T.C.
PAMUKKALE ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ
YABANCI DİLLER EĞİTİMİ ANABİLİM DALI
İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI
YÜKSEK LİSANS TEZİ

THE EFFECT OF TEACHING WRITING SKILLS VIA GOOGLE DOCS IN A BLENDED LEARNING ENVIRONMENT ON ERROR CORRECTION SKILLS OF TURKISH EFL LEARNERS

Beril NERGİZ

Denizli - 2022

HARMANLANMIŞ ÖĞRENME ORTAMINDA GOOGLE DOCS YOLUYLA YAZMA BECERİSİ ÖĞRETİMİNİN YABANCI DİL OLARAK İNGİLİZCE ÖĞRENEN TÜRK ÖĞRENCİLERİN HATA BECERİLERİNE ETKİSİ

Beril NERGİZ

Supervisor

Assoc. Prof. Dr. Çağla ATMACA

ETİK BEYANNAMESİ

Pamukkale Üniversitesi Eğitim Bilimleri Enstitüsü'nün yazım kurallarına uygun olarak hazırladığım bu tez çalışmasında; tez içindeki bütün bilgi ve belgeleri akademik kurallar çerçevesinde elde ettiğimi; görsel, işitsel ve yazılı tüm bilgi ve sonuçları bilimsel ahlak kurallarına uygun olarak sunduğumu; başkalarının eserlerinden yararlanılması durumunda ilgili eserlere bilimsel normlara uygun olarak atıfta bulunduğumu; atıfta bulunduğum eserlerin tümünü kaynak olarak gösterdiğimi; kullanılan verilerde herhangi bir tahrifat yapmadığımı; bu tezin herhangi bir bölümünü bu üniversitede veya başka bir üniversitede başka bir tez çalışması olarak sunmadığımı beyan ederim.

Beril NERGİZ

DEDICATION

To all English teachers

ACKNOWLEDGEMENTS

I would like to acknowledge and give my warmest thanks to my supervisor Assoc. Prof. Dr. Çağla ATMACA who made this work possible and better. Her guidance and advice carried me through all the stages of writing my thesis.

I would also like to thank my committee members for their brilliant comments and suggestions to make my thesis better.

I would also like to give special thanks to my whole family for their unconditional love and support.

Finally, many thanks to my participant students for their passion to maintain all the work.

ÖZET

Harmanlanmış Öğrenme Ortamında Google Docs Yoluyla Yazma Becerisi Öğretiminin Yabancı Dil Olarak İngilizce Öğrenen Türk Öğrencilerin Hata Düzeltme Becerilerine Etkisi

NERGİZ, Beril

Yüksek Lisans Tezi, İngiliz Dili Eğitimi Anabilim Dalı
Tez Danışmanı: Doç. Dr. Çağla ATMACA
Aralık 2022, 130 sayfa

Bu çalışma, harmanlanmış öğrenme ortamında Google Docs yoluyla yazma becerisi öğretiminin yabancı dil olarak İngilizce öğrenen Türk öğrencilerin hata düzeltme becerilerine etkisini belirlemeyi amaçlamıştır. Katılımcılara kolayda örnekleme uygulanmıştır ve araştırmaya 2021-2022 Eğitim-Öğretim yılı güz yarıyılı boyunca Rize Çayeli'nde bulunan Mesleki ve Teknik Anadolu Lisesi 10. Sınıf öğrencisi olan 50 öğrenci katılmıştır. Verilerin toplanması için karma yöntem tasarımı benimsenmiştir. Nicel verilerin toplanması için deney ve kontrol grubuna ön test ve son test uygulanmıştır. Nitel verileri toplamak için on bir açık uçlu soru ile odak grup öğrenci görüşmeleri ve öğretmen günlüğü yalnızca deney grubuna uygulanmıştır. Nicel verilerin analizinde Mann-Whitney U testi ve Independent Samples T-test kullanılmış, nitel veriler ise özetleyici içerik ve tematik analiz yöntemleri kullanılarak analiz edilmiştir. Nicel verilerin sonuçları, deney ve kontrol grubunun son test puanları arasında içerik, organizasyon, kelime dağarcığı, dilbilgisi kavramları, büyük harf kullanımı, imla ve noktalama açısından müdahaleler sonrasında anlamlı bir fark olduğunu göstermiştir. Ancak deney grubu ve kontrol grubu öğrencilerinin sadece mekanik ile ilgili paragraf yazımındaki hata düzeltme becerileri arasındaki fark, müdahaleler sonrasında istatistiksel olarak anlamlı bulunmamıştır. Ayrıca, nitel verilerin sonuçları, katılan öğrencilerin çoğunluğunun yazma derslerinde Google Docs kullanmak için bilgisayar teknolojisini tercih ettiğini ortaya koymuştur. Google Docs'un otomatik düzeltmelerinin, öğrencilerin hata düzeltmelerini iyileştirmede rol oynadığı gözlemlenmiştir.

Anahtar Kelimeler: İngilizcenin yabancı dil olarak öğretilmesi, Web 2.0 araçları, Google Dokümanlar, yazma becerileri, hata düzeltme becerileri.

ABSTRACT

The Effect of Teaching Writing Skills via Google Docs in a Blended Learning Environment on Error Correction Skills of Turkish EFL Learners

NERGİZ, Beril

Master Thesis in English Language Teaching Program
Supervisor: Assoc. Prof. Dr. Çağla ATMACA
December 2022, 130 pages

This study aimed to identify the effect of teaching writing skills via Google Docs in a blended learning environment on error correction skills of Turkish EFL learners. Convenience sampling was administered to the participants and 50 students from 10th grade at the vocational and technical Anatolian high school in Cayeli, Rize participated to the study, throughout the fall semester of the 2021-2022 academic year. In order to collect the data, a mixed method design was adopted. A pre-test and a post-test were administered to the experimental and control group to collect quantitative data. In order to collect qualitative data, focus group student interviews with eleven open-ended questions were conducted and teacher's diary was employed only for the experimental group. The quantitative data were analysed by using the methods of Mann-Whitney U test and Independent Samples T-test while the summative content and thematic analysis were used in the analysis of qualitative data. The results of the quantitative data demonstrated that there was a significant difference between the posttest scores of the experimental and control group regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation after the interventions. However, the difference was not statistically significant between the experimental group and control group's error correction skills in paragraph writing regarding only mechanics after the given treatment. Additionally, the results of the qualitative data revealed that the majority of participating students preferred computer technology to use Google Docs in their writing lessons. It was observed that automatic corrections of Google Docs played a role in helping students to improve their error corrections.

Keywords: EFL, Web 2.0 tools, Google Docs, writing skills, error correction skills.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ITILT   : Interactive Teaching in Languages with Technology

ISTE   : The International Society for Technology in Education

GAFE   : Google Apps for Education

CALL   : Computer Assisted Language Learning

MoNE   : Turkish Ministry of National Education

CEFR   : The Common European Framework of Reference for Languages

SPSS   : Statistical Package for the Social Studies

BL   : Blended Learning

CHAPTER I: INTRODUCTION

This chapter consists of five parts. In this chapter, the problem statement, purpose of the study, significance of the study, limitations and assumptions will be explained respectively.

1.1. Problem Statement

The study investigates the effect of teaching writing skills via Google Docs in a blended learning environment on error correction skills of Turkish EFL (English as a Foreign Language) learners. This topic of this study is triggered by the difficulties of teaching writing skills and error correction skills faced by foreign language teacher in limited English lesson hours in a vocational high school. Writing could be the most difficult skill to study in a foreign language for some EFL students (Rahmatunisa, 2014). According to Alsubaie and Ashuraidah (2017), the most obvious difficulty EFL students have in learning skills is the acquisition of writing skill. In this vein, some studies investigated the problems faced by EFL learners and teachers in writing. For example, Zhu (2001) studied on teachers to examine the argumentative essay writing skills of students in Mexico and stated that writing activities in language lessons were very complex and it became more difficult especially in these foreign language lessons. On the other hand, Al-Khasawneh and Maher (2010) investigated the writing problems of the Arab postgraduate students in Malaysia and claimed that EFL students had difficulty in expressing their thoughts by writing with limited spelling awareness and little vocabulary. Likewise, Ambrose and Palpanathan (2017) studied on high school students in Malaysia and revealed that although many writing lessons were given to students over the years, most students still did not have good writing skills in a foreign language. The authors reported that the mistakes of the students in their writing skills might be due to limited vocabulary, difficulty in forming sentence structure, problems with word spelling, capitalization and punctuation, grammatical errors, as well as their inability to develop ideas in expressing their thoughts. In addition, the study of problems faced by Indonesian EFL learners in writing argumentative essay conducted by Rahmatunisa (2014) revealed that linguistic, cognitive and psychological problems affected students' writing skills. The findings demonstrated that students mostly made mistakes in formatting words (30.2%), grammatical structure (23.2%), words classes (16.3%), use of articles (21%) and words (9.3%). While cognitive problems included organizing paragraph, difficulties in remaining word classes, generic structure, making a conclusion and putting punctuation, psychological problems were found as laziness, egoism, bad mood, and difficulties to start

writing. The study also revealed that students received feedback from teachers and consulted their friends as a solution. Furthermore, Rezaei and Jafari (2014) also found out among the Iranian EFL students that cognitive problems were caused by lack of adequate linguistic knowledge, teachers' negative feedback, low self-confidence and high expectations. Finally, Bilal, Tariq, Din, Latif and Anjum (2013) highlighted some factors that influenced teaching and learning process of English writing skills. The difficulty of giving writing lessons to overcrowded classrooms was highlighted and it was mentioned that the overloaded curriculum limited the time allocated to develop writing skills in classes. Low linguistic level was another factor for students encountering difficulties in writing. Thus, it is suggested to use methods that can motivate and interest students more in developing their writing competence. In line with the suggestion, the researcher in this study referred to technology to increase her students' motivation.

In Turkish EFL context, a number of studies focused on the writing problems of Turkish EFL learners (Atmaca, 2016; Dogan, 2019; Ekmekci, 2018; Kirmizi, 2018; Mantarli, 2019). To illustrate, a case study conducted by Atmaca (2016) investigated the types of errors the elementary level of Turkish EFL undergraduate students made in their final examination. It was found that errors were mostly lexical and grammatical. The errors made by the participants were specifically found in the areas of prepositions, verbs, articles, word choice, tense structure, punctuation, sentence structure, pluralism, gerunds and possessives. Also, Mantarli (2019) investigated the mistakes made by Turkish EFL students in the 11th and 12th foreign language classes of Anatolian high school in English text writing, and the findings of the study revealed that students often made mistakes in grammar, morphology, meaning, vocabulary and syntax. Among the five error types, the grammatical errors (861) were mostly committed. Additionally, the study conducted by Kirmizi (2018) in Turkish EFL context demonstrated that Turkish EFL students made lexical and linguistic errors were the most common of these errors. Other lexical mistakes made by the participants were omission (13.1%), confusion of two words (11.4%), word invention and wrong lexical choice (9.8%). Furthermore, Dogan (2019) investigated the problems in teaching writing skills to the preparatory school students at a university in Turkey and it was mentioned that paper-based writing tasks instead of using authentic tasks in teaching writing skills were one of the main problems. Finally, in the study conducted by Ekmekci (2018) with Turkish EFL undergraduate students, psychological and cognitive problems such as lack of sufficient motivation, self-confidence and students' prejudice and unwillingness to write in English were stated to affect writing skills of students.

In his book, Harmer (2007) concentrated on some of traditional handwriting, spelling, layout and pronunciation issues related to the writing process. He mentioned that the orthography between languages related to handwriting differs and that this can be a problem in creative writing. He stated that even though many written texts are written via email or word processing documents today, some exams are still handwritten, and we need to encourage students about proper handwriting. It may be possible to match this topic with students' spelling and correct typing factors. According to Harmer (2007), one of the reasons for spelling problems is that words in English are not spelled as they are pronounced, and this is why the teacher may observe a lot of spelling errors. It is claimed that there is a way to increase students' awareness of spelling and copying from written models for such problems. Likewise, attention is paid to different organizational charts in different genre writings, capitalization and the correct use of punctuation to make the text more meaningful. Harmer (2007) also defined the role of the teacher as motivator, resource and feedback provider in writing lessons. It was mentioned that giving feedback to the written texts requires careful work and the teacher should give supportive and positive feedback to the content. It was also emphasized that while giving feedback, it was necessary to focus on the needs of the students and the given task. In the light of the findings and suggestions stated so far, it is possible to claim that writing does not only include meaningful content and organization, but also it is necessary to use proper vocabulary, spelling, punctuation, capitalization, mechanics, rules of the language in order to give the intended meaning clearly to the reader. As it was stated in the study of Bilal et al. (2013), the teacher may not be an enough factor to foster mechanic skills, organization and content sufficiently at the same time on his/her own. The teacher needs to foster writing format and language competencies in addition to the corrections and feedback in the classroom. However, Bilal et al. (2013) claimed that time constraints for teachers in their courses are also a remarkable obstacle to provide feedback and make more explanations on students' drafts. These reasons may cause less attention on teaching writing and writing in second language learning could stand behind the other language skills. It can be concluded that the teacher may not fully ensure if paper-based feedback as a take home assignment was studied by the students and the way the feedback is given may be problematic and unclear for some students.

In addition to the afore-mentioned issues, in todays' world, teachers and students have currently faced distance education due to pandemic. As a result, it may be possible to state that this situation could have created a great awareness about integrating technology into our classrooms in the most effective way in addition to face-to-face education. Thus, in

language classes, the techniques in writing skills can be varied and technology can be integrated to foster further learning. In this way, there occurs a possibility for the teacher to save time and use his/her time more effectively by giving proper feedback to the student at the right time. Also, practicing writing without hesitation is important for students while they write in order to learn writing rules and if they are only concerned with making spelling and grammar mistakes, they may not be able to focus on producing an effective piece of writing (Alsubaie & Ashuraidah, 2017). In this regard, Google Docs appears to be a suitable online writing tool because it allows learners the flexibility to edit their writing products synchronously, get immediate online feedback and benefit from auto error correction and peer tutoring (Seyed Rezaei, Ghonsooly, Shahriari, & Fatemi, 2016). Thus, it can be claimed that teachers can observe, monitor and give extra feedback if needed and technology could provide opportunities for immediate feedback and collaboration.

In light of the afore-mentioned studies, to summarize the problem statement of the present study, it can be claimed that Turkish EFL learners still encounter difficulties in their writing skills and error correction skills. According to the relevant literature, there is still a need for improving writing skills of Turkish EFL learners and technology appears to be a suitable tool in the post-pandemic era. Thus, this study aims to find out the role of technology integration into writing classes as a feedback tool to enhance writing skills and error correction skills of Turkish EFL learners.

1.2. Purpose of the Study

The aim of this study is to reveal the effect of teaching writing skills via Google Docs in a blended learning environment on error correction skills of Turkish EFL learners. The participants of the study consisted of 50 vocational high school students and there was an experimental and a control group in the study. Blended learning environment was created in the experimental group via using Google Docs. To this end, the thesis aims to answer the following research questions.

1. What is the effect of teaching writing skills via Google Docs on error correction skills of Turkish EFL learners regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation?

2. Is there a statistically significant difference between the experimental group and control group in terms of error correction skills regarding only mechanics in paragraph writing after the given treatment?

3. What are the participating students' perspectives on the role of

traditional and online teacher feedback in their error correction skills for paragraph writing?

    4. What are the reflections of the participating teacher on student progress in online writing classes?

It should be noted that the first research question is concerned with overall writing skills development (content, organization, grammatical concepts, capitalization, spelling and punctuation) while the second research question is only concerned with mechanics (grammatical concepts, capitalization, spelling and punctuation). The third question focuses on student reflection whereas the last one focuses on teacher reflection.

1.3. Significance of the Study

After reviewing the articles on technology-assisted language learning published between 2004 and 2014, Ghanizadeh, Razavi, and Jahedizadeh (2015) state that technology is used in almost every field of language education and is seen as an authentic tool in improving input quality and providing timely and relevant feedback. As a result, Ghanizadeh et al. (2015) suggest that technology will be supportive in the development of many foreign language skills such as listening, writing, reading, speaking, grammar, and vocabulary, and will also help create a fun language learning environment. In this vein, computer assisted language learning (CALL) could meet various needs and expectations of educators and students in foreign language classes (Terzioglu, 2017).

Vygotskian social constructivist learning theory suggests that learning takes place between people through participation with the help of scaffolding (Lave & Wenger, 1991; Wenger, 1998). The current status of CALL was also led by the sociocultural and the social interactionist approaches (Terzioglu, 2017). In this regard, in order to maximize interaction, students' active participation and immediate feedback during the limited course hours, online tools can facilitate English language learning. To illustrate, Alsubaie and Ashuraidah (2017) state that although there are different ways to develop students' writing skills, one of the best choices is using online tools in the classroom and integrating online learning tool into classroom is needed as learners today are called digital natives. For instance, Web 2.0 tool Google Docs may provide learners with the opportunities of immediate error correction in spelling, punctuation, capitalization, proper vocabulary in their content and rules of the target language grammar in English writing skills (Aravindan, 2016). As a result, it may indirectly contribute to the development of students' writing skills. Some related studies (Abrams, 2019; Alharbi, 2020; Alsubaie & Ashuraidah, 2017; Lin & Yang, 2013;

Suwantarathip & Wichadee, 2014) used Google Docs as a research tool and collected the data through examining the development of paragraph organization and content, spelling and punctuation, grammar, and sentence structure. However, the variables and the aims were to investigate the effect of peer tutoring and motivation on developing collaborative writing skills of the learners via Google Docs. Only Alsmari (2019) studied on development of writing skills by examining paragraph organization and content, spelling and punctuation, grammar and sentence structure. But this time, the research tool was selected as Edmodo instead of Google Docs. Still, peer tutoring and collaboration were the other variables of this study. Although other studies show similarities with this study, research designs, research questions and data collection tools differ (Ambrose & Palpanathan, 2017; Arani, 2018; Aşıksoy, 2018; Cunningham, 2000; Khodabandeh & Soleimani, 2018). The importance of this study is that while using Google Docs, the attention was not given to on peer tutoring, and the students worked individually and received individual automatic feedback. Unlike previous studies, this study uses Google Docs and collaborative writing is not focused in the. Also, in this study, the effects of both traditional and traditional and online feedback on students' writing and error correction skills were examined in different groups. Thus, this study differs from other studies in terms of employing single and multiple feedback types for writing classes. In addition, the fact that the participants were from a vocational high school in a public school makes this study different from the others. To bridge this gap in literature and contribute to the previous studies, this study aimed to investigate the effect of teaching writing skills via Google Docs in a blended learning environment on error correction skills of Turkish EFL learners. Thus, the present study is assumed to be one of the few studies on observing and analyzing both the content and mechanical development of writing skills by enabling students to work individually without peer work or collaborative work of the Web 2.0 tool Google Docs and by using mixed method research design.

1.4. Limitations

This study has some limitations. Firstly, the study is limited to 50 10th grade high school students who attended English classes in the 2021/2022 Fall term. Thus, the study findings are limited to Turkish EFL context and cannot be generalized to other contexts. At the beginning of the study, the number of students in the control group was 25 and the number of students in the experimental group was 30 but two students in the control group could not participate in the study because they did not attend school throughout the semester

and three students changed schools at the beginning of the semester. During the study, the number of students in the control group decreased to 20 while the number of students in the experimental group was the same, which is 30 students. Secondly, due to the quarantine rules in the schools, the experimental and control groups were completely quarantined twice during the semester and did not come to school for a total of four weeks due to the high number of students infected with coronavirus. During this period, the research teacher was also infected with corona virus once and remained in quarantine for two weeks. The last task could not be completed because there was a loss of six weeks in the time allocated for the seven tasks to be done in the timeline. Thirdly, since the lesson hours were limited to two hours for a week, the teacher often gave verbal individual and collective feedback to both groups to save time. In order to clearly see the influence of Google Docs, the teacher gave oral and written feedback to both groups only during class hours. Fourthly, the error correction codes scale could be used partly because of the students' comprehension difficulties and different feedback habits. The teacher used the error correction codes scale only when giving written feedback in both groups. However, since the students had difficulty in understanding and applying the error correction codes, the teacher also supported them with verbal feedback. Finally, the data were collected via a pretest, a posttest, interviews and a teacher diary. As a limitation of this study, there is a risk for researcher's bias when she was keeping the teacher's diary and observation notes during the interventions. It might have affected the results of the fourth question. Future studies may employ different data collection tools.

1.5. Assumptions

There are a number of assumptions in this study. Firstly, the students who could not complete some of their duties due to the corona and absent students were contacted by the teacher in the same week before switching to another task and the teacher enabled them to complete their duties in an extra hour. It was assumed that this situation did not cause any adverse events or disruptions in the study. It was also assumed that the students in both groups took their writing tasks and pretest and-posttests seriously since the participation in the study was based on voluntary participation. Additionally, it was assumed that the six writing tasks would be sufficient to see the results in the pre and posttests in order to improve writing skills. Besides, it was assumed that rechecking the scoring of the paragraphs via a rubric with the other English teacher at the school was sufficient for ensuring inter-rater

reliability. Furthermore, it was assumed that the experimental group students answered sincerely to the open-ended questions in the interviews due to voluntary participation. Finally, it was thought that the introduction on how to use Google Docs in the first week was sufficient for the students' general computer literacy for using Google Docs for their EFL writing classes.

CHAPTER II: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

In this chapter, theoretical framework and related studies in the relevant literature will be provided.

2.1. Theoretical Framework

With the emergence of smartphones, computers, tablets in our life, the digital world also becomes a daily need for students and teachers since today's era presents us with digital scripts, texts, and books (Badran, 2017). In today's world, it is inevitable to use digital tools in education for the digital natives who grow up in the digital era (Prensky, 2001). In this sense, Whyte (2017) described digital tools as platforms and softwares which help students and teachers to access the text, images, audios, and shareable areas in learning/teaching via computer and mobile devices. Using these tools in language education includes different purposes such as writing and providing feedback, preparing teaching materials and setting homework assignments. Teachers interested in the digital world could provide opportunities in especially language education and bring digital text tools into the classroom environment for different purposes. Also, digital tools are considered to be important in language education in terms of providing input, interaction, feedback and output at the same time and thus improving efficiency of language teaching (Whyte, 2017).

According to Badran (2017), it is not enough to integrate technology within teaching and learning, but there must be a focus on pedagogy and relevance for teaching staff to engage fully with the new technology in schools. Thus, educators need to support and encourage the learner in terms of development of digital skills, provide opportunities, improve quality and apply technology effectively. Sarıçoban (2013) also indicated the importance of the electronic media's revolution on the language teaching methodology. Computers are now used as effective tools in terms of assessment, teaching grammar, vocabulary, syntax, reading, comprehension, and even in developing interactive communication skills, writing activities and learners' motivation. Specificallt, the concept of Web 2.0 tools was first brainstormed by O'Reilly (2007) and it was defined as a fuller platform and software above the level of a single device, providing richer user experiences. Web 2.0 tools includes such tools as wikis, blogs, video sharing websites, social networks, podcasts and many more (Ağır, 2014). In their study, Balbay and Erkan (2018) defined Web 2.0 tools as quite effective, motivational and encouraging. Also, the authors stated that English Language Teaching (ELT) instructors appreciated using already developed tools instead of creating a new one. Besdies, Aşıksoy (2018) emphasizes that Web 2.0 tools not

only develop learners' English language skills but also make learners autonomous and independent individuals in their own learning. The author also found that Web 2.0 tools were more effective and entertaining than traditional methods. Likewise, Khodabandeh and Soleimani (2018) claim that computer-based tasks create a positive and better effect in grammar learning than written tasks, and learners are better motivated by computer-based tasks than traditional tasks in grammar learning.

A framework supported by the International Society for Technology in Education (ISTE) Standards describes the essential 21st century learning skills and encourages rethinking traditional approaches. This framework for innovation in education helps educators and education leaders worldwide prepare learners to thrive in work and life. The ISTE standards for students are designed to be a student driven process and a road map for teachers to help students become empowered students by promoting collaboration with peers, driving their own learning and deepening their practice. Although there are specific ISTE standards for students, teachers and administrators, developing a digital culture, promoting creativity, innovation, and digital age collaboration are the main focus (Morquin, 2016). To meet ISTE standards, Google Docs could be adopted by some teachers since Google Apps for Education (GAFE) was a free resource for school districts, and its popularity, adoption and implementation gradually increased across the world (Tetreault, 2014, as cited in Morquin, 2016). As it has been pointed out by Chu, Kennedy, and Mak (2009), CALL based Web 2.0 tools like Google Docs could provide a great opportunity with its potential features to be applied in language classrooms.

2.1.1. Definition of Digital Tools for Language Education and Effects of Digital tools on Language Learning

Digital tools are platforms and softwares which assist students and teachers to access texts, images, audios and shareable areas in learning/teaching via computer and mobile devices (Whyte, 2017). Using these tools in language education may include different purposes. For instance, according to studies by Interactive Teaching in Languages with Technology (ITILT) project, these purposes may be named as getting started, writing and feedback, preparing teaching materials, setting homework assignments, promoting collaboration and sharing, employing audio and video materials and using social media (Whyte, 2017). Thus, it may seem possible to teach the students born into a digital world (Prensky, 2001).

In the master thesis, Badran (2017) mentioned the effects of digital tools on language learning. Similar to the students as digital natives, teachers could also be interested in the digital world and provide possible opportunities, especially for language education and bring digital text tools to the classroom environment for different purposes. In addition, digital tools offer a shared platform and allow us to work in collaboration without time and space limits. The author also claimed that digital tools could make students creative, create fun educational environments and educate them in plagiarism and fair use. Thus, if the students are interested, they can utilize the digital tool's facilities such as editing their writing, word choice, spelling, punctuation and grammar. Especially, it may help to create positive effects on L2 learners' proper writing, spelling and vocabulary knowledge. In this vein, Chun, Kern and Smith (2016) suggested that teacher should support specific learning goals with the technology.

