



**COMPARING THE IMPACT OF TEACHER
FEEDBACK AND COMBINED
AUTOMATED AND TEACHER FEEDBACK
ON EFL LEARNERS' PARAGRAPH
WRITING PERFORMANCE**

Master's Thesis

Fatma UZMAN

Eskişehir 2025

**COMPARING THE IMPACT OF TEACHER FEEDBACK AND COMBINED
AUTOMATED AND TEACHER FEEDBACK ON EFL LEARNERS'
PARAGRAPH WRITING PERFORMANCE**

Fatma UZMAN

MASTER'S THESIS

Department of Foreign Language Education

Programme in English Language Teaching

Supervisor: Assist. Prof. Dr. Aylin SEVİMEL ŞAHİN

Anadolu University

Graduate School

July 2025

Eskişehir

FINAL APPROVAL FOR THESIS



ABSTRACT

COMPARING THE IMPACT OF TEACHER FEEDBACK AND COMBINED AUTOMATED AND TEACHER FEEDBACK ON EFL LEARNERS' PARAGRAPH WRITING PERFORMANCE

Fatma UZMAN

Department of Foreign Language Education

MA Programme in English Language Teaching

Graduate School of Anadolu University, July 2025

Supervisor: Assist. Prof. Dr. Aylin SEVİMEL ŞAHİN

Writing in English as a foreign language (EFL) has usually been regarded as crucial, but also challenging in language learning. Therefore, teachers have employed both automated feedback (AF) through AI-powered tools and teacher feedback to improve their learners' writing skills recently. Then, the current study aims to investigate the impact of receiving AF through *Grammarly* combined with teacher written feedback on the paragraph writing performance of Turkish EFL middle school learners, and their opinions about using such combined feedback in their writing classes. A mixed-methods explanatory sequential research design was employed. First, in the experimental study, a total of 38 students who were in the 7th grade at a public middle school completed the pre- and post-writing tasks, and four paragraph writing tasks in an eight-week-process-based writing instruction. Secondly, 12 learners' opinions were explored through semi-structured interviews. The results revealed that the combined feedback group did not significantly outperform the teacher feedback group after the feedback intervention, but each group on their own significantly improved their writing performance from the pre- to post-writing tasks. Besides, the findings showed that all the learners enjoyed receiving combined feedback on their writing and mostly desired to receive such feedback on their future writing tasks. Although some shortcomings regarding combined feedback were underlined, it was usually perceived more advantageous. Learners also stated that receiving combined feedback enhanced their writing performance. Accordingly, some implications were offered both to learners and teachers.

Key Words: Automated Feedback, Combined Feedback, EFL Writing, Middle School Learners, Teacher Feedback

ÖZET

ÖĞRETMEN GERİ BİLDİRİMİ VE BİRLEŞTİRİLMİŞ OTOMATİK GERİ BİLDİRİM VE ÖĞRETMEN GERİ BİLDİRİMİ MODELİNİN YABANCI DİL OLARAK İNGİLİZCE ÖĞRENEN ÖĞRENCİLERİN PARAGRAF YAZMA PERFORMANSI ÜZERİNDEKİ ETKİSİNİN KARŞILAŞTIRILMASI

