

# THE EFFECTS OF PAPER-BASED AND COMPUTER SUPPORTED COLLABORATIVE WRITING ON THE WRITING PERFORMANCES OF PRE-INTERMEDIATE LEVEL PREPARATORY STUDENTS AT ULUDAG UNIVERSITY

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İngilizce Adı: The Effects of Paper-Based and Computer Supported Collaborative Writing on the Writing Performances of Pre-Intermediate Level Preparatory Students at Uludag University

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Tez yazma sürecinde bilimsel ve etik ilkelere uyduğumu, yararlandığım tüm kaynakları kaynak gösterme ilkelerine uygun olarak kaynakçada belirttiğimi ve bu bölümler dışındaki tüm ifadelerin şahsıma ait olduğunu beyan ederim.

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Serhat AŞIK tarafından hazırlanan "The Effects of Paper-based and Computer Supported Collaborative Writing on the Writing Performances of Pre-Intermediate Level Preparatory Students at Uludag University" adlı tez çalışması aşağıdaki jüri tarafından oy birliği ile Gazi Üniversitesi İngiliz Dili Eğitimi Anabilim Dalı'nda Yüksek Lisans tezi olarak kabul edilmiştir.

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To My Parents, Şevket and Ayşe Aşık, my grandmother Meryem Aşık, and my brother Fuat Aşık, and to the future of our generation; Arda, Eymen and late Ömer Asım Şahin, and Aras and Asya Saraç

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# KAĞIT ÜZERİNDE VE BİLGİSAYAR DESTEKLİ İŞ BİRLİKÇİ YAZMANIN ULUDAĞ ÜNİVERSİTESİ ORTA SEVİYE ÖĞRENCİLERİNİN YAZMA PERFORMANSINA ETKİLERİ (Yüksek Lisans Tezi)

# Serhat AŞIK GAZİ ÜNİVERSİTESİ EĞİTİM BİLİMLERİ ENSTİTÜSÜ Mayıs, 2018

## ÖΖ

Bu çalışma, yabancı dil olarak İngilizce öğrenmek amacıyla 2016-2017 akademik yılında Uludağ Üniversitesi Yabancı Diller Yüksekokulu'nda Hazırlık sınıfı orta seviye İngilizce eğitim gören öğrencilerin yazma becerileri performansları ile öğrencilerin içinde bulundukları yazma ortam ve durumları arasındaki ilişkiyi ortaya koymayı hedeflemektedir. Bu hedef doğrultusunda yazma ortamları bireysel yazma ve iş birlikçi yazma ortamları diye ikiye ayrılmıştır. Ayrıca iş birlikçi yazma ortamı da kağıt üzerinde ve bilgisayar destekli yazma olmak üzere ikiye ayrılmıştır. Çalışmanın üç farklı yazma durumunu kapsamasının sebebi olarak alanyazında yapılan çalışmaların genelde ikili karşılaştırma şeklinde yapılmış olmaları verilmiştir. Bu çalışma Türkiye'de yapılan benzeri diğer çalışmalar ile karşılaştırıldığında ilk üç yönlü deneysel çalışma olarak kendini göstermektedir. Yapılan araştırmanın sonuçlarına karma yöntem kullanılarak ulaşılmıştır. Bu çalışma kapsamında öğrenciler ön eğitim ve ön testin ardından altı haftalık uygulama sürecine geçmişlerdir. Ardından çalışma son test ile sonlandırılmıştır. Nicel veriler için ön ve son testler iki bağımsız ve eğitimli öğretim elemanı tarafından TOEFL Bağımsız Yazma Ölçeği kullanılarak değerlendirilmiştir. Bununla birlikte, araştırmanın nitel boyutu için dokuz öğrenci ile yarı yapılandırılmış görüşmeler gerçekleştirilmiştir. Bu öğrenciler tabakalı örnekleme yöntemi ile seçilmiştir. Elde edilen nicel veriler bilgisayar destekli işbirlikçi yazma grubunda yer alan öğrencilerin diğer gruplara göre anlamlı ölçüde daha başarılı yazabildiklerini göstermiştir. Kağıt üzerinde işbirlikçi yazma grubunda olan öğrencilerin ise bireysel yazma grubundaki öğrencilere göre daha başarılı oldukları nitel ve nicel verilerden elde edilen bulgular sonucunda ortaya konulmuştur. Nitel verilere bakıldığında ise işbirlikçi gruplarda yer alan öğrencilerin buna benzer çalışmaların diğer beceriler için de yapılması gerektiğini savunduğunu göstermiştir. Ayrıca, bilgisayar destekli işbirlikçi grupta yer alan öğrencilerin bu deneyimi yenilikçi ve farklı buldukları vurgulanmıştır. Yapılan bu çalışmanın farklı yazma ortamlarını anlamaya yönelik yeni ve daha kapsamlı çalışmalara yardımcı olması amaçlanmaktadır.

Anahtar Sözcükler: İşbirlikçi yazma, Bilgisayar yestekli işbirlikçi yazma, Bireysel yazma,

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### ABSTRACT

This study aims to reveal the relationship between the writing environments and applications and the writing performance of the students studying in pre-intermediate classes at Uludağ University School of Foreign Languages in the 2016-2017 academic year of English as a foreign language. In line with this purpose, the writing environments were divided into individual writing and collaborative writing. Moreover, the collaborative writing environment was separated into paper-based and computer supported collaborative writing. The reason for employing three different writing situations within this study can be predicated on the argument that the current literature is usually based on two-way comparisons. Within the scope of this study, the students underwent a six-week implementation process following a training session and a pre-test. Next, the study was concluded with a post-test. Furthermore, another example similar to this study could not be found within Turkish context. The results of this study was analysed through mixed a method approach. The pre- and post-tests of the groups written before and after the implementation were assessed by two independent and trained instructors for quantitative data analysis. These assessments were made through the TOEFL Independent Writing

Rubric. Moreover, the qualitative data were collected through semi-structured interviews with nine students. These students were selected through stratified random sampling method. The quantiative data showed that the students in the computer supported collaborative writing group produced significantly more successful writing outputs. It was also found that the students in paper-based collaborative writing group was slightly more successful than the individual writing group according to the result of quantitive analysis. Besides, the qualitative analysis showed that the students in the collaborative writing groups supported the idea of utilizing such experiences for other language skills. The students in the computer supported collaborative writing group underlined that the study had been an innovative and different experience for them. The current study aims to contribute to more recent and comprehensive studies on understanding different writing environments.

Key Words: Collaborative Writing, Computer Supported Collaborative Writing, Individual Writing, English as a Foreign Language Page Number: 98

Advisor: Assoc. Prof. Dr. Bena Gül PEKER

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## LIST OF ABBREVIATIONS

- CALL COMPUTER ASSISTED LANGUAGE LEARNING
- CSCL COMPUTER SUPPORTED COLLABORATIVE LEARNING
- CSCW COMPUTER SUPPORTED COLLABORATIVE WRITING
- EFL ENGLISH AS A FOREIGN LANGUAGE
- ESL ENGLISH AS A SECOND LANGUAGE
- PBIW PAPER-BASED INDIVIDUAL WRITING
- PBCW PAPER-BASED COLLABORATIVE WRITING

### **CHAPTER I**

#### **INTRODUCTION**

In this chapter, background to the study, purpose and significance of the study will be presented along with the definitions of some key words. The main objectives of this study will also be introduced.

#### **1.1. Background to the Study**

Writing in a foreign language is a rewarding experience since it is achieved through a challenging process in which students may have to overcome "cognitively and emotionally demanding" steps to produce a grammatically accurate and coherent text usually under time pressure (DeLost, 1998, p. 96; McLeod, 1987). It is generally considered an individual activity conducted through expert or teacher feedback. However, social, affective and motivational advantages of working on a text with peers cannot be underestimated. Accordingly, writing in groups not only allows students to endeavour in order to maintain a social relationship in harmony (Nelson & Carson, 1998), but also decreases students' anxiety and increases their motivation (G. Ç. Yastıbaş & A. E. Yastıbaş, 2015; Yang, Badger & Yu, 2015). The number of studies concentrating on the effects of such processes of the writing skill, however, is far behind what is necessary to understand the collaborative writing process (Storch, 2013; Wigglesworth & Storch, 2012).

The dramatic changes in understanding collaborative work in the 1990s constituted the first steps in improving the research on collaborative writing. Approaches focusing on the individual rather than the associated social group were mostly adopted before the 1990s (D. W. Johnson & R. T. Johnson, 1996). However, some approaches in the 1990s paved the way for more research on collaborative work, and in particular, collaborative writing. These were the theories of situated cognition, distributed cognition, sociocultural activity theory and ethnomethodology, the philosophies of phenomenology, mediation and dialog. They are concerned with the cognition and knowledge not being restricted in individual minds but emerging through interpersonal interactions.

Although the research on collaborative writing is limited, the current body of literature is in favour of utilizing collaborative writing in L2 writing classes for social, affective, and academic reasons. Firstly, the social interaction occurring among group members in order to produce a collaborative output could be advantageous for the whole group (Stahl, 2006). This social advantage may be caused by the individual differences in terms of faculty, gender or personality among the group members (Kucukozer-Cavdar & Taskaya-Temizel, 2016). Moreover, attempting to accomplish a writing task through mutual endeavours within group dynamics, students can be relieved from their constant stress resulting in anxiety (Li & Kim, 2016). Finally, collaboration in writing can support students' writing performance (Storch, 2005; Wigglesworth & Storch, 2012). It encourages students' interaction with the text (Elola & Oskoz, 2010) as well as fostering the social interaction among students resulting in immediate feedback, thus producing better texts (Storch, 2005). As a result, it can be seen that the advantages of collaborative writing are affecting one another.

Collaborative writing provides students with the advantage of working together within a social environment. This leads to reduced stress, collective cognition, and improved academic performance. However, the question that still remains to this day is how to maximize these advantages. With respect to this question, changing the writing

environment and transferring it into Web 2.0 technologies such as blogs, wikis or socialnetworking sites have been presented as a means of writing collaboratively (Aydın & Yıldız, 2014; Chan, Pandian, Joseph & Ghazali, 2012; Dizon, 2016; Wu, 2015). The development of technological tools and online platforms facilitated the collaborative process in L2 writing and enabled students to build an efficient connection (Blin & Appel, 2011). Furthermore, increasingly user-friendly softwares account for immediate exchange of ideas and feedback without any need to undergo intensive training. This integration of technological advancements with regard to collaborative writing avails students to gain more autonomy (Kessler & Bikowski, 2010). This can eventually make them less anxious and more motivated (Lin & Maarof, 2013).

Considering the potential advantages of collaborative writing whether in conventional classroom settings or online platforms, the existing body of research is still limited, particularly from a comparative view for these two different settings (Dobao, 2012; Storch, 2013). Therefore, the present study expounds arguments on the effects of individual and collaborative writing in different writing environments. Not only the effects of writing individually and collaboratively, but also writing in conventional paper-and-pen or online writing environment were studied to explain the related differences. Moreover, the perception change of the students in these groups was scrutinized through qualitative data. Within the context of this study, all three groups of students were given the same writing instruction during the fall semester. Hence, they were aware of the basic components of the writing tasks. The first group accomplished the brainstorming, drafting, revising, and publishing steps of the writing tasks individually. The second and third group, on the other hand, performed the brainstorming and revising steps collaboratively. The third group, however, carried out all the stages on computer supported writing environments, which are Google Docs and Wikispaces. Google Docs was utilized during the brainstorming stage in order to maintain an uninterrupted simultaneous student interaction. Moreover, Wikispaces was employed for peer revision and feedback as it provides storage and synchronous

discussion services. This group of students also performed the writing tasks in a computer laboratory so that each group could undergo the writing process under similar circumstances and within an equally given period.

#### **1.2. Statement of the Problem**

Writing in English as a Foreign Language (EFL) classes has been an important issue for language teachers as it is a difficult skill to obtain through the language learning process (Çakır, 2010; Lin & Maarof, 2013; Marzban & Jalali, 2016). Various attempts at facilitating this overwhelming process has been successful to some extent. These attempts were either through improving the competence of writing instructors to provide feedback and present information or developing students' interaction with their writing process. Some of them are directed at enhancing individual or group writing performance (Dobao, 2012; Marzban & Jalali, 2016; Mirazi & Mahmoudi, 2016; Nixon, 2007), while others are concerned with improving the writing environment (Kessler & Bikowski, 2010; Li & Zhu, 2013). However, with regard to increasing students' interaction with the writing process, the amount of research studies in the literature is limited in terms of comparing group and individual work or different writing environments (Storch, 2013).

With the advent of current technological writing tools, the need to explore innovative means of online collaborative writing tools has arisen. This study investigates the differences between individual and collaborative writing in terms of their effects on the development of students' writing performance. Furthermore, it provides an insight into the students' perceptions of using Google Docs and Wikispaces in a computer supported collaborative writing class and utilizing peer feedback in collaborative learning environments. Thus, the effects of integrating diverse writing tools and environments can be explored in order that it can be beneficial for the current literature. Once these effects have been identified, writing classes can be configured in a way to maximize the benefits of writing environment for students' writing performance. The present study may have the

potential to offer support to improve the learning environment by providing writing instructors with a broad understanding of writing environments. Moreover, it may contribute to students' classroom assignments.

#### 1.3. Purpose of the Study

The overarching purpose of this study is to explore and explain the differences between the writing performances of English students at pre-intermediate level of proficiency either in individual, paper-based or computer supported collaborative writing environments. It also sheds light on how the perceptions of the participants involved in paper-based or computer supported collaborative writing classes change through the implementation process.

#### 1.4. Research Questions of the Study

Situated in the line of abovementioned collaborative writing research, this study empirically investigates the relationship among:

- (a) individual and collaborative writing environments in pre-intermediate level university preparatory classes;
- (b) the writing performance of these students; and

(c) their perceptions of three different contexts: one in which a student writes individually in a pen-and-paper based environment, one in which the students write in groups (paper-based collaborative writing, namely PBCW) and one in which the students write in groups using Google Docs and Wikispaces (computer supported collaborative writing, namely CSCW).

The present study is a comparative experimental study as it compares the effects of different writing applications and settings on writing performance. The research questions guiding this study in the context of pre-intermediate level English writing classes at a state university in Turkey are as follows:

- 1.) What are the effects of paper-based individual, paper-based collaborative writing, and computer supported collaborative writing practices on the students' writing performance?
- 2.) Do the perceptions of pre-intermediate level students change towards paperbased and computer-supported collaborative writing after implementation?

#### **1.5. Significance of the Study**

Planning, revision, and receiving feedback are the main crucial processes to undergo during L2 writing (Leng, 2014; Mirazi and Mahmoudi, 2016). These processes can be accomplished individually and collaboratively under teacher supervision. Research in L2 writing has shown the differences between individual and collaborative work through these stages (Elola & Oskoz, 2010; Kessler, Bikowski & Boggs, 2012). Moreover, another set of studies have focused on the differences between conventional paper-and-pen collaboration and computer supported collaboration (Dizon, 2016; Jun, 2008). With regard to computer supported collaborative writing, the mediums used during this procedure have also been studied (Pardo-Ballester and Cabello, 2016).

The present study aspires to contribute to the understanding of the effectiveness of individual and collaborative writing in different writing environments on students' writing performance. Besides comparing individual and collaborative writing, the study aims to clarify the differences between two collaborative writing methods. Based on practical implementations, the findings of this study may inform EFL writing instructors about the possible consequences, thus enabling them to choose among the three options of writing, whether individual paper-based, collaborative paper-based, or computer supported collaborative writing. It may also help them to decide which writing process is more effective in terms of increasing students' interaction with the text and each other.

Another significant contribution is related to the exploration of the perceptions of students before and after each writing process. This can help the current body of literature to understand how students' perceptions evolve after the related implementations. Moreover, it can allow educational program developers to interpret the educational needs for more successful and interactive L2 writing applications.