It can be claimed that efficient integration of technology into education starts with proper use of technology and that is why teacher training in educational technology is important. For example, Greener and Wakefield (2015) focus on teacher's ability to use technology and the barriers which affect their confidence when using technological devices. They believe that teachers may eliminate the barriers or minimize the risks with Technology Enhanced Learning (TEL) nowadays. Some teachers' fears about falling behind the technology and students' ability appear to be a pressure to integrate technology in their classes. Another issue is mobile technology usage may be beyond educational use. For instance, students may use technology for entertainment purposes but not for educational purposes. As to the categories of barriers for teachers, first order factors are spending time to prepare materials and digital confidence. Second factor is about lacking pedagogical needs while the last factor is about personal confidence with technology tools (Prestridge, 2012, as cited in Greener & Wakefield, 2015). In this vein, Greener and Wakefield (2015) suggest encouraging teachers on the pedagogical issues they face and offering potential opportunities for solving learning problems of students.

2.1.2. Socio-Cultural View on Learning and Interactionist Theories

Sociocultural theory describes human learning as largely a social process. Lev Vygotsky (1978) believes that social interactions with the environment such as parents, caregivers, peers, contributes to individual development. While interacting with other people, the information is integrated to individual level (internalization). In this sense, an important concept in sociocultural theory is the Zone of Proximal Development (ZPD).

Vygotsky claims that it is a distance between a child's potential development and individual problem solving, and problem solving under adult guidance (scaffolding) or cooperation with his/her environment. This concept explains how a child cannot accomplish a task alone but can accomplish a task only with a more skilled person. Thus, Vygotsky indicates that social interaction plays a fundamental role in the development of cognition. In practical sense, in the classroom, the ZPD concept may be helpful for teachers in terms of students' potential development because teachers' scaffolding can help the students approach their current skill level. After that, a group activity in which low proficiency children are paired with high proficiency students to promote peer collaboration could exceed the limits of each student's capabilities besides teacher's scaffolding (Shaffer & Kipp, 2013).

Interactionist theories are concerned with interactions between students and students, and students and teachers. Bruner (1978) argues that even though a child is not able to speak, the child can learn language structure from the conversation with people (infant-adult relationship). This is how language learning happens with interaction. As for second language learning, it depends on the teacher's relationship with the student. The student could become more familiar with the language because the teacher is responsible for leading all interactions at first. This interaction could make the student communicate and if students control the interaction, they can control their own language learning. In the classroom, students need to be encouraged to discover themselves by not being afraid of making errors and learning from these errors by combining words to phrases, long sentences and dialogues as a result of interaction.

The point that the teacher researcher in this study tends to clarify is related to the mentioned concepts. The concepts stated above indicate that teacher-student interaction is helpful in student development. But today, scaffolding can take different forms such as the integration of technological tools. In this vein, it is thought that as a Web 2.0 tool Google Docs can contribute to development of the student by interacting with the student individually, giving feedback and correcting errors, all of which can be regarded as the duties of the teacher as for scaffolding. Specifically, Google Docs can support learning from mistakes while at the same time fostering learner autonomy among students.

2.2. CALL (Computer-Assisted Language Learning) and Blended Learning

Computers have been used for educational purposes in the world for a long time and as technology develops, applications are used in different generation computers. First of all, with the development of desktop computers, Computer Assisted Learning software that can

be used in many educations emerged and then Computer Assisted Language Learning (CALL) was developed for language learning and teaching to promote more student-centered lessons. The history of CALL demonstrates that it was first practiced by behavioristic views in the 1960s (Brown & Lee, 2015). Informed by behaviorists, this computer assisted instruction model included repetitive language drills, practices, grammatical explanations and translation tests. In the 1970s, with the communicative approach emphasizing that computer-based activities should be forms-oriented, it was emphasized that grammar teaching should be implicit rather than explicit. It was stated that the use of target language should be exclusive and cognitive processes such as discovery, expression and development should be included in communicative CALL applications (Warschauer & Healey, 1998). Thus, CALL software included applications such as rearranging words and texts to discover patterns of language and meaning, and simulations where students could explore themselves with group or individual work. Warschauer and Healey (1998) state that with the development of the World Wide Web (WWW) in the 1990s, CALL practices became more interactive by providing real communication with outside audiences both for teachers and learners and, supporting authentic materials and communicative tasks. In the 2000s, in addition to CALL, blended learning (BL) terminology was proposed by Neumeier (2005) who aimed to put forward a definition of BL and a framework of parameters for designing a BL environment. Grgurović (2011), for example, defines blended learning as face-to-face teaching and learning supported by CALL. Neumeier (2005), on the other hand, defines BL as an application to any learning context that involves computer assisted learning and claims that it can broaden the scope of CALL and promote an innovative component of general language teaching (p. 163-164). In this vein, Cunningham (2000) states that when CALL based software is adapted to education, the role of the teacher is facilitator, but more often as a mentor, reporter, motivator, or challenger. It was also stated that as educational contexts start to rely on technology as the source of knowledge, the teacher's role as has been changed as facilitator of learning, guide, correspondent. It explains that in learning, the student becomes a more autonomous learner and more responsibility is given to the student. The author further states that CALL based learning is compatible with current EFL pedagogy because the CALL field is eclectic. Thus, it is important to know how to integrate CALL into the language learning curriculum effectively. The author also claims that students, teachers, curriculum and learning environment are factors that affect effectiveness of CALL. Thus, to be effective in the educational setting by integrating CALL, some of the features are sought in education

environment. These features are the appropriate or adaptable materials, the age and academic level of the students, the independence of CALL, cooperation among students, motivation, computer literacy of students (Cunningham, 2000).

2.2.1. Teacher Feedback, Error Correction, Computer Mediated Feedback

According to Hyland and Hyland (2006), feedback is considered as the most important resource to develop writing skills in second foreign language learning. It also appears as the most essential scaffolding for student motivation, learning potential, building learner confidence and literacy. Also, Nicol and Macfarlane-Dick (2006) mention two types of feedback. It can be either summative which is generally provided at the end of the learning process, unit, topic or course or formative which is provided during the learning process and allows a set of practices and resubmission of the students' work. Hyland and Hyland (2006) indicate that summative feedback is often replaced by formative feedback and feedback practices have evolved into peer feedback, writing workshops, oral conferences, or computer-delivered feedback. The authors emphasize that there are two types of teacher feedback: written and conferencing or oral feedback. Research on native English speakers has shown that most written feedback is of poor quality and often misunderstood by students, inconsistent and authoritarian, overly error-focused, and often acts too directive (Connors & Lunsford, 1993).

Chandler (2003) found that the accuracy of learners was improved when the students received feedback compared to the times when they did not receive any feedback. In the same direction, some studies based on students' preferences for receiving feedback revealed that students expect teachers to comment on errors in their writings and they feel distressed when they do not receive feedback (Hyland & Hyland, 2006). The results of other studies on this subject demonstrate that learners also expect teachers to both make grammatical error correction and give feedback on the content and ideas in their writings. It is also stated that besides direct corrections, corrections with clues are more beneficial because they make them more active (Arndt, 1993).

On the other hand, Truscott (1996) argues that teachers should adopt a correction-free approach in their classrooms since error correction is not only ineffective but also harmful to student writing quality and fluency. The author claims that the teacher should focus on getting more practice in writing rather than wasting time on correcting errors. The inadequacy of some teacher characteristics such as the linguistic knowledge and backgrounds of teachers also determines how effective giving feedback will be and how it

varies in feedback practices. Thus, it is concluded that it is more effective if correction is combined with classroom discussions and focusing on both form and content.

Hyland and Hyland (2006) emphasize making mistakes as one of the fundamental processes for acquiring the language. Besides, it has been added that in order to have permanent or immediate access to the functions of the targeted language, errors should be highlighted, and explicit feedback should be given. The process that the learners go through until they finally reach the correct form of the target language is necessary for language acquisition. However, the authors state that although explicit feedback helps to acquire language, it takes time to internalize the correct use of the target language. Likewise, Carson (2001) and Ferris (2003) have revealed that there is a direct connection between corrective feedback and successful acquisition of a form.

Ferris and Hedgcock (2005) mention that there are two types of error correction methods: direct and indirect. While giving direct feedback, the teacher makes error corrections in an explicit way. However, in indirect feedback, errors are indicated by simply underlining, circling, or coding. It could be more difficult for students with lower proficiency level to make meaningful corrections via indirect feedback. Another danger of indirect feedback stated by Carson (2001) and Ferris (2003) is that students may misinterpret the given feedback or miss the point. While errors such as word choice and word order seem to be more difficult to treat, problems related to verbs, subject-verb agreement, run-ons, fragments, noun endings, articles, pronouns, and spelling can be treated more easily because they are more rule governed. It is also claimed that while it is possible to make corrections of the second type errors with indirect feedback, teachers give direct feedback on contextual errors such as word choices and word order. The undeniable and most encouraging finding is that giving immediate feedback and improving drafts help learners become more proficient writers. In this sense, Liu (2008) investigated the extent to which direct and indirect feedback types help L2 learners improve accuracy in their writing skills in terms of morphological, syntactic and semantic errors. It was found that indirect correction provided greater accuracy in writing skills than direct correction and helped the learners make fewer morphological errors. In line with Ferris and Hedgcock (2005), as mentioned above, among the results obtained in Liu's study, it was revealed that morphological errors correction was easier while semantic correction was more difficult, and the learners who received indirect feedback in particular did not make corrections about the highlighted word choice errors in the context.

The purpose of teachers to correct mistakes in students' drafts is not only form-based because one of their purposes is to help students reflect their ideas in their texts in the most

appropriate way. Some studies have revealed that giving feedback is not only a reference to the students' text and there is an interactive and productive communication between the teacher and the student in the learning path (Conrad & Goldstein, 1999; Hyland, 1998). According to these studies, the biggest problem is that if the teacher aims to establish trust between himself/herself and his/her student, s/he should make constructive criticism and encourage the student.

Via teacher's oral feedback, it is possible for students to understand the potential meaning of the text and interpret it accordingly. The Vygotskian concept of scaffolding is considered as the key concept for this interaction. Negotiating ideas in orally given feedback and giving feedback through dialogues between students and teachers is associated with the concept of scaffolding. In this way, it is aimed to develop both the student's ideas and texts while improving their writing skills. This verbal interaction and scaffolding are expected to be applied only in case of low-level students and this situation should be abandoned as soon as the student reaches independence in writing. Although it is not known whether this interaction has a positive effect on writing ability, the control of most L2 interactions remains firmly in the hands of the tutors (Hyland & Hyland, 2006).

Today, those who learn with online feedback programs which have gained popularity with the emergence of distance education prefer to receive feedback from an unseen tutor, their peers or the computer itself (Warschauer, 2002). As to the employment of computers in giving feedback, computer mediated feedback is divided into three categories: computer conferencing, automated feedback and corpora-based feedback (Hyland & Hyland, 2006). For teachers, the use of networked computers allows an efficient remote review of student drafts, easier peer feedback, easy switching between different screens, remote access to large numbers of students and giving feedback in computer conferencing (Palmquist, 1993). Corpora feedback provides a cognitive support tool where students can check their language use skills by gaining direct access to corpus information while writing paragraphs, with the help of software compatible with the writing process. There are a growing number of online resources including search engines such as Google that can be used to help students self-regulate by receiving corpora feedback (Joyce & Weil, 2000). In this way, students can find the frequency of use of certain specific words, phrases or grammatical patterns in more specific and relevant contexts.

In automated feedback, there are different tools such as Microsoft Word, Grammarly, Google Docs, etc. which can scan student texts and produce evaluative comments on them instantly. They offer different types of feedback, from the development of software to

grammar mistakes and to holistic assessments of content, organization, and mechanics (Burston, 2001). For teachers, it reduces hours spent on commenting or giving feedback on students' writing, allows them to focus on other aspects of their teaching and provides students with the opportunity to receive comprehensive feedback in a much shorter time. It can also help teachers deal with the burdens of increased expectations for learning and conduct assessments in a cost-effective way (Hyland & Hyland, 2006).

All in all, Hyland and Hyland (2006) emphasize that there is little research on the social, cognitive and communicative dimensions of automated feedback or on the possible dangers of ignoring meaning. These programs place particular emphasis on grammatical accuracy and writing in an automatic context, focusing on the student's mastery of grammatical usage and organization. In general, automated response programs may be seen as unreliable or lacking some pedagogical principles (Chapelle, 2001).

2.2.2. Google Docs for Education

Google Docs is an online word processing document which allows for customization and editing within the document itself (Aravindan, 2016). It is not much different from other word processors besides being popular with some teachers in different contexts. One reason for its popularity in education is that it offers many opportunities in learning and teaching. For example, Google Docs is helpful for teachers to monitor their students and see how they have corrected their drafts. It also provides one-on-one feedback on students' drafts. In addition, it offers automatic and instant feedback. Besides, it shows the correct spelling by underlining the misspelt words, checks the grammar constantly and makes the necessary arrangements automatically (Thompson, 2008).

Google Docs' auto corrections make markups where punctuation marks are forgotten and automatically adjust capitalization at the beginning of sentences. Another feature is that documents are open to sharing (Sharp, 2009). Thus, teachers can allow students to do homework collaboratively in common groups thanks to this share button. Also, peerwork can be supported by projects in the classroom or outside the classroom. In addition, when these files are shared with teachers, the teacher can use the remote comment feature. Besides, Google Docs is easily accessible in the classroom, outdoors or at home. Finally, another effective feature of Google Docs is that the draft can be saved in its final state even when exiting without saving, and it can be revised if necessary (Suwantarathip & Wichadee, 2014).

As it is seen, Google Docs offers various opportunities for both students and teachers. As to teachers, it can help them analyze their students' process and offers a safe zone. They

can get help any time and there is free training opportunity for educators and computer science workshops for helping students to improve their digital skills. In sum, with personalized learning work, Google Docs aims to reach every students' learning and satisfy their different needs in learning. In this way, teachers may personalize the classroom according to each student's needs and promote creativity, teamwork and simple and safe experience.

2.3. Writing Instruction

2.3.1. Approaches to Writing Instruction

There are a number of theories to support L2 writing and these are regarded to possess complementary and overlapping insights. The focus of these approaches displays differences in that the focus might be on language structures, text functions, themes, creative expression, composing processes, content or genre (Hyland, 2009). According to Hyland (2009), process-based writing focuses on thinking process, producing and linking ideas by emphasizing creative writer whereas genre-based writing is a social activity, focusing on expressing ideas, including social purposes by emphasizing reader expectations. While process-based writing is seen as the act of writing, genre-based approach is accepted as the final product. Disadvantages of process-based writing approach are that L2 and L1 writings is assumed to be similar, L2 language difficulties is overlooked and little attention is given to product.

In the current study, product-based activities were dominantly employed by presenting rules for writing, demonstrating and analyzing a model text, writing based on the model text and making corrections on the students' paper. Thus, the following parts will be devoted to this approach.

In product-based approach, the focus of instruction is on the end product of the students' writings. According to Kroll (1990), there are four steps in product-based writing, namely presentation of rules for writing, demonstration of a text for discussion and analysis, having learners write based on the text and correction of the learners' paper (p. 130). Mourssi (2006) claims that product-based writing is teacher oriented and no interaction is expected between students. The author views the approach to writing as a product, which is learned through imitation, copying, and modifying the given models, and needs to be assessed by teachers' explicit feedback. Here, the emphasis is generally on structural orientations such as accuracy in employing lexicon, grammar, and transitional words. In product-based writing lessons, the teacher determines the topic, the students individually express their opinions on

the topic and submit the text they have written to the teacher for evaluation and feedback. The only disadvantage of the approach mentioned by Haiyan and Rilong (2016) is that writing is considered as the final result. Besides, Mourssi (2013) points out that there is no interaction and sufficient feedback in the product-based writing. In addition, Bowles (2010) believes that it is not informative enough to solely count on the final production of the learners to understand the actual processes going on in their minds.

Hasan and Akhand (2011) revealed that under the product approach, students attempted to remember their previous knowledge, imitate model text and reproduce the original text. However, it was criticized in the study that this approach did not help students' composition structure and organization or improve their writing skills. Another criticism was that with this traditional approach, students were limited to a text source and they could only employ sample texts and reproduce them by rewriting. Therefore, Hasan and Akhand (2011) did not advocate the use of the product approach in teaching writing skills but emphasized the use of an eclectic approach together with the use of process approach because the product approach focuses only on the final work of the student, ignoring the context and audience. It was stated in their study that writing tasks in this approach are seen to have a context-free format, but the process approach is important for the student to reach the level of competence they need. On the other hand, Hasan and Akhand (2011) indicated that both students and teachers felt comfortable with the product approach in writing tasks consisting of fixed order, style and organization. However, students and teachers focused on structural errors in the development of writing skills, but not on organization. Thus, it is possible to claim that shaping writing tasks which focus on structural error corrections in writing skills according to a determined organization and layout makes it easier to focus on linguistic competence and structural error correction in the lessons. In this regard, the writing mainly consists of vocabulary choices, cohesive devices, grammatical features and syntactic patterns which are the essentials of focusing on language structures in L2 writing (Hyland, 2009). The author states that in structural orientation, the model text is imitated and manipulated by focusing on certain grammar and vocabulary in four stage process: familiarization with the model text, controlled writing by manipulating fixed patterns, guided writing by imitating model text and free writing. This orientation directs attention to writing as a product. In light of the afore-mentioned studies regarding the benefits of product-based writing, in this study, a product-oriented writing approach was implemented with fixed tasks by focusing on students' final work.

2.4. Related Studies

After offering the theoretical framework, related studies in the relevant studies will be shared. Firstly, the studies which employed Google Docs as a research tool and collected the data through examining the development of writing skills will be mentioned. However, the variables and the aims in these studies are different from the current study in terms of investigating the effect of peer tutoring and collaborative writing skills of the learners via Google Docs. Then, the studies which had similar aims and variables but employed different Web 2.0 tools will be presented. Finally, the studies which share similarities with the present study will be shared; however, each of them differs in one of the areas of research designs, research questions, participant profile and data collection tools. In light of these studies, a gap in the literature is stated by referring to the similarities and differences between the previous studies and the current study.

Various research studies have been carried out upon the development of writing skills through collaborative learning by using Google Docs. For instance, Lin and Yang (2013) implemented a socio-cultural study among 44 1st -year non-English majors enrolled in an English course at a college in southern Taiwan. 11 fourth-year English student tutors from the same school also participated in this study in order to assist the other participants in an online environment. Online collaborative writing and learning was designed via Google Docs as the main instrumentation of the research. This socio-cultural study aimed to employ both Google Docs and peer tutoring in English writing skills for one year in order to foster collaborative learning and motivation in the course. The data were collected from students' writing tasks and teacher reflection logs in addition to group interviews. The results indicated that e-tutoring provided an effective language development by using Google Docs. It also helped to develop grammatical concepts, confidence, interpersonal skills, patience and a sense of achievement. Moreover, the findings revealed that most of the students developed positive perceptions and attitudes towards using online tools in writing courses.

Suwantarathip and Wichadee (2014) investigated the effect of Google Docs on students' writing skills by focusing on collaborative writing. This quasi-experimental study aimed to compare writing abilities of students who collaborated for writing assignments by using Google Docs in a face-to-face classroom. The sample of the study consisted of 5,625 private university students in Thailand. The study took one semester which lasted for 14 weeks and cluster sampling was administered to assign the control and experimental groups. One of the groups was selected for the face-to-face group while the other one was chosen for the Google Docs group. The students in both groups worked collaboratively during the

writing assignments. The qualitative and quantitative data were collected by the pre-posttest, a questionnaire and an interview. The procedure began with the pretest writing tests which were administered to assess students' writing abilities in both groups. At the end of the interventions, the students were asked to write a parallel paragraph with different topics including the same word counts and the same two kinds of paragraphs comprising a cause and effect paragraph and a process paragraph, which were administered in the pretest as well. The other quantitative data collection tools were questionnaires with two different purposes. One of them was used to report the students' collaboration, comprising three statements with five-point Likert-type scale responses while the other one was aimed to learn how collaborative learning through Google Docs was considered by the students with five rating scale responses. The intervention took seven weeks and was followed by the post-test, a questionnaire, and an interview. The results showed that the Google Docs group received higher scores than the face-to-face group after the interventions. Also, it was stated that Google Docs motivated the students to learn more efficiently. Besides, Google Docs was found to support student learning without restriction of time and place and increase consciousness about how sentences should be corrected.

There are also a number of collaborative writing studies with the integration of Google Docs. First of all, Alsubaie and Ashuraidah (2017) studied the spelling, grammar and other writing problems of participants from the college of Arabic language in Saudi Arabia. Different instruments such as writing portfolios, questionnaires, written tasks, a rubric, and interviews were used in this study. The reasons for the problems were stated to stem from teachers' inability to give feedback, encourage revisions on students' drafts and provide more explanations in a limited course time. As a result of integration of Google Docs in English classes, the students' writing skills showed improvement in that the scores of the posttests were higher than those of pretests. Also, the participants clarified in the interviews that it was more encouraging to explore and test the ideas using the online learning compared to paper-based writing.

Secondly, a qualitative study conducted by Abrams (2019) investigated the link between patterns of collaboration and the linguistic features of texts written during a computer-supported collaborative writing task using Google Docs. It was administered to 28 first-year learners of German at a U.S. university and the results indicated that the learners who had lower proficiency level and difficulties in resolving language problems were easily able to produce accurate texts, develop their accuracy and textual cohesion in terms of content and form. Also, they were able to pay attention to meaning in their texts by using

Google Docs. Additionally, the findings revealed that collaboration in writing encouraged only the meaning-making, but the effect of collaboration was not related to the development of the linguistic features such as grammatical or lexical accuracy, syntactic complexity, or lexical diversity when it is compared to Google Docs use.

Thirdly, another qualitative case study conducted at a large Saudi university by Alharbi (2020) aimed to investigate the potential of Google Docs in facilitating and supporting pedagogical practices in a writing course. The participants were selected from 10 EFL learners working in pairs on article report writing over one academic semester. The data were collected through the instructor's observation and comments, learners' comments, text revisions through Google Docs and the interviews. The findings of the study revealed that the participants mostly made text revisions (344, 68%) in the use of academic language, specifically grammar and word choice including spelling, mechanics, citing and referencing in their writings. In addition, text revisions in the content, organization and coherence was still high (32%). The results indicated that an overall number of 504 text revisions included more local text revisions.

The studies investigating the effect of other Web 2.0 tools on writing skills appear to focus on peer-tutoring as well. To start with, Alsmari (2019) conducted an experimental study in paragraph writing courses by providing a blending learning environment in Saudi Arabia. The Web 2.0 tool was selected as Edmodo and it was found to create a major development in the student's writing skills over the time. It was also found that Edmodo helped the students' development in writing skills especially in the areas such as paragraph organization and content, spelling and punctuation, grammar and sentence structure. According to the students' and the teacher's comments, Edmodo helped to improve thinking out loud and brainstorming, and provided immediate feedback. Besides, it was stated that Edmodo increased the motivation and collaboration in the experimental group. Finally, it decreased the effective filter and helped the students to interact, comment and share their ideas or suggestions in a secure atmosphere. Likewise, Dogan (2019) conducted a mixed method research in Turkish EFL context and aimed to identify students' perceptions about using Edmodo for EFL writing classes. The data were collected from 52 Turkish EFL students in three groups via a five-point Likert-type scale with 40-items and a semi-structured interview. The participants used Google Docs since Edmodo platform provides Google Docs in online writing. The students wrote their paragraphs on Google Docs by completing nine oriented and content-based writing tasks for 12 weeks in Edmodo platform. The results of this study indicated that the students highly developed positive perceptions

towards using Edmodo and most of them did not report any negative perceptions towards integration of Edmodo in writing classes. They believed that their writing skills developed thanks to Edmodo application. Besides, Google Docs usage through Edmodo in their collaborative writing tasks enhanced their metalinguistic awareness.

A different word processing software called as WorkStation was used by Cunningham (2000) and the study aimed to assess students' attitudes towards the word processing experience in the EFL writing class. Thirty-seven Japanese female undergraduate students were the participants of this study. A four-point questionnaire consisting of 37 questions were administered to the students to elicit their perceptions about the advantages and disadvantages of using computers, determine whether they experienced difficulty learning to use the computer and to do word processing. While the experimental group was an online word processing class and the control group was a traditional class. The students worked individually or as a group in their language learning, depending on the criteria of the particular program and its goals. A computer system called Workstation was applied by the teacher in writing lessons and computer software was loaded for each lesson. During the interventions, writing lessons were conducted along with additional tasks to improve all four macro skills, grammar and vocabulary. As a result of data analysis, it was revealed that word processing class was beneficial for writing performance. Specifically, it was revealed that the word processing program made the student pay more attention to certain aspects of their writing and mechanical writing such as grammar, word choice and organization with the help of the WorkStation. However, they paid less attention to spelling and punctuation in their writing texts. It was also found that the students exhibited positive attitudes towards computer-based writing and preferred computer-based writing classes.

A very similar study to the current study was conducted to reveal whether computers could be useful and interesting for students. In this vein, Ambrose and Palpanathan (2017) aimed to find out if Google Docs can improve writing skills of students and discover students' perceptions about using Google Docs. The participants were 114 Chinese EFL learners in a secondary school, and they were chosen via purposive sampling. The students were 11th graders who learnt English for at least three years in high school. The data collection tools consisted of a questionnaire applied to the students, writing samples of the students, and face-to-face interviews. For the writing samples, the students were asked to write a paragraph in both Google Docs document and pen and paper. Two different topics in the descriptive essay were stated for each writing sample and they were asked to complete their paragraphs within an hour. The results of the pre-writing questionnaires demonstrated

that the majority of the students expressed positive attitudes towards using Google Docs in their writing lessons. However, the results surprisingly revealed that most of the students still preferred using a textbook rather than using a computer in learning English. Also, the students stated that the features of Google Docs helped them to improve their spelling and grammar especially and become independent learners. However, the research revealed that the students still preferred the paper and pencil method to a considerable extent. In writing lessons, the students stated that they were not worried about making mistakes on Google Docs because there were automatic corrections and it helped their essay writing. Also, it was observed that the students' sentence structure, organization of text structure properly, choosing appropriate vocabulary and using correct capitalization and punctuation skills improved. Interestingly, the results revealed that while some students got higher scores with Google Docs writing, some students actually got higher scores when they used paper and pencil. Finally, student interviews revealed that the students displayed positive perceptions towards the use of Google Doc.