Fatma UZMAN

Yabancı Diller Eğitimi Ana Bilim Dalı

İngilizce Eğitimi Tezli Yüksek Lisans Programı

Anadolu Üniversitesi, Lisansüstü Eğitim Enstitüsü, Temmuz 2025

Danışman: Dr. Öğr. Üyesi Aylin SEVİMEL ŞAHİN

Yabancı dil olarak İngilizce yazma becerisi, genellikle dil öğreniminde önemli ancak aynı zamanda zorlayıcı olarak düşünülmektedir. Bu nedenle, öğretmenler son zamanlarda öğrencilerinin yazma becerilerini geliştirmek için hem yapay zekâ destekli araçların sağladığı otomatik geri bildirimi hem de öğretmen geri bildirimini kullanmaktadır. Dolayısıyla bu araştırma, *Grammarly* aracılığıyla alınan otomatik geri bildirimin öğretmenlerin yazılı geri bildirimleriyle birleştirilmiş olarak alınmasının yabancı dil olarak İngilizce öğrenen Türk ortaokul öğrencilerinin paragraf yazma performansları üzerindeki etkisini ve bu tür birleştirilmiş geri bildirimin yazma derslerinde kullanılmasına ilişkin öğrencilerin görüşlerini araştırmayı amaçlamaktadır. Karma yöntemli açıklayıcı sıralı bir araştırma deseni kullanılmıştır. İlk olarak, deneysel çalışmada, bir devlet ortaokulunda 7. sınıfta okuyan toplam 38 öğrenci, sekiz hafta devam eden süreç temelli bir yazma öğretimi içerisinde ön ve son yazma etkinliklerini ve dört paragraf yazma etkinliğini tamamlamıştır. İkinci olarak, 12 öğrencinin görüşleri yarı yapılandırılmış görüşmelerle araştırılmıştır. Sonuçlar, geri bildirim uygulamasından sonra, birleştirilmiş geri bildirim grubunun öğretmen geri bildirim grubundan önemli ölçüde daha iyi performans göstermediğini, ancak her iki grubun da kendi içlerinde yazma performanslarını ön yazma etkinliğinden son yazma etkinliğine kadar önemli ölçüde geliştirdiğini ortaya koymuştur. Ayrıca bulgular, tüm öğrencilerin yazıları hakkında birleştirilmiş geri bildirim almaktan memnun olduklarını ve çoğunlukla gelecekteki yazma görevlerinde bu tür bir geri bildirim almak istediklerini göstermiştir. Birleştirilmiş geri bildirimle ilgili bazı eksikliklerin altı çizilse de genellikle daha avantajlı olarak algılanmıştır. Öğrenciler ayrıca birleştirilmiş geri bildirim almanın yazma performanslarını artırdığını belirtmişlerdir. Bu doğrultuda hem öğrenciler hem de öğretmenler için bazı öneriler sunulmuştur.

Anahtar Sözcükler: Otomatik Geri Bildirim, Birleştirilmiş Geri Bildirim, İngilizce Yazma Becerisi, Ortaokul Öğrencileri, Öğretmen Geri Bildirimi

ACKNOWLEDGEMENTS

Writing my MA thesis is a truly precious experience for me, and I would like to express my gratitude to all of the people who supported and encouraged me to complete this study.

I would like to express my deepest gratitude, first and foremost, to my dear supervisor Assist. Prof. Dr. Aylin SEVİMEL ŞAHİN for her invaluable guidance, constructive feedback, and usual kindness and understanding throughout my study. This thesis would not have been possible without her profound expertise and knowledge, and constant support and patience. She is such a great mentor that it is impossible not to be inspired by her diligence and personality.

In addition, I would like to thank my committee members, Assist. Prof. Dr. Hülya İPEK and Assist. Prof. Dr. Manolya TUNÇER for their insightful feedback and comments. Their useful suggestions made great contributions to my study.

Besides, I would like to extend my thanks to my school administrators for their constant assistance and understanding throughout my study. Moreover, I would like to thank my dear colleague, Sevim TELİS for her great assistance and support in evaluating the learners' writing tasks as a second rater. I would also like to thank Elif YILDIRIM and Gamze DEMİRTAŞ ÇELEBİ for their valuable help, contribution and cooperation especially during the data analysis process. Furthermore, a huge appreciation goes to my dear students for their participation in my study, invaluable contributions, and support.

I also owe special thanks to my parents, Hatice UZMAN and Hasan UZMAN for their encouragement, valuable support and patience throughout my study. Their unconditional love, continuous guidance, and patience empower me to overcome any difficulties I face throughout my life.

Last but not least, I would like to thank my great sister and best friend, Zeynep UZMAN for her constant support, encouragement, understanding, patience, and sincere advice throughout my study. The walks we took together made me feel refreshed, relaxed, and hopeful during this journey of thesis writing. Thank you, my best friend, for always being there whenever I need help.