A thorough review of literature revealed that the studies on the controversial issue of individual and collaborative writing is limited especially in Turkish context. Within a more global framework, it can be seen that the comparison of writing environments is usually restricted to two distinct options, between either individual and collaborative writing or pen-and-paper based and computer supported writing. However, this inhibits the profound understanding of various environments for the benefit of L2 writing. This study is significant in that it provides multiple comparisons of the effects of different writing environments as well as different writing applications.

#### 1.6. Definitinions of Terms

#### 1.6.1. Wiki

This term originally means "quick" in Hawaiian and is used first by the creator of wikis, Ward Cunningham (Kessler, 2009). In a technological context, they are second-generation web tools which can be edited by multiple users and facilitate collaborative writing activities (Cole, 2009).

#### 1.6.2. Collaborative Learning

It refers to working together in a group to accomplish a pre-assigned task and should not be mistaken for small study groups composed by teachers for intensive instruction (Cohen, 1994). It is also used as a synonym and interchangeable alternative for cooperative learning (D. W. Johnson & R. T. Johnson, 1996).

#### **1.6.3.** Paper-Based Individual Writing (PBIW)

It is used to define the writing process whose stages included brainstorming, drafting, revising, and publishing were completed individually without the assistance of a peer or a teacher.

#### 1.6.4. Paper-Based Collaborative Writing (PBCW)

It is used to define the writing process some stages of which (brainstorming and revising) were completed through collaborative among the members of a group working together in a convential classroom setting.

#### **1.6.5.** Computer Supported Collaborative Writing (CSCW)

It is defined as working together in a group through various computer softwares allowing its user to write onto a joint or separate pages (Storch, 2013). Within the purposes of this current study, Google Docs and Wikispaces are used to enable computer supported collaborative writing.

### **CHAPTER II**

### LITERATURE REVIEW

#### **2.1. Introduction**

This chapter reviews the relevant literature in accordance with the purposes of this study focusing on the effects of different writing environments and applications on writing performance. First, the main issues related to writing performance in L2 writing are examined, which is followed by a discussion of the advantages of collaborative and computer supported collaborative writing. Lastly, the effects of computer supported collaborative writing. Lastly, the effects of computer supported through an overview of relevant studies. Throughout this review, the relation between the sections and the present study is emphasized.

#### 2.2. Writing in Second Language

L2 writing is an area which needs to be explored in depth as studied by Yigitoglu and Reichelt (2012) to unravel the mysteries lying behind the steps to a successful writing in the target language. The literature pertaining to writing in second language, which has been considered as a complex skill for students, is separated into product and process focused before and after 1970 (Lee, 2017). However, the question concerning whether writing is a

skill that is acquired in order to contribute to or as a result of language learning process requires more research (Manchón, 2011). The understanding of this dilemma can facilitate the development process of L2 writing. This development is necessary for academic or occupational purposes, having international and intercultural communication, and supporting the learning process of other language skills (Yigitoglu & Reichelt, 2012).

In an attempt to clarify the aforementioned dilemma, Williams (2012) focused on the contribution of writing to second language learning based on the differentiation by Manchón (2011). The conventional perspective, on the other hand, regarded the target language as a gradual progressive process which eventually enables students to produce a written output. However, "the slow pace, cognitively encouraging records and providing an opportunity to explicit knowledge of language in order to reach a higher precision in writing" encourages students to interact more with the target language (Williams, 2012, p. 44). Moreover, the role of L2 writing in language learning process was also emphasized by Lee (2017), who specifies that it is a problem-solving process in which students go back and forth between the stages of pre-writing, writing, rewriting, editing and publishing (Lee, 2017).

Upon gaining a better understanding of the significance of L2 writing for foreign language development, a large number of studies attempted to obtain a clearer and more concrete view. It is because L2 writing is considered to be a cognitively and emotionally demanding process which requires formulating, executing and monitoring a text (Kellogg, 2001). The relationship between task complexity and L2 writing, for example, was studied by Révész, Kourtali, and Mazgutova (2017). They concluded that content needs to be supported in order to reduce the cognitive burden on students. The interrelationship among L1 writing skills, L2 writing skills, and L2 proficiency, on the other hand, was studied by Marzban & Jalali (2016). They suggested that L1 writing was more of a determinant at advanced levels while L2 proficiency led to a more successful writing performance at lower levels.

Furthermore, the need to facilitate this complex and challenging process has been a focus of research by many researchers from different perspectives. A taxonomy of ESL writing strategies for L2 students and teachers, first of all, was suggested by Mu (2005), consisting of rhetorical, meta-cognitive, cognitive, communicative, and social/affective strategies to facilitate L2 writing process. The importance of these strategies was also emphasized by Raoofi, Chan, Mukundan, and Rashid (2014). They found out that students who are highly proficient utilized more meta-cognitive strategies and, accordingly, organized their ideas and revised their content more than less proficienct students. Another study focusing on the facilitation of this process suggested to provide students with planning, translation, restructuring, in which they may change their ideas, the clausal structure of written text or linguistic components of their writings, and backtracking strategies for promoting their L2 writing performance (Jun, 2008). In order to accomplish L2 writing tasks successfully, EFL teachers also need to be aware of the obstacles and their own 'identities' in the writing classroom (Lee, 2013). These obstacles can be overcome through the use of recent technological opportunities maintaining a less overwhelming writing process (Aydın & Yıldız, 2014). Another perspective at facilitating the writing process focuses on the content suggesting that it needs to be supported so that the amount of pausing while writing is reduced while the revisions are increased (Révész et al., 2017). It was stated that when there was not enough support, the participants spend more time on planning, and thus pausing more frequently. Finally, more innovative social/affective approaches were proposed to facilitate L2 writing such as introducing students with drama activities in writing classes (Nordin, Sharif, Fong, Mansor & Zakaria, 2012), and paying special attention to teacher education programs in order to train teachers to deal with the interfering issues in L2 writing classes (Lee, 2013).

In summary, it has mostly been suggested that L2 writing is a complex, cognitively and emotionally demanding process both for students and teachers. However, the understanding has shifted from perceving it as an end-product to integrating it to improve language learning process. Thus, the research has concentrated recently on facilitating this process in order to resolve the related issues for the benefit of foreign language development.

#### 2.3. Collaborative Writing

There are many studies focusing on collaboration and teamwork in learning environments and particularly collaboration in writing (Blin & Appel, 2011; Cho & Lim, 2015; Stahl, 2006; Storch, 2013; Wigglesworth & Storch, 2012; Wu, 2015). Collaborative writing is considered as an effective strategy which requires the collaboration of two or more participants during the writing process (Wu, 2015). It facilitates the exchanges of ideas among the members of the same group resulting in more goal-oriented tasks and reflective students (Aydın & Yıldız, 2014; Kung, 2002).

Collaborative work is about inventing knowledge and skill together in pairs or groups through 'teaching each other, viewing from different perspectives, dividing tasks, pooling results, brainstorming, critiquing, negotiating, compromising, and agreeing' that would otherwise be too difficult to produce alone. It is a difficult process where students contribute representing various perspectives (Stahl, 2006, p.126). Ede and Lunsford (1990 as cited in Storch, 2013) indicated that this process is considered to be collaborative only when substantive interaction in all stages of the writing process is in question to produce a single and jointly written document. However, a collaborative writing session is not obligated to include each and every type of collaboration (Kessler & Bikowski, 2010). It can be divided into five different models: consensus group work, peer tutoring, project work, writing peer review, and response to lectures (Bruffee, 1993). It can also be categorized as 'joint collaboration, parallel collaboration, which are about producing one text as a group, incidental collaboration characterized by brief assistance between group members directly related to their writing tasks, and covert collaboration regarding the

assistance from different sources such as dictionaries, translators, grammar or spell checkers (Parks, Hamers & Huot-Lemonnier, 2003).

The findings of the studies related to the aforementioned collaborative writing types and models suggested that the students favoured collaborative writing (Alwi, Adams & Newton, 2012; Lin & Maarof, 2013). This preference can be explained by the positive effects of collaborative writing on building content and organization in writing which results in significant writing improvement (Sajedi, 2014). However, there are individual differences to consider due to cognitive and motivational variables. Students' motivation and their anxiety level, for example, can play a great role in how effective collaborative process is for students. During collaboration process, students need to review each other's work, and this may increase their anxiety level, whereby declining their motivation (Kormos, 2012). Taking the effects of individual differences on collaboration into account, Zhang (1995; 1999) studied the influence of the feedback types on the affective grounds and claimed that peer feedback and self-feedback are not as efficient as teacher feedback. He suggested that peer feedback during collaborative work needs to be used provided that the teacher cannot provide any feedback. This is because he claimed the students feel more stressed with a high level of anxiety and less motivated while studing with their peers. However, he also remarked that one type of feedback should not be chosen over the other depending solely on a limited research. This implies that more comprehensive analysis of feedback in L2 writing must be conducted in order to comprehend the drawbacks that may occur during the collaborative process.

#### 2.3.1. Feedback in Collaborative Writing

Feedback on students' writing provides writing teachers with insight into how effectively their students are performing and with a chance to encourage them accordingly. Students may also be in need of feedback to be aware of the steps necessary to improve their writing skills since giving and receiving feedback are eventually claimed to lead to learning in the second language as a result of contemplating over their writing process and the endproduct (Berg, 1999; Patri, 2002; Wigglesworth & Storch, 2012; Yu & Hu, 2017).

One type of feedback that is commonly used is the two-way categorization of direct and indirect feedback. The first category focuses on students' rewriting by taking the explicit corrections made by the teacher into consideration (Ferris & Roberts, 2001), thus producing fast and accurate texts (Chandler, 2003). Another type of feedback is indirect feedback. It can be in the form of highlighting, underlining or circling the error, indicating the number of errors before the corresponding line, and using a coding system to signify the type of error (Bitchener & Knoch, 2008, p. 414). When these two types of feedback are compared, it is argued that direct feedback is claimed to be more effective for beginner level students whereas the indirect feedback is more beneficial for the advanced students of English (Jun, 2008).

Another categorization of feedback types is made as surface-level or meaning-level feedback. Adapting the taxonomy of revisions from Faigley & Witte (1981), Paulus (1999) described the surface-level changes "either formal changes as such as spelling/capitalization, tense/number/modality, abbreviations/contractions, punctuation, formatting, morphological changes or additions deletions, substitutions, permutations, distributions, consolidations which do not interfere with the meaning, and meaning-level changes as additions deletions, substitutions, permutations, distributions, consolidations which affect the interpretation of the text" (p. 274). On the other hand, the importance of meaning-level revision was underlined by Zamel (1983) and Raimes (1985) claiming that an otherwise approach may not make a great contribution in terms of improving the students' writing performance. This can be encouraged through open-ended and meaningfocused tasks which are cognitively demanding (Aydın & Yıldız, 2014).

The last distinction between feedback types relates to the source of the feedback. Within this context, students may get direct or indirect feedback, surface-level or meaning-level feedback either from their teachers or their peers (Jun, 2008). However, the issue of

choosing teacher's or peer's feedback can affect the overall writing performance more has long been discussed by the researchers (Jun, 2008; Paulus, 1999; Ruegg, 2015; Yang, Badger & Yu, 2006). While some researchers agree that teacher feedback is inevitable for the purpose of improving the students' language skills (Jun, 2008; Ruegg, 2015), others have discussed the considerable benefits of facilitating peer review in foreign language classes (Yang, Badger & Yu, 2006). Accordingly, teachers or peers may provide students with feedback in an EFL classroom.

Teacher feedback has been supported as being a significant component of L2 writing (Paulus, 1999). In addition, Nelson and Carson (1998) stated that students preferred the teacher feedback to peer feedback since they are considered as experts at identifying mistakes. It was, however, claimed to be ineffective due to its nature of being vague or "rubber-stamp", and its possibility to induce inattention to feedback as long as it focuses too much on error correction (Truscott, 1996). Hence, a differentiation among teachers was made by Lee (2008), who suggested that teachers maintaining reflective and efficient feedback can contribute to students' writing performance more than those detracting students from explicit error correction on account of giving them illegible error feedback. The ineffectiveness in question may be concerned with crowded classes and programmes merely focusing on exams and homework, thus restricting the opportunity to provide more specific, idea-based, meaning-level teacher feedback (Yang, Badger & Yu, 2006). It is understood that teacher feedback is preferable and functional, particularly, when teachers are trained and well-aware of its consequences.

Peer feedback provides students with affective, social and academic advantages. It has been supported primarily because it enables students to gain autonomy while experiencing more meaning-level revisions. This autonomy results in reduced workload for writing instructors (Patri, 2002). These revisions are made through reciprocal exchange of ideas followed by teacher feedback on the final output (Yang et al, 2006). Moreover, peer feedback is 'a socially mediated activity' in which students use some strategies such as 'using L1 (Artefact), employing L2 writing criteria (Rule), adopting rules of group activity (Rule), seeking help from teachers (Community), and playing different roles to increase their group interaction (Yu & Lee, 2016). This interaction is useful in reducing the students' anxiety towards L2 writing (G. Ç. Yastıbaş & A. E. Yastıbaş, 2015). Finally, Lee (2015) maintains that "peer feedback could foster mastery goal orientations, trigger task interest, offer training on perspective-taking at different feedback stages, and enhance language and writing development" (p. 7).

Although the advantages of peer feedback have been studied, some relevant issues and attempts to resolve these issues have been presented in the current literature. A study by Carson and Nelson (1996), for example, claimed that students may be unwilling to make any negative comments on each other's writing in order not to disrupt their social relations. They later found out that students actually preferred these negative comments from either their peers or instructors (Nelson & Carson, 1998). Furthermore, their presumable unwillingless may be explained due to rising anxiety as a result of linguistic incapability (Ruegg, 2015). Hence, Yu and Lee (2014) offered to use L1 for the development of content and organization, and L2 for form-related issues in order to decrease anxiety. Another cause of issues when utilizing peer feedback was regarded to be the size of the feedback group (Jun, 2008). Throughout the research on peer feedback, it can be seen that the ideal number of collaborators in a peer feedback group varies. Some researchers suggested working with groups of three-four members in order to incease group dynamics (Nelson & Carson, 1998; Zhu, 2001). Hu (2005), on the other hand, proposed working in pairs in order to manage the groups more effectively. Moreover, students' response to peer feedback was considered to be another issue. This was because they varied according to students' and teachers' sociocultural backgrounds, motives, value perceptions, group dynamics and feedback training (Yu & Hu, 2017). Finally, the subject of training was addressed by Min (2016), who favoured strengthening the reviewing abilities of students through mastery modeling along with correction plus explication. Offering training prior to collaborative writing sessions was also proposed by Berg (1999) in order to increase the effects of corrective peer feedback on grammar and, hereby, writing quality.

The attempts to solve the aforementioned issues with regard to social interaction, lack of training and motivation generally show that adapted and trained collaboration process can help students more in terms of attaining the predetermined objectives and reducing their affective concerns. Despite the difficulties faced during its implementation, peer feedback is still encouraged as it raises the students' awareness of their weaknesses and strengths while raising 'the ownership of text' (Tsui & Ng, 2000).

In conclusion, teacher and peer feedback need to be utilized together to achieve a significant improvement in students' writings as this would lead them to analyze their writings more comprehensively and make meaning-level changes rather than superficial ones which may not improve the overall quality of their products (Lee, 2015). What is emphasized as useful is combining meaningful and trained teacher and peer feedback with multiple-draft revisions and re-writing useful (Paulus, 1999).

### 2.4. Computer Assisted Language Learning (CALL)

### **2.4.1.** Advantages of CALL for Teachers

In numerous studies in the literature of CALL, some advantages for teachers are listed. These advantages include using class time more effectively, making the teaching more flexible, monitoring students more easily, finding numerous resources for teaching and finally enabling teachers to develop themselves professionally.

First of all, the use of computer assisted technologies can make it easier for teachers to create materials in advance (Chapelle, 2001), which reduces the time spent in class for any classroom assignment or tasks related preparation. The time they spend prior to classes for preparation makes them utilize class time more efficiently through working on predetermined and designed activities. Moreover, computers allow teachers to allocate more

time on extra activities or feedback sessions. This is because that they provide teachers with online correction and scoring opportunities.