Khodabandeh and Soleimani (2018) investigated the effect of CALL based writing tasks on EFL learners' grammar learning. There were 60 participants at intermediate level from a high school in Iran. The students were divided into an experimental and a control group. According to the post-test scores, the participants in the experimental group had higher scores than the control group in learning grammar rules. These results also indicated that computer-based tasks had a positive effect in grammar learning than traditional written tasks. According to the researcher's observation, the participants in the experimental group were better motivated by computer-based tasks than traditional tasks in grammar learning, and they had more enthusiasm than the control group in learning English grammar rules. Although the participant scores in the control group were lower than the ones in the experimental group in the post-test, there was an acceptable increase in their progress as well.

In a similar vein, Arani (2018) aimed to explore the perspectives of the faculty members on applying Skype in academic writing process. The participants consisted of 70 faculty members from Kashan University of Medical Sciences in Iran. In data collection, a questionnaire was administered to the participants. The findings indicated that the participants were interested in Skype use in educational environment and most of them expressed that it was beneficial to use Skype for second language teaching because it was a motivating tool. The findings also indicated that faculty members developed their academic writing skills slightly with the use of Skype media and found it useful for language learners

because it provided a comfortable and interactional place.

Lastly, for Turkish EFL context, Aşıksoy (2018) aimed to investigate ELT students' perceptions towards Web 2.0 technologies in developing their language skills. 207 students from an ELT department at two state universities participated in this study. The instrument was a questionnaire including two different parts. The first part included the students' perceptions towards Web 2.0 tool in their language development and the second part aimed to find out what kind of Web 2.0 tools were used by the students. The results obtained from the descriptive data analysis highlighted that the majority of the participants appreciated Web 2.0 tools to develop their English language skills. They also emphasized that it helped them to become autonomous learners and independent individuals. Besides, the aural and visual materials the tools provided were found to create a rich, dynamic, creative and flexible learning environment.

As it is seen, some earlier studies (Abrams, 2019; Alharbi, 2020; Alsubaie & Ashuraidah, 2017; Lin & Yang, 2013; Suwantarathip & Wichadee, 2014) employed Google Docs as a research tool and collected the data through examining the development of paragraph organization and content, spelling and punctuation, grammar, and sentence structure. However, the variables and the aims were to investigate the effect of peer tutoring and motivation on developing collaborative writing skills of the learners via Google Docs. Only Alsmari (2019) studied development of writing skills by examining paragraph organization and content, spelling and punctuation, grammar and sentence structure. However, in the studies of Alsmari (2019) and Doğan (2019), the research tool was selected as Edmodo. Google Docs was used in Edmodo platform writing lessons, but the studies did not directly investigate Google Docs platform. Collaborative features of Edmodo platform on writing lessons were explored. Still, peer tutoring and collaboration were the other variables of these studies. Although these studies show similarities with this study, research designs, research questions, participant profile and data collection tools differ (Ambrose & Palpanathan, 2017; Arani, 2018; Aşıksoy, 2018; Cunningham, 2000; Khodabandeh & Soleimani, 2018). To bridge this gap in literature, this study aimed to investigate the effect of teaching writing skills via Google Docs in a blended learning environment on error correction skills of Turkish EFL learners and contribute to error correction techniques with the integration of technology in a blended language learning environment.

CHAPTER III: METHODOLOGY

In this chapter, research design, participants, data collection instruments, data collection procedures and data analysis will be explained respectively.

3.1. Research Design

The study was designed as a sequential mixed method research (Dörnyei, 2007). Likewise, some related studies also employed mixed method research design (Alsubaie & Ashuraidah, 2017; Ambrose & Palpanathan, 2017; Dogan, 2019; Khodabandeh & Soleimani, 2018). Since all data collection methods may have some limitations, using more than one method in a study could reduce these limitations, strengthen the study and enable researchers to better understand the phenomena (Greene & Caracelli, 1997). In this sense, Creswell, Plano Clark, Gutmann and Hanson (2003) define mixed method research design as simultaneous or sequential collection or analysis of both qualitative and quantitative data in a study. As a result of this definition, since both quantitative and qualitative data were collected at different times, the research design of this study was considered as a sequential mixed method research design. In this study, quantitative and qualitative data were collected sequentially in accordance with the sequential mixed method research design and then analyzed separately.

In this study, there was an experimental and a control group and these groups were previously formed by the school administration. Thus, convenience sampling was administered to the participants. The study was designed as a quasi-experimental study since the participants in the control and experimental group were chosen via convenience sampling. In the quasi-experimental study design, clustered units such as classrooms or counseling groups are selected as the participants since no randomization in selecting the groups is needed and testing the groups may interfere with the effect of the given treatment (Ekmekci, 1999). According to McMillan and Schumacher (2010), characterization of an experimental research is shaped by random assignment of subjects to intervention and control groups, manipulation of independent variables, and control of the dependent variables. The creation of experimental and comparison groups, manipulation of the factor of the group to receive the intervention, and assessment of the effect of the intervention on behavior are among the steps of the planning an experimental research. However, Fraenkel, Wallen and Hyun (2018) claim that a quasi-experimental research design differs from an experimental research design in that it does not include the use of random assignment. Instead, researchers rely on other techniques to control or at least reduce the threats to

internal validity. Besides, McMillan and Schumacher (2010) state that the purpose of the quasi-experimental design is the same with the classic experimental design in that the researchers aim to determine cause and effect relationship by introducing an intervention and seeing how that intervention relates to the outcome of the study. However, quasi-experimental designs do not include a random assignment of subjects and are often employed when conducting randomized experiments are difficult (McMillan & Schumacher, 2010). In this sense, Kerlinger (1970) refers to the random selection or random assignment of schools and classrooms as quite impracticable. Likewise, it is often not possible for the researchers to employ random sampling to control or experimental groups in educational research (Cohen, Manion, & Morrison, 2007). It is very common to determine the effect of curricular materials or teaching method in the implementation of the quasi-experimental research (McMillan & Schumacher, 2010). Hence, in the current study, since the classes were intact, or already organized for an instructional purpose, there was no random assignment of subjects. However, interventions were given to the experimental and control group, and these groups were compared by using both a pretest and a posttest.

The study was conducted throughout the fall semester of the 2021-2022 academic year. The collection of data took up to 13 weeks due to student and teacher coronavirus quarantines and weather-related issues in the region. Due to absent students in both groups, the interventions were delayed, and the completion of the tasks took longer than expected. Paragraph writing pre and posttests were applied to both experimental and control groups before and after the interventions. Before the experimental group interventions, the students were informed about how to use Google Docs. Paragraph writing topics in pre and posttests were chosen from the Guide for the 9th-12th Grades English Curriculum published by Turkish Ministry of National Education (MoNE), considering grade level and unit topics regarding The Common European Framework of Reference for Languages (CEFR) can/do statements for proficiency levels. The pre/posttests were adapted from the Unit 3 'Plan' writing activity in the MoNE 10th grade textbook. The language proficiency levels of the pre- and post-tests were determined by taking into account the CEFR can/can (CAN/DO) statements in the MoNE curriculum. Since the English lesson hours in Vocational and Technical Anatolian High Schools are limited to only two lesson hours (40+40 minutes) per week in 10th grades, the interventions included a 40-minute lesson in English writing skills for each group. The interventions were made in the form of six different writing tasks.

The teacher of the course followed the language skills and learning outcomes in Guide for the 9th-12th Grades English Curriculum published by Turkish MoNE. The teacher

carried out the lesson plans for six weeks in total for each group. Before moving on to the next lesson plan, the teacher identified the absent students who could not complete the task and enabled these students to complete the tasks by teaching the same lesson plan according to their own groups during their free hours in the same week. After all students successfully completed the tasks, the teacher moved on to the next lesson plan. Each week's lesson plan included Google Docs paragraph writing activities based on learning outcomes of writing skills and unit topics according to the English curriculum. The experimental group students were exposed to Google Docs and automatic error correction in their writing tasks with a blending learning environment whereas the control group students were exposed to only traditional paper-based error correction methods in writing skills during the classes. The teacher's observation was administered only to the experimental group in order to reveal the effect of Google Docs use. Moreover, a semi-structured interview form adapted from Alharbi (2020) was administered to the participants in the experimental group in order to reveal their perceptions about using Google Docs in the writing tasks. The reason to create a semi-structured interview was that it allows flexibility, helps to gather the individuals' thoughts in detail and enables interviewees to elaborate on the topic (Adams, 2010; Cohen, Manion, & Morrison, 2007). The teacher aimed to collect the data without limiting the participants' responses. The reason to employ Google Docs instead of other Web 2.0 tools was that the teacher of the classroom had more experience with using Google Docs in education than the other tools and based on previous studies, Google Docs was used as a common online writing tool in English language teaching rather than Microsoft or Grammarly. Also, Grammarly is a new tool and the teacher was not competent in using its functions effectively.

As for ethical considerations, a required permission and negotiation to conduct this study in a Turkish public high school was obtained from the Provincial Directorate of National Education (Document permission number: E-99530429-605.01-31221386), the school principal, parents, and the students themselves respectively, and copies of files were reserved. Specifically, the participation in this study was purely on voluntary basis and consent of the students and parents was obtained via the consent form, which was declared to the students and their parents, and was signed by the parents as well.

3.2. Participants

The study included 50 Turkish EFL students who were the 10th grade students at a Vocational and Technical Anatolian High School in the Black Sea region and they were chosen via the convenience sampling. Since the students in the high school were all males, the study included only male students aged between 14-15. Convenience sampling is the selection of a time and place for a study and selecting individuals from a pool of potential participants who are easy to reach based on their motivation to participate in the study, the match between their participation and other commitments (Mackey & Gass, 2005). With the consistency of this explanation, since there were only A and B branches from one ship machinery operation and one deck operation branches in the school, selecting participants was easily available to the researcher. Thus, convenience sampling was used in the selection of the participants. The reason for choosing 10th grade students was planned according to the curriculum since more importance is attached to the development of listening and speaking skills in 9th grade students. In foreign language teaching, the development of writing skills is expected to occur starting from the 10th grade. Thus, the researcher decided to work with 10th grade students and expected that it would be more effective for the results of the study. In addition, 11th grade students mainly take vocational courses and 12th grade students tend to focus on national exams. The study was implemented during the English classes in the fall semester of the 2021-2022 academic year. The participants took English lessons for two hours per week during the fall semester. This study was conducted in one lesson hour of English, each lesson hour consisting of 40 minutes. It was conducted weekly or every two weeks depending on the pandemic conditions. The students were divided into two groups as A branch experimental group and B branch control group. At the beginning of the term, the 10th grade experimental group consisted of 30 students and the control group consisted of 25 students, but the control group number decreased to 20 dues to absent students and school change reasons. Since the school was a maritime high school, all the participants were male students and no female students registered in this school. Their language proficiency level was defined as A2 for 10th Grade according to CEFR and the Guide for the 9th-12th Grades English Curriculum published by Turkish MoNE.

3.3. Data Collection Instruments

The data collection tools included a paragraph writing pretest before the intervention and the same task was applied as a paragraph writing posttest at the end of the intervention. Paragraph writing pre- and post-tests were designed considering the proficiency levels of the

students. The paragraph writing pre-test and post-test for Grade 10 included the task of writing an opinion paragraph about a vacation plan by choosing one of the students' favorite seasons. The topic of paragraph writing was selected from the 3rd Unit 'Plans' activities of the course book, considering the grade level and unit topics from the Guide for the 9th-12th Grades English Curriculum (Secondary Education English Course Curriculum Guide) published by Turkish MoNE. Afterwards, two different expert opinions were taken for the appropriateness of the activities. These experts were faculty members at an ELT Department at a state university in Turkey. For this study, the paragraph writing evaluation rubric which was adapted with reference to Hughes (2003) was used to evaluate the pre- and post-tests. The rubric for the evaluation of paragraph writing was originally prepared from the book 'Testing for language teacher' by Arthur Hughes (2003) in terms of content, organization, vocabulary, grammar, spelling and punctuation. Also, the list of error correction codes adapted by Doğan (2019) from Ferdouse (2013) and Lee (2004) was used, and written permission of the author was obtained. The copies of the correspondence were saved, too.

As the second instrument, the teacher's diary was employed for the experimental group in the study. The teacher served as an observer of the intervention process in order to make qualitative assumptions on the effect of Google Docs use. The teacher kept the diary in English and shared her reflections in detail.

Finally, a semi structured interview, which included eleven open-ended questions adapted from Alharbi (2020), was employed to reveal students' experiences in using Google Docs for paragraph writing. The reasons for using a semi-structured interview in this study were underpinned by the claim that it could be appropriate for students to establish a dialogue in the form of questions and answers and to feel comfortable (Adams, 2010). The interviews were held face-to-face and lasted for about seven-18 minutes. In the interview, there were some open-ended questions to provide comfort in the answers of the interviewee without being blindly tied to the questions asked, enable them to elaborate on the topic and save time so that it took neither too long nor too short to gather the individuals' thoughts in detail (Adams, 2010; Cohen, Manion, & Morrison, 2007). The interviews, which lasted between seven and 18 minutes, were held in groups of five with 30 students in the experimental group. Each focus-group interview was recorded, and the students were interviewed in Turkish so that they could explain their ideas more easily and in detail. Then, the teacher transcribed the focus-group interviews and translated the whole text into English. In order to adapt the interview questions to this study, a written permission was requested from Alharbi (2020) and copies of the correspondence were kept accordingly. Two different expert opinions were

received during the adaptation of the interview questions. Finally, there were eleven question items in the interview as follows:

Q1: Do you find Google Docs as a useful tool for learning writing and editing in the English course? Why?

Q2: How did Google Docs's auto corrections help your error correction skills regarding grammatical concepts in the development of writing skills? Explain.

Q3: How did Google Docs's auto corrections help your error correction skills regarding capitalization, spelling and punctuation in the development of writing skills? Explain.

Q4: How did the instructor help in writing and correcting your errors? Explain.

Q5: Was it easy to deal with error corrections during the writing tasks on Google Docs?

Q6: What did you focus on while doing revisions in your text? Why?

Q7: Which one do you prefer, instructor's intervention or Google Docs's auto correction during writing? Why?

Q8: Did you have any difficulties while using Google Docs for your writing classes? If yes, how did you overcome these difficulties?

Q9: What did you like most/least about using Google Docs for your writing classes? Why?

Q10: Do you prefer using Google Docs or pen and paper-based writing for learning writing skill in your future studies? Why?

Q11: Do you have any other comments about using Google Docs for your writing classes? If yes, please explain.

Table 3.3.1. *The Implementation Dates of the Study*

Groups	The Date and Duration of Pre-test	The Date of Teacher's Diary	The Date and Duration of Post-test	The Date and Duration of Student's Interviews
Experimental Group	21st September 2021, 40 Minutes	29.09.2021-Task 1 06.10.2021-Task 2 13.10.2021-Task 3 27.10.2021-Task 4 29.12.2021-Task 5 05.01.2022-Task 6	12nd January 2022, 40 Minutes	7nd January 2022, 7-18 Minutes
Control Group	22st September 2021, 40 Minutes		13rd January 2022, 40 Minutes	

As it is seen in Table 3.3.1., paragraph writing pre and posttests were applied to both experimental and control groups before and after the interventions on the different days in the same week because according to the schedule of teacher, the lessons with the groups were arranged on different days. The duration of pre-posttests was 40 minutes which is exactly one English lesson hour. The teacher's observation was administered only to the experimental groups during the intervention of the six tasks. The interviews with the student in experimental group were held in the same week at the end of the sixth task and the duration of each interview differed, lasting between seven and 18 minutes.

3.4. Data Collection Procedures

The study covered a 13-week data collection period during the 2021-22 Fall semester. Information about the study was given in the first week, then pre-test took one week, and then the writing tasks lasted for six weeks. There was also teacher's diary in which the teacher wrote down what she observed in the experimental group during the writing tasks. Besides, the post-test and student interviews with the experimental group were held in the last week. The writing tasks taken from the textbooks were considered to be more suitable for productive writing and creative writing. While choosing writing activities for this study, the teacher examined the activities in detail and selected most of the activities among the end-of-unit writing activities. This is because in the study, the students were deliberately selected for productive writing activities as they were intended to work on only one draft. In addition, the topics of writing varied according to the themes in the textbooks, the content of each unit was different, and the writing activities were prepared according to these topics. Another conclusion that the teacher reached while examining the activities was that more guided questions were provided in the writing tasks in the first units, but in the following units, the students were expected to be more creative without given questions. The model text was used in all type of tasks. Creating one draft in the tasks was considered enough because the emphasis was placed on the end product and this approach appeared as suitable for the limited English class hours.

Hasan and Akhand (2011) stated that creating, organizing and transferring ideas were important in writing studies. Thus, this study investigated the effect of Google Docs on writing skills and error correction skills of Turkish EFL learners. For this purpose, there were pre-test and post-tests of both groups, the six-week writing tasks, teacher's diary and interview questions. In this section, some of the writing tasks written in Google Docs are exemplified in sub-headings. In the first week of data collection, quantitative data from pre-

test were collected and from the second week till the seventh week, qualitative data were collected via the intervention and teacher observations. After the intervention was over, in the seventh week, qualitative data were collected first by focus-group interviews with the students and the quantitative data were collected by the posttest in the eighth week.

3.4.1. Data Collection in Week 1

In the first week, the students in the experimental group were informed by the teacher about how to use the Google Docs during lessons. The teacher first took the students to the computer lab where the writing lessons would be delivered and created a common e-mail account that would only be used for this study. Later, she asked everyone to create a Google Docs page under the demo folder by entering this joint account through the drive.
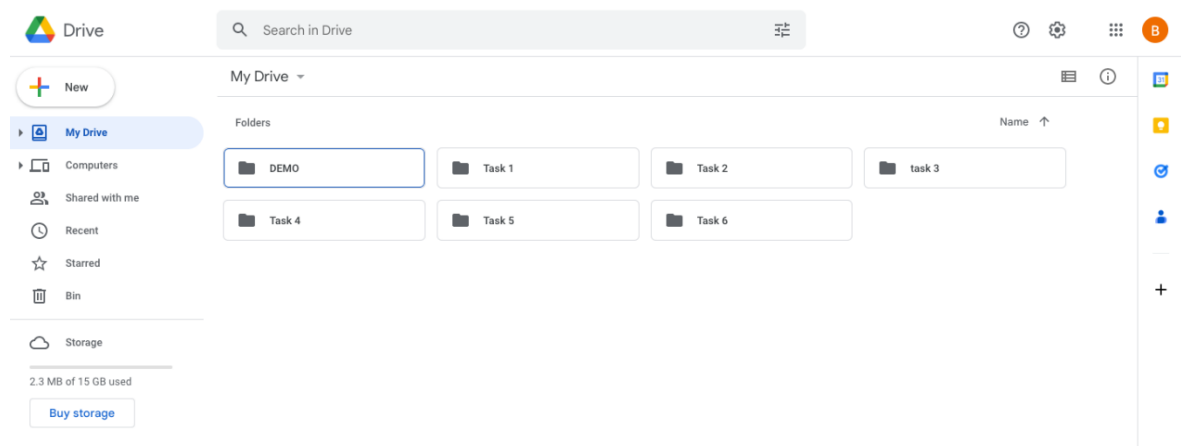
Figure 3.4.1. Google Drive account and tasks.

After all the students created a document with their own names, the teacher created a sample Google Docs document and explained how they could benefit from this application. First of all, she said that the bubbles that appear above or red/blue highlights appearing below when wrong words or sentences were written mean that they were correction marks and that they could correct mechanical mistakes such as spelling, typing and grammar mistakes directly by clicking on the bubbles. She also mentioned that in this way, the red or blue lines appearing below may mean that they should put punctuation marks and that the application automatically corrects the use of capital letters. She showed where to look for the word counts determined in the tasks and reminded the students that they should check the number of words they wrote for each task where minimum and maximum word limits were assigned. Then, the teacher showed the boxes where she could give written feedback via her computer and told the students what to do next. The teacher created the file of error correction codes and explained what the feedback codes she would give the students represent, reminding

them that she had uploaded this file to Google Drive, and they could look at it at any time. At the same time, the teacher reminded that if they took a copy or referred to translation, Google Docs would not not allow it, that is, they should not copy and paste. It would be noticed by the teacher if they referred to translation. The teacher could see and check all the texts, make corrections and even look at their history. She reminded them that the teacher would monitor them, talk to them individually throughout the lesson and give feedback both verbally and sometimes by leaving comments on Google Docs so that the students had to correct them immediately. She said that students could use online dictionaries while doing their writing tasks and gave information on how their writing tasks would be on a weekly basis. After answering the students' questions, she ended the lesson by writing a demo task.

Hi! I'm ███ get up at 7 o'clock in the morning. I wash my hands and face I have breakfast in the morning and put on my school uniform. I go to school on the weekdays. I return home from school, play computer games, order food from outside, play with friends, go back home, read a book , go shopping, meet friends, travel and get home. I take a rest.

Figure 3.4.2. Demo lesson Google Docs paragraph writing sample.

In demo writing, she gave a short writing activity in the first unit and expected the students to make instant corrections according to what was told, both with Google Docs' automatic error corrections and according to the teacher's feedback. While the students were successfully completing the demo writing, it was seen that they had a lot of trouble understanding the error correction codes given by the teacher.

In the first week, paragraph writing pre-tests were also applied to the participants in each group before the interventions. During the 40-minute lesson, the teacher distributed the pretest paper, first gave the instructions and then waited for the students to complete the paragraph writing task individually according to the instructions during the given time. The pretest was done on paper for both groups in their classrooms. The paragraph writing pretest included the task of writing an opinion paragraph about making a holiday plan by choosing one of their favorite seasons. Effective writing instructions about what details to include and what to talk about in their paragraphs while making a holiday plan were clearly stated on the given paper and the students were asked to write a paragraph between 100-120 words. This paragraph writing pre-test was chosen among the writing activities in the 3rd unit of English textbook which was used in all 10th Grade in the country. Therefore, the subject had not been covered yet, no intervention had been made to improve writing skills, and the students were expected to express themselves with their prior knowledge without getting any help from the

teacher and their peers. When the pre-tests were over, they were graded according to the assessment rubric.

3.4.2. Data Collection in Week 2

In the second week and following weeks, the teacher of the course followed the language skills and learning outcomes in the Guide for the 9th-12th Grades English Curriculum published by Turkish MoNE. Due to the pandemic conditions, the teacher was able to implement six of the designed lesson plans consisting of seven tasks. Each week's lesson plan included writing skills according to the English curriculum and paragraph writing activities based on the learning outcomes of the unit topics. Every two weeks, the teacher allocated 40 minutes of the English lesson to writing skills, and after introducing and explaining the weekly topic in detail, the participants in both groups were asked to write a paragraph according to the unit topic that the teacher specified in the lesson plans and achievements. The paragraph writing activities in the lesson plans were taken from the English textbooks published by MoNE. The main difference between the experimental and control groups in the interventions was that the experimental group was asked to write their paragraphs in Google Docs while the control group was asked to write them on paper. Therefore, during the English lessons, the control group was exposed to traditional error correction methods in paragraph writing activities whereas the participants in the experimental groups were exposed to Google Docs automatic correction method in writing tasks for six weeks. Each group was supervised and observed by the teacher, and received feedback on their writing only during class hours. In other words, while the students in the control group were only exposed to the teacher's feedback in the limited time, the experimental group was exposed to both teacher feedback and Google Docs' immediate feedback in the given time. During the implementation, the teacher took notes for each week on the Google Docs error correction skills and students' attitudes in her diary, and made observations and assumptions about the effectiveness of the tool.

Task one was a writing task taken from the coursebook. Since the objectives of the unit was based on writing a descriptive paragraph, the writing taks required the students to describe themselves, their family and habits in a short descriptive paragraph with the help of cues and/or guiding questions. First, the students in both groups read a text about daily routines in their textbook and chose the best title for it. Then, they thought about their daily routines and made notes. The lead-in lasted for 10 minutes. The teacher asked students to write a descriptive paragraph (50-100 words) with the help of the guiding questions in the

textbook which include daily routines. After taking out the blank paper, the students in the control group tried to answer the guiding questions by using the online dictionaries for 30 minutes. Both control group and experimental group students were allowed to search for unknown words from online dictionaries during writing lessons. First of all, the teacher went around the class, visited the students one by one and gave feedback, both in written and oral way, by using the error correction codes on their papers. After giving feedback to all students, she continued to give feedback as much as possible to those who finished their task. In the experimental group, the students logged in the shared Google Drive account and created their Google Docs account for the writing task individually. Since the task was short, the teacher opened all the files on her computer and sent comments to the students' writings using error correction codes.
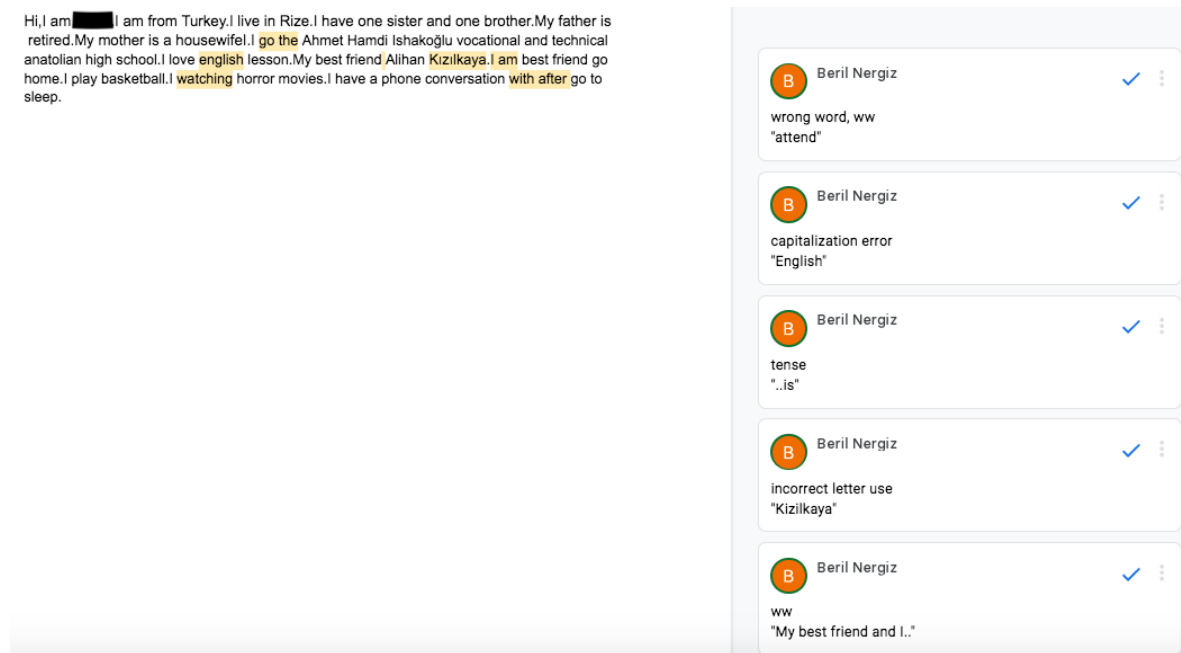
Figure 3.4.3. Google Docs paragraph writing sample task 1.