Fatma UZMAN

Eskişehir 2025

STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this thesis is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “Scientific Plagiarism Detection Program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

Fatma UZMAN

ETHICAL COMMITTEE DECLARATION

Evrak Kayıt Tarihi: 13.12.2024 Protokol No: 825028

Tarih: 23.12.2024



ANADOLU ÜNİVERSİTESİ
SOSYAL VE BEŞERÎ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
KARAR BELGESİ

ÇALIŞMANIN TÜRÜ:	Yüksek Lisans Tez Çalışması
KONU:	Eğitim Bilimleri
BAŞLIK:	Öğretmen Geri Bildirimi ve Birleştirilmiş Otomatik Geri Bildirim ve Öğretmen Geri Bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması
PROJE/TEZ YÜRÜTÜCÜSÜ:	Dr. Öğr. Üyesi Aylin SEVİMEL ŞAHİN
TEZ YAZARI:	Fatma UZMAN
ALT KOMİSYON GÖRÜŞÜ:	-
KARAR:	Olumlu

29/07/2025

DECLARATION OF GENERATIVE ARTIFICIAL INTELLIGENCE USAGE

I declare that I received support from generative artificial intelligence programs (for example, DeepL and Quillbot) while preparing this thesis. I have received support from generative artificial intelligence programs (e.g., language translation, etc.) during the preparation of the thesis. I declare that I have checked the accuracy of the information I received from generative artificial intelligence programs.

I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.



Fatma UZMAN

TABLE OF CONTENTS

	<u>Page</u>
COVER PAGE.....	i
FINAL APPROVAL FOR THESIS.....	ii
ABSTRACT.....	iii
ÖZET.....	iv
ACKNOWLEDGEMENTS.....	v
STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES.....	vi
ETHICAL COMMITTEE DECLARATION.....	vii
DECLARATION OF GENERATIVE ARTIFICIAL INTELLIGENCE USAGE.....	viii
TABLE OF CONTENTS.....	ix
LIST OF TABLES.....	xii
LIST OF FIGURES.....	xiii
LIST OF ABBREVIATIONS.....	xiv
1 INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	5
1.3 Purpose of the Study.....	8
1.4 Significance of the Study.....	9
2 LITERATURE REVIEW.....	11
2.1 Writing in L2 Classrooms.....	11
2.2 Approaches to Writing Instruction in EFL Contexts.....	13
2.2.1 The product-based approach.....	13
2.2.2 The genre-based approach.....	15

2.2.3 The process-based approach.....	16
2.3 Teacher Written Feedback.....	18
2.4 Automated Feedback.....	23
2.5 Related Studies on the Use of Automated Feedback and Teacher Feedback in L2 Writing Classroom.....	29
2.5.1 Studies on the integration of AF into L2 writing instruction.....	29
2.5.2 Studies on the learners' views of using AF and teacher feedback in L2 writing classroom.....	33
2.5.3 Studies investigating both the impact of using AF and teacher feedback and learners' views.....	35
2.5.4 Studies on the use of AF and teacher feedback and learners' views about feedback types in Turkish EFL context.....	42
3 METHODOLOGY.....	46
3.1 Research Design.....	46
3.2 Participants and Research Context.....	46
3.3 Data Collection Instruments.....	47
3.3.1 Pre- and post-writing tasks.....	48
3.3.2 Writing scoring rubric.....	48
3.3.3 Semi-structured interviews.....	49
3.4 The Feedback Intervention Design and Delivery.....	50
3.4.1 Feedback intervention tools.....	50
3.4.1.1 <i>Weekly paragraph writing tasks</i>	50
3.4.1.2 <i>Grammarly</i>	51
3.4.1.3 <i>Writing scoring rubric for providing teacher feedback</i>	52
3.4.2 Feedback intervention process.....	53
3.4.2.1 <i>Feedback intervention process for the experimental group</i>	53
3.4.2.2 <i>Feedback intervention process for the control group</i>	56