Secondly, the teaching process can be made easier with the software programmes which are being produced and published by the publishers currently. For example, teachers sometimes have difficulties in finding authentic materials for listening and speaking and this problem can be mostly solved by the computer facilities easily (Celce-Murcia, 2001). Finally, teachers can improve their teaching skills through the online resources provided by the Internet (Dudeney & Hockly, 2007). For example, they can use blogs and wikis in writing classes for uploading files regularly for students and ask them to send their work for assessment. These make the classes more enjoyable and guide students to benefit from these in their time outside class. Teachers can design the language environment through a better understanding of online opportunities so that students can gain more student autonomy can change the language learning environment for students to attain more autonomy (Chapelle, 2008) by creating online study groups, structuring the learning activities, and facilitating group interactions (Graham & Misanchuk, 2004).

#### 2.4.2. Disadvantages of CALL and Obstacles for Teachers

Although there are many advantages of using CALL in the classroom, there are also some disadvantages and obstacles for the teachers who want to use it. Although there are more positive aspects of CALL for teachers, its negative aspects need to be taken into consideration while using computers or computer assisted technologies in the learning process. Some disadvantages are lack of trained teachers, imperfect CALL programs, and inabilitiy to handle unexpected situations.

#### a. Lack of Trained Teachers

The first challenge for teachers to integrate computer technology in their classes is their insufficient computer literacy. In language teaching, it is necessary for teachers to have the basic technology knowledge before using technology in their classes. Therefore, computers will only benefit those who are familiar with computer technology (Roblyer & Wiencke, 2003). Furthermore, it is also claimed that computer literacy directly pointed an individual's technology literacy. Without improving these competencies, the effects of ICT in teaching environments will be limited (Murray & Peres, 2014). In order to use ICT effectively in classes, teachers need to be confident with their skills (Schmidt, Baran, Thompson, Mishra, Koehler & Shin, 2009). Otherwise, they may be unwilling to integrate computers into their teaching process (Newhouse, 2002).

Apart from lack of training, some other personal reasons are also considered among the obstacles for using technology in the class. Personal characteristics such as age, gender, educational level, educational experience and experience with computers, and more importantly the attitudes of teachers towards technology can influence their use of CALL in EFL classes (Schiller, 2003). It can be seen that male EFL teachers are involved in technological processes more than their female counterparts and that novice teachers are better equipped with technological know-how which eventually affects their integration of CALL into classes.

To conclude, it can be argued that equipping the classroom with technological tools alone does not have much to do for effective educational results and that they need to be supported with training programs for teachers. They need to be equipped with basic computer skills and encouraged to utilize them for the purposes of improving their computer literacy. This can enable teachers to enrich their materials and approaches they adopt in their classes.

# b. Imperfect CALL Programs

In addition to the lack of trained teachers, some computer programs do not meet the requirements for an effective teaching process. In order to attain more precise effects of using technology, different kinds of software are needed. Today, most of the software available to EFL teachers and students are directed at improving reading, listening and writing skills, there are also some speaking programs but their function is still limited. It is not easy to find appropriate software packages in EFL classes for the desired skills at the appropriate level (Warschauer, 2004). For the teachers in Turkey, the ministry constructed a database open to teachers and students use and it is called as Eğitim Bilişim Ağı (EBA). This database is being updated and improved day by day with the contributions of teachers from all around the country. All of the programs on this database can be downloaded and installed on the IWBs in the classes. This abundance of e-materials raises another problem that is the ability and competency to choose the right materials and study with them in an effective manner. For EFL teachers, there are limited number of programs and most of them are including YouTube videos and Turkish subtitles, or basic vocabulary exercises which requires substantial improvement.

## c. Inability to Handle Unexpected Situations

The last challenging aspect of utilizing CALL in EFL classes is the teachers' inability to handle unexpected situations. Relying too much on technology for the lesson makes the teacher reliant on some other factors as well. In a technology-based lesson, teacher may face unexpected situations such as electricity problems, network errors and hardware issues. (Lai & Wu, 2006).

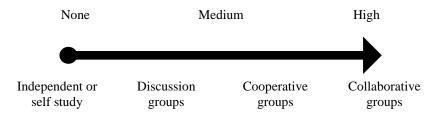
Moreover, artificial intelligence alone is not sufficient to deal with unprecedented learning problems or to respond to students' questions immediately as teachers. Considering these, no matter how much teachers rely on technology, they need to be ready to take the control of the lesson, and they always need to have extra activities and classical materials in case of any technological problems (Arnold & Ducate, 2006). Teachers are irreplaceable in that they provide moral counselling and guidance to select appropriate and genuine sources among the vast number of resources of information on the Internet through feedback and mentoring (Dina & Ciornei, 2013).

# 2.5. Computer Supported Collaborative Learning

The studies focusing on collaboration accompanied by the need to seize the current trends in technological world have brought about Computer Supported Collaborative Learning (CSCL). This dynamic field of research is centred around how the concept of technology enables participants to create, share, and review knowledge (Resta & Laferrière, 2007). They can collaboratively produce an output around the computers while having a face-toface interaction. However, they need to be provided with sufficient number of computers, which raises their interest and motivation, or involve in an online collaborative process through local area networks, wide area networks, and a more globally, Internet, which may be preferred for distant or face-to-face learning (D. W. Johnson & R. T. Johnson, 1996). The computer supported collaborative learning part of this study is related to the use of computers and two online platforms, namely Google Docs and Wikispaces. These platforms enable them to have a face-to-face interaction in order to prevent any delayed submission of the writing tasks and maintain an effective classroom interaction.

CSCL systems are primarily designed to support students' interaction with the task and each other (Erkens, Jaspers, Prangsma & Kanselaar, 2005). By means of these systems, students can share resources with others and communicate within the group or the external world. Hence, computer technologies serve as a medium and mediator for collaborators (Stahl, 2006). Although the earliest softwares fail to provide an environment for immediate and direct interaction, the current technological tools have filled the void. The mediums allowing immediate communication are called synchronous mediums whereas the others

are referred as asynchronous mediums (Stahl, 2006). While CS part of CSCL is improving progressively, the benefits and drawbacks of CL have also been studied extensively (Graham & Misanchuk, 2004). One significant matter of concern regarding collaborative learning was raised by Graham & Misanchuk (2004), which is determining the level of interdependence among collaborators as shown below:



*Figure 1.* Different levels of interdependence in learning environments (Adapted from Graham, C. R., & Misanchuk, M. (2004). Computer-mediated learning groups: Benefits and challenges to using groupwork in online learning environments. *Online collaborative learning: Theory and practice*, *1*(8), 1-202)

The benefits of collaborative learning outweigh the drawbacks (Laal & Ghodsi, 2012; Roberts, 2004). These drawbacks can be avoided by designing the computer supported learning environment purposefully and not taking social interaction for granted (Kreijns, Kirschner, Jochems, 2003; Li & Kim, 2016). Bhavsar and Ahn (2013), for instance, suggested that collaboration provides the individuals with a socially constructed learning environment in which a more student-centred approach can be employed through either product or process-oriented collaboration. They get involved in an interactive process in which they are provided with a chance to work together. This interaction allows the students to benefit from each other's experiences avoiding a traditional teacher-dominant class (Lin & Maarof, 2013). However, it does not imply that a teacher is not required during the process. Instead, the teacher needs to adapt the conditions in order to maximize

the benefits of collaborative learning. Sixty-seven benefits of collaborative learning were listed by (Panitz, 1999) and summarized by Roberts (2004, p. 71) as follows:

#### **Academic Benefits**

-	promotin	g critical th	ninkii	ng sl	cills	

- involving students actively in the learning process
- improving classroom results
- modelling appropriate student problem-solving techniques

#### **Social Benefits**

- developing a social support system for students
- building diversity understanding among students and staff
- establishing a positive atmosphere for modelling and practicing cooperation

#### **Psychological Benefits**

- increasing students' self esteem
- developing positive attitudes towards teachers

However, simply asking the students to collaborate with one another to produce a written product may not be effective unless some arrangements are made for the quality of the end-product and effectiveness of the collaboration process. This is because collaborative learning is a personal philosophy rather than being just an easily implemented classroom technique (Panitz, 1999). In order for teachers to improve collaborative learning process, Aydın and Yıldız (2014) emphasized the importance of meaningful contexts and authentic purposes for collaborative writing stating that it is a social process in which the individuals interact with one another.

Furthermore, the students need to be provided with large and creativity-based tasks in which they may have to depend on each other's knowledge and capabilities throughout the whole process (Bremner, Smith, Jones, & Bhatia, 2014). Hence, there shall be a social bound to serve the purpose which ultimately calls for working together. This approach of togetherness creates an environment where the social essence of learning is accommodated, and social interaction is appreciated (Carson & Nelson, 1996). In

conclusion, the opportunities of technological developments and collaborative learning are combined in CSCL. Computers allow users to communicate resulting in collaboration and learning together (Johri, 2005).

## 2.6. Computer Supported Collaborative Writing

Research comparing computer supported collaborative writing and individual writing concludes that the former provided the students with significantly higher writing scores (Bikowski & Vithanage, 2016) and utilization of various cognitive processes (Popta, Kral, Camp, Martens & Simons, 2017). This shows us that after focusing on the advantages of collaboration for L2 writing, it has been a matter of discussion to find out various methods to increase the aforementioned benefits. Hence, the relation between online platforms and collaborative writing has been studied within this scope. Using Blackboard 9 in their research, Pardo-Ballester and Cabello (2016) discussed the importance of the medium used for peer review in online learning environments and implied that more research is required on this matter. A study by Nicolaidou (2013) on how e-portfolios expand the students' capability to provide corrective feedback showed that the electronic environment can be a beneficial tool to support their writing performance and develop their peer feedback capabilities. These tools are mainly separated into first and second generation (Web 2.0) applications, with the former offering less interaction and only allowing users to receive information rather than enabling the building and sharing of information. Moreover, the use of Web 2.0 applications such as wikis, blogs, Facebook, and Google Docs aroused great interest among researchers (Li & Kim, 2016; Storch, 2013).

#### 2.6.1. Use of Wikis in CSCW

One of the most prevalent online platforms while engaging in online collaborative writing is called wikis. Wikis, which are online platforms where users can add and edit content, can be categorized into free, fee-based, and self-hosted wikis. They require their own server to function. Wikis are online tools with such possibilities as collaborative problem solving, collaborative research, collaborative writing, dynamic journal, electronic portfolio, portal, resource aggregator, collaborative study guide, and virtual conference (Lamb & Johnson, 2007). Wikipedia, Wikispaces, PBworks, Wetpaint and Wikia are among the prominent examples of wikis. When collaboration is desired to be utilized for educational purposes within or outside the classroom, there are some necessary skills to consider for its rewarding attainment: cognitive, writing and constructive editing, group processing (acting as a group for a purpose through active participation and interaction), web skills along with self-organization, integrity (equal and honest contributions), and openness (expressing opinions despite being exposed to criticism) (J. A. West & M. L. West, 2009).



*Figure 2.* Wiki collaboration skills and behaviours (Adapted from West, J. A., & West, M. L. (2009). *Using wikis for online collaboration: The power of the read-write web.* New Jersey: John Wiley & Sons.)

Researchers have shown an increased interest in the use of wikis pertaining to collaborative writing although some studies expressed their concerns (Cole, 2009; Karasavvidis, 2010). In their study exploring the perceptions and attitudes of 59 primary students working collaboratively through the stages of prewriting, drafting, revising and

editing to produce a collaborative text on *MediaWiki* and their writing teacher towards wiki-based collaborative writing, Li, Chu, Ki, and Woo (2012) found out that it increased their motivation, group interaction, and thus writing ability despite some technical difficulties such as formatting and not being able to write on the same page together.

Another study by Chao and Lo (2011) focused on students' perceptions and the writing skills of 51 L2 students in groups of four to five students with an assigned group leader at a Taiwanese university towards wiki-based collaborative writing. The writing applications were conducted through the stages of planning, partitioned drafting (individual), peerrevising, peer-editing, and individual publishing. The findings brought positive results in favour of wiki-based collaborative writing. Moreover, the study was carried out in the course of five weeks in order to eliminate the stress emerging due to strict time limitations. In their research on collaborative writing tasks, Li and Zhu (2013) used wikis with three groups of EFL students and consequently separated them as *collectively* contributing/mutually supportive, authoritative/responsive, and dominant/withdrawn groups' by tracking the students' movements in the 'Discussion', 'Page', and 'History' sections available. The study concluded that the first group gained more learning opportunities. Moreover, utilizing 'Moodle' for the development of Business Writings in their study, Chan, Pandian, Joseph, and Ghazali (2012) supported the use of wikis in collaborative writing after a short period of introduction of this online tool.

Web 2.0 tools are useful for collaborative writing purposes in L2 classrooms (Aydın & Yıldız, 2014). They concluded that students' argumentative tasks in wikis facilitated peer feedbacks more than informative and decision - making tasks, which is an important skill to acquire from collaborative learning along with consensus building, conflict resolution and basic communication (Graham & Misanchuk, 2004). The contribution of each collaborator cannot painstakingly be controlled on wiki-based collaborative platforms. However, with the help of log files on wikis, it can easily be observed throughout the

writing process on a transparent basis and encouraged accordingly (Cho & Lim, 2017; J. A. West & M. L. West, 2009).

More specifically, pedagogical, social and technological affordances of Wikispaces, which is a free and user-friendly web tool offering backup opportunity through page reverting and autosave, were extensively studied by Singh, Harun, and Fareed (2013). The data for this study was collected through online students' essays, reflective research diary, feedback form, field notes, and questionnaires. They found out that it promotes active collaborative learning and knowledge building provided that its layout is planned and designed well by the teacher or the administrator allowing small groups consisting of 3-4 students working together in order to increase interaction among students and between teacher and students.

### 2.6.2. Use of Google Docs

Another common and user-friendly platform utilized for the purposes of online collaborative writing is Google Docs. It enables collaborators to watch others' activity through an open and synchronous communication channel which allows users to successfully engage in collaborative learning (Zhou, Simpson & Domizi, 2012) and writing (Suwantarathip & Wichadee, 2014; Vens, 2010). However, the waylay emerging in Google Docs worry users as the members of the group may delegate their work to others. Hence, the need to define the required social affordances arises. Hence, collaborators need to have a sense of shared understanding, accountability, trust, social cohesion, and predictability. In this context, shared understanding is about having similar expectations whereas accountability is concerned with the notion fulfilling his role as a team member for the benefit of the group. They should also trust each other and adopt the mindset of performing as a team to make sure that the actual outcome is similar to the expected outcome (Kirschner, 2002).

In order to deepen our understanding of the practical uses of this web tool, there have been many studies explaining its advantages over collaborative writing (Evans & Bunting, 2012). Blin and Appel (2011), for example, highlighted the importance of messages among the students in computer supported collaborative writing in L2 activities. When combining collaborative writing process and simultaneous messaging between users, researchers benefit from Google Docs as it is one of the most commonly used web tool allowing the users with a chat box to collaborate simultaneously while forming a written output. Moreover, the user-friendliness of Google Docs was emphasized by Suwantarathip and Wichadee (2014) as well as Godwin-Jones (2008). They revealed that that the students working collaboratively on Google Docs scored higher than those studying face-to-face in their writing tasks. The simultaneous messaging on Google Docs also gives the students a fun experience while performing formal tasks as emphasized by Godwin-Jones (2008).

Although being rather user friendly, Google Docs still needs to be used after a fair amount of training. In their study focusing on the lack of knowledge for effective use of Google Docs, Zhou, Simpson, and Domizi (2012) ascertained that most undergraduate students and their instructors were unfamiliar with the possibilities Google Docs could offer. However, they concluded that the students could easily collaborate after a short period of time without requiring intensive training. However, it was also noted that employing Google Docs did not significantly influenced their learning but rather changed how they communicate over the Internet.

In their study comparing two groups, one of which writing collaboratively using Google Docs and the other one having a face-to-face communication in a classroom through writing tests and two questionnaires, Suwantarathip and Wichadee (2014) concluded that the mean scores of the group working through Google Docs were higher than the other group. They also emphasized that students' attitudes towards using Google Docs were found to be positive which was explained as a possible result of teachers' being able to monitor the proportion of each student's participation in the overall writing process imparting students to contributing equally.