On the one hand, she observed the students' automatic corrections of their mistakes via Google Docs and shared her own comments where automatic corrections were not sufficient. The teacher provided guidance when the students in the experimental group asked questions about Google Docs' automatic corrections. The students who completed their paragraphs by automatic word check on Google Docs received mostly written but also oral feedback from the teacher as long as the time was sufficient. The teacher remotely monitored and took field notes on their error corrections in the experimental group. In both groups, during the paragraph writing, the teacher reminded the students that they should be careful about first identifying, then correcting their misspelling, punctuation, correct typing or capitalization and grammar errors by using correction codes or signals reflected on paper or

by Google Docs, and also consider cohesion and coherence issues. The students were familiar with the subject of the writing task as they did reading, listening and speaking activities related to the unit in the previous week.

3.4.3. Data Collection in Week 3

In the second task, the teacher had another writing activity included in the same unit of the textbook. The writing task included the same purpose with the previous writing task, which was to describe themselves, their family and habits in a short descriptive paragraph with the help of cues and/or guiding questions in the textbook. The teacher asked the students to describe themselves, their family and habits in a short descriptive paragraph with the help of clues (50-100 words.). However, in the first 10 minutes of the writing lesson, the students were expected to read a descriptive paragraph about Linda's summer holiday plans and match the colors to their functions as topic sentence, supporting sentence and concluding sentence in the paragraph. The teacher reminded them that this was a sample text and gave them enough time to complete the activity. The students were guided by the model text which was planned as a warmup reading activity in the first 10 minutes of the writing lesson. Thus, the students were familiar with the given topic, were able to activate their schemata and imitate the model text in their paragraph. In the control group, the teacher aimed to perform the topics and learning outcomes by using traditional instructor-learner methods for error correction via giving feedback with the help of paper-based error correction codes while the experimental group corrected their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes in mostly online teacher comments and signals reflected by Google Docs. The teacher continued to observe the experimental group's error corrections via Google Docs, took notes and kept her diary accordingly.
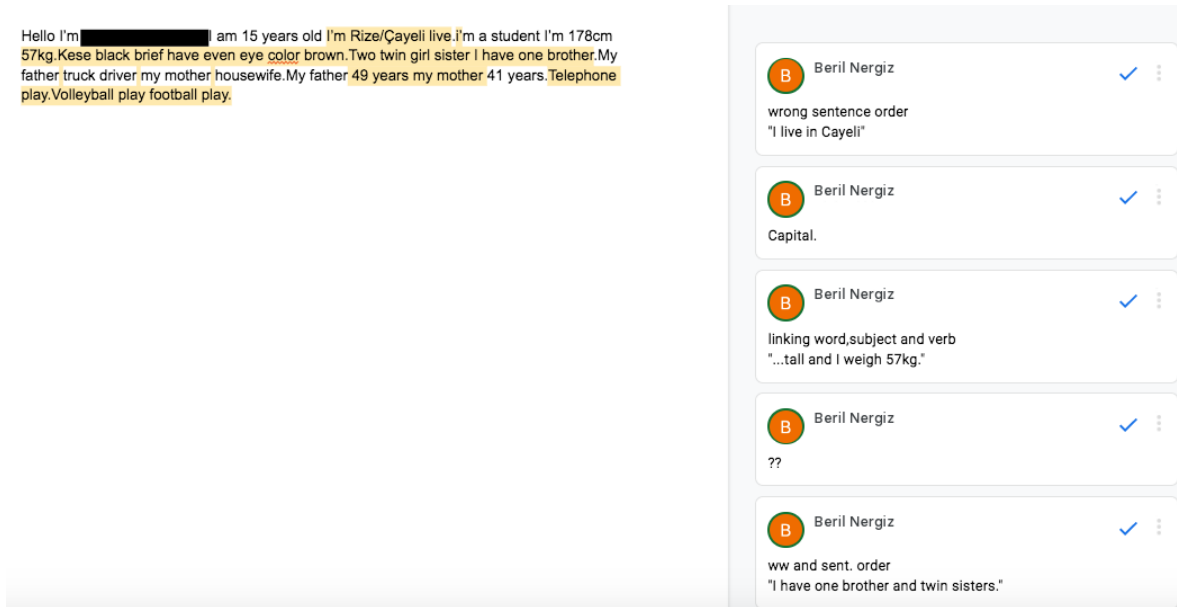
Figure 3.4.4. Google Docs paragraph writing sample task 2.

Although the error correction codes were shown in English at first and then corrections were made accordingly, Turkish feedback was also given as it was seen that the students sometimes had difficulty in understanding the codes. The same list of error correction codes adapted by Doğan (2019) from Ferdouse (2013) and Lee (2004) was partially used because the students had difficulty in understanding the codes in English and indicated that the feedback should be given in Turkish, individually, orally or by demonstration. That is why error correction codes were partially used since the teacher sometimes had to provide oral feedback instead of written feedback where error correction codes were only applied. It is thought that this situation is due to the students' low English levels, lack of L2 writing experiences and lack of feedback experiences.

3.4.4. Data Collection in Week 4

The third task included an opinion paragraph writing activity in the new unit. Since the teacher chose the pre-test and post-test among the activities from this unit, attention was paid to ensure that what the students learned in the lesson was a similar writing activity. The subject of this writing activity was writing about their own plans for the future. The students were expected to describe their future plans and arrangements. Thus, it could be considered as a more creative writing activity. As a lead-in activity, the teacher played the audio about the weekly plans of Mandy and Alex and had students listen and fill in the missing information in the given table in the textbook. After the experimental group opened individual Google Docs accounts and the control group drew out their papers, both groups

were asked to write a daily or weekly plan similar to the one in the listening activity. It was also aimed to make guided writing based on the weekly planning that was clear in the given table. The teacher gave instructions on how to write a daily/weekly planner (50-100 words). The teacher said: "Imagine you have the chance to spend your dream weekend in a foreign country next month." First, the students brainstormed and made notes about their plans. Next, they used their notes and prepared their to-do-list draft. Then, they added all the details and edited their final paragraph. As the task took a little more time, some of the students could not complete the desired number of words in the given time. It was seen that time was not enough for this writing activity.

Figure 3.4.5. Google Docs paragraph writing sample task 3.

Due to the new unit words, sentences and a different grammatical structure, the teacher often reminded the students of the topics covered in the previous lesson. In the experimental group, the teacher used verbal feedback while giving feedback to the students and was able to comment on the Google Docs. In both groups, the teacher started giving feedback in Turkish. At the same time, most error correction codes were mostly followed in the control group. Since the students had difficulty in understanding the codes in both groups, it was feasible in the control group for the teacher to write the codes written on students' papers and give oral feedback by explaining the meaning of the codes. This was because the teacher could make instant corrections on students' papers while giving oral feedback at the same time in the control group while the manual corrections by using a pen on a computer secreen were not feasible in Google Docs classroom. In the experimental group, when

teacher used her computer to give online written feedback, it was not possible to provide oral feedback at the same time. Writing online comments via computer after oral feedback was also observed to be a waste of time. After oral feedback was given to each student, the teacher was only able to make extra online comments to some students during the remaining time in the experimental group. Therefore, in some cases, the teacher chose to give oral feedback rather than written feedback in the experimental group due to the time restrictions. This caused her to be unable to use error correction codes during oral feedback. The students who used Google Docs were observed to improve their paragraphs by making automatic corrections. The teacher remotely monitored Google Docs' automatic corrections on capitalization, correct typing, spelling, punctuation and appropriate grammar, and took field notes on their error corrections. In both groups, the teacher constantly reminded them to use capital letters, correct typing, spelling, punctuation and appropriate grammar as well as considering cohesion and coherence issues in their writing.

3.4.5. Data Collection in Week 5

In both groups, the process of giving feedback continued in the same way as in the previous lessons. During the descriptive paragraph writings, the teacher reminded the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing, capitalization and grammar errors by using correction codes or signals reflected by Google Docs, and also consider cohesion and coherence issues. In the control group, only the teacher gave written and verbal corrections with the help of the error correction codes during the lesson. However, the students in the experimental group were observed to be well-versed in the automatic corrections of Google Docs, and thus they corrected their paragraphs in this way in terms of mechanics. In the experimental group, the teacher continued to give verbal feedback without online comments. The feedback given was not only on mechanics and vocabulary, but also attention was paid to coherence and cohesion issues, and reminders were made about the use of cohesive devices. The teacher listened to the ideas that the students actually wanted to express in their texts. Thus, in both groups, the teacher continued to give feedback on the cohesion of the text as well as the mechanics and correct word choice. Both groups continued to use online dictionaries, but the control group continued to create their paragraphs on paper. In the meantime, the teacher continued to record her observations in the experimental group in her diary in future lessons.

Although the objectives of task four were the same as the previous task, this task focused on a different text type this time. The task four included planning a party by writing

an invitation email to one of students' friends (35-50 words). The students read a party invitation email and answered the questions in 10 minutes. The aim was to show the students how to write an invitation mail, what kind of expressions, patterns to use and how the organization of the paragraph was achieved. The students chose one of the given party pictures first and imagined that they would throw a party. By looking at the sample texts and questions, the students wrote sentences and created an invitation mail.

Dear ▇▇▇▇
I have a birthday party on 13 september at 21:30 pm . The party will be in the indoor gym. My friends are coming and we will eat protein foods. Fancy joining us ? See you .

Love
▇▇▇▇▇

Figure 3.4.6. Google Docs paragraph writing sample task 4.

3.4.6. Data Collection in Week 6

Task five was the last descriptive paragraph writing activity of this unit. The reason for including three tasks from the same unit was that the topic of pre/posttests were selected by this unit, and new words and grammar rules in this unit were practiced more with the higher numbers of the writing tasks. Besides, since it was desired to do more similar writing activities related to pre and posttests, the number of writing activities in this unit was kept high. The language functions and topics given in the unit were mostly functional and exemplary for the daily use of the language, as specified in the Guide for the 9th-12th Grades English Curriculum.

Winter

My favourite season is winter, I love it because of the cold weather. Firstly , I'm going to go mountain climbing on Everest . Secondly, I am going to set up camp one night , I will try local food and music , I will make new friends ,Finally, I watch the sun set on top of Everest

Figure 3.4.7. Google Docs paragraph writing sample task 5.

This task, unlike the previous writing activities, focused on teaching how to write an opinion paragraph and how to create the organization of the paragraph. As the introduction on how to create the paragraph organization was made in the previous lesson, at the beginning of the lesson the teacher started with an activity that mentioned it again by skimming a text to draw a conclusion. The lead-in activity aimed to explain how an opinion

paragraph should be written and help the students write an opinion paragraph about their plans. The students were expected to read the opinion paragraph on making plans for summer holidays. The teacher asked them to read the given sentences carefully and pay attention to colors and then match the colors to their functions in the paragraph. The aim of this activity was to make students write an opinion paragraph about their plans (50-100 words). The teacher asked them to read the paragraph again as an example and told them to keep the parts of a paragraph in mind and to be careful while forming paragraphs in their writing. This time, the students were expected to write an opinion paragraph about making their own plans for the future (education/career/holiday etc.). 30 minutes was allocated to complete the activity. The teacher uploaded an informative file about the conjunctions that can be used in the paragraphs on the Google Drive account in the experimental group while she gave a list of conjunctions to the students as a photocopy in the control group. Thus, the students were encouraged to use more cohesive devices in their paragraphs. While the students were creating their paragraphs, the teacher paid attention to the organization of the text and gave feedback on the cohesion of the text.

3.4.7. Data Collection in Week 7

Task six was the last writing task of the interventions. This paragraph writing activity of a new unit included describing past activities and events. The students were exposed to a new subject content, vocabulary and grammatical patterns in this unit. Task six consisted of writing the end of a given unfinished story. This writing activity was different from the other activities in terms of being creative writing and it was an activity in which students would be exposed to error corrections in terms of grammar. While Google Docs helped the students to autocorrect the past forms of verbs, the students in the control group used irregular verbs list. The teacher brought two unfinished short stories and read these stories together with the students in the lesson. As a lead-in activity, the students summarized the story they read in the previous lesson and told it to each other in turn by using conjunctions as a group speaking activity. They described the characters and places as well. The teacher gave the students flexibility in writing by asking them to choose the paragraph that they liked most among two paragraphs. As she helped with any unknown vocabulary while reading, the students wrote an ending to the story by using their imagination (max. 50 words). In this task, the students tried to practice story writing and use creative writing skills. The students who had difficulty in writing stories and forming language functions in the past tense had difficulty in completing the desired number of words in the given time for this task.

Katia opened the door. Then Katia's friends and everybody were in the house. Good morning Katia screamed. katia was touched by it. katia friends said you think we forget your birthday forget but you we best friends as well as you never forget birthday. |

Figure 3.4.8. Google Docs paragraph writing sample task 6.

In all the tasks so far, all writing steps including familiarization, controlled writing, guided writing and free writing were used in the writing tasks, which is found in focus on language structures (Hyland, 2009). The students were exposed to different vocabulary and grammar aspects in different units. This situation was thought to indirectly contribute to the development of writing skills both semantically and formally. In this thesis, eclectic writing tasks were tried to be used in that there was focus on language structure, genre and creative writing in different tasks. Six out of seven paragraph writing tasks were successfully completed in both groups with the use of Google Docs and pen and paper-based style. During the interventions, the interactions were between teacher-student and they were all carried out in an interactive and collaborative way, which offered scaffolding. The feedback was given adequately during lesson hours. No extracurricular feedback was given to the students. The reason for this was to clearly show the difference in the development of students' writing skills between the two different feedback types given in limited class hours in both experimental and control group. The aim was not to prolong the feedback period, but to reveal which method was more beneficial in a limited time or whether there was a difference between the two types of feedback. Google Docs was observed to enable the experimental group to correct their errors only in punctuation, capitalization, grammar, correct typing and spelling by highlighting or lining below the wrong or necessary places. The students clicked on the signals and successfully corrected their errors. Sometimes Google Docs even made some unnecessary autocorrections in words that students deliberately chose to express their opinions. This situation caused a change in the meaning of the sentence that the students wanted to express. Thus, it can be claimed that computers can be quite functional in error correction, but it would not be wrong to say that teacher's presence in the classroom is needed to avoid misunderstanding as computers may be insufficient to choose the right vocabulary to express meaning.

WEEK 6 - 05.01.2021 - Computer Lab/Library - Experimental Group

Students had a lot of difficulty in writing English texts using the past tense at the beginning of the task. While observing that punctuation and spelling errors in sentences decreased, grammatical errors were observed intensively in this lesson. Google docs fixed these errors in the most efficient way. It has been observed that Google docs is very fast and efficient in correcting grammar and word spelling errors. It was observed that the areas where the students benefited the most from google docs were grammar and correct spelling of the word. Google Docs did not provide any assistance in producing vocabulary or organising the content. Students had difficulties in producing content on the new topic. Therefore, many of them could not complete the required number of words. During the 1st term, 6 of the 7 writing activities that had to be implemented due to 2-week teacher quarantine, classroom-wide quarantines and the snow holiday in the district could be completed. Due to the pandemic period, such results were considered as the limitations of the thesis. There were no online lessons during the quarantine period. and there were deficiencies in the processing of gains. In order to overcome this, the activities had to be accelerated together with the subjects that were left behind. At least 2 writing activities were prepared from each unit in the Graduate Thesis. Some writing lessons could not be held in the specified weeks and 1 writing activity could not be completed.

Figure 3.4.9. Google Docs teacher's diary sample week 6.

3.4.8. Data Collection in Week 8

After the completion of the six tasks, in the eighth week, the posttest which was the same as the pretest, was administered to the students in both groups again to see if there was a significant difference between writing performances of the students and reveal the effect of Google Docs on development of writing skills and error correction skills. Both groups completed the posttest within one lesson hour by writing their paragraphs on the given papers. After the post-tests were evaluated by the teacher according to the paragraph writing evaluation rubric, the opinions of the other English teacher working at the same school were taken, and all the pre- and post-tests were reviewed and re-evaluated according to the rubric. Teacher diaries were also arranged for qualitative analysis in order to see what challenges and experiences students had while using Google Docs.

Finally, the data were collected through semi-structured interviews conducted within the eightth week with the students in the experimental group. The experimental group, consisting of 30 students, was taken to an empty classroom in groups of five by the teacher, and the interviews were held between seven-18 minutes in Turkish. The interview questions consisting of 11 questions were all open-ended, but in some cases the teacher intervened by

asking more detailed questions, trying to prevent students from repeating each other and obtaining more specific data. Audio recordings were made during the interviews and then the audio recordings were transcribed by the teacher for further qualitative analysis.

3.5. Data Analysis

Since mixed method research design was adopted in the study, there were different data analysis tools. To analyze the pre-test and post-test results of the experimental and control groups, the paragraph writing evaluation rubric adapted with reference to Hughes (2003) was used in the paragraph analysis. Teacher observation notes and interviews were analyzed via summative content analysis which requires counting and comparing various keywords or content with regard to the interpretation of the context (Hsieh & Shannon, 2005).

Summative content analysis and thematic analysis were used in order to identify patterns and meanings in the qualitative data. Qualitative data analysis was conducted manually by the researcher. In the analysis of observation notes, the researcher detected the categories and then grouped them under common themes. Braun and Clarke (2006) describe the steps for thematic analysis as familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Since the teacher already took her observation notes, the data were in the form of transcription. First, the patterns were identified through the data set. Second, the initial codes were systematically created to represent the meanings and the patterns seen in the data. The codes were identified, and the data were interpreted again to reveal interesting excerpts and apply the appropriate codes. It was ensured that the excerpts represented the same meaning as the applied codes and new codes were added when necessary. Next, the codes were collated with supporting data by adjusting and revising the codes. Based on these codes, the themes emerged. The codes were grouped together under the relevant theme. After that, the themes were evaluated and revised to answer the related research question. Finally, the quotations exemplifying the relevant codes and themes were shared. In the same way, summative content analysis and thematic analysis were used in the analysis of student interviews. First of all, after examining the data set, themes and categories were created and calculations of frequencies were manually conducted.

In this study, when the pre and posttests of the students were evaluated, a second coder, namely a colleague of the researcher, was also involved in the scoring of the pre/posttest paragraphs of the students. Then, necessary changes were made to ensure the

inter-rater reliability of the study. According to the rubric, first, the scores of the students were compared with each other again. Next, it was agreed by the teachers to give similar points to students who had similar writings or errors. When there was an extreme difference in scoring among the students who made similar errors, the score was re-evaluated by looking at the rubric again. The second teacher graduated from an English teaching department a year ago and had been teaching for the last one year, working with both high school and primary school students at the same time.

The quantitative data were analyzed via SPSS Statistics 2014. For the pretest and posttest, firstly, the normal distribution of the data was checked. Two well-known tests of normality, namely the Kolmogorov-Smirnov Test and the Shapiro-Wilk Test which are more appropriate for small sample sizes (< 50 samples), were applied. In cases where the sample size is less than 50, Kolmogorov-Smirnova is checked for normality (N=30, N=20). As a result of the test of normality, the data in the pretest did not show a normal distribution in the data set of the first research question, so a nonparametric Mann Whitney U test analysis was performed in the analysis of the pretest scores. Since the posttest data showed a normal distribution, Independent Samples T-test was used in the analysis of the posttest scores. In the data set of the second research question, it was seen that both the pre and posttest scores did not distribute normally. As a result, a nonparametric Mann Whitney U test was used in the analysis of both pre-test and post-test scores. In the quantitative data analysis, p value was taken as 0.05.

Table 3.5.1. *Methodological Overview*

Research question	Data Collection Tool	Data Analysis
1. What is the effect of teaching writing skills via Google Docs on error correction skills of Turkish EFL learners regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation?	Pretest, posttest	Mann Whitney U test, Independent Samples T-test
2. Is there a statistically significant difference between the experimental group and control group in terms of error correction skills regarding only mechanics in paragraph writing after the given treatment?	Pretest, posttest	Mann Whitney U test
3. What are the participating students' perspectives on the role of traditional and online teacher feedback in their error correction skills for paragraph writing?	Semi structured interviews	Summative content analysis Thematic analysis
4. What are the reflections of the participating teacher on student progress in online writing classes?	Teacher diary	Summative content analysis Thematic analysis

CHAPTER IV: RESULTS

In this chapter, the results of the study will be provided. Quantitative results obtained from the pre-test and post-test, and qualitative results obtained from observations and interviews will be discussed respectively.

4.1. Pretest-Posttest Results for the Effect of Teaching Writing Skills Via Google Docs on Error Correction Skills of Turkish EFL Learners Regarding Content, Organization, Vocabulary, Grammatical Concepts, Capitalization, Spelling and Punctuation (Research Question 1)

In this section, the analysis of the pre-test and post-tests scores of the experimental and control groups are examined. The quantitative data were analyzed via SPSS to answer the first research question, that is, to reveal the effect of teaching writing skills via Google Docs on error correction skills of Turkish EFL learners regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation. In the evaluation rubric of the pre-posttests results, writing skills were scored by the content, organization and vocabulary categories while the mechanics category in the rubric included only grammatical concepts, capitalization, spelling and punctuation. The total score of all categories was 100 points. While analyzing the pre-posttests of both groups in the first research question, the students' scores out of 100 points were taken into account. Therefore, the first question presents the results on the development of both writing skills and error correction skills of the students. p value was taken as 0.05 in this analysis.

Table 4.1 presents the results from two well-known tests of normality, namely the Kolmogorov-Smirnov Test and the Shapiro-Wilk Test which are more appropriate for small sample sizes (<50 samples). In cases where the sample size is less than 50, Kolmogorov-Smirnova is checked for normality (N=30, N=20).

Table 4.1. *Test of Normality for Question 1*

	Group Name	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	*df*	Sig.	Statistic	*df*	Sig.
Pretest Score	Experimental Group	.150	30	.084	.881	30	.003
	Control Group	.311	20	.000	.702	20	.000
Posttest Score	Experimental Group	.131	30	.200[*]	.949	30	.163
	Control Group	.181	20	.085	.902	20	.045

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

In Table 4.1, it is seen that the Kolmogorov Smirnov statistic for pretest scores take value .150 and .311 while statistics for posttest scores take value .131 and .181. These values

have degrees of freedom which equals the number of data points, namely 30 (df) and 20 (df). Apart from the statistical analyses, boxplot graphs were also examined and it was assumed that pretest scores did not display normal distribution. Thus, a non-parametric Mann Whitney U test was used in the analysis of the pretest scores. It was found that there was no statistically significant difference between the groups, which implies that the participating student profile was similar to each other in both groups. However, the p-values for posttest scores are provided as .200 and .085 (reported as $p > 0.05$). These values and boxplot graphs indicated that posttest results are normally distributed, and a parametric Independent Samples T-test was used in the analysis of the post-test results. One of the reasons for applying Independent Samples T-test for the posttest is that since the Skewness is 1.094 and close to 1, the normal distribution can be accepted, and the parametric test can be applied. The boxplot also shows a normal distribution. Normal distribution is acceptable when Skewness Kurtosis values are between -1 and +1 or close to 1. Therefore, Independent Samples T-test was applied for the postest and a significant difference emerged.

In the analysis of pretest scores, a nonparametric Mann-Whitney U test was used as our samples consist of small numbers of non-normal data and the sample sizes for each group differ. Table 4.2 contains a summary of the pretest score rankings for the two groups below.

Table 4.2. *Mann-Whitney Test Ranks for Pretest Scores in Question 1*

	Group Name	N	Mean Rank	Sum of Ranks
Pretest Score	Experimental Group	30	28.22	846.50
	Control Group	20	21.43	428.50
	Total	50		

The statistics required for the test are taken from the ranks of pretest scores and shown in Table 4.2. For the experimental group, there are 30 students' pretest scores whose total sum of ranks is 846.50. This results in a mean rank of 28.22. By contrast, for the control group, there are the pretest scores of 20 students and its total sum of ranks is 428.50. This results in a mean rank of 21.43. Thus, the experimental group has a larger mean rank than the control group and tends to take larger values. The test statistics for pretest scores are presented in Table 4.3.

Table 4.3. *Test Statistics^a for Pretest Scores in Question 1*

	Pretest Score
Mann-Whitney U	218.500
Wilcoxon W	428.500
Z	-1.621
Asymp. Sig. (2-tailed)	.105

a. Grouping Variable: Group Name

Here the value 218.500 is the Mann-Whitney U pretest score as shown in Table 4.3. It is stated that the p value, quoted next to Asymp. Sig. (2-tailed), is .105 (reported as $p > 0.05$) which is higher than 0.05. Therefore, there is not a significant statistical difference between the experimental and control group for the pretest scores. As a result of Mann Whitney U test, there was no statistically significant difference. The results in Table 4.3 indicate that both groups tend to have similar scores in the pretest at the beginning.

In the analysis of posttest scores, the Independent Sample Test was used. It was aimed to explain if there was a significant difference in the posttest scores between the experimental and control groups after they were exposed to different types of writing lessons. Group statistics in Table 4.4 provide basic information about the group comparisons, including the sample size, mean, standard deviation, and standard error for pretest-posttest scores. In Table 4.4, there are 30 students in the experimental group and 20 students in the control group. The mean for the experimental group is 39.30 while the mean for the control group is 26.15 for the posttest scores.