3.5 Data Collection Procedure.....	59
3.5.1 The process before the feedback intervention.....	60
3.5.2 The process after the feedback intervention.....	61
3.6 Data Analysis.....	63
4 RESULTS AND DISCUSSION.....	67
4.1 Quantitative Results.....	67
4.2 Qualitative Findings.....	71
4.2.1 Views about feedback types and process.....	72
4.2.2 The perceived impact of combined feedback on paragraph writing.....	77
4.3 Discussion.....	79
4.3.1 Discussion on the impact of combined AF and teacher feedback on the learners' writing performance.....	80
4.3.2 Discussion on the learners' opinions about receiving combined feedback in their writing classes.....	84
5 CONCLUSION.....	90
5.1 Summary.....	90
5.2 Implications.....	93
5.3 Suggestions for Further Research.....	95
REFERENCES.....	98
APPENDICES	
CURRICULUM VITAE	

LIST OF TABLES

	<u>Page</u>
Table 3.1 Characteristics of the Participants and Research Context.....	47
Table 3.2 Data Collection Procedure for the Control and Experimental Groups.....	61
Table 3.3 The Intraclass Correlation Coefficient Values for the Pre-Writing Scores of Both Groups.....	64
Table 3.4 The Intraclass Correlation Coefficient Values for the Post-Writing Scores of Both Groups.....	65
Table 4.1 Summary of the Shapiro-Wilk Normality Test Results for the Pre- and Post-Writing Scores of Both Groups.....	68
Table 4.2 The Results of the Independent Samples t-tests for the Pre- and Post-Writing Scores of the Experimental and Control Group.....	69
Table 4.3 The Results of the Paired Samples t-tests for the Experimental and Control Group.....	70

LIST OF FIGURES

	<u>Page</u>
Figure 2.1 The Four Stages of Writing Instruction in Product-Based Approach.....	14
Figure 2.2 The Stages of Writing Instruction in Genre-Based Approach.....	15
Figure 2.3 The Process Wheel (Harmer, 2015)	17
Figure 3.1 The General Procedure of Providing Feedback to the Experimental Group.....	53
Figure 3.2 The Feedback Intervention Process for the Experimental Group.....	56
Figure 3.3 The General Procedure of Providing Feedback to the Control Group.....	57
Figure 3.4 The Feedback Intervention Process for the Control Group.....	59
Figure 3.5 The Six Steps of Conducting a Thematic Analysis.....	66
Figure 4.1 The Main Themes Related to the Learners' Opinions about Receiving Combined Feedback.....	72

LIST OF ABBREVIATIONS

AF	: Automated Feedback
AI	: Artificial Intelligence
AWE	: Automated Writing Evaluation
CEFR	: Common European Framework of Reference for Languages
EFL	: English as a Foreign Language
ESL	: English as a Second Language
LSA	: Latent Semantic Analysis
L1	: First Language
L2	: Second Language
MoNE	: Ministry of National Education
NLP	: Natural Language Processing
SPSS	: Statistical Package for Social Sciences

1 INTRODUCTION

1.1 Background to the Study

Being able to write in English as a foreign language (EFL) has usually been regarded as a highly remarkable skill by many researchers, educators and learners. Of the language skills that learners are assumed to master, writing skill in English is a really crucial and necessary aspect of language learning. Getting their ideas across in a written way in English might enable language learners to come into prominence among their peers. Writing in English is a vital but challenging part of language learning. In fact, it is thought to be the most complex and difficult skill to learn and teach most of the time (Chen, 2025).

Moreover, students seem to be most reluctant to focus on writing in English classes (Harmer, 2015). The act of writing a text is usually viewed as challenging by learners. This might be because writing in a second or foreign language requires learners to be competent in various sub-skills of writing such as vocabulary choice, grammar use, spelling, punctuation, content, organization, and so on (Yangin-Eksi, 2012; Xu et al., 2023). In addition to this, writing necessitates learners to engage in and manage cognitive, metacognitive, and affective processes (Wilson et al., 2024).