Another comparison using Google Docs for in-class computer supported collaborative and individual writing between two groups of L2 writing classes at a U.S. university with 32 participants in the experimental group and 27 in the control group was made by Bikowski and Vithanage (2016). They subsequently divided collaborative learning groups into explicit collaborators, budding collaborators and resistant collaborators based on their willingness to collaborate throughout the writing process. They also suggested that while the group working collaboratively using Google Docs had more learning gains than the control group, both groups shared positive remarks for future use of Google Docs in writing classes. This was explained by the fact that Google Docs it provided the control group with the opportunity to ask questions to their instructors as well as instantly saving their work without any loss of data and offered the experimental group with the possibility of writing and editing simultaneously.

As a result, wikis and GoogleDocs are the two important sources to utilize for computer supported collaborative writing. While wikis provide students with their own page to state their opinions and give feedback to their peers, GoogleDocs offers a platform through which they can interact with a joint text simultaneously and have a social interaction via the chatbox placed at the right side of the page. When the required precautions are taken and thorough preparation and planning are made by qualified and technologically competent teachers, these platforms can enable students to get engaged in a collaborative writing process which can increase their writing performance and social interaction.

# **CHAPTER III**

# METHODOLOGY

## **3.1. Introduction**

In this chapter, data collection and analysis processes are explained comprehensively. The chapter starts with a discussion of the research model. It subsequently gives information on the participants followed by a discussion of the research tools. The next section presents the data collection procedures with clear justification concerning their roles in obtaining the results. The final section is for the analyis of data.

# **3.2. Research Design**

The present study is comparative in that it tries to investigate the effects of individual and collaborative writing on the writing performance. After revealing the differences between these environments and applications through scoring the pre- and post-tests of the students by two independent raters, the analysis was supported by qualitative data which came from the interview conducted with a representative group of participants. The qualitative data obtained from interviews was used to support the analysis made as a result of the pre- and post-test scores of the students, which were graded by two raters using TOEFL Independent Writing Rubric. Hence, a mixed method approach was employed to obtain

abundant information related to the current study as suggested by Creswell (1994) and gain various perspectives as recommended by Frechtling & Sharp (1997). The mixed method was used to gather data from two experimental groups and a control group. The experimental groups received two different types of treatment throughout the process. One experimental group engaged in paper-based collaborative writing while the other utilized Wikispaces and GoogleDocs for collaborative writing purposes. The control group did not receive any instruction to engage in a collaborative writing process. Instead, they continued their writing lessons as before, which was characterized by writing academic paragraphs individually without communication with their peers through the writing process. In sum, the procedure for experimental groups can be summarized as pre-test-treatment-post-test structure. The pre-test and post-test control group design can be shown as follows (Tuckman, 1999):

Table 1

#### Research Model

R	$O_1$	$\mathbf{X}_1$	O <sub>2</sub>
R	O <sub>3</sub>	$X_2$	$O_4$
R	O <sub>5</sub>		$O_6$

This diagram displays the treatments ( $X_1$  and  $X_2$ ) that the experimental groups received besides pre-tests ( $O_1$ ,  $O_3$ , and  $O_5$ ) and post-tests ( $O_2$ ,  $O_4$ , and  $O_6$ ) for all the groups.

### **3.3.** Participants and Context of the Study

The present study was conducted at Uludağ University School of Foreign Languages (UUSFL) in the spring term of the 2016-2017 academic Year. The Schools of Foreign Languages in Turkey offer intensive English courses the levels of which range from Elementary to Advanced English. In UUSFL, there are three levels available as Elementary, Pre-Intermediate, and Intermediate. Upon enrolling at UUSFL, students are

divided into different levels of classes based on another English proficiency test. Elementary, pre-intermediate, and intermediate classes are offered 26, 24, and 22 class hours of English respectively. Due to the skills-based approach adopted in the context of this school, elementary and pre-intermediate classes take five hours of writing instruction while intermediate classes take four. For the faculties and departments where thirty percent of the courses are taught in English, it is obligatory to study at UUSFL for a full academic year unless students get the sufficient score, which is 70 (seventy), in the Uludag University English Preparatory School Exemption Exam, or an above average score on equivalent national (YDS, e-YDS, and YÖKDÍL) and international exams (TOEFL and IELTS) in advance. These faculties and departments are listed as the Faculty of Veterinary Science, Chemistry and Psychology in Faculty of Science and Letters, and Department of Industrial Engineering in Faculty of Engineering.

Within the framework of this study, three pre-intermediate level classes were selected because they receive instruction in writing academic paragraphs in the fall semester and make a gradual transition into writing opinion essays in the spring semester. Elementary classes, on the other hand, receive instruction in writing academic paragraphs for a longer period of time and usually focus on producing grammatically correct sentences. The transition from paragraphs to essays are much faster at intermediate level classes. The participants were between the ages of 18 and 23. All of them had writing classes during the fall semester, five class hours a week. For the current study, 65 pre-intermediate students, with 22 students for PBIW and PBCW, and 21 for CSCW, who volunteered to participate in this study were chosen. During the first term, the students that were in all the groups were taught the basics of paragraph writing including topic sentence, concluding sentence, and giving detailed information in the body of the academic paragraphs. They were also taught some conjunctions and linking words to elaborate their writing. The writing skill of students is tested and assessed by means of two quizzes, one midterm and one final exam as well as two writing evaluations. In writing quizzes, they usually answer

questions assessing their sentence-level writing skills. However, in midterms, they need to write a paragraph following the questions addressing their basic knowledge in writing. In the writing evaluations, however, they only need to write a paragraph, which involves the students to individually write a paragraph to be corrected with implicit coding and rewrite accordingly. Despite all these testing, evaluating and assessing processes, they were still having difficulties in expressing innovative ideas and presenting them in accurate and eloquent manner through a smooth flow of ideas.

#### **3.4. Research Tools**

The data in this study was collected through a pre-test and a post-test following six weeks of implementation. Two topics were presented during the pre- and post-tests. The students were presented with the same topics in order to provide the students in each group with equal opportunities. They were all graded by two independent raters using the Test of English as a Foreign Language (TOEFL) Independent Writing Rubric (See Appendix 1). Furthermore, semi-structured interviews were conducted before and after six weeks of implementation.

TOEFL Independent Writing Rubric was used to evaluate the essays of the participants taking this exam. It was chosen for the grading of pre- and post-tests within the framework of this study as it is a comprehensive evaluation rubric that has been used by a non-profit organization since 2004, and it is an internationally recognized English test to measure English proficiency of the participants. The details of this rubric can be summarized as follows; Score of 0 refusing to write, just writing the topic again, or writing in a language apart from English; Score of 1 - giving little or no detail, severe underdevelopment, and serious errors in sentence structure or usage; Score of 2 - restricted development in response to the topic, inappropriate word or word-form selection, lack of organization, insufficient explanations, exemplifications, or details, an accumulation of errors in

sentence structure or usage; Score of 3 - developed explanations, exemplifications, and details to some extent, hints of unity, progression, and coherence, occasional obscure connection of ideas, inconsistency in sentence formation and word choice, limited vocabulary and syntactic structure; Score of 4 - addressing the topic well, not fully sophisticated points, well-organized and sufficient explanations, displaying unity, progression, and coherence, despite some redundancy, digression, or unclear connections, syntactic variety and range of vocabulary, minor errors in structure, word form, or use of idiomatic language; Score of 5 - addressing the topic effectively, well-organized, clear and appropriate explanations, demonstrating unity, progression, and coherence, consistent facility in the use of language, having syntactic variety, appropriate word choice, and idiomaticity, though having minor lexical or grammatical errors.

The semi-structured interview prior to the implementation consisted of 13 questions within two sections. The first section was related to the students' general perceptions of the writing classes and writing as a skill, and the second section was about their perceptions of own writing process and performance. The interview following the implementation, on the other hand, included 14 questions focusing mainly on their perceptions and opinions about the relevant writing process. A representative number of students (n = 9) were selected to participate in these interviews for understanding their writing background and their experiences throughout this study more extensively. Their suggestions for writing classes and evaluation of the benefits and challenges were also inquired within the framework of qualitative data collection. Their interviews were transcribed, coded, and relevant themes were explored to understand their individual perceptions. This allowed the researcher to interpret how the students' perception changed throughout the study.

# **3.5. Data Collection Procedures**

All the students were asked to sign a consent form confirming that they were going to participate in this study voluntarily. They were informed about the upcoming process. Three students from each class were chosen on the basis of stratified random sampling for semi-structured interviews before the implementation process started. These students were to represent the three different groups at UÜSFL. The first group consisted of students who were going to study at one of the faculties where the preparatory school was obligatory, and as mentioned 30% of the courses are taught in English. The second group comprised of the students who were going to study at one of the faculties where the preparatory school was obligatory, but the courses at the faculty were taught in Turkish. The last group was constituted of the ones who were entitled to study in the preparatory school at their own discretion as part of their academic studies without having any formal liabilities. In other words, they could continue their academic career at their faculties although they failed in the preparatory school. Nine students in total were first asked about their general perceptions and opinions about writing in L2. Later, they were inquired about their writing habits, their coping mechanisms and personal strategies they use in different stages of writing such as brainstorming, drafting, reviewing, and publishing, namely final version. After the interviews were completed and video-recorded by the researcher, they were given a pre-test with two alternative topics to choose from for an academic opinion paragraph. They were required to write within the time limit (45 min) in order to prepare them for their own graded writing exams.

Prior to this present study, the independent raters were given 30 different sheets to grade for the pilot study based on the TOEFL rubric. Next, their grades were analyzed using Pearson Product-Moment Correlation in order to determine the inter-rater reliability.

The CSCW group to study in the computer lab underwent a training course in order to use Wikispaces and Google Docs. The reason why CSCW was maintained in a computer lab was that not all the students had their own personal computers that they could use to interact with the writing assignment. Conducting the research outside class could have deteriorated the interdependence among the members of the assigned groups as anticipated by Graham and Misanchuk (2004). All the students in this group were given separate email accounts in order to log on to the related online platforms for confidentiality reasons. They were also given a separate page on Wikispaces in order to prevent any cross-intervention during synchronous wiki writing.

This study included the students' paper-based individual writing (PBIW), paper-based collaborative writing (PBCW) and computer-supported collaborative writing (CSCW) performances.

In the first lesson with the PBIW and PBCW groups, they were provided with the following to accomplish their assigned writing tasks:

- o two opinion paragraph topics to choose from,
- $\circ$  a draft sheet on which they can take notes, brainstorm and write their drafts, and
- a sheet where they can finalize their writing.

In the first lesson with the CSCW group, they, on the other hand, were provided with the following to accomplish their assigned writing tasks:

- o two opinion paragraph topics to choose from on Google Docs,
- a predetermined email account through which they can access their draft pages on Google Docs where they would brainstorm, and
- a separate page on Wikispaces where they could write their first and final drafts and give feedback for the written product of their peers.

For the CSCW group, Google Docs and Wikispaces were employed for brainstorming and providing feedback respectively in order that the effects of online collaborative process could be understood. The reason why Google Docs was chosen for brainstorming was that it provides an interpersonal communication space for the group members without lacking the immediacy of a face-to-face learning environment to maintain a continuous and spontaneous discussion platform.

Moreover, Wikispaces enabled the students to store their draft and final writing output while giving a chance to comment on their peers' work unlike previous online tools which were deemed to be ineffective due to the delay caused by their technological incapabilities (Bennett, 2004; Caverly & Ward, 2008; Maxwell & Felczak, 2011).

Following six weeks of implementation, the groups were given the same topics as the pretests and required to write within a predetermined time limit (45 minutes). These post-tests were again graded by the raters using the TOEFL rubric. The students who participated in the interviews before the implementation were interviewed again. The interview questions were related to their overall perception, opinions, and suggestions related to the process. During quantitative data analysis, the pre-tests and post-tests were used to determine the effects of the related implementation of the students' writing performance. Qualitative data, on the other hand, which was obtained through pre- and post-implementation interviews was utilized to examine how the students' opinions and perceptions changed towards L2 writing.

# 3.6. Data Analysis

The present study is a mixed study consisting of quantitative and qualitative data analysis processes. The quantitative data elicited by means of the pre-test and post-test scores of the three groups was analysed in SPSS 23.0 program by using independent sample t-test. The tests were graded by using TOEFL Independent Writing Rubric. In order to attain interrater reliability, 32 sample paragraphs written by a class of students who were not subject to this study were evaluated by these raters as part of a pilot study. These results were analysed by using t-test. Within the framework of this rubric, the organization, content, task accomplishment, grammar and vocabulary variation were evaluated. In addition, content analysis was used for the qualitative data. First, the general data were reviewed.

Next, the codes and themes were identified. Later, the specific data were gathered under related themes. Finally, the data were analysed directly with descriptive content analysis method.

# 3.8. Summary

This chapter has explained the methodology of the current study. This chapter consists of the research design, participants, research tools, data collection procedures, and data analysis of the present study. In addition to the introduction of the research settings, the rationale for using specific tools in the present study was explained comprehensively. Moreover, the background of the participants in the current study was mentioned to have a better understanding of the available conditions.

Table 2

Outline of Research Questions, Related Instruments and Data Analysi.	Outline of Research	Questions, Related	Instruments and Data Analysis
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Research Question		Instruments	Data Analysis	
i	What are the effects of paper-based individual, paper-based collaborative writing, and computer supported collaborative writing practices on the students' writing performance?	TOEFL Independent Writing Rubric Pre- test and Post-Test	Independent Sample t-test	
1	Do the perceptions of pre-intermediate level students change towards paper- based and computer-supported collaborative writing after implementation?	Semi-structured Interviews	Descriptive Content Analysis	

Table 2 gives the outline of the present study including research questions, the related instruments and data analysis.

# **CHAPTER IV**

# **RESULTS AND DISCUSSION**

### 4.1. Introduction

The purpose of this chapter is to present the results of the data collected through the preand post-test scores as well as pre- and post-implementation interviews. The quantitative and qualitative data were obtained from the students who participated in the study on a voluntary basis. The findings are discussed in line with the results of the studies from the relevant literature. In the first part, findings related to the two research questions are analysed. Then the interpretation of this analysis is presented. Lastly, how the findings of this study relate to the current literature is discussed.

The quantitative data were obtained from the pre- and post-tests applied before and after the six-week implementation. The raters were two lecturers working at the same university. The current lecturers of the selected classes were not assigned as the raters of the writing performances in order to attain the interrater reliability and objectivity. The second research question is analysed qualitatively by the data coming from the open-ended interviews applied to the participants before and after the implementation. The participants were asked about their perceptions of collaborative writing applications before the application in order to elicit the perceptions of the students prior to the research. Following the implementation, the same participants were interviewed again to see whether there were any changes in their perceptions. For the qualitative analysis, the themes were created from a neutral perspective. The codes, on the other hand, included positive or negative views of the students. By doing so, it was possible to compare the perceptions of the participant students before and after the implementation.

# **4.2. Inter-rater Reliability**

As mentioned earlier, the writing scores of the students in control and experimental groups were graded by two independent and trained raters. They scored 32 academic paragraphs written by a separate group in the same school prior to the implementation of the current study in order to assure inter-rater reliability. The results were assessed through the Pearson Product-Moment Correlation Test as shown below;

Table 3

Results of Pearson Product-Moment Correlation for the Writing Scores Between Two Raters

		Rater 1	Rater 2	
Rater 1	Pearson Correlation	1	.621	
	Sig. (2-tailed)		.000	
	Ν	32	32	
Rater 2	Pearson Correlation	.621	1	
	Sig. (2-tailed)	.000		
	Ν	32	32	

\* Correlation is significant at the 0.01 level (2-tailed).

As can be seen from the table, the data obtained from the pilot scoring of the two raters presented a significant correlation (r = .621, p <.05) (Table 3). Hence, as these two raters' scoring proved to be coherent with each other, the pre-tests and post-tests from all the groups were graded by these raters.