Table 4.4. *Group Statistics for Pretest-Posttest Scores in Question 1*

	Group Name	*N*	Mean	Std. Deviation	Std. Error Mean
Pretest Score	Experimental Group	30	16.70	16.099	2.939
	Control Group	20	13.90	21.460	4.799
Posttest Score	Experimental Group	30	39.30	24.406	4.456
	Control Group	20	26.15	16.011	3.580

The means of pre and posttest scores of both groups in Table 4.4 reveal that there was an increase in means of the scores in both the experimental and control group. However, the increase in the pretest and posttest scores of the experimental group was found higher than that of the control group. Table 4.4 shows that the mean scores of pre-posttests increased from 16.70 to 39.30 in the experimental group while the mean scores of pre-posttests increased from 13.90 to 26.15 in the control group. Thus, the average increase of pre-posttest score in the experimental group was higher than that of the control group (MD=22.60 > 12.25).

Table 4.5 displays Independent Samples T-test results for posttest scores. Due to homogeneity of variety and small group of participants (N=50), equal variances assumption is not assumed so Levene not assumed value was considered as significant (.026). Thus, according to the results of the Independent Samples T-test, there was a statistically

significant difference between the posttest scores of the experimental and control group.

Table 4.5. *Independent Samples Test for Posttest Scores in Question 1*

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Posttest Score	Equal variances assumed	6.066	.017	2.121	48	.039	13.150	6.200	.683	25.617
	Equal variances not assumed			2.301	47.997	.026	13.150	5.716	1.657	24.643

To summarize the results of quantitative data analysis for research Question 1, non-parametric Mann Whitney U test in the analysis of pretest scores and parametric Independent Sample T-Test in the analysis of posttest scores were used. As a result of the Independent Sample T-Test, a significant difference was found between the experimental and control group in the posttest scores of the students regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation after the interventions. In other words, in this study, traditional teacher feedback in the control group versus traditional teacher feedback + automatic corrections in the experimental group were studied via Google Docs and it was seen that the students in the experimental group got higher scores in the posttest for the first research question.

4.2. Pretest-Posttest Results in Terms of Error Correction Skills Regarding Only Mechanics in Paragraph Writing After the Given Treatment (Research Question 2)

The analysis aimed to reveal whether there was a significant difference between the the experimental group's and control group's error correction skills in paragraph writing after the given treatment regarding mechanics. Unlike the first research question, the scores of the students obtained from content, organization and vocabulary in the evaluation rubric were not analyzed. This time, the data analysis set presents the results obtained from the analysis of the scores that the students received only from the mechanics section in the

evaluation rubric. The pre-posttest scores of the students were evaluated according to the mechanics section in the evaluation rubric. The total score of the mechanics category was 30 points. While analyzing the pre-posttests of both groups in the second research question, the students' scores out of 30 points were taken into account. p value was taken as 0.05 in this analysis.

Table 4.6. *Test of Normality for Question 2*

	Group Name	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	*df*	Sig.	Statistic	*df*	Sig.
Pretest Score	Experimental Group	.311	30	.000	.666	30	.000
	Control Group	.315	20	.000	.571	20	.000
Posttest Score	Experimental Group	.198	30	.004	.854	30	
	Control Group	.197	20	.041	.782	20	.000

a. Lilliefors Significance Correction

Table 4.6 presents the results of normality tests (N=30, N=20) in that the Kolmogorov Smirnov statistics for pretest scores take value .311 and .315 while statistics for posttest scores take value .198 and .197. These values have degrees of freedom which equals the number of data points, namely 30 (df) and 20 (df). The p-value provided by SPSS (quoted under Sig. for Kolmogorov-Smirnov) is .000 for pretest scores in both groups (reported as p < 0.05) which is less than 0.05. Likewise, the p-value is .004 and .041 for the posttest scores, which is less than 0.05. These values indicate that pre and posttest results are not normally distributed. Thus, a non-parametric Mann Whitney U test was used for the analysis of the pre-posttest results. The SPSS output contains a summary ranking of the pre-posttest scores for the two groups and is presented in Table 4.7.

Table 4.7. *Mann-Whitney Test Ranks in Comparison of Pre-Posttest Scores in Question 2*

	Group Name	N	Mean Rank	Sum of Ranks
Pretest Score	Experimental Group	30	27.68	830.50
	Control Group	20	22.23	444.50
	Total	50		
Posttest Score	Experimental Group	30	28.60	858.00
	Control Group	20	20.85	417.00
	Total	50		

As it is seen in Table 4.7, the statistics required for the test are obtained from the ranks of pre and posttest scores for the experimental and control group. For the experimental group, there are 30 students' pretest scores whose total sum of ranks is 830.50. This results

in a mean rank of 27.68. By contrast, for the control group, there are 20 students' pretest scores whose total sum of ranks is 444.50. This results in a mean rank of 22.23. Thus, the experimental group has a larger mean rank than the control group and thus tends to take larger values. As for sum ranks for the posttest scores, it takes a value of 858.00 for the experimental group while the control group's total sum of ranks is 417.00. This results in a mean rank of 28.60 in the experimental group and 20.85 in the control group. The experimental group (N= 30) has larger mean ranks (27.68, 28.60) in both pretest and posttest scores than the control group (N= 20) with mean ranks (22.23, 20.85); thus, the experimental group tends to take larger values. Since there was no normal distribution, the Mann Whitney test was employed in test statistics and it is illustrated in Table 4.8.

Table 4.8. *Test Statistics ^{a} for Pre-Posttest Scores in Question 2*

	Pretest Score	Posttest Score
Mann-Whitney U	234.500	207.000
Wilcoxon W	444.500	417.000
Z	-1.357	-1.852
Asymp. Sig. (2-tailed)	.175	.064

a. Grouping Variable: Group Name

As shown in Table 4.8, the value in the Mann-Whitney U is 234.500 for pretest score and 207.000 for posttest score. It is clearly seen that the p value, quoted next to Asymp. Sig. (2-tailed), is .175 for the pretest score (reported as $p > 0.05$) and .064 (reported as $p > 0.05$) for posttest scores, which are higher than 0.05. Even though the p value ,064 for the posttest score is accepted as marginally significant, the value is still higher than 0.05. In consideration of the results, a statistically significant difference was not found in both groups' pretest and posttest scores. The results indicate that both groups tend to have the similar scores in the pretest and posttest for the second question. Namely, the difference between the experimental group and control group is not statistically significant in terms of their error correction skills regarding only mechanics in paragraph writing after the given treatment.

Basic information about the group comparisons, including the sample size, mean, standard deviation, and standard error was provided in Group Statistics Table 4.9 for pretest-posttest scores. In Table 4.9, there are 30 students in the experimental group and 20 students in the control group. The mean for the experimental group is 7.93 while the mean for the control group is 3.40 for the posttest scores.

Table 4.9. *Group Statistics for Pretest-Posttest Scores in Question 2*

	Group Name	*N*	Mean	Std. Deviation	Std. Error Mean
Pretest Score	Experimental Group	30	2.07	2.888	.527
	Control Group	20	2.35	4.614	1.032
Posttest Score	Experimental Group	30	7.93	7.799	1.424
	Control Group	20	3.40	3.393	.759

In Table 4.9, the means of pretest and posttest scores of both groups increased in both the experimental and control group. However, the increase in the pretest and posttest scores of the experimental group was found to be higher than that of the control group even though no significant difference was found between the experimental and control group regarding only mechanics after the given treatment. Table 4.9 demonstrates that the mean scores of pre-posttests increased from 2.07 to 7.93 in the experimental group while the mean scores of pre-posttests increased from 2.35 to 3.40 in the control group. Thus, the increase of pre-posttest score in the experimental group was higher than that of the control group.

4.3. Interview Results for the Participating Students' Perspectives upon the Role of Traditional and Online Teacher Feedback in Their Error Correction Skills for Paragraph Writing (Research Question 3)

In the analysis of the qualitative data obtained from the interview results, first of all, some interview questions and the given answers were discussed together. The reason for this is that the answers given to some of the questions showed similarity. That is, since the students gave similar or partially the same answers to most of the questions, they were not considered separately during the analysis. Thus, the answers given to some questions were analyzed and interpreted together. In the following section, firstly, the combined questions are given, then, the common themes in the combination of the questions are explained. Finally, the themes and categories in which the findings were collected are specified and interpreted with frequency tables. The participants were given a code during data analysis to ensure anonimity. Since the experimental group is group A, the participants were coded from 1 to 30 in order of the school attendance list, starting with the letter A.

The first three open ended questions were as follows:

Q1: Do you find Google Docs as a useful tool for learning writing and editing in the English course? Why?

Q2: How did Google Docs's auto corrections help your error correction skills regarding grammatical concepts in the development of writing skills? Explain.

Q3: How did Google Docs's auto corrections help your error correction skills regarding capitalization, spelling and punctuation in the development of writing skills? Explain.

It is possible to examine the answers given to these three questions under seven themes. Benefits of Google Docs and Google Docs' auto corrections clearly explain what these themes represent. In the first question, the students were asked whether there were any benefits of Google Docs, and the students who answered yes to this question were asked to indicate their reasons by giving detailed explanations. As it is seen in first section of Table 4.10, there are seven themes and matching categories in the interview results. The first part in Table 4.10 demonstrates 10 categories formed via the keywords and the seven emerging themes about the benefits of Google Docs. In student interviews, it was reported that the contribution of Google Docs in word correction and spelling was the most beneficial. Afterwards, the students stated that they had the chance to develop their writing skills and it contributed to their vocabulary learning. Also, it was found to be beneficial in terms of forming sentence correctly, making grammatical corrections, automatic feedback, correcting punctuation marks, making the lesson fun, showing the number of words written and the teacher's ability to give online feedback respectively.

Table 4.10. *Emerging Themes in Interview Item 1*

Themes	Categories	Frequency
Spelling	Word Correction and Spelling	8
Writing Development	English Writing Skills	6
Grammatical concepts	Grammatical corrections	2 3
Vocabulary	Sentence Order	4
Punctuation	Vocabulary learning	1
Technological	Correcting punctuation	2
Features	Auto Correction	1
	Word Count	1
Motivation	Online Comment	1
	Motivation for the lesson	
Total		29

Some of the student comments for Question 1 from the interviews are offered below (These interviews were held on 07.01.2022 after the post-test)

The student A6: I find it partially useful. It's a useful tool, but I couldn't see any effect on myself.

The student A1: Yes. It improves our English writing skills. It increases our appreciation towards English.

The student A3: I see its useful. At first, I didn't know anything at the time of writing, but I got better with Google Docs.

The student A7: Yes, because if we misspell the word, it corrects and adds grammatical fixes. It shows where to use punctuation marks.

The student A10: Yes, it helps us to construct English sentences better.

The student: A14 Yes, there is word correction.

The student A17: Yes, it improves our English in terms of vocabulary learning.

The student A22: Yes, it corrects the spelling of the word by checking correct typing.

The student A25 Yes, it shows our mistakes when we make a mistake.

The student A27: Yes, it corrects my spelling with automatic corrections right away without bothering us.

The student A28: Yes, for example, you can count and display the number of words you have written, the teacher can send us a message while giving feedback.

According to the interview results, only one student out of 30 who used Google Docs in their writing classes for six weeks said that Google Docs was partially useful, while all the other students stated that it was a very useful tool for the first question. Student A6 thinks Google Docs is helpful, but simply states that he has not made any progress personally.

Table 4.11. *Emerging Themes in Interview Item 2,3*

	Themes	Categories	Frequency
	Grammatical concepts	Correcting Tenses	9
		Word suffixes (-ing, -plural)	4
		Sentence Order	1
		Prepositions	1
	Punctuation	Correcting punctuation	10
	Capitalization	Correcting capitalization	8
		Word Correction and Spelling	2
	Spelling		
Total			35

In the second and third question, the students were asked to talk about Google Docs' auto corrections in terms of error correction skills. As it is seen in Table 4.11, the results of the second and third questions are examined under the four themes in the experimental group. The categories under the theme of grammatical concepts showed that the students mostly benefited from the tense correction in the grammar autocorrects of Google Docs. Also, the students mentioned that the Google Docs auto corrections were effective for using various suffixes, correcting sentence ordering and prepositions that they had difficulty in learning in their writings. Some of the student responses are given below.

Some responses for the second question are as in the following. (These interviews were held on 07.01.2022 after the post-test)

The student A4: It completely organizes the sentence.

The student A11: It corrects sentences, adds plural suffixes.

The student A20: We skip past tense inflections when constructing a sentence and Google Docs corrects it.
The student A24: It corrected in the -ing, noun, pronoun and adding suffixes to adjectives.
The student A25: It was adding -to preposition.
The student A27: It helped me use the suffixes.
The student A29: It helped with adding inflections when using past tense and future tense sentences.

Some responses for the third question are as follows. (These interviews were held on 07.01.2022 after the post-test)

The student A3: It helped me a lot in punctuation, put commas in between when I wrote more than one word.
The student A7: It helped a lot with capitalization.
The student A12: It helps at the beginning of sentences, sometimes we forget to capitalize.
The student A13: It added punctuation marks such as a question mark at the end of the sentence, for example when asking a question.
The student A20: It helped with word spelling.
The student A24: It showed us how to perform punctuation correctly.

The categories under the spelling, capitalization and punctuation themes showed that the automatic corrections of Google Docs were most effective in punctuation and capitalization. Some of them stated that these corrections were slightly effective in word and spelling corrections.

Now, the answers given to the fifth and eighth questions will be presented.

Q5: Was it easy to deal with error corrections during the writing tasks on Google Docs?

Q8: Did you have any difficulties while using Google Docs in your writing classes? If yes, how did you overcome these difficulties?

Table 4.12. *Emerging Themes in Interview Item 5,8*

Themes	Categories	Frequency
Difficulties	Correction of Suffixes and Prefixes	1

The fifth and eighth questions are grouped under the theme of difficulties when using Google Docs as it is seen in Table 4.12. In question five, only student A17 stated that dealing with error corrections on Google Docs was difficult in writing lessons. The rest of the students said that they had no difficulty in dealing with error corrections in their paragraph on Google Docs and that the corrections were made by pressing the red and blue lines highlighting the errors in the same way.

Some of the answers to question five are as follows (These interviews were held on 07.01.2022 after the post-test)

The student A1: It was easy, there were red and blue lines, we knew it was wrong.
The student A7: It was easy, it underlined the errors and we fixed it with a click.

The student A11: Yes, it was easy, the original word was on top, we were correcting it by clicking.
The student A16: It was easy, when the red or blue line appeared at the bottom, when I pressed on it, it showed the correct one and we corrected it by pressing it.
The student A17: It was difficult.
The student A23: Yes, but I was doubtful sometimes, because I was wondering if Google Docs was correcting it in the way I wanted, I was wondering if it was exactly the same sentence in my mind.
The student A26: It was easy, it fixed the errors automatically.

In question eight, the student with the code A17 stated that he could not understand the Google Docs correction of the suffixes and prefixes. However, all the other students stated that they did not have any technological difficulties in using Google Docs in general and only one student added that he mistakenly deleted the comments in order to see the comments of the teacher. Some participant answers to the eighth question are offered below. (These interviews were held on 07.01.2022 after the post-test)

The student A17: Sometimes I didn't understand when the Google Docs put the suffixes.
The student A18: I did not, sometimes only when the teacher commented, I deleted it.

Now, the participant responses for the fourth, seventh, and tenth questions will be shared.

Q4: How did the instructor help in writing and correcting your errors? Explain.

Q7: Which one do you prefer, instructor's intervention or Google Docs auto correction during writing? Why?

Q10: Do you prefer using Google Docs or pen and paper-based writing for learning writing skill in your future studies? Why?

Question four is aimed to reveal the role of the teacher's guidance and feedback during the intervention times. On the other hand, question seven was related to the specific preference of the students for error correction while question ten was related to the comparison of Google Docs and paper-based writing.

Table 4.13. *Emerging Themes in Interview Item 4*

	Themes	Categories	Frequency
	Mechanical feedback	Word Correction and Spelling	5
		Correcting punctuation	3
		Sentence Order	2
		Cohesion	2
		Correcting capitalization	1
		Meaning	
		Giving samples	6
	Meaning feedback	Explaining errors	3
			1
Total			23

The answers given to question four are examined under the themes of mechanical and meaning feedback in Table 4.13. All of the students in the experimental group stated that the teacher helped them during the interventions in writing paragraphs by verbally and commenting online on error corrections. There were eight categories under the themes of mechanical and meaning feedback. As it is understood from the categories, the teacher not only gave feedback to the students in terms of the unity of structural elements, but also about the unity of the ideas by analyzing the paragraphs as a whole semantically and gave feedback on whether the sentences were meaningful or not. Table 4.13 shows student reflections on the type of teacher feedback. The results indicate that in addition to providing feedback in terms of cohesion, ordering sentence, correcting word and spelling, punctuation, capitalization, all of which can be given via Google Docs auto-corrections feature, the teacher mostly focused on giving feedback about meaning. Some students also stated that the teacher gave some examples about mistakes and made a clear explanation about the errors.

Some participant quotations for the fourth question are exemplified below. (These interviews were held on 07.01.2022 after the post-test)

The student A4: The teacher gave feedback in punctuation and capitalization.
The student A6: She helped to form the sentences.
The student A7: No matter how much Google Docs helped us, since this was a computer, the teacher checked and corrected our sentences semantically.
The student A10: Even if we got the sentence right, sometimes it could be meaningless, and the teacher provided help in this regard.
The student A11: She helped with punctuation, gave feedback by making online remote comments.
The students A12: The teacher also showed our mistakes, she talked to us personally and gave feedback individually and verbally.
The student A14: She helped me to order the sentence at the beginning.
The student A16: The teacher made corrections by giving examples.
The student A24: She was correcting our mistakes by explaining the sentence, but Google Docs was only correcting them.
The student A28: The teacher made corrections for correct vocabulary and spelling.

Table 4.14. *Emerging Themes in Interview Item 7*

	Themes	Categories	Frequency
	Corrections preference	Teacher corrections	24
		Google Docs automatic corrections	6
Total			30

According to the answers given to the seventh question, Table 4.14 presents that only six students said that they preferred the automatic corrections of Google Docs to the interventions of the teacher. The other 24 students stated that teacher interventions were

more effective than automatic corrections, especially in terms of receiving feedback semantically.

Some participant comments for the seventh questions are demonstrated below. (These interviews were held on 07.01.2022 after the post-test)

The student A1: I prefer Google Docs, it is easier.
The student A2: Sometimes Google Docs change the word I specifically wrote in a sentence although I don't want to express my opinion with that word, but the teacher shows us the correct one and sometimes Google Docs can also make mistakes.
The student A3: Google Docs easily and automatically corrects the mistakes.
The student A4: Google Docs can give feedback more easily and faster; we can work on it on our own.
The student A7: I prefer teacher intervention, because Google Docs only corrects words, but teacher gives more semantic corrections
The student A8: Teacher's intervention, because Google Docs gives us feedback on one word while the teacher can give feedback on one full sentence.
The student A9: Teacher's intervention, Google Docs gives feedback on words, but teacher gives feedback when meaning is not semantically correct.
The student A12: Teacher explains more clearly.
The student A16: I prefer the teacher because Google Docs only does the correction but does not explain why it is wrong, but the teacher explains.
The student A18: I prefer teacher interventions, learning from the computer is not clear.
The student A23: I prefer Google Docs as a word correction, but I prefer teacher explanation. In general, I prefer teacher intervention.
The student A27: Google Docs gives feedback faster, so I prefer it.

The students who preferred teacher intervention often complained that automatic corrections only corrected the errors but did not explain what were corrected or why they were corrected. In the interviews, 18 students stated that the teacher gave meaningful examples about the mistakes and explained them. Also, four students stated that Google Docs changed the words by not accepting the sentence they wanted to write, and they said that they had difficulty in writing the meaning they wanted to share. They stated that the solution to this was that the teacher listened to the students' ideas and helped them to form sentences that had the same meaning. The students who preferred Google Docs, on the other hand, indicated that automatic corrections were very easy and fast.

Table 4.15. *Emerging Themes in Interview Item 10*

	Themes	Categories	Frequency
	Writing lessons preference	Google Docs Pen-paper based	28 2
Total			30

As it is shown in Table 4.15, in the tenth question, the students were asked whether they would prefer pen and paper-based writing classes or writing lessons using Google Docs. Only two of them preferred the traditional education method, that is, pen-paper-based writing

lessons. On the contrary, 28 students stated that they enjoyed using technology via choosing Google Docs in the writing lessons.

Some of the student comments for the tenth question are given below. (These interviews were held on 07.01.2022 after the post-test)

> *The student A2: Google Docs, I want to write more because it's easier.*
> *The student A3: I prefer Google Docs. Today there is no more pen and paper, and it is more technological, and the lessons are more enjoyable. For example, when we think of other lessons, they are more boring.*
> *The student A6: I prefer pen and paper-based writing lessons to correct my spelling mistakes by myself and learn better.*
> *The student A7: I prefer Google Docs for auto-correcting errors.*
> *The student A9: I prefer pen and paper-based writing.*
> *The student A11: Google Docs, if we misspell the word on the paper, we can't fix it if we don't know the correct one.*
> *The student A16: I think Google Docs, it sounds more fun.*
> *The student A22: Google Docs for taking immediate feedback.*
> *The student A23: Google Docs, writing on the computer helps our handwriting to become more legible.*
> *The student A24: Google Docs, it's better for receiving feedback remotely with the teacher's online comments.*
> *The student A25: I prefer Google Docs; the computer is fun to use.*
> *The student A27: Google Docs, because I made more mistakes with pen and paper.*

In the given quotation above, A6 and A9 coded students preferred pen and paper-based writing lessons and A6 coded student said that it would be better to find the correct spellings of the words by himself. In addition to the fun of technology use in classrooms, Google Docs' features of quick and easy automatic error corrections and feedback, online commenting feature are among the reasons of students to prefer Google Docs. Now, the answers given to the sixth, ninth and eleventh questions are offered below.

Q6: What did you focus on while doing revisions on your text? Why?

Q9: What did you like most/least about using Google Docs in your writing classes? Why?

Q11: Do you have any other comments about using Google Docs in your writing classes? If yes, please explain.

In the sixth question, the students were asked to reflect on their main focus while doing revisions. The ninth question was about the most and least appreciated features of Google Docs in writing. Finally, the eleventh questions aimed to reveal the additional comments about the use of Google Docs in writing classes.

Table 4.16. *Emerging Themes in Interview Item 6*

	Themes	Categories	Frequency
	Spelling	Word and Spelling Corrections	9
	Punctuation	Correcting punc.	9
	Grammar	Correct grammar	5
	Capitalization	Correcting capital.	4
	Coherence	Meaningful sentences	3
		Cohesive Devices	1
		Word functions	1
	Cohesion	Sentence Order	1
Total			33

Six themes emerged for the results of the sixth question item as it is shown in Table 4.16. These themes were spelling, capitalizayion, grammar, punctuation, coherence and cohesion respectively. According to the results, 16 students preferred to focus primarily on the spelling and punctuation of the word in their English paragraph writing tasks but frequency of the spelling and punctuation in the interview was higher since a student might say more than one category in his/her answer. This is followed by grammar and the use of capital letters. However, it appears that there is less focus on using cohesive devices, constructing meaningful structure, word functions and sentence ordering. According to the results in Table 4.16, it has been revealed that students give more importance to writing a paragraph by focusing on the structure and form (mechanical aspects) in their foreign language writing skills than focusing on the meaning (content and organization).

Some participant quotations for the sixth question are exemplified below. (These interviews were held on 07.01.2022 after the post-test)

The student A1: Using punctuation marks and capital letters
The student A2: Different speech class of the word, such as adjective, noun.
The student A6: Correct order of sentences
The student A9: The meaning of the sentence
The student A14: Punctuation
The student A16: Grammar, tenses
The student A18: The unity of the ideas, paragraphs
The student A22: Cohesive Devices
The student A30: Word correction and spelling

Table 4.17. *Emerging Themes in Interview Item 9*

Themes	Categories	Frequency
General Use	Quick and automatic feedback	7
	Accessibility	6
	Word Count	2
Automatic Correction	Word Correction	8
	Punctuation	1
	Grammar	1
	Sentence order	1
Insufficiency in feedback	Feedback on coherence	4
	Automatic correction	1
	Punctuation problems	2
	Meaningful explanations	2
Total		35

For the ninth question, the most appreciated Google Docs features are listed in Table 4.17. Giving quick and automatic feedback, accessibility and word count are found under the theme of general use and providing help for word correction, punctuation, grammar, sentence order are found under the theme of automatic correction. Two students stated that they received more feedback with automatic corrections in addition to the teacher's feedback. However, another theme emerged and it was related to the insufficient features of Google Docs. The students criticized Google Docs for not focusing on coherence in the text. Also, four students stated that they did not like the fact that Google Docs could not fully understand what they wanted to write, and it sometimes made undesired automatic word corrections. Besides, while one student mentioned the lack of meaningful explanations about what caused their mistakes, two students stated that automatic word corrections prevented them from focusing on correcting their mistakes. Finally, no further comments were received for the eleventh question.

Some student comments for the ninth question are offered below. (These interviews were held on 07.01.2022 after the post-test)

The student A1: I like Google Docs to correct our mistakes quickly.
The student A7: I like the word correction and removing unnecessary words.
The student A9: I like the word correction, but the feature I don't like is that somehow it doesn't make me pay attention because I know it will underline and correct the word automatically.
The student A13: Accessibility from anywhere and word correction were my favorite, but I didn't like it when it corrected some words that I indented to write, sometimes Google Docs didn't understand the meaning I wanted to share.
The student A18: Helping with punctuation marks.
The student A20: Google Docs is efficient for making a sentence and grammar learning,
The student A23: We couldn't write everything we wanted, Google Docs was not correcting the meaning I wanted to share, I couldn't use the word to give a different meaning in a context.
The student A24: It was correcting my mistakes but not informing me, I didn't like it.
The student A26: I like the feature of Google Docs while showing us the number of words we have typed. However, when we didn't put the 'dot' mark at the end of the sentence we wrote, it didn't make automatic corrections in the sentence and I didn't like it.
The student A30: Automatic correction is my favorite.

4.4. Observation Results Related to the Reflections of the Teacher upon Student Progress in Online Paragraph Writing Sessions (Research Question 4)

The qualitative data collected from the teacher's observations during the six-week paragraph writing interventions in the experimental group for the fourth question revealed the effect of the Web 2.0 tool Google Docs on development of writing skills and error correction skills of Turkish EFL learners. In order to collect the qualitative data from the teacher's diary, summative content analysis and thematic analysis were used. The frequencies of the categories were also calculated, and qualitative data analysis was done manually by the researcher.