In order to help learners in learning to write in English, EFL teachers have tended to make use of an eclectic range of approaches to second language (L2) writing instead of choosing and strictly following only one approach (Hyland, 2003). The product approach, the process approach and the genre approach to teaching writing are some of the well-known ways which teachers adopt and organize their teaching writing around. Although each approach has its own strengths and weaknesses, a large number of language teachers utilize the process approach to writing as the focal point of their writing classes (Hyland, 2003). It is because the process approach to writing has been found to increase the student writers' interest, self-efficacy and motivation to write in previous studies (Zhou, 2015). Besides, in this approach, writing is conceived as a non-linear, exploratory, and generative process in which writers explore and reformulate their ideas as they approximate meaning (Hyland, 2008). It stresses the need for involving learners in various stages of constructing a text, such as pre-writing, drafting, responding to drafts, reviewing, redrafting, proofreading, editing, evaluating and producing a finished text (Hyland, 2008). Additionally, it emphasizes the significance of responding to or

correcting what students have written in an appropriate manner, namely giving the right kind of feedback to learners' writing in an effective way (Hyland, 2003).

In other words, feedback refers to any kind of information provided by a teacher, peer, parent, self, or experience related to the aspects of a person's performance and understanding (Hattie & Timperley, 2007). In fact, feedback has been stated to be crucial to teaching writing. It has been found to be in the top five of ten factors influencing learners' general educational achievement (Hattie & Timperley, 2007). L2 students often want and expect feedback on the errors of their written works from their teachers (Ferris, 1995b). Therefore, teachers should not refrain from giving feedback on learners' writing because it is regarded as one of the most important elements affecting learner performance (Ellis, 2010). That is, it is an essential aspect of L2 writing instruction.

Many L2 writing researchers and teachers have acknowledged that written feedback plays a role in writing although the nature and extent of this role remain unclear and inconclusive (Ferris, 2010). A significant number of studies have been conducted by L2 writing researchers in order to better understand whether to give feedback, what to give as feedback, when and how to give the feedback, and who gives the feedback. It has been pointed out in previous L2 writing studies that the form, the focus, the quality, the means of delivery, the need for, and the purpose of feedback might all influence the effectiveness of feedback in improving learners' writing skills (Chen & Cheng, 2008). It has also been noted in many studies that written feedback has the power to promote L2 development and help students improve the accuracy of their writing when it is provided under the right conditions (Ashwell, 2000; Bitchener & Knoch, 2008).

However, language teachers have often reported in previous L2 writing studies that certain factors cause them to have difficulty when giving written corrective feedback to learners' writing (Paris, 2022). To illustrate, teachers usually feel that they have to respond to all mistakes in students' written works instead of a selective approach. The reason why they prefer a comprehensive but vague approach might be the case that they are afraid that learners' poor grammar or misunderstanding might become fossilized if they do not do so (Lee, 2017). However, it has been pointed out in some studies that such an extensive but vague approach to written corrective feedback is less likely to be pedagogically effective, when compared with a selective treatment of targeted errors (Ellis et al., 2008; Sheen, 2007). Moreover, teachers have also been found to focus on

language form basically, and pay less attention to content, organization, and style while giving feedback (Furieux et al., 2007). It might be because teachers do not allocate enough time to focus on each dimension of writing owing to insufficient contact hours (Henderson et al., 2019). Another issue that challenges teachers in the process of giving feedback is student writers' reluctance and lack of effort to reflect on and revise their writing drafts based on their teacher feedback. They often ignore teacher written corrective feedback, although teachers spend enormous amounts of time correcting their mistakes, which may negatively affect teachers' motivation to deliver feedback in writing classes (Lee, 2007). Furthermore, crowded EFL classes have a detrimental effect on feedback procedures because a large number of learners in classes usually make it hardly possible for teachers to score students' essays, and provide timely and individualized written corrective feedback on them (Liu & Kunnan, 2016). Besides, it has been claimed in some studies that many teachers do not usually have time, patience, and linguistic expertise to provide that much feedback to learners in that much detail (Ferris, 2010).