## **4.3.** Findings Related to the Research Questions

The quantitative data obtained from the writing scores of all the groups were analysed by independent sample t-test by the 23.0 version of SPSS. Furthermore, a content analysis approach was employed for the qualitative research question following the quantitative analysis.

# **4.3.1.** Findings related to the difference between the scores of classes writing individually or collaboratively

At first, the writing scores of the students prior to the implementation were compared both within group and between groups. This analysis revealed the differences among the mean scores of the groups before the implementation. This design enabled the researcher to discover the effect of the implementation types on the progress of the students. The distribution of the participants according to the groups and their mean scores of pre- and post-grading is displayed in Table 4.

#### Table 4

The Differences in the	Writing Performances	of the Three Groups
		- J

		Number of participants	Means	Standard Deviations	Degrees of Freedom	T-value	Significance probability
		n	М	SD	df	t	р
Paper-Based Individual Writing –	Pre-test	22	2.909	0.781	21	-1.682	0.107
	Post-test	22	3.272	0.735			
Paper-Based Collaborative – Writing	Pre-test	22	2.772	0.685	21	-2.022	0.056
	Post-test	22	3.250	0.735			
Computer Supported – Collaborative Writing	Pre-test	21	2.904	0.644	20	-2.368	0.028
	Post-test	21	3.452	0.773			

As shown in Table 4, the total number of students writing individually in the control group and the ones in the first experimental group participating in paper-based collaborative writing consisted of 22 participants, while the second experimental group, namely CSCW group, consisted of 21 participants. One student in each group did not take part in the relevant post-tests, hence was not included in the data analysis process.

Table 4 also shows the mean scores, standard deviations, degrees of freedom, t-value, and significance probability for the individual and collaborative pre- and post-tests. The results showed that all the groups performed better on the post-test than the pre-test. In order to see whether these differences were statistically significant or not, a within group comparison was implemented for the pre- and post-test scores of each distinctive group. For this analysis, a paired sample t-test analyses was employed. Firstly, judging by the pretest (M= 2.90, S.D.= .781) and post-test scores (M= 3.27, S.D.= .735) of the control group, which participated in individual writing practices, it can be seen that they were not significantly different due to the p-value being higher than .05. This indicates that the scores of the control group at the beginning and the end of the research process were rather similar with slight improvement. It could be caused by the limitations of studying alone in that the individual is constricted to his or her own ideas while revising and improving their own grammar or producing ideas.

With regard to the group engaging in paper-based collaborative writing, it can clearly be seen in the table above that this group displayed some improvement in their writing performance with pre-test (M= 2.77, S.D.= .685) and post-test scores (M= 3.25, S.D.= .735). However, the difference in means is not statistically significant at the .05 level; p =.056.

Finally, the difference between the mean scores of pre- and post-test for the computer supported collaborative writing group displayed statistically significant improvement at the

.05 level; p = .028. Accordingly, the post-test scores (M= 3.45, S.D. = .773) were higher than the pre-test (M= 2.90, S.D. = .644).

The first research question sought to determine the effects of different writing practices on the writing performance of students assessed through the TOEFL Independent Writing rubric by two independent raters. The differences in means were analysed and concluded that all the groups made progress to some extent. However, the difference between the means of pre- and post-tests of the individual and paper-based computer supported writing group remained statistically insignificant whereas the computer supported writing group showed a statistically significant improvement between the relevant tests. This implies that CSCW group made more progress than the others through the process. The possible underlying reasons are discussed in the discussion chapter.

By answering the first research question depending on the quantitative analysis conducted, it is not possible to explain the central phenomena in detail. Therefore, the answers of the students to the semi-structured interview questions were analysed qualitatively by conducting descriptive content analysis method to further explain and explore the case more extensively from inside to outside.

#### 4.3.2. Qualitative Analysis

# 4.3.2.1. The perceptions of pre-intermediate level students towards individual, collaborative and computer supported collaborative writing

The content analysis method followed by a thematic approach was employed in order to analyse the qualitative data. First, open coding was done to choose key themes among identified early themes. Then the key themes were developed and organized through focused coding as suggested by Vens (2010) and supported by Miles, Huberman & Saldana (2014). Lastly, the final themes were identified accordingly.

The qualitative data from the questionnaires and interviews revealed five themes about the participating students' perceptions of three different writing implementations. These are as follows:

- (1) feedback,
- (2) participation,
- (3) classroom management,
- (4) writing process, and
- (5) technological familiarity (see Table 5).

# Table 5

Themes and Codes about Students' Perceptions of Collaborative Writing and Computer Supported Implementations before the Treatment

Themes	Codes
1. Feedback	- ambiguity
	- incorrect content
	- content focused
	- form focused
	- quality of peer feedback
2. Participation	- equal in teacher directed class
	- embarrassment
	- more time for self-correction
	- group dynamics
	- inter-personal relationships
3. Classroom management	- discipline problems
	- loud noise
	- inappropriate partners
4. Writing process	- inappropriate for individual learning styles
in writing process	- challenging
	- stress
	- planning
	- brainstorming
	- different levels
	- language barriers
	- L1 use
	- cultural conflict
5. Technological familiarity	- connection problems
	- keyboard speed
	- instant correction
	- spontaneous interaction

The content analysis of the qualitative data obtained by the interviews before the treatment revealed five themes. The first theme was the feedback. All of the participants in this study are familiar with individual writing as this is the typical instruction they received during their previous language learning experiences. According to the participants, getting feedback from the teacher rather than a peer is more preferable because they perceive that the feedback from the teacher is more accurate.

Another code within the feedback theme was related to the quality of peer feedback. The participants were suspicious about the correctness of their friends' feedback. One of the participants state that;

"I feel more secure when my mistakes are corrected by the teacher. My friends are not knowledgeable enough to correct my mistakes"

Most of the participants are highly acquainted with the form focused corrective feedback from their teachers. They feel safer when they are corrected by their teachers. This finding parallels the findings of two studies by Lee (2008) and Ferris and Roberts (2001) who found that teacher feedback can improve accuracy as long as teachers are aware of the impact that their feedback can have on student expectations and attitudes.

The second theme was related to participation in the class. As nearly all of the students are used to being instructed in teacher-oriented classrooms, they believe that they will have more just chances to participate in the lessons when the control is at their teachers. They argue that teachers allocate equal time for students to participate in the collaborative process. One of the participants states as follows:

"When I am in a collaborative task, some students have more participation time in the lesson as we do not have the same language levels"

Prior to the implementation, the participants also thought that they need more time for selfcorrection. During whole class or pair work tasks they cannot concentrate on their own works.

Within the theme of classroom management, participants from all groups stated that during collaborative tasks there is a risk for discipline problems to arise. As they are more familiar

with teacher oriented instruction, they perceive a collaborative style as one of the potential factors for discipline problems in the class, which one participant from the experimental group states as follows:

"Because of the loud noise, in the class during collaborative tasks, I sometimes had difficulty in concentrating on my work"

Another code within the theme of classroom management was related to inappropriate partners. As they are grouped by their instructors they thought that being paired with an inappropriate partner of group, they might lose their motivation and they might prefer not to participate the activities willingly. This finding can be explained by the prior exposure of the students. As they have not been presented with such kind of classroom applications before, they might perceive it as a potential threat for their success. This finding is in parallel with the findings of Dirkx and Smith (2004) who argue that learning environments where students work collaboratively need to be designed carefully taking the emotional dynamics among group members into consideration. Similarly, Evans and Bunting (2012) and Lin and Maarof (2013) found that their participants have some similar prejudices for the collaborative tasks in the classroom.

Under the theme of writing process, the participants stated some prejudices for the inappropriate language levels. They state that there may be some higher or lower level peers in their groups and this may be an obstacle for them. Although all of the classes are attained as pre-intermediate levels according to the results of the general proficiency exam, they still think that there are important level differences among them. One of the participants in the individual writing group highlighted that if there are higher level peers in the group, they will lead the group. This may result in the lower level students' having less chance to express themselves. On the other hand, if there are low level partners in their group they will be behind the class and get lower marks accordingly. For their general writing process, stress is another code stated by the students. Some of the participants state that they are not extrovert enough to share their ideas freely.

The final negative perception of the participants about the collaborative and computer assisted collaborative writing is interpersonal relationships and cultural conflict. Although these were not stated by many participants, some of the students stated that they sometimes write on cultural or daily issues, so being paired with a friend from a different cultural background or personality type might cause some communication problems between them and some misunderstanding is also another possible problem.

Apart from the negative perceptions, some of the participants had positive perceptions about collaborative writing. They stated that they do not have a chance to negotiate the meaning in their L1 with their instructors, but when they are working with their peers, they can use their first language and by doing so they can generate ideas more easily. In terms of computer supported collaborative writing, some participants had some positive attitudes and they stated that utilizing some software for writing purposes appeals to them more than the paper pen type of writing as they consider themselves competent in using computer based programs. One of the participants stated that;

"Writing collaboratively in an online platform will certainly make us more motivated, because we already use some technologies for writing purposes in our daily lives"

This finding can be explained with the high technology familiarity of the students. They are actively using some software programs for writing purposes and so it is not surprising they expect to be more confident in writing in the class in computer supported tasks.

Under the theme of technological familiarity, the students stated that their level of computer skills would highly influence their interaction using the online softwares. The technological challenges were also believed to disrupt the writing process if used in a classroom. Some students especially emphasized that the hardware related issues could cause troubles. However, some students stated their preference for computer assisted learning environments highlighting their possibility to enable spontaneous interaction and instant feedback.

"Through Internet, we can communicate with our friends instantly and thus help each other very quickly."

# Table 6

# Themes and Codes about Students' Perceptions of Collaborative and Computer Supported

Collaborative Writing Implementations Following the Treatment

Themes	Codes
1. Feedback	- ambiguity
	- incorrect feedback
	- content focused
	- form focused
	- quality of peer feedback
2. Participation	- goal oriented equal participation
	- social interaction
	- more time for self-correction
	- inter-personal relationships
	- group dynamics
3. Classroom management	- self-monitoring
	- loud noise
	- inappropriate partners
4. Writing process	- collaborative learning
	- planning
	- brainstorming
	- scaffolding
	- L1 use
	- cultural enrichment
5. Technological familiarity	- connection problems
	- keyboard speed
	- instant correction
	- spontaneous interaction

The results of the content analysis pertaining to the qualitative data obtained through the interviews after the implementation are presented as five themes. Firstly, all the students stated their preference for the teacher feedback in order to correct and improve their grammatical mistakes. However, they believed that the feedback sessions helped them evaluate the mistakes of their peers, and hence enabling them to realize that they should not be afraid of making mistakes as it is natural in terms of language development, and benefit from the process by applying to different sources of feedback for various purposes. One of the students emphasized that;

"The feedback from my friends were basically based on exchanges of ideas, but yours was more about the grammar."

They admitted that they found giving and receiving feedback challenging in the beginning, but they got used to it within time and improved the quality of their feedback.

Within the scope of participation, students having engaged in collaborative writings stated that they were hesitant at expressing their opinions at first, but as the social relation among the members of the group progressed, their willingness to contribute increased. Some students expressed their opinions stating that;

"While writing individually, students may not want to write and can even hand in the writing assignment blank. However, when working with a group, you have to contribute. I personally feel responsible and do not want to conflict anyone's interests." "I felt more relaxed this way. We wrote in solidarity. We improved together."

With regard to the concerns about spending too much time before writing, the participants emphasized that writing in a group made the brainstorming and revision stages faster, and thus enabled them to concentrate on their first and final drafts.

Classroom management was considered to cause some difficulties in terms of maintaining a quiet environment suitable for concentrating on writing. However, it turned out that the social interaction among the group members led to self-monitoring within the group. They encouraged their friends to improve their concentration. The noise actually became an indicator of working hard to accomplish the assigned task in the paper-and-pen collaborative writing group. The computer supported collaborative writing group was already involved in interpersonal discussions which were maintained quietly through the online platforms.

The issue of inappropriate partners arose in only one of groups in paper-and-pen collaborative writing group, but still they were pleased with the results as they focused on their strengths rather than weaknesses. One of the participants in this group states that;

"Our group was like a concentration camp. Noone was better than the other. Therefore, we couldn't correct each other's grammatical mistakes, yet we exchanged and improved our ideas, which eventually improved our writings." Because they were grouped randomly, the students could not always work with those at a similar proficiency level. However, they still expressed their positive opinions about this matter;

"When you don't know A, another student tells you about it, and when they don't know B, you tell them about it. It is better when there are different sets of information." "Because we are all different, we can contribute for different aspects. When we are alone, the things we focus can be limited."

All the students engaging in collaborative writing activities explained that their paragraphs turned out to be more organized. They also emphasized that they could include more ideas through group work and thinking collaboratively. One student in paper-and-pen collaborative writing group expressed that he could have contributed more if provided they were given more time.

The technological difficulties either resulting from external disruptions such as power cut, internet outage and hardware defects or from students' incapability to utilize technological tools were experienced throughout this study. The students indicated the need to provide an uninterrupted writing session by means of thorough and regular technological maintenance. However, they all stated that after a certain period of adaptation process, they overcame such difficulties and focused on the advantages that the online platforms provides such as instant feedback from their peers or writing instructor. One of the participants expressed this transitions as follows;

"I was really upset when the power went out because I really liked doing this. Even the most basic things like logging into the website was challenging for me at first, but through the last week, it was almost perfect. My concerns got gradually eliminated."

One of the emerging controversies throughout the collaborative writing sessions was related to L1 use. A group of students favoured using L1 during the brainstorm and peer-revision stages emphasizing its affective implications as they perceived using L1 as being more advantageous in generating ideas. However, on the other hand, some other students stated some reservations because they believed that too much dependence on L1 free from the teacher control might affect their L2 learning process negatively.

### 4.4. Summary of the Results

The findings of the study revealed that the computer supported collaborative writing group performed higher gains than the other groups, and this was the only statistically significant finding in the quantitative analysis. In order to elaborate on the results found through the analysis of quantitative data, semi-structured interviews were conducted to determine the differences before and after the implementation. The content analysis for the purposes of qualitative analysis were categorized into five themes as feedback, participation, classroom management, writing process, and technological familiarity. The participants hesitant to engage in collaborative writing process due to the concerns about overcoming the interpersonal disagreeableness on various issues before, during and after producing a written text later concentrated on the benefits of working with peers.

### 4.5. Discussion

The current study examined the effects of different writing practices on the students' writing performance and their perceptions towards the relevant writing environment. Sixty-five students of a Preparatory School of Foreign Language Education at a state university in Turkey participated in this study. The students were studying in three different classes of pre-intermediate level of English. They all underwent the same writing instruction throughout their first semester. Within the framework of this study, one class engaged in individual writing and acted as the control group whereas the other two classes participated in collaborative writing sessions. One of these collaborative groups utilized conventional paper-and-pen method, and the other one studied in a computer laboratory using Google Docs for brainstorming purposes and Wikispaces for revision and publishing purposes. All the students were required to write a paragraph before and after the implementation. Then these writings were graded by two independent raters. The perceptions of the students through individual and collaborative writing were also elicited through semi-structured interviews before and after the implementation. The reason for using two different online

tools was that Google Docs provides users with spontaneous messaging and editing services whereas Wikispaces offers the opportunity to create separate pages for the members of a group.

The first research question of this study was related to determining the effects of individual, paper-based collaborative writing, and computer supported collaborative writing practices on the students' writing performance. First of all, it can be argued based on the results of the descriptive statistical analysis that the PBCW group had slightly more effective writing performances than the PBIW group. This corresponds to the findings of most studies (Elola & Oskoz, 2010; Stahl, 2006; Wigglesworth & Storch, 2009); while contradicting Mirazi and Mahmoudi's (2016) study, which found out that individual planning improved students' writing performance more than that of collaborative planning. However, all the groups expressed their preference for employing brainstorming and planning in the interviews conducted after the implementation. Moreover, the students in the experimental groups stated that writing collaboratively reduced their anxiety enabling them to think more clearly and producing more organized writing output. The findings of this study as related to collaborative writing are consistent with the current literature (G. Ç. Yastibaş & A. E. Yastibaş, 2015; Laal and Ghodsi, 2012; Li and Kim, 2016; Panitz, 1999; Roberts, 2004; Storch, 2005; Wigglesworth & Storch, 2012). The concerns explained by Zhang (1995, 1999) and Kormos (2012) towards the negative relationship between collaborative writing and anxiety were overcome through providing teacher-feedback at the end of each session. Moreover, the social interaction was not taken for granted for the students in CSCW group and the learning environment was designed purposefully as suggested by Kreijns, Kirschner, and Jochems (2003).