Table 4.18. *Emerging Themes in Teacher's Diary*

Themes	Categories
Paragraph Writing	Content
	Vocabulary
	Organization
Error Correction	Spelling
	Grammatical Concepts
	Capitalization
	Punctuation
Challenges and Experiences	Positive Experiences
	Time and Feedback Challenges
	Student's own barriers

In Table 4.18, the qualitative data results showed that three main themes emerged based on the teacher's observations of the students' developments during the Google Docs interventions. The main themes are paragraph writing, error correction, challenges and experiences of the learners with Google Docs. Besides, 11 categories were also specified by the researcher. These 11 categories under the three main themes are content, organization, vocabulary, grammatical concepts, capitalization, spelling, punctuation, challenges by the Google Docs, students' own language barriers, time and feedback and positive experiences. The categories of content, organization, vocabulary are under the theme of writing skills. The categories of grammatical concepts, capitalization, spelling and punctuation are under the theme of error correction. Finally, the categories of challenges by the Google Docs, students' own language barriers, time and feedback and positive experiences are under the theme of challenges and experiences of the learners.

As it is seen in Table 4.18, the data from observations related to the content and

organization categories are shown under the theme of writing skills. At the beginning, no observation was obtained about the vocabulary category as the observation notes supported this result.

> *Since the students had not been exposed to regular paragraph writing activities before, they had difficulties in creating English paragraphs both in terms of organization and semantics.* (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)
>
> *It was observed that most of the students had difficulty in creating content in their paragraphs, as well as applying capitalization, punctuation marks and grammar rules correctly in their writings.* (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)
>
> *Depending on the genre-based writing, the students had difficulties in the writing style in the task. It was observed that this situation was due to the fact that they did not write emails before and the students did not know the discourse items that should be used. This caused a problem in creating content. Most students attempted to write by adhering to the given sample text.* (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)
>
> *The students had problems in writing and organizing a text while answering the given questions. Most students were seen to write sentences in different lines or creating dialogues rather than composing a text.* (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

The observations demonstrated that there were problems in creating content and organization by the students, which started from the first weeks and continued in the following weeks. It could be claimed that the students' low level of readiness related to their writing skills might have been due to the lack of experience in their previous foreign and first language writing courses as shown in the observation notes because the students asked questions in consideration of paragraph writing in their native language. An observation note in the students' barriers category also supports this issue.

> *It was observed that the students asked questions about distinguishing a paragraph or a text, a line, a sentence or a phrase in consideration of paragraph writing in their native language, and it was seen that this might have been due to the lack of L1 writing experiences.* (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

Observation notes support the issue that Google Docs may not be an effective tool in making a meaningful paragraph or creating an outline of a paragraph in improving writing skills. This problem is stated in the category of challenges.

> *It was observed that Google Docs sometimes made wrong corrections since it may not have detected the meaning that the students wanted to share.* (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)
>
> *Especially when several sentence elements were missing in a sentence, autocorrect sometimes used vocabulary different from the students' intentions or it corrected a present/future tense sentence in the past tense. Although this rarely happened, the teacher listened to the students'*

ideas and made the right correction. (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

Google Docs was not very effective in providing assistance to produce vocabulary or organizing the content. The students had difficulties in producing content on the new topic. (Teacher's diary Week 6 - 05.01.2022- Computer Lab/Library - Experimental Group)

It was clearly stated in the comments of the third week that Google Docs could not help in creating meaningful content and it might not have been sufficient to understand the intended expressions. In addition to this, instead of the expressions intended to be explained in the context, Google Docs replaced the words of the students with its own that could create different meanings. According to last week's observation (week six), Google Docs was not seen as effective in terms of content creation and text organization to improve writing skills according to the teacher of the lesson. Also, the observations in the time and feedback categories indicated that development of the writing skills regarding organization and content was supported only by the feedback given by the teacher and frequent paragraph writing activities.

Since the writing topic was similar to the previous topic and was shorter, the students produced the content more easily and needed less teacher feedback. (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

Some improvements in word spelling were observed, but teacher feedback was more needed as Google Docs made corrections that changed the meaning in some places while creating phrases. (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

The results related to the capitalization, spelling, grammatical concepts and punctuation categories are shown under the theme of error correction.

*It was observed that most of the students had difficulty in creating content in their paragraphs, as well as applying capitalization, punctuation marks and grammar rules correctly in their writings. (*Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

At the same time, it was observed that the students frequently made mistakes regarding the use of capital letters and the correct spelling of the word. (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

Every student used an online dictionary, but they still had a hard time in typing words into their documents. (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

The observations in the first week revealed that the students could not apply correct capitalization, spelling, punctuation and accurate grammar conceptions to their paragraphs to a large extent. It was also observed that the reason for this might have been that some error correction skills were not acquired in the native language, and these observations were included with the following comments in the category of the student's

own barriers. Besides, the teacher of the lessons made such inferences when students asked the most basic questions about spelling and punctuation marks in the lessons. In addition, the teacher integrated such error-correcting skills into their lessons by first asking some questions to check the students' knowledge in their L1.

> *It was observed that most of the students did not have a good command of spelling and punctuation marks in their native language, and did not know the places where they should be applied as the Turkish teachers stated that most of the students had serious problems with the correct spelling, use of capital letters and where to put the punctuation marks at the official school meetings.* (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

> *It was observed that they did not pay attention to the use of punctuation marks in their mother tongue as it was discussed with the Turkish teachers in the school meetings.* (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

As to the observation notes of the second week, it was seen that despite the use of Google Docs, spelling errors still came to the fore.

> *The teacher observed in this lesson that the majority of the mistakes in the writing lessons were still spelling mistakes despite using punctuation marks and a dictionary.* (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

The reason for high frequency of the spelling mistakes may be due to the fact that Google Docs sometimes made no correction on some mistakes in the sentence when no punctuation mark was put at the end of the sentences. In addition, the students may also have had difficulties in writing an English word. Likewise, the observation notes presented below show that the students may have had difficulties in correcting punctuation errors because unlike automatic corrections in grammar, spelling and capitalization, the students were expected to use and correct punctuation marks manually when the Google Docs highlighted the errors. The observation notes supporting this issue are stated in the category of challenges.

> *It was more difficult for the students to correct the blue marks manually indicating what punctuation marks should be used.* (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

> *On the other hand, since students still had trouble in using punctuation marks from time to time, Google Docs appeared to be ineffective in automatic corrections.* (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

Although the students continued to have difficulties with spelling and punctuation from time to time despite the Google Docs auto-corrections, most of the time, quick and effective feedback on capitalization, grammar and spelling was received by Google Docs and the students were able to correct their mistakes effectively.

At the same time, it was observed that the students frequently made mistakes regarding the use of capital letters, grammatical concepts and the correct spelling of the word. They immediately fixed these errors by clicking on the blue ticks of the Google Docs. (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

In the meantime, no negative comments were made regarding the development of capitalization, grammar and punctuation in the following weeks. Starting from the second week, the error correction skill, where the first improvement was made, was observed to be related to capitalization, and it was shown that it was reinforced very well with auto-corrections. Likewise, observation notes in the following weeks indicated the progress about spelling. The observation notes supporting these results are stated in the category of positive experiences under the theme of challenges and experiences of the learners.

Since Google Docs constantly autocorrects capitalization, the teacher observed that the skill that improved the earliest was capitalization. Google Docs used capitalization automatically without any indication. (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

Some improvements in word spelling were observed, but teacher feedback was more needed as Google Docs made corrections that changed the meaning in some places while creating phrases. (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

In addition, thanks to automatic error corrections, the students were able to make grammar and spelling error corrections with Google Docs more easily and accurately rather than making them manually. It was observed that as the students made progress in their weekly paragraphs, they used Google Docs automatic corrections more easily and effectively.

Grammar errors and wrong word spellings are indicated by Google Docs with red or blue lines, and the students are seen to make the corrections easily. They constantly stated that they liked to do writing activities on computers and that automatic editing was very useful. (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

Not many errors were observed in the text, as Google Docs is now used to a lot. (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)

It can be inferred that that the reason for this was that automatic error corrections were made by Google Docs efficiently, the students could use this feature of Google Docs better, and thus they made fewer mistakes compared to the first week. It is also possible to claim that the error correction feature of Google Docs was very effective in giving feedback on accurate grammar, punctuation, capitalization, correct typing and spelling during the writing tasks as the teacher started to give less mechanical feedback.

In this way, the teacher saved time in giving feedback and the students were given a chance to take more feedback in two different areas with both automatic corrections and teacher feedback in a limited lesson time. The following observation notes support these conclusions.

The teacher was able to make more corrections about the content. (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)

The students benefited from Google Docs' automatic corrections more about grammar, capitalization, punctuation, correct spelling. (Teacher's diary Week 5 - 29.12.2021- Computer Lab/Library - Experimental Group)

With the improvement of texts in writing tasks, the most beneficial feature of Google Docs was observed to be in the grammar concepts. The observation notes showed that the students learned grammar concepts more easily thanks to the automatic corrections made by Google Docs during the lesson.

As different grammatical structures were introduced in the new unit, the students were exposed to more Google Docs grammar corrections and it was observed that they did not have a problem by clicking on the automatic corrections. (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

It was observed that the students benefited more from the automatic grammar corrections as the number of words in paragraph writing increased and the new contents were added in paragraph writing. (Teacher's diary Week 5 - 29.12.2021- Computer Lab/Library - Experimental Group)

The students mentioned that they could learn grammar with Google Docs automatic corrections. (Teacher's diary Week 5 - 29.12.2021- Computer Lab/Library - Experimental Group)

Only in the sixth week, it was stated that there were more grammatical errors compared to punctuation and spelling errors. It was observed that the reason for this was that the students had difficulty in using the past simple tense. Although the students learned this grammar rule in detail the previous year, when they were in the 9th grade, it was observed that most of the students were not competent in using past simple tense.

The students had a lot of difficulty in writing English texts using the past tense. While it appeared that punctuation and spelling errors in sentences decreased, grammatical errors were observed intensively in this lesson even though they were exposed to simple past tense use in previous years. (Teacher's diary Week 6 - 05.01.2022- Computer Lab/Library - Experimental Group)

In the last week, although the students encountered new grammar concepts and structures in a new unit, they were not overwhelmed, and they benefited effectively from the corrections of spelling and grammar made by Google Docs auto-corrections. Writing a story was a new type of genre and using simple past tense was a necessary linguistic competence.

Google Docs seemed to fix grammar and spelling errors efficiently. It was observed that Google

docs was very fast and efficient in correcting grammar and word spelling errors. Also, it was observed that the areas where the students benefited from Google Docs most were grammar and correct spelling of the word. (Teacher's diary Week 6 - 05.01.2022- Computer Lab/Library - Experimental Group)

Along with the increase in the word number of the writing task, another commonly referred Google Docs feature was the automatic word count feature. It appeared that the more students used Google Docs, the more features affected their paragraph writing and the teacher interventions disappeared. It was observed that the most appreciated feature by the students was the automatic word count.

As the number of words increased, they began to check their word count. They constantly checked the number of words they wrote using the feature of Google Docs. (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

The students continued to consider their word count. It was observed that the feature that the students liked most was related to counting the number of words. Teacher interventions related to the use of Google Docs were almost never observed. (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)

It observed that most of the students were more active in their English lessons, with the writing lessons delivered via Google Docs rather than the traditional writing lessons. It was also observed that many students were more motivated in gaining writing skills thanks to Google Docs.

It was observed that the majority of the students enjoyed the lessons more while doing their writing lessons. In fact, it was observed that the students who were not very active in English lessons became more active in online writing classes. (Teacher's diary Week 5 - 29.12.2021- Computer Lab/Library - Experimental Group)

Finally, the observation notes stated in the categories of challenges, time and feedback are presented. In the beginning, it was seen that the teacher was quick to give feedback by making comments on Google Docs remotely and was able to catch up with everyone in giving feedback by using error correction codes.

The teacher was able to give feedback to everyone with error correction codes by commenting on Google Docs during a lesson. Since the error correction codes were uploaded to Google Drive, the students looked at the codes and tried to correct their mistakes according to the comments made by the teacher. (Teacher's diary Week 1 - 29.09.2021- Computer Lab/Library - Experimental Group)

One feature of Google Docs in which the students had difficulty was related to understanding for which part of the sentence the comments were made. When the teacher made comments online, a mark appeared where the error was done in the student's paragraph. The student often did not understand which part to arrange in the

marked part. In addition, they thought that when they accepted online comments made by the teacher, their mistakes would be corrected automatically just like Google Docs. So, this might have caused the deletion of most of the teacher's comments.

> *The students were accepting and deleting written feedback via Google Docs. They had problems in understanding how they should fix the parts the teacher had marked without deleting the comments. They could not clearly understand which part should be corrected in the markings given by the teacher.* (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

As this situation continued in the other weeks, the teacher's attempt to comment online repeatedly started to cause a waste of time and the time allocated to the written online feedback started to decrease gradually unlike in the first weeks. Therefore, it was stated in the observation notes that in the following weeks, especially as the number of words in the paragraph writing task increased, online written feedback caused a waste of time and there was a tendency towards the teachers' verbal feedback.

> *Since the students continued to ask questions or deleted the comments after the teacher made a mark while giving written feedback, such situations started to take more time in giving feedback to the student's paragraph.* (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)
>
> *While the teacher gave written feedback in the experimental group beforehand, with the increase in the number of words in the paragraphs, she started to give verbal and individual feedback instead of written feedback in order to give feedback to everyone in the lesson. Another reason for this was that despite being in the third week, the students still deleted the teacher's written feedback in the Google Docs by mistake while they were applying it. Thus, giving the same written feedback to the student again started to cause a waste of time in the lesson.* (Teacher's diary Week 3 - 13.10.2021- Computer Lab/Library - Experimental Group)

It was stated that another reason for giving verbal feedback was that the students were more accustomed to this way of feedback and they understood better with verbal feedback in Turkish. The students could not fully perceive the error correction codes due to their low level of foreign language level or because they were not accustomed to receiving feedback in a foreign language.

> *Another reason for this was that students appeared to be more accustomed to verbal feedback in other courses since the students stated that they are used to receiving feedback orally.* (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)
>
> *Although the students were informed about the error correction codes, they could not perceive the error codes in English and there was confusion.* (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

Due to this problem, the teacher gave Turkish feedback orally as well as written or oral English feedback. (Teacher's diary Week 2 - 06.10.2021- Computer Lab/Library - Experimental Group)

As a result, it was stated that there was a problem in correcting the errors highlighted by the teacher's written feedback, which caused a waste of time. Thus, it was stated that the teacher tried to save time by both giving the error correction codes in Turkish in addition to English and giving them verbal feedback as well.

The teacher's feedback was in Turkish and verbal, because longer paragraphs started to be created and there was a loss of class time due to giving written feedback. (Teacher's diary Week 4 - 27.10.2021- Computer Lab/Library - Experimental Group)

Based on these observation comments, it would not be wrong to say that the Google Docs online comment may have caused a waste of time. It can be said that variables such as a crowded student group, students' computer and digital skills, and feedback habits might have negatively affected this situation. Thus, it is possible to say that the expected efficiency from the online comment feature of Google Docs may not be obtained within a class hour and more class hours should be devoted to its application.

CHAPTER V: DISCUSSION, CONCLUSION AND SUGGESTIONS

In this chapter, the results of the current study and previous studies will be compared. Then, the purpose and findings of the study with the interpretation of the results will be briefly mentioned, and the educational implications of the study will be provided. Finally, limitations of the study will be clarified and suggestions will be proposed for future studies.

5.1. Discussion

The quantitative data results of this study showed that a significant difference was found between the experimental and control group regarding content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation in writing skills on error correction skills of Turkish EFL learners after the interventions. Another important quantitative data result revealed that no significant difference was found between the experimental group and control group in terms of their error correction skills regarding only mechanics which were grammatical concepts, punctuation, capitalization and spellling in paragraph writing after the given treatment. The qualitative data findings revealed that the majority of participating students in the experimental group (N=28) preferred computer technology in their writing lessons by using Google Docs while only two participants preferred pen-paper writing lessons. Similarly, the teacher observed that Google Docs' auto corrections offered students to learn how to correct sentences, notice correct grammar use, appropriate word selection and correct word choice, spelling, punctuation, and capital letters.

The results of the current study bear some similarities with those of previous studies (Abrams, 2019; Alsubaie & Ashuraidah, 2017; Suwantarathip & Wichadee, 2014). The students' writing skills showed a positive increase in their pre and post-test scores via Google Docs in a qualitative study conducted by Abrams (2019). Besides, Suwantarathip and Wichadee (2014) showed that the participants using Google Docs received higher scores than the face-to-face group after the intervention. Likewise, Alsubaie and Ashuraidah (2017) found that the students' writing skills showed an increase in that the scores of the posttests were higher than those of pretests as a result of integration of Google Docs in English classes. Considering the quantitative results of data analysis in this current study, there was an increase in the mean scores of pre-posttest scores in both experimental and control group. However, there was a significant difference in the posttest scores of the participants in the experimental group for the first research question, that is, they got higher scores in terms of content, organization, vocabulary, grammatical concepts, capitalization, spelling and punctuation.

The findings of the present study regarding the perceptions of the learners on the use of Google Docs in the development of writing and error correction skills are consistent with previous studies in which the students were found to display favorable attitudes towards using Google Docs in writing classes (Ambrose & Palpanathan, 2017; Cunningham, 2000; Lin & Yang, 2013). For example, in their study conducted with a mixed methods research design, Lin and Yang (2013) claimed that most of the students developed positive perceptions and attitudes towards using online tools in writing lessons. Ambrose and Palpanathan (2017) also showed that the majority of the students expressed positive attitudes towards using Google Docs in their writing lessons and they stated that Google Docs was more comfortable in writing classes at a high rate. Likewise, Cunningham (2000) revealed that the students had positive attitudes towards computer-aided writing and preferred computer-aided writing lessons. In the same way, the present study showed that 28 students out of 30 preferred Google Docs based courses to traditional pen-paper based courses. The students in this present study stated that writing lessons with Google Docs were quite fun and motivating. Also, in the current study, it was stated in observation notes that the students were more active in their English lessons with Google Docs rather than the traditional writing lessons, and the researcher observed that many students were more motivated in gaining writing skills. Besides, the interviews revealed that writing on Google Docs was comfortable, easy and fast.

A number of related studies also echo the results of the first question in current study in terms of the development of content, organization, vocabulary, grammatical concepts, spelling, punctuation and capitalization (Abrams, 2019; Alsubaie & Ashuraidah, 2017; Doğan, 2018; Lin & Yang, 2013; Suwantarathip & Wichadee, 2014). To start with, a socio-cultural study by Lin and Yang (2013) found that Google Docs helped to provide an effective language development including grammatical concepts in paragraph writing. Also, pre and posttest results of Alsubaie and Ashuraidah (2017) reported a positive increase in the writing of college students who had writing problems such as spelling and grammar. The results of second research question in the current study showed that there was an increase in the posttest scores in the development of error correction skills even though no significant difference was found between the experimental and control group regarding mechanics. In addition, in Abrams's study (2019) where the lower level students had language problems, the students were found to develop accuracy in their texts. Besides, a mixed method research by Dogan (2019) found out that Google Docs through Edmodo created awareness for metalinguistic knowledge. Furthermore, a semi-experimental study by Suwantarathip and

Wichadee (2014) revealed that Google Docs increased understanding of how to correct sentences. Similarly, according to the qualitative data results in the current study, the most used and beneficial Google Docs feature was observed to be related to improving grammar concepts since the students benefited from Google Docs for correcting the tenses. Besides, the students indicated that grammar was the second area where they were very careful not to make mistakes. In this sense, the interview and observation results in the current study revealed that the students' writing skills improved as a result of using Google Docs in writing descriptive texts. It was observed that the students showed improvement in forming sentences, organizing the text structure properly, choosing appropriate vocabulary and using correct capitalization and punctuation.

The findings of the observations during the interventions in the current study remind the terms of ZPD (Zone of Proximal Development) by Vygotsky (1978) and scaffolding by Bruner (1978). The learners contacted and interacted with the teacher when they were in the field of potential development in their writing lessons and the teacher helped them semantically by interacting with them. In this way, the students were able to unveil their own potential level, as evidenced in the teacher's observation notes and the participants' posttest scores.

Moreover, according to Suwantarathip and Wichadee (2014), another feature of Google Docs was that it supported students' learning without the constraints of time and space. Similarly, in the present study, the students indicated that they both saved time and got extra feedback in a short time in addition to the teacher's feedback. Doğan (2018), on the other hand, indicated that the use of Google documents in collaborative writing tasks via Edmodo created an awareness of metalanguage. Likewise, the present study revealed that the students gave more importance to writing a paragraph by focusing on the structure and form rather than meaning. In addition, the study conducted by Cunningham (2000) found that the word processor class was helpful for improving writing skills. It was revealed that the students in the word processor class paid more attention to certain aspects of their writing and mechanical writing such as grammar, word choice and arrangement with the help of software. These results are consistent with those of the current study in that most of the students preferred to focus primarily on the spelling and punctuation of the word in their English paragraph writing tasks. Grammar and the use of capital letters were the other areas where they were careful not to make mistakes. Thus, it is possible to say that Google Docs gives structure-oriented feedback and meets the expectations of the students in writing tasks.

Furthermore, the results of Ambrose and Palpanathan (2017) display some similarities and differences ith those of the current study. In both studies, the students stated that they were not afraid of making mistakes on Google Docs and automatic corrections helped them a lot in terms of error correction. Besides, the students in both studies stated that they paid more attention to grammar, word choice, spelling and organization as well as capitalization, punctuation and correct word selection. Furthermore, the studies showed the similar results in that the majority of the students stated that Google Docs helped their writing lessons and one participant in each study claimed that it did not contribute to learning due to copy-paste or distracting feature of computers. However, the study of Ambrose and Palpanathan (2017) revealed that despite the high 21st century technology skills, the students still preferred the paper and pencil method to a considerable extent. On the contrary, in the current study, the majority of participating students in the experimental group (N=28) preferred computer technology in their writing lessons using Google Docs while only two participants preferred pen-paper writing lessons.

A number of studies (Alsmari, 2019; Ambrose & Palpanathan, 2017; Cunningham, 2000; Doğan, 2019; Khodabandeh & Soleimani, 2018) used Google Docs as a research tool and collected data by examining the improvement of paragraph organization and content, spelling, punctuation, grammar and sentence structure. Although these studies show similarities in terms of the aims and results with the current study, they differ in terms of research designs, research questions, participant profile and data collection tools. Only Alsmari (2019) studied the development of writing skills by examining paragraph organization and content, spelling and punctuation, grammar and sentence structure. This time, however, the research tool was chosen as Edmodo instead of Google Docs. Still, peer education and collaboration were other variables of this study. Doğan (2019) conducted a mixed method study which aimed to identify students' perceptions using Google Docs through Edmodo; however, in Dogan's study, assessing the development of error correction skills was not taken into account. Also, Khodabandeh and Soleimani (2018) investigated the effect of CALL based tasks on EFL learners' grammar learning with the comparison of written question tasks. Although the research model and topic are similar to this study, only grammar learning was studied. Besides, Cunningham (2000) assessed students' attitudes towards the word processing experience in the EFL writing class. With the experimental and control groups, a word processing software different from Google Docs was used through task-based activities and a questionnaire was also used to collect data. The most important difference of the study conducted by Cunningham (2000) was that there were different

teachers in the experimental group and the control group, and different teaching programs were applied during the interventions. In addition, no pretest or posttest was applied to see if there was a significant difference between the experimental and control group. Furthermore, the data collection tools were different from those of Ambrose and Palpanathan (2017) because in the present study pre-post questionnaires were administered to participants, and writing samples and assignments were evaluated with the help of a rubric.

Apart from the above-mentioned studies, the results of the current study differ from those of Abrams (2019) since the author stated that Google Docs created a textual cohesion in terms of content and form, which was not reported in this study. On the contrary, in the current study, the qualitative data showed that Google Docs did not make semantic corrections for the integrity of the paragraph and the students could not reveal the meaning they intended in their writings with Google Docs. In addition, Google Docs was criticized in student interviews for not explaining the causes of errors in the instant feedback and not correcting the error with examples. Finally, the students indicated that Google Docs could not provide any semantic and explanatory feedback during the learning process and that teacher feedback was needed on this issue.

5.2. Conclusion and Implications

The starting point for this study was the difficulties of teaching writing skills and error correction skills faced by foreign language teacher in limited English lesson hours in a vocational high school. The data gathered from the participants' pre-posttest results showed that a significant difference was found between the experimental and control group on the development of writing skills including content, organization, vocabulary and error correction skills of the learners regarding grammar, spelling, capitalization and punctuation after the given treatment via Google Docs. It was found that the increase in the posttest scores of the experimental group was higher than that of the control group. Thus, the result indicated that the automatic corrections of Google Docs in addition to the traditional teacher feedback were more beneficial than using only one type of feedback. On the other hand, the difference was not statistically significant between the experimental group and control group on the development of error correction regarding only mechanics which were grammar, spelling, capitalization, punctuation in paragraph writing after the given treatment. Besides, another important result from the interviews revealed that the students in the experimental group believed that Google Docs created a more enjoyable lesson environment in English writing lessons than traditional writing lessons. In addition, the students in the experimental group

appreciated quick and easy automatic error corrections, online commenting and word count functions of Google Docs. Moreover, according to the students' statements during the interviews, they believed that Google Docs was an effective online tool to develop their writing skills and error correction skills and it contributed to their vocabulary learning. Similarly, in the interviews, the students indicated that they benefitted from Google Docs' automatic corrections in correcting the errors of punctuation, capitalization, grammatical concepts and spelling. However, the students who used Google Docs in their writing lessons criticized the automatic corrections for not being able to give semantic feedback and sometimes changing the intended meaning. Another criticism about automatic corrections stated by the students was that it did not provide any direct explanations about their error correction and why these automatic corrections were made. Thus, based on the critics in the interviews, the students believed that the teacher was more beneficial in providing a meaningful feedback since the auto corrections of Google Docs were not supported by explanatory feedback or meaningful examples. Finally, the data obtained from the teacher's observations revealed that the students mignt not be exposed to different genre writing activities neither in their L1 nor in their L2 writing classes before. Based on her observations, the teacher indicated that automatic error corrections made by Google Docs were efficient enough and the students used automatic corrections. She found that the students in the experimental group made fewer mistakes in the following weeks compared to the first week, and they showed progress to some extent in their error correction skills.