In order to cope with the issues learners and teachers suffer from in feedback processes, teachers and researchers have always been in search of alternative ways of giving timely and effective feedback on learners' writing. It can be assumed that Automated Writing Evaluation (AWE) systems might offer practical solutions and help instructors to cope with the problems encountered when giving feedback (Chen, 2025; Yildiz & Gonen, 2024). Given that most of our learners are born and grown up in the digital age and have been interacting with digital technology at an early age (Thompson, 2013), AWE systems seem likely to draw their attention as an innovative practice. In addition, the development of educational technology, the availability of computers and the Internet all over the countries and the great improvements in the field of Artificial Intelligence (AI) have led the AWE systems to gain popularity in English writing instruction and assessment (Chen & Cheng, 2008; Warschauer & Grimes, 2008; Zhang & Hyland, 2018). The AWE systems can be described as computer-based technologies in which the coded systems evaluate the written texts of learners and provide immediate scores (Shermis & Burstein, 2003). They make use of AI systems, Natural Language Processing (NLP), and Latent Semantic Analysis (LSA) as evaluation mechanisms (Warschauer & Ware, 2006). This analysis and evaluation might range from lexical, syntactic, and grammatical levels to semantic and discourse levels (Chen & Cheng, 2008). In addition to providing immediate scores, they provide diagnostic and instant feedback to learners in various aspects of

writing (Chen & Cheng, 2008). Furthermore, with a growing emphasis on the use of AI systems in education, not only AWE but also other AI-powered feedback tools such as *Grammarly*, *Criterion*, *My Access!*, and *Write & Improve* have become popular, and they have been increasingly employed for L2 writing instruction.

Automated feedback (AF) provided by AI-powered feedback tools, which can be used for classroom writing instruction, has begun to be the main focus of many recent studies. The AF that is supported by AI systems has been found to be rather useful in responding to learners' errors in their writing in various studies. For instance, the AF enables teachers and students to save time and effort as they are simple to use and efficient (Al-Garawany, 2024; Zhao et al., 2023). Learners easily access immediate and convenient feedback because it has no limitations of time, place, and usage frequency (Chen & Cheng, 2008; Yildiz & Gonen, 2024). Additionally, the AF might motivate students to produce more and better writing revisions with an opportunity to learn on their own (Chen & Cheng, 2008). The use of AF might also lighten or liberate teachers from the heavy workload of providing timely feedback on learners' writing drafts (Li et al., 2015; Liu & Kunnan, 2016; Sadigzade, 2025; Shadiev & Feng, 2024).

On the other hand, the AF has some shortcomings. For example, the AF has been shown to favour lengthiness and certain lexical grammatical features, and they cannot recognize incoherent or illogical writing (Cheville, 2004). This might mislead student writers to believe that L2 writing is all about language aspects and neglect the content and rhetoric aspects of writing (Cheville, 2004). Since the AF lacks human interaction, it might influence L2 writing detrimentally as it lessens student motivation and makes writing less authentic (Wang et al., 2013). This concern has also been stated by the National Council of Teachers of English (2013) that the feedback provided by the AWE systems will probably negate the social communicative function of writing (NCTE, 2013). In addition, the AF has often been criticized for its lack of focus on some important aspects of writing such as content and organization (Li et al., 2015; Warschauer & Grimes, 2008; Teng, 2024; Yildiz & Gonen, 2024). Another concern pointed out in the AF-related studies is that it does not differentiate among users with different L2 proficiencies, first languages (L1s), or educational backgrounds as it is usually generic (Ranalli, 2018). The AF has also been noted to be sometimes too complex and confusing for low proficiency learners to follow (Aluthman, 2016).

Based on all these discussions, it can be assumed that it would be better for EFL teachers to utilize the combination of the AF and their own written feedback when responding to learners' written works so that they might address the issues they encounter in giving feedback more easily. As a result, learners are expected to improve their L2 writing skills. Also, the AF that is powered by AI systems has often been suggested to be used as a supplement to writing instruction rather than as a replacement for teachers. For instance, Chen and Cheng (2008) put forward in their studies that the AF cannot be effectively used alone or applied instead of teacher feedback in writing classrooms. Likewise, Ware (2011) maintains that the AF needs to be employed as being complementary to teacher feedback, not a replacement. In addition, the AF has been found to be the most effective when it is employed along with teacher feedback as the complementary feedback in writing classrooms (Dikli & Bleyle, 2014). Yildiz and Gonen (2024) also emphasize the necessity of integrating the AF with teacher feedback as the combination improves L2 writing, especially in EFL contexts in which learners need more feedback and opportunities for correction. Additionally, it has been argued in many previous studies that learners have more favourable opinions about the use of the AF when it is supplemented by teacher feedback (Chen & Cheng, 2008; Warschauer & Grimes, 2008). Therefore, the combination of the AF and teacher feedback may be beneficial to the development of EFL students' writing performance (Chen, 2025; Liu & Kunnan, 2016).

1.2 Statement of the Problem

As the use of AI-powered tools have gained popularity in L2 writing classrooms, many researchers have carried out studies in order to better understand their scoring functions and the feature of providing feedback to learners. When the previous studies that probed into the use of AI-powered tools in L2 writing classrooms are reviewed, it can be recognized that most of the studies have focused on the reliability and validity of the scoring systems provided by these tools (Attali, 2011; El-Ebyary & Windeatt, 2010; Liu & Kunnan, 2016; Stevenson, 2016). However, the investigation of the component of providing the AF that is instant, available, and diagnostic for learners has usually been ignored in previous studies. That is, only a few studies have explored how the use of AF provided by the AI-powered tools affects the writing achievement of learners (Altuntas, 2021; Bako, 2023; Chen & Cheng, 2008; Ghufuron & Rosyida, 2018; Han & Sari, 2024; Liao, 2016; Link et al., 2022; Wang et al., 2013; Yildiz & Gonen, 2024).

Moreover, when the studies investigating the impact of using this new feedback type on learners' writing performance are analysed, it has been noted that various research designs have been adopted by researchers. Researchers have usually made use of research designs in which the control group receives teacher feedback while the experimental group receives AF on their writing (Bae & Jung, 2024; Hassanzadeh & Fotoohnejad, 2021; Wang & Han, 2022; Yildiz & Gonen, 2024). The findings of such studies have revealed that each feedback type has its own advantages and disadvantages. For instance, AF has been stated to be time saving for both teacher and learners and to provide timely feedback to learners (Zhao et al, 2023). Nevertheless, it has often been reported that AF develops learners' surface-level writing skills such as grammar, spelling, and mechanics most of the time, but it seems insufficient to improve learners' higher-order skills of writing such as content and organization (Ghufron & Rosyida, 2018; Teng, 2024; Warschauer & Grimes, 2008; Yildiz & Gonen, 2024). With regards to teacher feedback, it is regarded as more reliable and effective than other types of feedback by learners because teachers integrate their expertise, knowledge and insights into the feedback process (Gielen et al., 2010). However, it has often been reported that teachers usually have problems in providing feedback to learners because of crowded classrooms (Liu & Kunnan, 2016). Providing feedback has also been stated to be time consuming for teachers (Warschauer & Grimes, 2008; Wilson & Czik, 2016).

Based on the affordances and shortcomings of each feedback type, a combination of AF and teacher feedback might be more beneficial for learners as it offers learners a more diverse and comprehensive feedback source (Stevenson, 2016). In addition, utilizing both AF and teacher feedback might make giving feedback easier and more effective for teachers. Since the surface-level writing errors of learners have already been corrected by the AF, teachers can focus on and allocate more time on the writing aspects such as content and organization, which the AF does not usually provide feedback on (Ersanli & Yesilel, 2022; Shadiev & Feng, 2024; Yildiz & Gonen, 2024). That is, both AF and teacher feedback have their own advantages and disadvantages, and no single feedback type is believed to meet all of the students' needs in writing skills (Cheng, 2017). