collaborative writing develops writing as a skill and results in better scores.

One another point that is related to students' writing scores is the level of motivation and anxiety which have adverse effects on students' writing scores. As it is mentioned in the literature, grading papers causes low attitude towards writing. Since all the students know that they will be graded at the end of each writing implication, they feel demotivated and stressed and as a result they get lower scores for their texts. Henschen & Sidlow (1990) state that "students often find writing a frustrating, isolated, irrelevant chore" (p. 29) as grade is perceived as the only source of motivation. At the end of this study, since the scores that students obtained improved, it can be concluded that collaborative writing enhances students' self-confidence and thus reduces the level of anxiety, which in turn leads to better scores of writing. Another factor may be that all the participants of the study were assured that their grades would not affect their school performance. This may have also helped students to build positive attitudes towards collaborative writing.

5.1.3 RQ 3: Is there a relationship between students' writing scores and their attitudes? The results of the study show that conducting collaborative writing sessions in addition to traditional writing practices improved students attitude levels both towards writing and CW, and as a consequence of such improvement and change, students obtained higher grades. In other words, CW changed students' attitudes in a positive way and this level of change resulted in higher scores.

There are studies which support the findings of the current study. The results of the study conducted by Powell (1984) show a close link between attitude and success. Another study which share similar results is by Gallick and Sheryl (1997). Following an AR activity, they declared that “students demonstrated a 100 percent increase in positive attitudes towards writing”, as well as an improvement in their writing success (p. 71). In addition, Dörnyei (2003) stresses that high level of motivation and success results in fruitful L2 learning. Similarly, Gardner and Lambert (1972) assert that students’ attitudes have an impact on their motivation, which leads to language learning, in this case, it is writing. They further state that attitudes are closely associated with achievement.

5.1.4 RQ 4: Does collaborative writing lead to more readable papers? The readability analysis of the study revealed that after the study, the readability levels of the texts were much higher, which made the texts more difficult to be understood. Comparing pre-CWT and post-CWT results, it was clearly seen that the readability levels of both groups reached higher levels in the post-CWTs compared to the pre-CWTs, but the amount of increase was far more remarkable in the experimental group. That is to say, all of the participants used higher levels of language and thus, they were able to reach higher grades of readers. This finding also makes the study in line with other research studies.

There are numerous studies conducted in collaborative writing alone; however, the literature is so scarce that there are very few studies held on readability in collaborative writing. One of these precious studies is by Deveci & Ayish (2018), which is about using dictogloss as a collaborative writing activity. In their study, they compared readability levels of original texts and student writings by using an online readability formula. They concluded that students who wrote in collaboration were more likely to improve the level of language in their outputs. This can be a proof that students who are writing in collaboration are more careful with their language use.

Another study by is Hartley & Cabanac (2016). They strove to figure out whether writing collaboratively in pairs affect the readability of academic blogs, and contrary to the presumptive beliefs, they found out that collaboratively written posts

were less readable than the individually written ones. This finding also challenges the widespread opinion on collaborative writing when the readability calculation is put into practice.

Considering the insufficient number of researches on readability and the results of the study, readability brings more challenges than benefits. Klare (1976) mentions that readability formulas do measure the style only without touching on the content, organization, or word order. They measure mostly the difficulty of a text and they do not inform you about the accuracy. Since shorter sentences are perceived to be better, they are not good indicators of writing success as they have the tendency to score basic sentence clauses as difficult. Moreover, a short sentence may be difficult for readers, even a short word may also be difficult. Klare further states that the formulas make no distinctions based on readers' characteristics.

Another point is that readability formulas only measure what can be counted. While developing the formulas, developers dismiss all the features that cannot be easily calculated although they are aware know that the dismissed parts effect the readability of a piece of material. In accordance with this, Redish (1980) stated that "the features included in the published formulas are usually chosen as much for how easy they are to count as for their predictive value" (p. 69).

In sum, as for the results of readability measurements, a good score does not mean that the text is perfect and lower scores do not tell what else is wrong with the written material except for longer sentences and unfamiliar words; nor does it provide any feedback. Regarding the related literature and the results of the study, readability measurement formulas are not good indicators of success in both writing and collaborative writing contexts.

5.2 Pedagogical Implications

The results of the study and relevant literature revealed that collaborative writing is highly beneficial for students. The main pedagogical implication that arises from the present findings is that by using collaborative writing there may be established supportive environment for teaching and learning writing, which enables

students to learn from each other; not just the necessary grammar and vocabulary, but also the organizational structures of the given tasks. It is a well-known fact that most of the students see writing as a challenging process, which also affect their attitudes towards writing in a negative way. As the study shows, collaborative writing has positive effects on attitudes of learners due to different learning opportunities it brings into classrooms. In addition, the study revealed that students are open to new activities in their writing classes. Therefore, instructors should include some collaborative activities in order to deal with negative attitudes of learners towards writing. When learners believe that the activity being conducted is beneficial, they focus on the task more, and as a result, they improve their writings, which is reflected on their writing scores. Thanks to collaborative writing, with all aspects and sub skills, it is a rewarding classroom implication.

5.3 Conclusions

The aim of this study was to investigate the effects of collaborative writing practices on the students of the school of foreign languages of a state university. The study also indicated the challenges students face in L2 writing and it was concluded that collaborative writing is a writing teaching tool that can be used to overcome these problems. After six-week period of implementation, it was found that students' writing success improved substantially. In addition to writing scores they got, their attitudes towards collaborative writing changed in a positive way.

This study was carried out for six weeks in addition to students' usual writing lessons. Students' writing scores improved because during each collaborative writing activity, students were allowed to interact each other, which may have helped them to learn from each other. In so doing, thanks to collaborative dialogue and languaging, they found the opportunity to fill the gaps they have, and each week, they began to feel more secure, which enabled them to write more confidently. In addition, since the activity continued simultaneously to the curriculum for six weeks, they had the opportunity to practice more than they were supposed to do, and consequently their writing scores increased.

The results of the questionnaire applied to measure the level of attitudes demonstrated that they had positive attitudes towards writing and collaborative writing. The reasons might be that their level anxiety decreased after the treatment. They were more eager to write since they shared the responsibility by taking on different roles, which made them more confident and they were not afraid to make mistakes. However, through the collaborative writing process, students were not provided with feedback by the researcher. Within a longitudinal study, this might be a drawback for their language development, since they may develop misusages of language and structural forms while interacting their peers or other group members.

As for the readability measurements, formulas utilized are not good indicators of success since they only tell about the difficulty of a text without mentioning the accuracy and this limits their functionality.

In conclusion, the results of the study supported by the pertinent literature show that collaborative writing is an effective and efficient teaching method that can be administered in writing classes.

5.4 Recommendations for Further Study

This study was conducted with limited number students at a state university. A similar study can be conducted with a higher number of participants from several other universities to gather more comprehensible data and reach more general results. Another point is that in the study only quantitative method was adapted. The same research can be conducted by administering both quantitative and qualitative method. Furthermore, in this study, questionnaire was the only tool used to collect data about attitudes of the participants. For further study, researchers can consider interviewing the learners in order to gain more insight about collaborative writing and attitudes.

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Appendices

A. Consent Form:

This is a research being conducted by Bahçesehir University, English Language Education Master's Program. You are invited to participate in this research. Your participation in this research is voluntary. You may choose not to participate. The procedure involves filling a questionnaire that will take approximately 5 minutes. Your responses will be confidential. You also have the right to withdraw from the study at any time. The results of this research will be used for scholarly purposes only. If you have any questions about the research, please contact:

behceterden@gmail.com

I accept to respond this questionnaire. Yes No

B. Questionnaire

Gender: 1) Female 2) Male

Age:

A. Circle the item which is appropriate to you.

I have written with a group. *never* *rarely* *sometimes* *often* *usually*

B. Put a tick under the item which is appropriate to you.

N= neutral *SA= strongly agree* *A= agree*
D= disagree *SD= strongly disagree*

	Question	SA 1	A 2	N 3	D 4	SD 5
1	I like to write in English.					
2	I am not good at writing in English.					
3	I have difficulty in concentrating on a topic and writing about it in English.					
4	Expressing ideas through writing in English seems to be a waste of time.					
5	Writing in English improves my grammar.					
6	Writing in English improves my vocabulary.					
7	Writing in English improves the quality of my writing.					
8	I prefer thinking alone before and during writing.					
9	I cannot explain my thoughts in writing easily.					
10	I do not like sharing my thoughts with others while writing together with them in English.					
11	I believe that writing with a group would improve my English grammar more than writing alone.					
12	I believe that writing with a group would improve my English vocabulary more than writing alone.					
13	I believe that writing with a group would improve the quality of my writing in English more than writing alone.					

C. Writing Rubric

	1 point	2 points	3 points	4 points	Points
Topic Sentence	Topic sentence is present but without controlling idea	Topic sentence is present but with controlling idea			
Body/Supporting Sentences	1 supporting sentence	2 supporting sentences	2 supporting sentences and at least 3 sentences	3 or more supporting sentences with details and examples	
Concluding sentence	Concluding sentence is present but does not sum up the paragraph	Concluding sentence is present and sums up the paragraph or restates the main idea			
Organization Coherence Transitions	At least 1 signal word or transition with limited coherence	2 signal words or transitions providing coherence	3 signal words or transitions providing coherence	At least 5 signal words or transitions providing coherence	
Grammar Punctuation Spelling Capitalization	More than 10 errors in spelling, punctuation, and grammar	Between 10-7 errors in spelling, punctuation, and grammar	Between 7-5 errors in spelling, punctuation, and grammar	Less than 5 errors in spelling, punctuation, and grammar	
				TOTAL:	

D. Rubric of Equivalence

points students got for the second draft	equivalence
1 point	6 points
2 points	13 points
3 points	19 points
4 points	25 points
5 points	31 points
6 points	38 points
7 points	44 points
8 points	50 points
9 points	56 points
10 points	63 points
11 points	69 points
12 points	75 points
13 points	81 points
14 points	88 points
15 points	94 points
16 points	100 points

E. Permission Letter



T.C.
MANİSA CELAL BAYAR ÜNİVERSİTESİ
Yabancı Diller Yüksekokulu Müdürlüğü



Sayı : 15715141-302.14.06-
Konu : Yüksek Lisans Tez Uygulama İzni
(Behçet ERDEN)

Sayın Behçet ERDEN

İlgi : 30.03.2020 tarih ve 13002 sayılı dilekçeniz.

İlgi dilekçeniz ile talep ettiğiniz "The effects of Collaborative Writing on Students' Writing Scores" başlıklı yüksek lisans tez çalışmanızı Yüksekokulumuzda yapmanız uygun bulunmuştur.
Bilgilerinizi rica ederim.

e-İmzalıdır
Prof. Dr. Mahmut KARGİN
Yüksekokul Müdürü

Evvelki Doğrulama İzni : <https://dogrulama.cbu.edu.tr/evvelki-dogrulama-belgedogrulama.aspx?V=DEA5K36TN>
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Bu belge 6070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

F. CV