Taking into consideration the need for using technology to develop writing skills and error correction skills of the Turkish EFL learners, this study provides some significant educational implications especially for English teachers working in different schools in Turkey. First of all, it is necessary for teachers to create a learning atmosphere in which learners learn English in an effective and enjoyable way. Thus, it is recommended that English teachers should benefit from technology in order to attract students' attention to writing instead of focusing only on traditional approaches in teaching writing skills. The results of the study may shed light on foreign language writing and error correction problems and raise awareness about technology integration for writing classes for Turkish EFL learners. Google Docs appears to be a highly recommended word processing tool which can provide positive learning experiences and improve writing skills and error correction skills in a blended learning environment in Turkish EFL writing classes. Thus, it could be employed as an authentic material to create a fun writing environment as well. Furthermore, according to this study, a product-based writing and genre writing, or task-based activities

can be used with the Google Docs. However, it should be noyed by English teachers that Google Docs is not a way to teach the organization chart and content of these writing approaches, but it could be very effective to practice grammatical concepts, punctuation, capitalization and spelling. Automatic corrections of Google Docs provide mechanical feedback by processing the words the students write in their paragraphs. As it may lead a teacher to give less mechanical feedback, the teacher can save time in giving feedback and students may have a chance to take more feedback on both mechanics and content with both automatic corrections and teacher feedback in a limited lesson time. However, it must be also noted that some students may still prefer a balance between the use of online and traditional classes. In this study, it was found that even if the learners were willing to benefit from technology in the lessons, they found the teacher's help in the development of their writing skills more meaningful. Therefore, teachers can balance the use of Google Docs' automatic corrections and traditional methods in their writing lessons to serve their students' needs and keep them motivated. Another issue that should be given attebtion is that error correction codes should be clearly explained to students and they should be provided both written and oral feedback since the students in this study preferred explicit feedback in their errors so that they could detect which part needed revision. However, giving feedback by both orally and online during writing lessons can be a waste of time. Instead, it is recommended that error correction codes can be given to the students remotely with the online comment feature of Google Docs to check their homework and then detailed feedback can be given via these codes in the class.

All in all, blended learning could be a more useful teaching method and explored to enhance language teaching and learning. It can be concluded that Google Docs is a useful tool that enables learners to correct their errors, receive immediate and online feedback. For this reason, English teachers are advised to implement different feedback types in their writing lessons. As the data revealed, the generation called digital natives seem to enjoy writing on computers and exhibit positive attitudes towards the lesson. The effect of the teacher's feedback seems to be undeniable and, in this study, it was observed that the students' writing skills and error correction skills improved to some extent. In this vein, the teacher can act as a guide in a blended learning environment. Finally, with the help of online tools in writing classes, students can be supported to learn by discovering and use technology-based tools where they can have the opportunity to participate actively and individually.

5.3. Limitations and Suggestions for Further Studies

This study has some limitations. First of all, this study was conducted with 50 students during one semester and the findings cannot be generalized to other contexts. Also, the data were collected from pre-test and post-tests, six-week interventions, teacher observation notes during the interventions and the experimental group student interviews. Thus, future studies can employ different data collection tools to triangulate the data or refer to various inferential statistics. Additionally, there were only male students in this study due to the demographic features of the vocational school and future studies could investigate equal number of male and female students. Besides, another limitation was about time constraints. Thus, future studies can be conducted for two terms or longer.

As another limitation of this study, there is a risk for researcher's bias since the observation data were collected from the teacher's diary during the interventions. Also, the teacher was the only English teacher at school. Therefore, being the only teacher in the application and data analysis is one of the limitations of this study. In addition, there was student dropout in the control group.

Since the data collection period coincided with the pandemic period, the interventions were limited to six weeks and it is suggested that this process can be kept longer for future studies. Also, participants with different learner characteristics can be included in further studies. Additionally, it is suggested that further studies should be conducted to investigate the students' perspectives towards using the technology with a pre-questionnaire and post questionnaire. Besides, it is highly recommended that different online writing platforms can be used for comparative purposes. Furthermore, Google Docs is in fact an online shareable platform and could be employed for improving collaborative writing in future studies. Finally, future studies can be conducted to compare the effects of collaborative writing in pen-paper based writing classes and online classes to see students' writing development in different areas.

REFERENCES

Abrams, Z. I. (2019). Collaborative writing and text quality in google docs. *Language Learning & Technology*, *23*(2), 22-42.

Adams, W. C. (2010). Conducting semi-structured interviews. In J. S. Wholey, H. P. Hatry, and K. E. Newcomer (Eds), *Handbook of Practical Program Evaluation* (3rd ed., pp. 365–377). San Francisco, CA: Jossey-Bass.

Agır, A. (2014). What are the usage conditions of Web 2.0 tools faculty of education students? *Turkish Online Journal of Distance Education, 15*(3), 171-196.

Alharbi, M. A. (2020). Exploring the potential of Google Doc in facilitating innovative teaching and learning practices in an EFL writing course. *Innovation in Language Learning and Teaching*, *14*(3), 227-242.

Al-Khasawneh, F. M. S., & Maher, S. (2010). Writing for academic purposes: Problems faced by Arab postgraduate students of the college of business. UUM. *ESP World, 9*(2), 1-23.

Alsmari, N. A. (2019). Fostering EFL students' paragraph writing using Edmodo. *English Language Teaching*, *12*(10), 44-54.

Alsubaie, J., & Ashuraidah, A. (2017). Exploring writing individually and collaboratively using google docs in EFL contexts. *English Language Teaching*, *10*(10), 10-30.

Ambrose, R. M., & Palpanathan, S. (2017). Investigating the effectiveness of computer-assisted language learning (CALL) using Google Documents in enhancing writing - A study on senior 1 students in a Chinese independent high school. *IAFOR Journal of Language Learning*, *3*(2), 85-112.

Arani, J. A. (2018). Advancing academic writing in a mobile Skype-based blended model. *International Journal of Interactive Mobile Technologies (iJIM), 12*(3), 86-103.

Arndt, V. (1993). Response to writing: Using feedback to inform the writing process. In: M. Brook & L. Walters (Eds.), *Teaching composition around the Pacific rim: Politics and pedagogy* (pp. 90-116). Clevedon, UK: Multilingual Matters.

Aravindan, S. (2016). *How to use google docs in the classroom.* Retrieved from https://study.com/academy/lesson/how-to-use-google-docs-in-the-classroom.html.

Aşıksoy, G. (2018). ELT students' attitudes and awareness towards the use of Web 2.0 technologies for language learning. *Journal of Language and Linguistic Studies*, *14*(2), 240-251.

Atmaca, Ç. (2016). Error analysis of Turkish EFL learners: A case study. *Procedia*

- Social and Behavioral Sciences, 232, 234-241.

Badran, M. (2017). *Digital tools and language learning.* Unpublished master thesis. Malmö Högskola Faculty of Education and Society, Malmö.

Balbay, S., & Erkan, G. (2018). Perceptions of instructors on using Web 2.0 tools in academic English courses. *International Journal of Curriculum and Instruction*, *10*(2), 45-60.

Bilal, H. A., Tariq, A. R., Din, N., Latif, H., & Anjum, M. N. (2013). Investigating the problems faced by the teachers in developing English writing skills. *Asian Journal of Social Sciences and Humanities, 2*(3), 238-244.

Bowles, M. (2010). Concurrent verbal report in second language acquisition. *ARAL, 30*, 111-127.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Brown, H. D., & Lee, H. (2015). *Teaching principles* (4th ed.). USA: Pearson Education.

Bruner, J. S. (1978). Learning how to do things with words. In J. S. Bruner & A. Garton (Eds.), *Human growth and development: Wolfson college lectures 1976* (pp. 62-84). Oxford: Oxford University Press.

Burston, J. (2001). Computer-mediated feedback in composition correction. *CALICO Journal 19*(1), 37–50.

Carson, J. (2001). Second language writing and second language acquisition. In T. Silva & P. Matsuda (Eds.), *On second language writing* (pp. 191–200). Mahwah, NJ: Lawrence Erlbaum.

Chandler, J. (2003). The efficacy of various kinds of error correction for improvement of the accuracy and fluency of L2 student writing. *Journal of Second Language Writing, 12*(3), 267–296.

Chapelle, C. (2001). *Computer applications in second language acquisition: Foundations for teaching, testing, and research.* Cambridge: Cambridge University Press.

Chu, S. K. W., Kennedy, D., & Mak, Y. K. (2009). MediaWiki and Google Docs as online collaboration tools for group project co-construction. *Proceedings of the 2009 International Conference on Knowledge Management,* 1-14, Hong Kong.

Chun, D., Kern, R., & Smith, B. (2016). Technology in language use, language teaching, and language learning. *The Modern Language Journal, 100*(1), 64-80.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th edition). New York: Routledge.

Connors, R. J., & Lunsford, A. A. (1993). Teachers' rhetorical comments on student papers. *College Composition and Communication, 44*(2), 200-223.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209-240). Thousand Oaks, CA: Sage.

Cunningham, K. (2000). Integrating CALL into the writing curriculum. *The Internet TESL Journal*, *6*(5), 9-22.

Conrad, S. M., & Goldstein, L. M. (1999). ESL student revision after teacher-written comments: Text, contexts, and individuals. *Journal of second language writing, 8*(2), 147-179.

Doğan, N. (2019). *Collaborative social learning: Using Edmodo as a social platform to teach EFL writing for preparatory school students*. Unpublished master thesis. Pamukkale University the Institute of Educational Sciences, Denizli.

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*. New York: Oxford University Press

Ekmekçi, E. (2018). Exploring Turkish EFL students' writing anxiety. *The Reading Matrix: An International Online Journal, 18*(1), 158-175.

Ekmekci, F. Ö. (1999). *Research manual for social sciences* (Vol. 2). Turkey: Selt Publishing.

Ferris, D. (2003). *Response to student writing.* Mahwah, NJ: Lawrence Erlbaum.

Ferris, D. & Hedgcock, J. (2005). *Teaching ESL composition: Purpose, process, and practice.* Mahwah, NJ: Lawrence Erlbaum.

Ferdouse, F. (2013). Learning from mistakes: Using correction code to improve student's writing skill in English composition class. *Stamford Journal of English, (7)*, 62-86. https://doi.org/10.3329/sje.v7i0.14463

Fraenkel, J., Wallen, N., & Hyun, H. (2018). *How to design and evaluate research in education* (10th ed.). New York: McGraw-Hill Education.

Ghanizadeh, A., Razavi, A., & Jahedizadeh, S. (2015). Technology-enhanced language learning (TELL): A review of resourses and upshots. *International Letters of Chemistry, Physics and Astronomy, 54*, 73-87.

Greene, J. C., & Caracelli, V. J. (1997). Defining and describing the paradigm issue in mixed-method evaluation. *New directions for evaluation, 74*, 5-17.

Greener, S., & Wakefield, C. (2015). Developing confidence in the use of digital tools in teaching. *Electronic Journal of E-Learning*, *13*(4), 260-267.

Grgurović, M. (2011). Blended learning in an ESL class: A case study. *Calico Journal*, *29*(1), 100-117.

Haiyan, M., & Rilong, L. (2016). Classroom EFL writing: The alignment-oriented approach. *English Language Teaching, 9*(4), 76-82.

Hasan, M. K., & Akhand, M. M. (2011). Approaches to writing in EFL/ESL context: Balancing product and process in writing class at tertiary level. *Journal of Nelta, 15*, 77-88.

Harmer, J. (2007). *The practice of English language teaching.* (4th ed., pp. 323-330). England: Pearson Education Limited.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content Analysis. *Qualitative Health Research, (15)*9, 1277-1288.

Hughes, A. (2003). *Testing for language teachers,* 83-186. Cambridge university press.

Hyland, F. (1998). The impact of teacher written feedback on individual writers. *Journal of second language writing, 7*(3), 255-286.

Hyland, K. (2009). *Second language writing* (6th edition). New York: Cambridge University Press.

Hyland, K., & Hyland, F. (2006). Feedback on second language students' writing. *Language Teaching*, *39*(2), 83-101.

Joyce, B. & Weil, M. (2000). *Models of teaching.* New Jersey, NJ: Prentice-Hall.

Kerlinger, F. N. (1970). A social attitude scale: Evidence on reliability and validity. *Psychological Reports, 26*(2), 379-383.

Khalil, Z. M. (2018). EFL students' perceptions towards using google docs and google classroom as online collaborative tools in learning grammar. *Applied Linguistics Research Journal*, *2*(2), 33-48.

Khodabandeh, F., & Soleimani, H. (2018). The effect of CALL-based tasks on EFL learners' grammar learning. *Teaching English with Technology*, *18*(3), 54-68.

Kırmızı, G. D. (2018). Lexical errors and linguistic calques as lexical transfer in EFL writing: A case study. *Başkent University Journal of Education, 5*(2), 99-106.

Kroll, B. (1990). *Second language writing: Research insights for the classroom.* Cambridge: Cambridge University Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral*

participation. Cambridge university press.

Lee, I. (2004). Error correction in L2 secondary writing classroom: The case of Hong Kong. *Journal of Second Language Writing, 13*(4), 285–312.

Lin, W. C., & Yang, S. C. (2013). Exploring the roles of google. doc and peer e-tutors in English writing. *English Teaching: Practice and Critique*, *12*(1), 79-90.

Liu, Y. (2008). The effects of error feedback in second language writing. *Journal of Second Language Acquisition and Teaching*, *15*, 65-79.

Mackey, A., & Gass, S. (2005). *Second language research: Methodology and design.* New Jersey: Lawrence Erlbaum Associates, Inc.

Mantarlı, B. (2019). *Yabancı dil sınıflarında öğrenim gören 11. ve 12. sınıf öğrencilerinin İngilizce metin yazımında yaptıkları hataların analizi.* Yaımlanmamıl yüksek lisans tezi, Bartın Üniversitesi Eğitim Bilimleri Enstitüsü, Bartın.

McMillan, J. H., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry.* Harlow, England: Pearson.

Morquin, D. (2016). *Teachers' perceptions regarding the use of google classroom and google docs and their impact on student engagement.* Unpublished doctoral dissertation. Texas A&M University, Kingsville.

Mourssi, A. (2006). *The role of motivation and learning strategies in improving second language learners' writing.* Unpublished doctoral dissertation, University of Birmingham, UK.

Mourssi, A. (2013). Theoretical and practical linguistic shifting from product/guided writing to process writing and recently to the innovated writing process approach in teaching writing for second/foreign language learners. *International Journal of Academic Research in Business and Social Sciences, 3*(5), 731-751.

Neumeier, P. (2005). A closer look at blended learning—parameters for designing a blended learning environment for language teaching and learning. *ReCALL*, *17*(2), 163-178.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education, 31*(2), 199-218.

Ninio, A., & Bruner, J. (1978). The achievement and antecedents of labelling. *Journal of Child Language*, *5*(1), 1-15.

O'Reilly, T. (2007). What is Web 2.0: Design patterns and business models for the next generation of software. *Communications & Strategies, 65*(1), 17-36.

Palmquist, M. (1993). Network-supported interaction in two writing classrooms. *Computers and Composition, 10*(4), 25–57.

Prensky, M. (2001). Digital natives, digital immigrants' part 1, *On the Horizon, 9*(5), 1-6. https:// doi.org/10.1108/10748120110424816.

Rahmatunisa, W. (2014). Problems faced by Indonesian EFL learners in writing argumentative essay. *Journal of English Education, 3*(1), 41-49.

Rashtchi, M., Porkar, R., & Saeed, S. F. G. M. (2019). Product-based, process-based, and genre-based instructions in expository writing: Focusing on EFL learners' performance and strategy use. *European Journal of Education Studies*, *6*(6), 115-136.

Rezaei, M., & Jafari, M. (2014). Investigating the levels, types, and causes of writing anxiety among Iranian EFL students: A mixed method design. *Procedia-Social and Behavioral Sciences, 98,* 1545-1554.

Saricoban, A. (2013). Pre-service ELT teachers' attitudes towards computer use: A Turkish survey. *Eurasian Journal of Educational Research, 53*, 59-78.

Seyed Rezaei, Z. S., Ghonsooly, B., Shahriari, H., & Fatemi, A. H. (2016). A mixed methods analysis of the effect of google docs environment on EFL learners' writing performance and causal attributions for success and failure. *Turkish Online Journal of Distance Education*, *17*(3), 90-110.

Shaffer, D. R., & Kipp, K. (2013). *Developmental psychology: Childhood and adolescence.* Boston: Cengage Learning.

Sharp, V. (2009). *Computer education for teachers: Integrating technology into classroom teaching* (6th ed). Hoboken, N.J.: John Wiley.

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.

Terzioglu, Y. (2017). Call teacher education: Language teachers and technology integration. *Turkish Online Journal of Distance Education, 18*(3), 228-231.

Thompson, J. (2008). Don't be afraid to explore Web 2.0. *Education Digest, 74*(4), 19-22.

Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning, 46*(2), 327–369.

Truscott, J. (2004). Evidence and conjecture on the effects of correction: A response to Chandler. *Journal of Second Language Writing, 13*(4), 337–343.

Warschauer, M. (2002). Networking into academic discourse. *Journal of English for Academic Purposes, 1*(1), 45–58.

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching*, *31*(2), 57-71.

Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*, *9*(5), 2-3.

Whyte, S. (2017). *Digital tools for interactive teaching in languages with technology.* In ITILT mini-guide, 3-7. Retrieved on January 28, 2021 from http://bit.ly/2h6ENUi.

Vygotsky, L. S. (1978). *Mind and society*: *The development of higher mental processes.* Cambridge: Harvard University Press.

Zhu, W. (2001). Performing argumentative writing in English: Difficulties, processes, and strategies. *TESL Canada Journal*, 34-50.

APPENDICES

Appendix 1. Paragraph Writing Pretest and Posttest

Writing Task 1-2
Name & Surname: **Date:**
Group:
Topic: Writing an opinion paragraph

What is your favourite season for a holiday? Write an opinion paragraph on 'Making holiday plans in your favourite season'.
 (Write 100-120 words)

For example: making plans for summer holiday

  In your paragraph:
- Tell why you want to go there
- Tell when you will be going.
- Tell about your destination and how to get there.
- Tell who you are going to go with.
- Tell how long and where you will stay. Talk about your feelings, too.
- Tell how you will spend your days there and what you want to experience
- Tell what kind of things you think you will buy, etc.

Appendix 2. Paragraph Writing Evaluation Rubric

Rubric for A1-A2-B1 levels

As students go through interlanguage phase in their acquisition process, we will just assess them in terms of Content, Organization, Vocabulary and Mechanics.

PARAGRAPH WRITING TEST RATING SCALE FOR A1-A2-B1 LEVELS

CONTENT (50 Marks)

(41-50) VERY GOOD: Ideas expressed fully, covering all content elements. Completely relevant to the assigned task. Interesting and informative.

(31-40) 4. GOOD: Ideas expressed covering some content elements with some minor repetition or digression. Somewhat relevant to the task and somewhat interesting.

(21-30) 3. ADEQUATE: A simple account with some repetition and digression from the task. One or two content elements may have been ignored. Content may have been covered, however, not very interesting, but monotonous.

(10-20) 2. INADEQUATE: Not enough information. Student is jumping from one point to the other. Noticeable digression and irrelevance to the task. Requires considerable effort to follow.

(0-9) 1. POOR: Totally irrelevant to the assigned task or information is too little to assess.

ORGANIZATION (10 Marks)

(9-10) 5. VERY GOOD: Ideas clearly stated, supported by various examples, facts or details. Well-organized and developed with cohesive devices.

(7-8) 4. GOOD: Main ideas stand out but loosely organized or somewhat supported by various examples, facts or details. Still cohesive.

(5-6) 3. ADEQUATE: Only topic sentences and some factual information have been expressed. Limited support. Non-fluent. Lack of cohesion.

(3-4) 2. INADEQUATE: Ideas confused or disconnected. No cohesion at all.

(0-2) 1. POOR: Ideas do not communicate. No organization or not enough to assess.

VOCABULARY (10 Marks)

(9-10) 5. VERY GOOD: Effective word choice and appropriate usage fully relevant to the task. Appropriate vocabulary has been used, however, a few words may replace with the ones from L1.

(7-8) 4. GOOD: Quite precise use of vocabulary but still occasional inappropriate usage without obscuring the meaning. However, some words may replace with the ones from L1.

(5-6) 3. ADEQUATE: Basic usage of vocabulary. Student may not remember some words but replaces with the ones from L1.

(3-4) 2. INADEQUATE: Vocabulary is focused on basic objects, places and most common words. Frequent inappropriate usage of words.

(0-2) 1. POOR: Not enough usage of vocabulary to assess.

MECHANICS (30 Marks)

(16-30) VERY GOOD TO EXCELLENT	Demonstrates mastery of conventions; few errors of spelling, punctuation, correct typing, capitalization and accurate grammar, but meaning not obscured.
(6-15) POOR TO FAIR	Frequent errors of spelling, punctuation, correct typing, capitalization and accurate grammar; meaning confused or obscured.
(0-5) VERY POOR	No mastery of conventions; dominated by errors of spelling, punctuation, correct typing, capitalization and accurate grammar, illegible; or nor enough to evaluate.

Appendix 3. Interview Questions

Sayın Katılımcımız

Bu araştırmada WEB 2.0 aracı Google Docs'un, dilbilgisi kavramlarındaki hata düzeltmeleri, büyük harf kullanımı, yazım ve noktalama işaretleri açısından İngilizceyi yabancı dil olarak öğrenenlerin yazma gelişiminde hata düzeltme becerilerine etkisinin araştırılması hedeflenmektedir.

Araştırma T.C. Milli Eğitim Bakanlığı'nın ve okul/kurum yönetiminin izni ile gerçekleşmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çalışmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Veriler sadece araştırmada kullanılacak ve üçüncü kişilerle paylaşılmayacaktır.

Mülakat, 11 adet açık uçlu sorudan oluşmakta ve kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz. Tahmini cevaplama süresi 10-15 dakikadır.

Katılımı onaylamadan önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımla.

Araştırmacı: Beril NERGİZ, Yüksek Lisans Öğrencisi, İngiliz Dili Eğitimi Anabilim Dalı, Pamukkale Üniversitesi
İletişim Bilgileri: berilnergiz48@gmail.com , +90 546 295 4003

1. Do you find Google Docs as a useful tool for learning writing and editing in the English course? Why?
2. How did Google Docs's auto corrections help in your error correction skills regarding grammatical concepts in the development of writing skills? Explain.
3. How did Google Docs's auto corrections help in your error correction skills regarding capitalization, spelling and punctuation in the development of writing skills? Explain.
4. How did the instructor help in writing and correcting your errors? Explain.
5. Was it easy to deal with error corrections during the writing tasks on Google Docs?
6. What did you focus on when doing revisions on your text? Why?
7. Which do you prefer, instructor's intervention or Google Docs's auto correction during writing? Why?
8. Did you have any difficulties while using Google Docs for your writing classes? If yes, how did you overcome these difficulties?
9. What did you like most/least about using Google Docs for your writing classes? Why?
10. Do you prefer using Google Docs or pen & paper based writing for learning writing skill in your future studies? Why?
11. Do you have any other comments about using Google Docs for your writing classes? If yes, please explain.

Adapted from Alharbi (2020)

1. Google Dokümanlar'ı İngilizce dersinde yazmayı ve düzenlemeyi öğrenmek için yararlı bir araç olarak görüyor musunuz? Niçin?

2. Google Dokümanlar'ın otomatik düzeltmeleri, yazma becerilerinin geliştirilmesinde dilbilgisi kavramları ile ilgili hata düzeltme becerilerinize nasıl yardımcı oldu? Açıklayınız.

3. Google Dokümanlar'ın otomatik düzeltmeleri, yazma becerilerinin geliştirilmesinde büyük harf kullanımı, yazım ve noktalama ile ilgili hata düzeltme becerilerinize nasıl yardımcı oldu? Açıklayınız.

4. Öğretmen yazım ve hata düzeltmelerinde size nasıl yardımcı oldu? Açıklayınız.

5. Google Dokümanlar'da yazma çalışmaları sırasında hata düzeltmeleriyle uğraşmak kolay mıydı?

6. Metninizi gözden geçirirken neye odaklandınız? Neden?

7. Yazma sırasında öğretmenin müdahalesini mi yoksa Google Dokümanlar'ın otomatik düzeltmesini mi tercih edersiniz? Neden?

8. Yazma dersleriniz için Google Dokümanlar'ı kullanırken herhangi bir zorluk yaşadınız mı? Cevabınız evet ise, bu zorlukların üstesinden nasıl geldiniz?

9. Yazma dersleriniz için Google Dokümanlar'ı kullanmanın en çok / en az nesini beğendiniz? Neden?

10. Gelecekteki çalışmalarınızda yazma becerisini öğrenmek için Google Dokümanlar'ı mı yoksa kalem ve kağıt tabanlı yazmayı mı tercih edersiniz? Neden?

11. Yazma dersleriniz için Google Dokümanlar'ı kullanmakla ilgili başka yorumlarınız var mı? Cevabınız evet ise lütfen açıklayınız.

Alharbi (2020) 'den uyarlanmıştır.

Appendix 4. Error Correction Codes

Appendix 3 Error Correction Codes

Symbol	Meaning	Example
Art	There is a missing, extra, or incorrect article.	He lives in <u>the</u> Turkey. Art
Irrelevant	Point is no relevant to the task.	
Punc	Punctuation mistakes	
Pl/sg	There is a mistake in plural singular mistake.	He has three <u>child.</u> pl
prep	There is a mistake in preposition	
Repet.	Repetitive words/phrases, ideas etc	
Spell.	There is a spelling mistake	
Tense	There is a tense mistake.	
Verb	There is a tense mistake.	He did not <u>came.</u> verb
Ww	Wrong word	He <u>wins</u> 3000tl. ww
Wwf	Wrong word form.	He was very <u>boring</u> and fell as p.
??	I do not understand what you mean.	

Adapted from Ferdouse (2013) and Lee (2004)

Appendix 5. Lesson Plans

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	Date: WEEK 2	Time: 40 min - a lesson time	Class Profile: **10th Grade, A2 Proficiency Level**

Topic: SCHOOL LIFE	**Assumed Knowledge:** **1. Exchanging personal information in both formal and informal language** **2. Taking part in a conversation in everyday life situations**

Objectives: Students will be able to
- exchange personal information in both formal and informal language.
- describe themselves, their family and habits in a short descriptive paragraph with the help of cues and/or guiding questions.
- identify spelling, punctuation, correct typing, capitalization and accurate grammar.

<div align="center">Anticipated Problems and Solutions</div>

Problems:	Solutions:
● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● The students read a text about daily routines and choose the best title for it. Then, they think about their daily routines and make notes below.	T-S	

| 30 min | **MAIN ACTIVITY** | ● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task.
● The teacher asks students to write a descriptive paragraph (50-100 words) with the help of the guiding questions which include daily routines. Ss read the instructions and the questions. Next, they start writing their paragraphs. The teacher reminds them to include their answers to the questions given and gives Ss enough time to write the paragraph.
● During the paragraph writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues.
● The teacher remotely monitors and takes field notes on their error corrections on one hand.
● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction.
● After the students finish their paragraphs, the teacher gives feedback on their writing. | T-S | Google Docs Paragraph Writing |

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	**Date:** WEEK 3	**Time:** 40 min - a lesson time	**Class Profile:** **10th Grade, A2 Proficiency Level**
Topic: SCHOOL LIFE		**Assumed Knowledge:** 1. **Exchanging personal information in both formal and informal language** 2. **Taking part in a conversation in everyday life situations**	

Objectives: Students will be able to
    ● diagrammatize a text about everyday life/habits/family members into a graphic organizer.
    ● exchange personal information in both formal and informal language.
    ● describe themselves, their family and habits in a short descriptive paragraph with the help of clues or guiding questions.
    ● identify spelling, punctuation, correct typing, capitalization and accurate grammar.			

	Anticipated Problems and Solutions	

Problems:	Solutions:
● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● Students are expected to read the descriptive paragraph about Linda and match the colors to what they are about in the paragraph. The teacher reminds them that one has been done for them as an example and gives them enough time to complete the activity.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● The teacher makes students describe themselves, their family and habits in a short descriptive paragraph with the help of clues (50-100 words.). ● During the paragraph writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues. ● The teacher remotely monitors and takes field notes on their error corrections on one hand. ● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction. ● After the students finish their paragraphs, the teacher gives feedback on their writing.	T-S	Google Docs Paragraph Writing

Lesson Plans for 10th Grade

Instructor: Beril NERGİZ	Date: WEEK 4	Time: 40 min - a lesson time	Class Profile: 10th Grade, A2 Proficiency Level

Topic: PLANS	Assumed Knowledge: **1. Describing future plans and arrangements** **2. Expressing one's ideas in unplanned situations**

Objectives: Students will be able to

- describe their future plans and arrangements

- catch the details of future plans and arrangements in a recorded text/video.
- write about their own plans for the future
- identify spelling, punctuation, correct typing, capitalization and accurate grammar.

Anticipated Problems and Solutions

Problems: ● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	**Solutions:** ● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	**Stage**	**Procedures**	**Interaction Type**	**Materials**

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● The teacher plays the audio about the weekly plans of Mandy and Alex and has Ss listen and fill in the missing information in the table.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● The teacher gives instructions on daily/weekly planner writing (50-100 words). The teacher says that imagine you have the chance to spend your dream weekend in a foreign country next month. First, brainstorm and make notes about your plans. Next, use your notes and prepare your draft. Add all the details and edit your final draft. ● During the planner writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues. ● The teacher remotely monitors and takes field notes on their error corrections on one hand.	T-S	Google Docs Paragraph Writing

			● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction. ● After the students finish their paragraphs, the teacher gives feedback on their writing.		

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	Date: WEEK 5	Time: 40 min - a lesson time	Class Profile: **10th Grade, A2 Proficiency Level**
Topic: PLANS		**Assumed Knowledge:** **1. Describing future plans and arrangements** **2. Expressing one's ideas in unplanned situations**	

Objectives: Students will be able to
- describe their future plans and arrangements
- identify specific information about people's future plans and arrangements in a text
- write a paragraph about their plans
- identify spelling, punctuation, correct typing, capitalization and accurate grammar.

Anticipated Problems and Solutions

Problems:	Solutions:
● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● The students read a party invitation email and answer the questions.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● Ss choose one of the given party pictures and imagine that they throw a party. The teacher asks Ss to plan their party by writing an invitation email to one of your friends (35-50 words). ● During the email writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues. ● The teacher remotely monitors and takes field notes on their error corrections on one hand. ● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction. ● After the students finish their paragraphs, the teacher gives feedback on their writing.	T-S	Google Docs Paragraph Writing

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	Date: WEEK 6	Time: 40 min - a lesson time	Class Profile: **10th Grade, A2 Proficiency Level**
Topic: PLANS		**Assumed Knowledge:** **1. Describing future plans and arrangements** **2. Expressing one's ideas in unplanned situations**	

Objectives: Students will be able to				

- skim a text to draw a conclusion.
- write an opinion paragraph about their plans.
- talk about their own plans for the future.
- identify spelling, punctuation, correct typing, capitalization and accurate grammar.

Anticipated Problems and Solutions

Problems:	Solutions:
● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● This activity aims to explain how an opinion paragraph should be written and help the students write an opinion paragraph about their plans. Students are expected to read the opinion paragraph on 'making plans for summer holidays'. The teacher asks them to read the sentences carefully and pay attention to colors and then match the colors to their functions in the paragraph.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● The aim of this activity is to make students write an opinion paragraph about their plans (50-100 words). The teacher asks them to read the paragraph again as an example and tells them to keep the parts of a paragraph in mind and to be careful while forming the paragraphs in their writing. This time, the students are expected to write on 'making their own plans for the future' (education/career/holiday etc.). Enough time should be given to complete the activity.	T-S	Google Docs Paragraph Writing

<table>
<tr>
<td></td>
<td></td>
<td>
● During the opinion paragraph writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues.

● The teacher remotely monitors and takes field notes on their error corrections on one hand.

● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction.

● After the students finish their paragraphs, the teacher gives feedback on their writing.
</td>
<td></td>
<td></td>
</tr>
</table>

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	Date: WEEK 7	Time: 40 min - a lesson time	Class Profile: **10th Grade, A2 Proficiency Level**
Topic: LEGENDARY FIGURE	**Assumed Knowledge:** 1. **Describing past activities and events.** 2. **Talking about sequential actions.** 3. **Describing characters and settings in an event in the past.**		

Objectives: Students will be able to
● retell a story by describing characters and places. ● write the end of a given unfinished story. ● identify spelling, punctuation, correct typing, capitalization and accurate grammar.

Anticipated Problems and Solutions	
Problems: ● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	**Solutions:** ● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● The students summarize the story they read before and tell it to each other in turn using some sequence words. They describe the characters and places as well.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● The teacher has Ss read an unfinished story. She helps with any unknown vocabulary and asks them to write an ending to the story by using their imagination(about 50 words). ● During the story writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues. ● The teacher remotely monitors and takes field notes on their error corrections on one hand. ● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction. ● After the students finish their paragraphs, the teacher gives feedback on their writing.	T-S	Google Docs Paragraph Writing

Lesson Plans for 10th Grade

Instructor: **Beril NERGİZ**	Date: WEEK 8	Time: 40 min - a lesson time	Class Profile: **10th Grade, A2 Proficiency Level**
Topic: LEGENDARY FIGURE		**Assumed Knowledge:** 1. **Describing past activities and events.** 2. **Talking about sequential actions.** 3. **Describing characters and settings in an event in the past.**	

Objectives: Students will be able to

- retell a story by describing characters and place.
- write the end of a given unfinished story.
- identify spelling, punctuation, correct typing, capitalization and accurate grammar.

Anticipated Problems and Solutions	
Problems: ● Technological problems or weak internet connection might limit access to the platforms. ● Students might have problems using Google Docs platform.	**Solutions:** ● It is compensated with another lesson time. ● The teacher remotely monitors and reminds how to use Google Docs from time to time or helps if it is necessary.

Time	Stage	Procedures	Interaction Type	Materials
10 min	**LEAD-IN**	● The teacher reads the instructions and makes Ss choose a story of a legendary figure such as Nasreddin Hodja. Ss do research and make notes about the important details.	T-S	
30 min	**MAIN ACTIVITY**	● In the experimental group, the teacher asks students to log in their Google Drive accounts and open Google Docs for the writing task. ● Then, they use their notes and rewrite the story by changing its ending (50-100 words). ● During the short paragraph writing, the teacher reminds the students that they should be careful about first identifying, then correcting their misspelling, punctuation, typing or capitalization and grammar errors by using correction codes or signals reflected by Google Docs and also consider cohesion and coherence issues. ● The teacher remotely monitors and takes field notes on their error corrections on one hand. ● In the control group, the teacher aims to perform the same topics and learning outcomes by using traditional instructor-learner methods on error correction.	T-S	Google Docs Paragraph Writing

		● After the students finish their paragraphs, the teacher gives feedback on their writing.		

Appendix 6. Transcript of Interviews

Student Interview, Code: A7, Group 2

1. Do you find Google Docs as a useful tool for learning writing and editing in the English course? Why?

Student A7: Yes, I find it useful because it corrects the word if we misspell it and adds grammatical suffixes. It shows where to use punctuation marks.

2. How did Google Docs's auto corrections help in your error correction skills regarding grammatical concepts in the development of writing skills? Explain.

Student A7: It helped me a lot because automatic corrections fixed grammatical concepts and added suffixes in the sentences. I learned when I saw the correct spelling of the words.

3. How did Google Docs's auto corrections help in your error correction skills regarding capitalization, spelling and punctuation in the development of writing skills? Explain.

Student A7: It helped a lot with capitalization mistakes.

4. How did the instructor help in writing and correcting your errors? Explain.

Student A7: No matter how much Google Docs helps us, since this is a computer, the teacher should check and correct us semantically.

The Teacher: *What you mean is that since it is a computer, it may not understand exactly what you want to mean in your sentence. Did the teacher involve when you needed a semantic correction?*

Student A7: Yes.

5. Was it easy to deal with error corrections during the writing tasks on Google Docs?

Student A7: It's easy, it was highlighting our mistakes and we were correcting them with one click.

6. What did you focus on when doing revisions on your text? Why?

Student A7: I focused more on punctuation marks and capitalization.

7. Which do you prefer, instructor's intervention or Google Docs's auto correction during writing? Why?

Student A7: I prefer teacher's feedback, Google Docs just corrects the words but the teacher makes more semantic corrections.

8. Did you have any difficulties while using Google Docs for your writing classes? If yes, how did you overcome these difficulties?

Student A7: I didn't have any difficulties.

9. What did you like most/least about using Google Docs for your writing classes? Why?

Student A7: I like the way it corrects words and removes unnecessary words.

10. Do you prefer using Google Docs or pen & paper based writing for learning writing skill in your future studies? Why?

Student A7: I prefer Google Docs as it corrects errors automatically.

11. Do you have any other comments about using Google Docs for your writing classes? If yes, please explain.

Student A7: It would be better if Google Docs could also give semantic feedback instead of just word and morphological corrections.

Appendix 7. Teacher's Diary
Observation Notes from Week 2

**Week 2- 06.10.2021- Computer Lab/Library- Experimental Group**

Although the students were informed about the error correction codes, they could not perceive the error codes in English and confusion arose. Due to this problem of the students, the teacher gave Turkish feedback as well as English feedback. Students benefited from the online dictionary in the lessons. The teacher observed in this lesson that the majority of the mistakes in the writing lessons were still spelling mistakes despite using punctuation marks and a dictionary. Since Google Docs constantly autocorrects capitalization, the teacher observed that the skill that improved the earliest was capitalization. Google Docs used capitalization automatically without any indication. It was more difficult for students to correct the blue marks indicating that punctuation marks should be used. It was observed that they did not pay attention to the use of punctuation marks in their mother tongue. Grammar errors and wrong word spellings are indicated by google docs with red or blue lines, and the students are seen to make the corrections easily. Students constantly stated that they like to do writing activities on computers and that automatic editing is very useful. Since the writing topic was similar to the previous topic and was shorter, the students produced the content more easily and needed less teacher feedback. Students were accepting and deleting written feedback via Google Docs. They had problems with how they should fix the places the teacher had marked without deleting the comments. They could not clearly understand which part should be corrected in the markings given by the teacher.

Appendix 8. Paragraph Writings Tasks in Control Group

A Student's Paragraph Writing Tasks

Task 1

Task 2

Task 3

Task 4

Task 5

My favorite season is summer. I like it because the
schools are on holiday. I have a lot of free time.
I play a trick on somebody. I am going to tall sleep.
I am going to meet friends and travel. I am going to
take up with. I am going to drive around. I am going to
swim. I am going to go to the movies.
I am going to talk to friends, for this reasons
I like summer.

Task 6

Please, read the short story below and complete the missing part of it with your own words within 50-100 words.

??
....

It was Katia's 20th birthday and she was looking forward to seeing her friends. They were meeting at *Mamma Mia's*, her favourite Italian restaurant, for a special birthday dinner. Katia was excited and got to the restaurant at exactly 7 o'clock, the time they had arranged to meet. She looked around for a familiar face, but no one had arrived yet. So she decided to wait outside and stood patiently in the warm evening sunshine.

At 8 o'clock Katia went home. Her friends had forgotten her birthday and she felt lonely and miserable. She opened the front door and walked into the dark house. The living room door was closed. 'How strange,' she thought because she always left it open. Nervously, she opened the door.

my friends with floor is still after I call the police the police came. Police examine in
detail, police look for a scapegoat and convict, culprit my friends. Katia affected. Birthday
party give a bad account of my friends bring something to court field a
question

Appendix 9. Pretests and Posttests

Pretest and Posttest from the Experimental Group

Kod. 1005

PARAGRAPH WRITING PRE TEST AND POST TEST (10th Grade)

Writing Task 1-2 PRE TEST
Name & Surname: ▮▮▮▮▮▮▮▮   Date: 21.08.2021
Group: ▮▮ A
Topic: Writing an opinion paragraph   (3p)

What is your favourite season for a holiday? Write an opinion paragraph on 'Making holiday plans in your favourite season'.
(Write 100-120 words)

For example: making plans for summer holiday

In your paragraph:
- Tell why you want to be go there
- Tell when you will be going.
- Tell about your destination and how to get there.
- Tell who you are going to go with.
- Tell how long and where you will stay. Talk about your feelings, too.
- Tell how you will spend your days there and what you want to experience
- Tell what kind of things you think you will buy, etc.

I'm go to Çin.

Info. is too little to assess. (1p)
No organization or not enough to assess. (0p)
Not enough usage of vocabulary to assess (1p)
No mastery of conventions. (1p)

Kod: 1005

Writing Task 2 POST TEST
Name & Surname ▮▮▮▮▮▮▮▮▮▮▮   Date: 12.01.2022
Group: A
Topic: Writing an opinion paragraph

62p

What is your favourite season for a holiday? Write an opinion paragraph on
'Making holiday plans in your favourite season'.
(Write 100-120 words)

For example: making plans for summer holiday

In your paragraph:
- Tell why you want to go there
- Tell when you will be going.
- Tell about your destination and how to get there.
- Tell who you are going to go with.
- Tell how long and where you will stay. Talk about your feelings, too.
- Tell how you will spend your days there and what you want to experience
- Tell what kind of things you think you will buy, etc.

My favourite Holiday's Summer I am going to America Hit place I am going to thtel. Then going to New york. I am touring to the statue of Liberty. Then have lunch at a fancy restaurant in America. Then i will Play american football. I will have dinner later. I am going to the bar tonigh. Then I will go back to my country.

Ideas expressed fully and clearly covering some content elements Completely relevant to the assigned task. (25)(25)
Ideas supported by various examples, details well organized with using some cohesive devices (5)
quite precise use of vocab. (8)
Few errors of capitalization, mastery of conventions 16 (20)
Spelling

Pretest and Posttest from the Control Group

Kod: 1066
25
4

PARAGRAPH WRITING PRE TEST AND POST TEST (10th Grade)

Writing Task 1-2 PRE TEST
Name & Surname ███████████   Date: 22.09.2021
Group: B
Topic: Writing an opinion paragraph

(14p)

What is your favourite season for a holiday? Write an opinion paragraph on 'Making holiday plans in your favourite season'.
(Write 100-120 words)

For example: making plans for summer holiday

In your paragraph:
- Tell why you want to be go there
- Tell when you will be going.
- Tell about your destination and how to get there.
- Tell who you are going to go with.
- Tell how long and where you will stay. Talk about your feelings, too.
- Tell how you will spend your days there and what you want to experience
- Tell what kind of things you think you will buy, etc.

Ideas do not communicate (0)
Not enough usage of vocabulary but basic words used (4)
No mastery of convention (0)
Relevant to the task but information is too little to assess (10)

Kod: 1064

Writing Task 2 POST TEST
Name & Surname ████████████

Group ██ -B ████████

Topic: Writing an opinion paragraph

Date: 13.01.2022

(50)

What is your favourite season for a holiday? Write an opinion paragraph on 'Making holiday plans in your favourite season'.
(Write 100-120 words)

For example: making plans for summer holiday

In your paragraph:

- Tell why you want to go there ʌedex qɔz
- Tell when you will be going. ʌirʒanən
- Tell about your destination and how to get there. ʌɛaʒr
- Tell who you are going to go with.ʧinte
- Tell how long and where you will stay.Talk about your feelings. ʊʒ bʊdər too. ✗ ve ellədə.
- Tell how you will spend your days there and what you want to experience coʒ qɪʒ təlɛɔn sɪʃ ʊ ʒɛecɔ ı
- Tell what kind of things you think you will buy, etc. ʌeleʃ   sʊʃin əleən

Frequent errors of spelling, punctuation and grammar (7)

Ideas clearly stated covering most of the content elements
Completely relevant to the task (3½)

Basic vocab. usage (6)

Limited support Main ideas stand out and clearly stated (7)

My favorite season is Summer. I will go to America, Germany, Russia, Italy. I go to By car. I _going to the well Well_ my best friends. I _going seventy day. I 3 Hotel stay. I funny restaurant, playing basketball, travel I Go to center. I buy car, by ____ and by phone

Appendix 10. Consent Forms

YEĞİTEK KATILIM KABUL FORMU

Sayın Katılımcımız

Katılacağınız bu çalışma, Harmanlanmış öğrenme ortamında Web 2.0 aracı Google Docs'un İngilizceyi yabancı dil olarak öğrenen Türk öğrencilerin yazma gelişiminde hata düzeltme becerilerine etkisi" adıyla, Beril Nergiz tarafından 2020-2021 Güz Döneminde yapılacak bir araştırma uygulamasıdır.

Araştırmanın Hedefi: WEB 2.0 aracı Google Docs'un, dilbilgisi kavramlarındaki hata düzeltmeleri, büyük harf kullanımı, yazım ve noktalama işaretleri açısından İngilizceyi yabancı dil olarak öğrenenlerin yazma gelişiminde hata düzeltme becerilerine etkisinin araştırılması hedeflenmektedir.

Araştırmanın Nedeni: O Bilimsel araştırma X Tez çalışması

Araştırmanın Yapılacağı Yer(ler):

Çayeli Ahmet Hamdi İshakoğlu Mesleki ve Teknik Anadolu Lisesi

Araştırma Uygulaması: Ön Test/ Gözlem / Son Test / Mülakat şeklindedir.

Araştırma T.C. Milli Eğitim Bakanlığı'nın ve okul/kurum yönetiminin izni ile gerçekleşmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çalışmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Veriler sadece araştırmada kullanılacak ve üçüncü kişilerle paylaşılmayacaktır.

Uygulamalar, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz.

Katılımı onaylamadan önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımla.

_____

_____

.... sınıfı .... numaralı öğrencisi .... olarak yukarıda bilgileri bulunan araştırmaya katılmayı kabul ediyorum.

Katılımcı Adı-Soyadı

   :   *…../…../…………*

Telefon Numarası :

VELİ ONAM FORMU

Sayın Veli;

Çocuğunuzun katılacağı bu çalışma, "Harmanlanmış öğrenme ortamında Web 2.0 aracı Google Docs'un İngilizceyi yabancı dil olarak öğrenen Türk öğrencilerin yazma gelişiminde hata düzeltme becerilerine etkisi"" adıyla, 20/09/2021 – 14/01/2021 tarihleri arasında yapılacak bir araştırma uygulamasıdır.

Araştırmanın Hedefi: WEB 2.0 aracı Google Docs'un, dilbilgisi kavramlarındaki hata düzeltmeleri, büyük harf kullanımı, yazım ve noktalama işaretleri açısından İngilizceyi yabancı dil olarak öğrenenlerin yazma gelişiminde hata düzeltme becerilerine etkisinin araştırılması hedeflenmektedir.

Araştırma Uygulaması: Ön Test/ Gözlem / Son Test / Mülakat şeklindedir.

Araştırma T.C. Milli Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleşmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çocuğunuz çalışmaya katılıp katılmamakta özgürdür. Araştırma çocuğunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuğunuzun katılımı tamamen sizin isteğinize bağlıdır, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılmamama veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilemeyecektir.

Çalışmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir.

Uygulamalar, genel olarak kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuğunuz kendisini rahatsız hissederse cevaplama işini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çocuğunuz çalışmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Anket çalışmasına katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir.

Onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımızla,

Araştırmacı: Beril NERGİZ

Velisi bulunduğum .... sınıfı .... numaralı öğrencisi .... ………………………………….'in yukarıda açıklanan araştırmaya katılmasına izin veriyorum. (Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz*).

…./…../…………

İsim-Soyisim İmza:

Veli Adı-Soyadı :

Telefon Numarası :

Appendix 11. Official Permission Documents

T.C.
ÇAYELİ KAYMAKAMLIĞI
İlçe Milli Eğitim Müdürlüğü

Sayı : E-99530429-605.01-31221386   08.09.2021
Konu : Veri Toplama İzin Talebi

İLÇE MİLLİ EĞİTİM MÜDÜRLÜĞÜNE
ÇAYELİ

İlgi :   a) Beril NERGİZ'in 27.08.2021 tarihli dilekçesi
         b) Çayeli A.H.İ. Mesleki ve Teknik Anadolu Lisesi Müdürlüğünün 30/08/2021 tarih ve 30350828
sayılı yazısı

        İlgi (b) yazı ekindeki ilgi (a) dilekçe ile Beril Nergiz; İngilizce öğretmeni olarak görev
yapmakta olduğu okulunda, Pamukkale Üniversitesi İngiliz Dili Eğitimi Lisansüstü öğrencisi
olarak 2021-2022 Güz Döneminde "Harmanlanmış öğrenme ortamında, WEB 2.0 aracı
Google Docs'un İngilizceyi yabancı dil olarak öğrenen Türk öğrencilerin yazma gelişiminde
hata düzeltme becerilerine etkisi" başlıklı araştırma uygulaması için veri toplama izni talep
etmektedir.
        Dersleri aksatmamak kaydıyla ekli veri toplama çalışmalarını yapması uygun görülmektedir.

        Makamlarınızca da uygun görülmesi halinde olurlarınıza arz ederim.

Ek - Dilekçe ve Ekleri (18 Sayfa)

                                              Halil İbrahim TOSUN
                                              Şube Müdürü

OLUR

Hüseyin ŞAHİN
İlçe Milli Eğitim Müdürü

Bu belge güvenli elektronik imza ile imzalanmıştır.

Adres :   Belge Doğrulama Adresi : https://www.turkiye.gov.tr/meb-ebys
                                                                          Bilgi için:
Telefon No :   Unvan : İlçe Milli Eğitim Şube Müdürü
E-Posta: İnternet Adresi: Faks:
Kep Adresi : meb@hs01.kep.tr

Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evraksorgu.meb.gov.tr adresinden abf7-f265-3bd5-a6fc-dd51 kodu ile teyit edilebilir.

Re: Asking permisson for the research intrumentation

Dear Beril NERGIZ,

Thank you for your email. Regarding to adapt the "Appendix A" of my article entitled "Exploring the potential of Google Doc in facilitating innovative teaching and learning practices in an EFL writing course " into your thesis, here I grant you a permission to do so. Feel free to adapt whatever you need from my article with citation.

I wish you all the best during your thesis journey.

Good luck

Dr. Mohammed Alharbi
Dean of Education College
Majmaah University
Saudi Arabia

Re: Asking permisson for the research intrumentation

Merhaba Beril Hanım,
Referans gösterdiğiniz taktirde bu tarz şablonları kullanmakta bir sorun yoktur diye biliyorum. Tabi en doğru bilgiyi danışmanınız verebilir. Kişisel olarak benim tezimden bu şablonu kullanmanızda bir sakınca yok. Beni de kaynak gösterirseniz çok sevinirim :)

Çalışmanızda Başarılar Dilerim.
nd

CURRICULUM VITAE	**Beril NERGIZ** **Cayeli Ahmet Hamdi Ishakoglu Vocational and Technical Anatolian High School** **English Teacher** Cayeli,Rize 53200 Turkey
Surname:	NERGIZ
Name:	BERIL
Workplace:	Cayeli Ahmet Hamdi Ishakoglu Vocational and Technical Anatolian High School
Title / Position:	English Teacher
E-mail:	
Phone:	

Education / Öğrenim

Degree	Department	University / Institute	Dates
B.A.	English Language Teaching	Yildiz Technical University	2014-2019
M.A.	English Language Teaching	Pamukkale University	2019-…

Work Experience / İş Tecrübesi

Positions	Study Area	University / Institute	Dates
Teacher	English	Cayeli Ahmet Hamdi Ishakoglu Vocational and Technical Anatolian High School	2020- …
Teacher	English	Gurur Nursery School & Middle School	2019-2020

Seminars and Training Programs / Kurs ve Seminerler

Certificate of designing creative activities in foreign language teaching/lessons , ETZ Academy
Innovative Thinking Seminar in Teaching English Cambridge University Press & Assessment
Memory Theory and English Vocabulary Learning Methods Seminar Macmillan Education
İngilizce Öğretmenleri Mesleki Gelişim Toplulukları (PDC) Eğitici Eğitimi Kursu Ministry of National Education, British Council, Sabanci University