A comparison of the results of the CSCW with the other groups shows that this group had more gains in terms of writing performance with a mean score of 2.90 in their pre-test and 3.45 in the post-test. Therefore, this was congruent with Suwantarathip and Wichadee' (2014) study comparing students writing collaboratively in a face-to-face learning environment and an online collaborative writing platform, namely Google Docs. However, it contradicted the results of the study utilizing Google Docs in an out-of-class writing activity (Zhou, Simpson, and Domizi, 2012). This contradiction might have been caused by the fact that the present study was conducted in a computer lab in order to eliminate any exterior variables allowing the students to concentrate on their work and complete the writing assignment within the limited time period as in the cases of control group and PBCW experimental group.

The second research question of the study was about whether the perceptions of the students would change towards paper-based or computer collaborative writing after the implementation. Apart from the participants in the experimental groups, the participants in the control group were also interviewed. The interviews with the PBIW group were conducted in order to eliminate the bias that their perceptions may have been influenced by the mere fact that they were getting direct written feedback from the teacher after each session as recommended by some researchers (Lee, 2015; Paulus, 1999; Yang et al., 2006). While the control group emphasized the benefits of getting written teacher feedback and stated specifically that the process did not have much effect on how they perceive writing an academic paragraph, the experimental group highlighted how their concerns about producing a linguistic output with their peers had changed over time besides focusing on the benefits of getting written teacher feedback at the end of each session. Some students were hesitant to get any feedback from their peers and believed that the teacher needs to be the only source of feedback. One student in the PBCW expressed his feelings in the interview prior to the implementation stating that he might feel "afraid and embarrassed" as he did not want to show his mistakes. However, he stated his preference for the peer feedback to improve more content and more organized writing after the implementation. Similarly, Nelson and Carson (1998) emphasized that this change may occur as they get used to getting feedback from their peers. The possible reasons for the concerns about peer feedback was explained by Yun (2008) as being the group size, and Yu and Hu (2017) as

being sociocultural background, motives, value perceptions, group dynamics, and feedback training. These initial concerns were overcome through a controlled classroom environment and feedback training prior to the implementation as suggested by Min (2016) and Berg (1999) both in PBCW and CSCW. The findings related to the students' favouring teacher feedback for grammar correction and peer feedback for content and organization development were in line with the current literature (Alwi et al., 2012; Jun, 2008; Lin & Maarof, 2013; Sajedi, 2014; Yang et al., 2006). The experience of the students in CSCW group also resulted in favouring peer feedback based on more content and organization which is similar to the findings of Kessler's (2009) study highlighting the importance of using wikis for online collaboration to get more meaning focused feedback. Aydın and Yıldız's (2014) study also shows similar results for Turkish students of English.

With regard to the theme of participation in the qualitative analysis, the students in the control group did not interact with their classmates during the implementation. However, when they were asked, before and after the study, whether they would prefer peer review or collaborative writing, it was seen that their worries about interpersonal relationships for the purposes of accomplishing a task remained the same as they did not get to experience collaborative writing. However, the IW group reflected upon their past experiences and pointed out that their collaboration for assignments usually depended on their friendship. Therefore, they would work together with others mostly when they became friends through the activities and social bond to be formed outside class. However, the students in PBCW emphasized how they built a social relationship in order to accomplish the task and stated that they got used to each other's company and felt obligated to contribute to strengthen this relationship although expressing some reservations about participation during collaborative writing before the study as proclaimed by Storch (2005). The students in CSCW group also emphasized the benefits of utilizing synchronous messaging and editing through Google Docs for their group dynamics and social interaction (Suwantarathip & Wichadee, 2014; Vens, 2010) similar to the findings of a study conducted by Prieto (2016) over the effects of information communication technology on the social relationship among students. This relationship between the online platforms and social interaction could be explained by the fact that the brainstorming page could be seen by all the members of the group and the writing instructor on Google Docs and the amount of feedback provided by each student was recorded on Wikispaces. The students stated that they felt encouraged and obligated to be a part of the group in order not to disrupt group dynamics. They also indicated that they were more focused on the tasks and determined to accomplish them through equal distribution of workload, a finding which is also consistent with the current literature (Aydın & Yıldız, 2014; Kung, 2002).

From the point of classroom management, the control group was no different from how they behaved in the previous semester as they did not have any treatment regarding their writing practices. In addition, the experimental groups did not have a chance to observe or examine each other's learning environments. However, the students reported that online collaboration facilitated self-monitoring and peer reviewing as everything was recorded and presented to the relevant audience and group members simultaneously. The students did not need to press a save button while using Google Docs; however, they had to save their work so that the others could see it while utilizing Wikispaces. As for the students in the PBCW group, they stated that they sometimes missed what the others commented on, due to the high noise level as all the groups were collaborating all at once. The online platforms, on the other hand, provided the students with a quiet learning environment through which they could concentrate on their tasks as done in a study (Bikowski & Vithanage, 2016).

The benefits of collaborative learning, as listed by Panitz (1999) and Roberts (2004), and supported by other researchers (Laal & Ghodsi, 2012), were observed through the stages of brainstorming, drafting, revising, and publishing. The students benefited from the advantages of collaborative learning academically, socially, and psychologically. The students in both collaborative writing groups emphasized the importance of negotiation

between the group members through the writing process in which they utilized each member's strengths in order to improve the overall quality of their individual final written products. Having proposed similar results in his study, Bikowski (2016) mentioned that students tend to use their native language for this negotiation, which was also observed in all the groups participating in this current study. However, in this study, it should be noted that the accessibility of the student to student interaction in the CSCW group enabled the researcher to monitor the study groups in L2.

Finally, most of the students in the CSCW group expressed their concerns about using online platforms prior to the study as they did not regard themselves as technologically competent in order to initiate and sustain a social connection over the internet to complete a written assignment. These concerns were anticipated through personal observations, expert opinions and the current literature explaining the common issues with utilizing technological tools for educational purposes. Some precautions were taken prior to the implementation in order to prevent their interference with the process. The issue of editing clash on wikis stated by Li, Chu, Ki, and Woo (2012) was resolved by opening separate accounts and designating personal sub-pages for each student. This allowed them to concentrate on their drafts and final writing without worrying about losing any data. The issue of forming groups stated by Graham & Misanchuk (2004) was settled through stratified random sampling, through which the students from different majors collaborated within groups of four as recommended by Dobao (2012), who compared the effects of group, pair, and individual work on language-related episodes and writing quality. It was also anticipated that the students could reach the collaborative work constructed in the classroom and might change what was presented on Google Docs or Wikispaces. The researcher, hence, obtained individual email accounts for each student in CSCW group and prepared the computer lab in advance to initiate the writing process once the students took their places at the computer desk as suggested by Evans and Bunting (2012). This also prevented any possible delays which might have emerged due to technical difficulties. The

researcher was already familiar with Google Docs and Wikispaces and technologically competent enough to respond to the technical and technological failures. This qualification precluded the concerns asserted by Zhao and Czilco (2001), Schiller (2003), and Kumar (2008). The students were also provided with technological training for utilizing the online tools to be employed throughout the research study as suggested by Zhou, Simpson, and Domizi (2012). Through meticulous designing, an artificial learning environment for online collaboration was created in order to 'directly and empirically observe the knowledge being built' (Stahl, 2006). Irrespective of their technological familiarity, all the students who were interviewed after the implementation stated that they needed some time to adjust to this new writing system. However, all of them expressed their willingness to utilize such technological tools enabling collaborative work in other classes as well because they were accustomed to the computer supported collaborative writing system almost immediately after they were introduced.

# **CHAPTER V**

### **CONCLUSION AND IMPLICATIONS**

#### 5.1. Summary

A considerable amount of literature has been published on the effects of collaborative writing whether in a conventional classroom or online learning environments in and outside class (Aydın & Yıldız, 2014; Blin & Appel, 2011; Cho & Lim, 2015; Kessler and Bikowski, 2010; Stahl, 2006; Storch, 2013; Wigglesworth & Storch, 2012; Wu, 2015). It is broadly defined as a process of co-authoring of a text by a pair or group of collaborators, and this collaboration can be to produce a single jointly-produced text or to produce separate texts while working as a group in some stages of this production (Storch, 2013). The means to collaborate have changed over the years and shifted into online collaboration environments (Bikowski, 2016; Padro-Ballester & Cabello, 2016). While learners accomplish writing tasks which they would not be able to produce individually, they also take advantage of the integration of technology into classrooms (Stahl, 2006). However, it can be seen that this integration along with the aforementioned collaboration still requires more research according to the current literature (Blin & Appel, 2011; Li & Zhu, 2017; Resta & Laferrière, 2007).

#### **5.2.** Conclusions

There are two research questions in the present study: (1) What are the effects of paperbased individual writing, paper-based collaborative writing, and computer supported collaborative writing practices on the students' writing performance? (2) Do the perceptions of pre-intermediate level students change towards paper-based or computersupported collaborative writing after implementation?

As a result of the quantitative data analysis, it was found that the scores of the students in CSCW group were the highest although all groups displayed some improvement in their post-test scores. The scores of the ones in PBCW group were higher than the control group, but it was not statistically significant. These findings were consistent with the current literature (Elola & Oskoz, 2010; Stahl, 2006; Wigglesworth & Storch, 2009).

The results of the qualitative data responded the second research question concerning the perception of the students in relevant groups. It was concluded that the students were less anxious in the collaborative groups despite initial concerns and hesitations contradicting the findings of Zhang (1995, 1999) and Kormos (2012). Their prejudice towards working with peers or using online resources within class time also seemed to have changed owing to their beneficial experience. All the groups stated their preference for feedback by either teachers or peers. The experimental groups emphasized the role of peer feedback having an effect on their writing at meaning-level while regarding teacher feedback to be more effective at surface-level due to its nature of being mostly form focused (Alwi et al., 2012; Kessler, 2009; Lin and Maarof, 2013; Sajedi, 2014;).

As a consequence, the findings of this study revealed that the effect of computer-supported collaborative writing was significantly higher than paper-based collaborative and individual writing. Taking the suggestions and recommendation made in the literature to design a well-structured computer supported and paper-based collaborative learning

environment, the researcher managed to avert the anticipated technical obstacles that might have interfered with the research process. The negative opinions of the students prior to the study also seemed to have changed favouring the collaborative writing after the implementation.

### **5.3. Implications**

Some practical, pedagogical and empirical implications can be made based on the findings of this study. It clarifies the effects of different writing environments and situations on students' writing performance and their perception concluding that CSCW is more beneficial for both. This can help writing instructors to choose a better platform for their students. The importance of working with peers under the supervision, mentoring, monitoring, and assistance of teachers can be clearly seen. However, the need to design learning environments carefully has been underlined throughout the current study. Online collaborative writing platforms, in particular, requires technological competence so as not to disrupt the learning process and delay any learning outcomes. The suggestions made by Kreijns, Kirschner, Jochems (2003) can be considered along with the implementation process of this current study. Whether in CSCW or PBCW, it should also be noted that teachers must be trained in order to provide sufficient and quality feedback while guiding the feedback sessions among peers. The need to train teachers in terms of providing feedback has been addressed in the literature (Berg, 1999; Min, 2016). Students must also be trained about getting and giving feedback while realizing the effects of peer feedback on each other's academic performance.

It can also be concluded from the findings that schools must be equipped with more computer labs allowing students to collaborate through online platforms. The technological opportunities accompanied by required training can relieve the concerning parties from too much workload as a result of keeping track of every student and assignment through conventional means of paper-based monitoring. This would provide students, teachers, managers, and eventually nations with economic advantages.

The educational programs of language schools also need to be designed taking the effects of collaborative writing studied within the context of this research into consideration. The psychological, sociological, and academic benefits of utilizing collaborative work can facilitate the learning process on condition that the learning environment is designed meticulously. The training required for this organization, the lesson plans enabling collaboration among learners, and evaluation of these processes can be included in the educational programs.

#### **5.4. Suggestions for Further Research**

The current study was limited to three pre-intermediate level classes (N = 65) undergoing their preparatory education for English at School of Foreign Languages, Uludag University, in 2016-2017 Academic Year. Therefore, the relevant findings cannot be generalized to all the foreign language schools despite its facilitation of the understanding different writing environments and situations. It can be used as an initial point to conduct more research in the related issues with more participants. Other data collection methods can also be used in the future research besides writing assignments and interviews throughout a more extended time period.

The researcher in this study was highly trained in terms of providing feedback and designing, auditing, and monitoring technological platforms. However, this may not the same for all the researchers willing to understand the aforementined effects more comprehensively. Hence, they should be aware of their lack of knowledge and have trainings accordingly.

Moreover, a fourth group within the context of this study was anticipated but could not be formed due to practicality and administrative issues. In the further studies, a comparative study can be conducted between computer-supported individual writing and paper-based individual writing in order to analyze their concurrent effects on students' writing performance and perception.

Finally, a delayed post-test was planned prior to the study but could not be fulfilled because the most of the participants were absent in the classes due to their personal issues as well as administrative issues. It can be executed in the future studies in order to analyze the long-term effects of the relevant environments.

### REFERENCES

- Alwi, N. A. N. M., Adams, R., & Newton, J. (2012). Writing to learn via text chat: Task implementation and focus on form. *Journal of Second Language Writing*, 21(1), 23–39. https://doi.org/10.1016/j.jslw.2011.12.001
- Arnold, N., & Ducate, L. (2006). Future foreign language teachers' social and cognitive collaboration in an online environment. *Language Learning and Technology*, 10(1), 42-66.
- Aydın, Z., & Yildiz, S. (2014). Use of wikis to promote collaborative EFL writing. Language Learning & Technology, 18(181), 160–180. Retrieved from http:// llt.msu.edu/issues/february2014/aydinyildiz.pdf
- Bhavsar, V., & Ahn, R. (2013). Lessons learned from the collaborative writing process. *The Journal of Faculty Development*, 27(3), 12-16.
- Bitchener, J., & Knoch, U. (2008). The value of written corrective feedback for migrant and international students. *Language Teaching Research*, 12(3), 409–431. https://doi.org/10.1177/1362168808089924
- Berg, E. C. (1999). The effectiveness of trained peer response on ESL Students' writing quality and revision types. *Journal of Second Language Writing*, 8(3), 215–241. https://doi.org/10.1016/S1060-3743(99)80115-5
- Bikowski, D., & Vithanage, R. (2016). Effects of web-based collaborative writing on individual L2 writing development. *Language Learning & Technology*, 20(201), 79–99. Retrieved from http://llt.msu.edu/issues/february2016/ bikowskivithanage.pdf

- Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing*, 14(3), 191– 205. https://doi.org/10.1016/j.jslw.2005.08.001
- Blin, F., & Appel, C. (2011). Computer supported collaborative writing in practice: An activity theoretical study. *CALICO Journal*, 28(2), 473–497. https://doi.org/10. 11139/cj.28.2.473-497
- Bremner, S., Peirson-Smith, A., Jones, R., & Bhatia, V. (2014). Task design and interaction in collaborative writing: The students' story. *Business and Professional Communication Quarterly*, 77(2), 150-168. https://doi.org/10.1177/2329490613514
- Bruffee, K. A. (1993) Collaborative Learning: Higher Education, Interdependence & the Authority of Knowledge. Baltimore: Johns Hopkins University.
- Carson, J. G., & Nelson, G. L. (1996). Chinese students' perceptions of ESL peer response group interaction. *Journal of second language writing*, 5(1), 1-19. https:// doi.org/ 10.1016/S1060-3743(96)90012-0
- Celce-Murcia, M. (2001). Language teaching approaches: An overview. *Teaching English* as a Second or Foreign Language, 2, 3-10.
- Chan, S. H., Pandian, A., Joseph, A. S., & Ghazali, A. H. (2012). Teaching business writing using Wiki: Online collaborative writing. *International Journal of Arts & Sciences*, 5(5), 405.
- Chandler, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. *Journal of Second Language Writing*, 12(3), 267–296. https://doi.org/10.1016/S1060-3743(03)00038-9
- Chao, Y. C. J., & Lo, H. C. (2011). Students' perceptions of Wiki-based collaborative writing for learners of English as a foreign language. *Interactive Learning Environments*, 19(4), 395-411.
- Chapelle, C. A. (2001). *Computer applications in second language acquisition*. UK: Cambridge University.

- Cho, M. H., & Lim, S. (2017). Using regulation activities to improve undergraduate collaborative writing on wikis. *Innovations in Education and Teaching International*, 54(1), 53-61. https://doi.org/10.1080/14703297.2015.1117009
- Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research*, 64(1), 1–35. https://doi.org/ 10.3102/ 00346543064
- Cole, M. (2009). Using Wiki technology to support student engagement: Lessons from the trenches. *Computers & education*, 52(1), 141-146.
- Costa, T., & Huertas, S. (2016). Creative debate as a tool to empower and create disruptive thinking within learning contexts in a university design environment. *Procedia -Social and Behavioral Sciences*, 228, 413–417. https://doi.org/10.1016/ j.sbspro.2016.07.063
- Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches*. California: Sage.
- Çakır, İ. (2010). Yazma becerisinin kazanılması yabancı dil öğretiminde neden zordur?. Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 1(28), 1-12. Retrieved from http://dergipark.gov.tr/erusosbilder/issue/23762/253280
- DeLost, L. J. (1998). Postbaccalaureate, pre-medical minority students exploring writingas-a-process in a collaborative learning environment: A teacher researcher study of student writers preparing for a timed essay exam. Doctoral Dissertation, Southern Illinois University Carbondale Department of English in the Graduate School, Illinois.
- Dina, A. T., & Ciornei, S. I. (2013). The advantages and disadvantages of computer assisted language learning and teaching for foreign languages. *Procedia-Social and Behavioral Sciences*, 76, 248-252.
- Dizon, G. (2016). A comparative study of Facebook vs. paper-and-pencil writing to improve L2 writing skills. *Computer Assisted Language Learning*, 29(8), 1249-1258. https://doi.org/10.1080/09588221.2016.1266369

- Dobao, F. A,. (2012). Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, *21*(1), 40–58. https://doi.org/10.1016/j.jslw.2011.12.002
- Ede, L. S., & Lunsford, A. A. (1990). Singular texts/plural authors: Perspectives on collaborative writing. Illinois: SIU.
- Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning & Technology*, *14*(3), 51-71.
- Erkens, G., Jaspers, J., Prangsma, M., & Kanselaar, G. (2005). Coordination processes in computer supported collaborative writing. *Computers in Human Behavior*, 21(3), 463-486.
- Evans, D. J., & Bunting Jr, B. S. (2011). Cooperative and collaborative writing with google docs. Collaborative Learning and Writing: Essays on Using Small Groups in Teaching English and Composition, 109-129.
- Faigley, L., & Witte, S. (1981). Analyzing revision. College composition and communication, 32(4), 400-414.
- Ferris, D. R., Liu, H., Sinha, A., & Senna, M. (2013). Written corrective feedback for individual L2 writers. *Journal of Second Language Writing*, 22(3), 307–329. https://doi.org/10.1016/j.jslw.2012.09.009
- Ferris, D., & Roberts, B. (2001). Error feedback in L2 writing classes how explicit does it need to be? *Journal of Second Language Writing*, 10(3), 161–184. https://doi.org/10.1016/S1060-3743(01)00039-X
- Frechtling, J. A., & Sharp, L. M. (Eds.). (1997). User-friendly handbook for mixed method evaluations. Pennsylvania: Diane.
- Godwin-Jones, R. (2008). Emerging technologies: Web-writing 2.0: Enabling, documenting, and assessing writing online. *Language Learning & Technology*, 12(2), 7-13.

- Graham, C. R., & Misanchuk, M. (2004). Computer-mediated learning groups: Benefits and challenges to using groupwork in online learning environments. *Online collaborative learning: Theory and practice*, 1(8), 1-202.
- Hitchings, M. G. (2016). Career Opportunities: Connecting Design Students With Industry. *Procedia-Social and Behavioral Sciences*, 228, 622-627.
- Hockly, N., & Dudeney, G. (2007). *How to teach English with technology*. China: Longman.
- Johnson, D. W., & Johnson, R. T. (1996). Cooperation and the use of technology. Handbook of research for educational communications and technology: A project of the Association for Educational Communications and Technology, 1017-1044.
- Johri, A. (2008). Online, offline, and in-between: Analyzing meditated-action among American and Russian students in a global online class. *Global Information Technologies: Concepts, Methodologies, Tools, and Applications*, 1854-1865.
- Jun, Z. (2008). A comprehensive review of studies on second language writing. *HKBU* Papers in Applied Language Studies, 12, 89–123.
- Karasavvidis, I. (2010). Wiki uses in higher education: Exploring barriers to successful implementation. *Interactive Learning Environments*, *18*(3), 219-231.
- Kellogg, R. T. (2001). Competition for working memory among writing processes. *The American Journal of Psychology*, *114*(2), 175-196.
- Kessler, G. (2009). Student-initiated attention to form in wiki-based collaborative writing. *Language Learning & Technology, 13*(1), 79-95. https://doi.org/10.1109/LPT.2009.20
- Kessler, G., & Bikowski, D. (2010). Developing collaborative autonomous learning abilities in computer mediated language learning: Attention to meaning among students in wiki space. *Computer Assisted Language Learning*, 23(1), 41-58. https://doi.org/10.1080/09588220903467335

- Kessler, G., Bikowski, D., & Boggs, J. (2012). Collaborative writing among second language learners in academic web-based projects. *Language Learning & Technology*, 16(1), 91–109. Retrieved from http://www. academia. edu / download/ 30862473/kesslerbikowskiboggs.pdf
- Kim, S. H. (2014). *Metacognitive knowledge in second language writing*. Doctoral Dissertation, Michigan State University, Second Language Studies, Michigan.
- Kirschner, P. (2002). Can we support CSCL? Educational, social and technological affordances for learning. In P. Kirschner (Ed.), *Three worlds of CSCL: Can we support CSCL*. Inaugural address, Open University of the Netherlands.
- Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing*, 21(4), 390–403. https://doi.org/10.1016/j.jslw.2012.09.003
- Kreijns, K., Kirschner, P. A., & Jochems, W. (2003). Identifying the pitfalls for social interaction in computer-supported collaborative learning environments: a review of the research. *Computers in human behavior*, 19(3), 335-353.
- Kucukozer-Cavdar, S., & Taskaya-Temizel, T. (2016). Analyzing the effects of the personality traits on the success of online collaborative groups. *Procedia-Social and Behavioral Sciences*, 228, 383-389.
- Kung, S. C. (2002). Evaluation of a team model of digital language exchange. *ReCALL*, *14*(2), 315-326.
- Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. Procedia-Social and Behavioral Sciences, 31(2011), 486-490.
- Lai, C. Y., & Wu, C. C. (2006). Using handhelds in a Jigsaw cooperative learning environment. *Journal of Computer Assisted Learning*, 22(4), 284-297.
- Lamb, A., & Johnson, L. (2007). An information skills workout: Wikis and collaborative writing. *Teacher Librarian*, *34*(5), 57-73.

- Lee, I. (2008). Student reactions to teacher feedback in two Hong Kong secondary classrooms. *Journal of Second Language Writing*, *17*(3), 144-164.
- Lee, I. (2013). Becoming a writing teacher: Using "identity" as an analytic lens to understand EFL writing teachers' development. *Journal of Second Language Writing*, 22(3), 330–345. https://doi.org/10.1016/j.jslw.2012.07.001
- Lee, M. (2017). Activity theoretical approach to L2 writing: A case study of Korean university students. Doctoral Dissertation, The University at Buffalo, State University of New York, Department of Learning and Instruction, New York.
- Lee, M. K. (2015). Peer feedback in second language writing: Investigating junior secondary students' perspectives on inter-feedback and intra-feedback. *System*, 55, 1-10.
- Leng, K. T. P. (2014). An analysis of written feedback on ESL Students' writing. *Procedia Social and Behavioral Sciences*, *123*(2000), 389–397. https://doi.org/10.1016/j.
  sbspro.2014.01.1437
- Li, X., Chu, S. K. W., Ki, W. W., & Woo, M. (2012). Using a wiki-based collaborative process writing pedagogy to facilitate collaborative writing among Chinese primary school students. *Australasian Journal of Educational Technology*, 28(1), 159-181.
- Li, M., & Kim, D. (2016). One wiki, two groups: Dynamic interactions across ESL collaborative writing tasks. *Journal of Second Language Writing*, 31, 25–42. https://doi.org/10.1016/j.jslw.2016.01.002
- Li, M., & Zhu, W. (2013). Patterns of computer-mediated interaction in small writing groups using wikis. *Computer Assisted Language Learning*, 26(1), 61-82. https:// doi.org/10.1080/09588221.2011.631142
- Lin, O. P., & Maarof, N. (2013). Collaborative writing in summary writing: Student perceptions and problems. *Procedia-Social and Behavioral Sciences*, 90, 599-606. https://doi.org/10.1016/j.sbspro.2013.07.131

- Manchón, R. M. (2011). Writing to learn the language: Issues in theory and research. *Learning-to-write and writing-to-learn in an additional language*, 61-82.
- Marzban, A., & Jalali, F. E. (2016). The interrelationship among L1 writing skills, L2 writing skills, and L2 proficiency of Iranian EFL students at different proficiency levels. *Theory and Practice in Language Studies*, 6(7), 1364–1371.
- McLeod, S. (1987). Some thoughts about feelings: The affective domain and the writing process. *College Composition and Communication*, *38*(4), 426-435.
- Min, H. T. (2016). Effect of teacher modeling and feedback on EFL students' peer review skills in peer review training. *Journal of Second Language Writing*, 31, 43–57. https:// doi.org/10.1016/j.jslw.2016.01.004
- Mirazi, S., & Mahmoudi, A. (2016). The Effects of Collaborative and Individual Planning on Iranian Male and Female EFL Learners' Writing Ability. *Theory and Practice in Language Studies*, 6(8), 1630. https://doi.org/http://dx.doi.org/10.17507/tpls.0608.16
- Mu, C. (2005). A Taxonomy of ESL Writing Strategies. Proceedings Redesigning Pedagogy: Research, Policy, Practice, 1–10.
- Murray, M. C., & Pérez, J. (2014). Unraveling the digital literacy paradox: How higher education fails at the fourth literacy. *Issues in Informing Science and Information Technology*, 11, 85.
- Newhouse, P. (2002). Literature review: The impact of ICT on learning and teaching. *Perth: Western Australian Department of Education*, *32*(3), 16-22.
- Nelson, G. L., & Carson, J. G. (1998). ESL students' perceptions of effectiveness in peer response groups. *Journal of Second Language Writing*, 7(2), 113–131. https://doi.org/10.1016/S1060-3743(98)90010-8
- Nicolaidou, I. (2013). E-portfolios supporting primary students' writing performance and peer feedback. *Computers and Education*, 68, 404–415. https://doi.org/10.1016/ j.compedu.2013.06.004

- Nixon, R. M. (2007). Collaborative and independent writing among adult Thai EFL learners: Verbal interactions, compositions, and attitudes. Doctoral Dissertation, University of Toronto, Department of Curriculum, Teaching and Learning Ontario Institute for Studies in Education, Toronto.
- Nordin, N. A., Sharif, N. M., Fong, N. S., Mansor, W. F. A. W., & Zakaria, M. H. (2012). Fulfilling the tasks of reading, writing, speaking and listening through drama workshop. *Procedia - Social and Behavioral Sciences*, 66, 196–202. https://doi.org/ 10.1016/j.sbspro.2012.11.261
- Panitz, T. (1999). The motivational benefits of cooperative learning. *New directions for teaching and learning*, *1999*(78), 59-67.
- Pardo-Ballester, C., & Cabello, A. C. (2016). L2 Collaborative E-writing. *Procedia-Social and Behavioral Sciences*, 228, 601-607. https://doi.org/10.1016/j.sbspro.2016.07.092
- Parks, S., Hamers, D., & Huot-Lemonnier, D. (2003). Crossing boundaries: Multimedia technology and pedagogical innovation in a high school class. *Language Learning & Technology*, 7(1), 28–45.
- Patri, M. (2002). The influence of peer feedback on self-and peer-assessment of oral skills. *Language Testing*, *19*(2), 109-131.
- Paulus, T. M. (1999). The effect of peer and teacher feedback on student writing. *Journal of Second Language Writing*, 8(3), 265–289. https://doi.org/10.1016/S1060-3743(99)80117-9
- Raimes, A. (1985). What unskilled ESL students do as they write: A classroom study of composing. *TESOL quarterly*, 19(2), 229-258.
- Raoofi, S., Chan, S. H., Mukundan, J., & Rashid, S. M. (2014). A qualitative study into L2 writing strategies of university students. *English Language Teaching*, 7(11), 39–45. https://doi.org/10.5539/elt.v7n11p39

- Resta, P., & Laferrière, T. (2007). Technology in support of collaborative learning. *Educational Psychology Review*, 19(1), 65–83. https://doi.org/10.1007/s10648-007-9042-7
- Révész, A., Kourtali, N. E., & Mazgutova, D. (2017). Effects of task complexity on L2 writing behaviors and linguistic complexity. *Language Learning*, 67(1), 208-241. https://doi.org/10.1111/lang.12205
- Roberts, T. S. (2004). *Online collaborative learning: Theory and practice*. Hershey, PA: Information Science.
- Roberts, T. S. (2008). Computer-Supported Collaborative Learning in Higher Education.Higher Education. Hershey, PA: Information Science.
- Roblyer, M. D., & Wiencke, W. R. (2003). Design and use of a rubric to assess and encourage interactive qualities in distance courses. *The American journal of distance education*, *17*(2), 77-98.
- Ruegg, R. (2015). The relative effects of peer and teacher feedback on improvement in EFL students' writing ability. *Linguistics and Education*, 29, 73–82. https:// doi.org/ 10.1016/j.linged.2014.12.001
- Sajedi, S. P. (2014). Collaborative summary writing and EFL students' L2 development. *Procedia-Social and Behavioral Sciences*, 98, 1650-1657. https://doi. org/10.1016/j.sbspro.2014.03.589
- Schiller, J. (2003). Working with ICT: Perceptions of Australian principals. Journal of Educational Administration, 41(2), 171-185.
- Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (2009). Technological pedagogical content knowledge (TPACK): The development and validation of an assessment instrument for preservice teachers. *Journal of Research on Technology in Education*, 42(2), 123–149

- Scott, A. D. G., & Scott, S. A. (2016). ScienceDirect Marketing Me: A case study on the evolution of an MBA marketing competence exercise. *Procedia - Social and Behavioral Sciences*, 228(16), 641–647. https://doi.org/10.1016/j.sbspro.2016.07.098
- Silva, T., & Patton, E. (2004). Selected bibliography of recent scholarship in second language writing. *Journal of Second Language Writing*, 13, 243–250. https://doi.org/10.1016/j.jslw.2004.09.003
- Singh, A. K. J., Harun, R. N. S. R., & Fareed, W. (2013). Affordances of Wikispaces for collaborative learning and knowledge management. *GEMA Online Journal of Language Studies*, 13(3), 79-97.
- Stahl, G. (2006). *Group cognition: Computer support for building collaborative knowledge*. Cambridge, MA: MIT.
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language learning*, 52(1), 119-158. https://doi.org/10.1111/1467-9922.00179
- Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. Journal of Second Language Writing, 14(3), 153–173. https://doi.org/10.1016/j. jslw.2005.05.002
- Storch, N. (2013). Patterns of Interaction in ESL Pair Work. *Language Learning*, 52(1), 119–158. https://doi.org/10.1111/1467-9922.00179
- Storch, N. (2013). Collaborative writing in L2 classrooms. UK: Multilingual Matters.
- Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using google docs on students' writing abilities. *Turkish Online Journal of Educational Technology-TOJET*, *13*(2), 148-156.
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language learning*, *46*(2), 327-369. https://doi.org/10.1111/j.1467-1770.1996.tb01238.x

- Tsui, A. B., & Ng, M. (2000). Do secondary L2 writers benefit from peer comments?. Journal of second language writing, 9(2), 147-170. https://doi.org/ 10.1016/S1060-3743(00)00022-9
- Van Popta, E., Kral, M., Camp, G., Martens, R. L., & Simons, P. R. J. (2017). Exploring the value of peer feedback in online learning for the provider. *Educational Research Review*, 20, 24-34.
- Vens, T. (2010). The suitableness of Google Documents as a student collaborative writing tool. Master's Thesis, Iowa State University Curriculum and Instructional Technology, Iowa.
- Warschauer, M. (2004). Technology and social inclusion: Rethinking the digital divide. Cambridge, MA: MIT.
- West, J. A., & West, M. L. (2009). Using wikis for online collaboration: The power of the read-write web. New Jersey: John Wiley & Sons.
- Wigglesworth, G., & Storch, N. (2012). What role for collaboration in writing and writing feedback. *Journal of Second Language Writing*, 21(4), 364–374. https://doi.org/ 10.1016/j.jslw.2012.09.005
- Williams, J. (2012). The potential role(s) of writing in second language development. Journal of Second Language Writing, 21(4), 321–331. https://doi.org/ 10.1016/ j.jslw.2012.09.007
- Wilson, B. G. (2005). Theory and method as tools: reflections on research on the pedagogical uses of ICT in education. *Computers in human behavior*, 21(3), 541-546.
- Wu, H. (2015). The effects of blog-supported collaborative writing on writing performance, writing anxiety and perceptions of EFL college students in Taiwan.
  Doctoral Dissertation, University of South Florida College of Arts and Sciences Department of World Languages, Florida.

- Wu, X. (2003). Intrinsic motivation and young language learners: The impact of the classroom environment. System, 31(4), 501-517.
- Yang, M., Badger, R., & Yu, Z. (2006). A comparative study of peer and teacher feedback in a Chinese EFL writing class. *Journal of second language writing*, *15*(3), 179-200.
- Yastıbaş, G. Ç., & Yastıbaş, A. E. (2015). The effect of peer feedback on writing anxiety in Turkish EFL (English as a foreign language) students. *Procedia - Social and Behavioral Sciences*, 199, 530–538. https://doi.org/10.1016/j.sbspro.2015.07.543
- Yigitoglu, N., & Reichelt, M. (2012). Teaching Turkish and Turkish-language writing in the US: A descriptive report. *Journal of Second Language Writing*, 21(1), 71-75. https://doi.org/10.1016/j.jslw.2011.11.001
- Yu, S., & Hu, G. (2017). Understanding university students' peer feedback practices in EFL writing: Insights from a case study. *Assessing Writing*, 33, 25–35. https://doi.org/ 10.1016/j.asw.2017.03.004
- Yu, S., & Lee, I. (2014). An analysis of Chinese EFL students' use of first and second language in peer feedback of L2 writing. *System*, 47, 28–38. https://doi.org/ 10.1016/j.system.2014.08.007
- Yu, S., & Lee, I. (2016). Exploring Chinese students' strategy use in a cooperative peer feedback writing group. System, 58, 1-11. https://doi.org/10.1016/j.system.2016.02.05
- Zamel, V. (1983). The composing processes of advanced ESL students: Six case studies. *TESOL quarterly*, 17(2), 165-188.
- Zhang, S. (1995). Reexamining the affective advantage of peer feedback in the ESL writing class. *Journal of Second Language Writing*, 4(3), 209–222. https://doi.org/10.1016/1060-3743(95)90010-1
- Zhang, S. (1999). Thoughts on some recent evidence concerning the affective advantage of peer feedback. *Journal of Second Language Writing*, 8(3), 321–326. https://doi.org/10.1016/S1060-3743(99)80119-2

Zhou, W., Simpson, E., & Domizi, D. P. (2012). Google Docs in an Out-of-Class Collaborative Writing Activity. *International Journal of Teaching and Learning in Higher Education*, 24(3), 359-375. **APPENDICES** 

#### **APPENDIX 1. TOEFL Independent Writing Rubric**

#### **iBT/Next Generation TOEFL Test** ETS TOEFL Independent Writing Rubrics (Scoring Standards) **Task Description** Score An essay at this level largely accomplishes all of the following: • effectively addresses the topic and task • is well organized and well developed, using clearly appropriate explanations, exemplifications, 5 and/or details displays unity, progression, and coherence · displays consistent facility in the use of language, demonstrating syntactic variety, appropriate word choice, and idiomaticity, though it may have minor lexical or grammatical errors An essay at this level largely accomplishes all of the following: · addresses the topic and task well, though some points may not be fully elaborated • is generally well organized and well developed, using appropriate and sufficient explanations, exemplifications, and/or details 4 · displays unity, progression, and coherence, though it may contain occasional redundancy, digression, or unclear connections • displays facility in the use of language, demonstrating syntactic variety and range of vocabulary, though it will probably have occasional noticeable minor errors in structure, word form, or use of idiomatic language that do not interfere with meaning An essay at this level is marked by one or more of the following: · addresses the topic and task using somewhat developed explanations, exemplifications, and/or details • displays unity, progression, and coherence, though connection of ideas may be occasionally 3 obscured • may demonstrate inconsistent facility in sentence formation and word choice that may result in lack of clarity and occasionally obscure meaning • may display accurate but limited range of syntactic structures and vocabulary An essay at this level may reveal one or more of the following weaknesses: · limited development in response to the topic and task · inadequate organization or connection of ideas 2 • inappropriate or insufficient exemplifications, explanations, or details to support or illustrate generalizations in response to the task · a noticeably inappropriate choice of words or word forms an accumulation of errors in sentence structure and/or usage An essay at this level is seriously flawed by one or more of the following weaknesses: · serious disorganization or underdevelopment 1 little or no detail, or irrelevant specifics, or questionable responsiveness to the task · serious and frequent errors in sentence structure or usage An essay at this level merely copies words from the topic, rejects the topic, or is otherwise not 0 connected to the topic, is written in a foreign language, consists of keystroke characters, or is blank.

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## **APPENDIX 2. Pre-Implementation Interview Questions for All the Groups**

- 1. Yazma becerisi dersiniz kapsamında genel olarak neler yaptığınızı, dersin işleyiş sürecini anlatır mısınız?
- 2. Yazma derslerine katılım oranınız ortalama kaçtır?
- 3. Ne kadar sıklıkla paragraf veya benzeri yazı çalışmaları yaparsınız?
- 4. Bu yazı çalışmaları esnasında planlama yapar mısınız?
  - Evet ise kaç dakika?
  - Hayır ise neden?
- 5. Bu yazı çalışmaları esnasında taslak bir yazı oluşturur musunuz?
  - Evet ise kaç dakikada?
  - Hayır ise neden?
- 6. Bu yazı çalışmaları esnasında paragrafın düzenlemesini yapar mısınız?
  - Evet ise kaç dakika ayırırsınız?
  - Hayır ise neden?
- 7. Bu yazı çalışmaları esnasında son halini vermek amacıyla tekrar düzenlenmiş halini yazar mısınız?
  - Evet ise kaç dakika?
  - Hayır ise neden?
- 8. Ders kapsamında akademik paragraf yazmayı kolaylık ve zorluk açısından nasıl değerlendirirsin?
- 9. Seni zorlayan noktalar var mı?
- 10. Bunların üstesinden gelebiliyor musun?
  - Evet ise nasıl?
  - Hayır ise neden gelemiyorsun ve sence nasıl üstesinden gelebilirsin?
- 11. Tek başına mı yoksa arkadaşlarınla beraber mi yoksa sınıf olarak öğretmen ile beraber mi yazmayı tercih edersin?
- 12. Bu sana nasıl hissettiriyor? Bu durum seni nasıl etkiliyor?
- 13. Senin için ideal bir yazma becerisi dersi nasıl olmalı?

### **APPENDIX 3.** Post-Implementation Interview Questions for PBCW and CSCW Groups

- 1. Yaptığımız çalışmayı kısaca özetler misin?
- 2. Beyin firtinası (brainstorming) bölümünde önceki derslerde yapılan çalışmalar ile bu uygulama kapsamında yapılan çalışmalar arasında bir fark olup olmadığı konusunda ne düşünüyorsun?
- 3. Taslak yazma (drafting) bölümünde önceki derslerde yapılan çalışmalar ile bu uygulama kapsamında yapılan çalışmalar arasında bir fark olup olmadığı konusunda ne düşünüyorsun?
- 4. Düzeltme ve dönüt verme (revision) bölümünde önceki derslerde yapılan çalışmalar ile bu uygulama kapsamında yapılan çalışmalar arasında bir fark olup olmadığı konusunda ne düşünüyorsun?
- 5. Nihai halini yazma (publishing) bölümünde önceki derslerde yapılan çalışmalar ile bu uygulama kapsamında yapılan çalışmalar arasında bir fark olup olmadığı konusunda ne düşünüyorsun?
- 6. Bu çalışma sonrasında tek başına mı yoksa arkadaşlarınla beraber mi yoksa sınıf olarak öğretmen ile beraber mi yazmayı tercih edersin?
- 7. Yapılan çalışma ile senin tercihin arasında bir ilişki olup olmadığı konusunda ne düşünüyorsun?
- 8. Yapılan çalışma süresince içinde bulunduğun durumun kaygı düzeyin üzerinde etkisi olup olmadığı konusunda ne düşünüyorsun?
- 9. Yapılan çalışmaların yaygınlaştırılıp yaygınlaştırılmaması konusunda ne düşünüyorsun?
- 10. Çalışmayı gerçekleştirdiğin ortamda ortaya çıkan ürünü etkileyen etmenler nelerdi?
- 11. Çalışmanın başı ve sonunu göz önünde bulundurduğunda konu ile görüşünün değişip değişmediği konusunda ne düşünüyorsun?
- 12. İleride bu çalışmanın tekrarlanması durumunda önerebileceğin noktalar var mı?
- 13. Yapılan çalışmanın genel olarak seni duygusal olarak etkileyip etkilemediği konusunda ne düşünüyorsun?
- 14. Senin için ideal bir yazma becerisi dersi nasıl olmalı?

### **APPENDIX 4. Consent Form**

# Öğrenci Onay Formu

Sayın Katılımcı,

Amacı üniversite hazırlık öğrencilerinin İngilizce yazma becerisi kazanımı sürecinde yaşamış olduklarını tespit etmek ve onların gelişimine katkıda bulunmak olan bir çalışmaya katılımınız talep olunmaktadır.

Çalışmanın hedeflerine ulaşabilmesi için sizlere 2016-2017 akademik yılı bahar döneminin ilk yedi haftası haftada bir kez olmak üzere üzerinde yazabileceğiniz konular verilecek ve sizden uygun akademik yazılar yazmanız istenecektir. Araştırmacı bu süre dahilinde hazır bulunacaktır.

Bu çalışmaya katılımınız, çalışmanın bulgularına değerli katkılar sağlayacaktır. Bu çalışma kapsamında yapacağınızın etkinliklerin değerlendirilmesi sonucu ders başarı puanları üzerinde bir etkisi olmayacaktır. Kişisel bilgileriniz saklı tutulacak olup bu çalışma sizin açınızdan hiçbir sakıncaya neden olmayacaktır.

Katılımınız ve desteğiniz için teşekkür ederim.

Serhat AŞIK İngilizce Öğretmenliği Yüksek Lisans Programı Gazi Üniversitesi serhatydyo@gmail.com

Yukarıda verilen bilgiyi okuyup anladığımı ve çalışmaya katılmayı kabul ettiğimi beyan ederim.

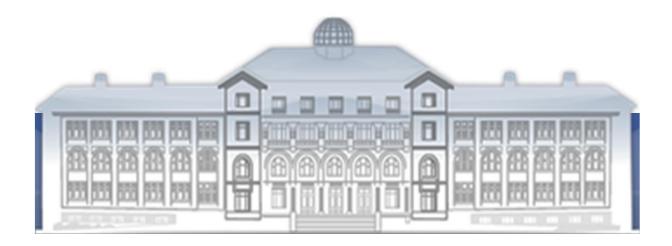
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# **APPENDIX 5. Sample Draft and Revision on Wikispaces**

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	2016-2017 Academic Year / Term 2 /	March 3			A Home
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Initials:					* Week1
Student No:031620070 Choose one of the topics below and w	rite a paragraph of about 150-200 words				Group Writing
Choose one of the topics below and write a paragraph of about <u>150-200 words</u> .  • Write about your favourite season. What do you do during this season? How does it make you feel?  • In your opinion, why do so many people want to learn English? Give a few strong examples to support your answer.  My favourite season is summer because of several things. First of all, I always go on holiday in summer. I prefer go on holiday because I like sea, aand, and sun. I can go to beach and sunbathe. I can meet a lot of tourists a range of European countries in beach. I can eat and drink because I love lce cream and milk shake. Secondly, The summer cloths are the most comfortable all seasons. I always waar t-shirts. I waar sunglasses because I protect myself for sunshine. I usually wear slipper because it is very confortable. Finally, I have free time very much. I usually get uplately. I watch breise. Especially, I watch foreign Tv series. It is a bit of boring but I think it is very exciting. The summer is very good season for three features.				Student1	
				Student2	
				Student3	
				Student4	
				studentx	
				- Week2	
					Student1 Week2
My favourite season is summer because of several things. First of all, I always go on holiday in summer. I prefer go on holiday because I like see,aand, and sun. I can go to beach and sunbathe. I can meet a lot of tourists a range of European countries in beach. I can act and drink because I love ice cream and milk shake. Secondly, the summer cloths are the most comfortable all seasons. I always wear t-shirts. I wear sunglases because I protect myself for sunshine. I usually ware slipper because I is very comfortable. Finally, I have free time very much. I usually get up latelly. I watch Tv series. Especially, I watch foreign Tv series. It is a bit of boring but I think it is very exciting. The summer is very good season for three features.				Student2 Week2	
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				Studentx Wock2	
Teacher Feedback					+ Week3
_My favourite season is summer because of several things (WW). First of all, I always go on holiday in summer. I prefer go (VF) on holiday because I like sea, sand, and sun. I can go to beach and sunbathe. I can meet a lot of fourists (PR) a range of European countries in (PR+AR) beach. I can eat and drink because I love ice cream and milk shake. Secondly, the summer cloths (SP) are the most comfortable OF all seasons. I always wear Lshirts I wear sunglasses because I protect myself for (PR) sunshine. I usually wear slipper (SIPL) because it is very comfortable. Finally, I have A LOT OF free time. I usually get up lately (WF). I watch TV series. Especially, I watch foreign TV series. It is a bit of boring (P) but I think it is very exciting. The summer is (AR) very good season for three features (WW).				Student1 Week3	
				Student2 Week3	
				Student20 Week3	
				Student3 Week3	
Much better organized. Use more conjunctions so that you can develop more ideas and connect them properly! Well done!			Student4 Week3		
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Add Discussion				Student1 Week4	
				Student2 Week4	
					Student3 Week4
Comment bounserhat Mar 2, 2017				Student4 Week4	
				Studentx Week4	
Your Comment				* week5	
					Student1 Week5
studentwriting1 Mar 3, 2017 very short					Student 2 Week 5
studentwriting3 Mar 3, 2017					Student 3 Week 5
you should add more senten	ces i hope it will be nice				Student 4 Week 5
studentwriting20 Mar 3, 2017					Student 20 Week5
you can add many examples such as working					* week6
Comment					Student 1 Week 6



GAZİLİ OLMAK AYRICALIKTIR...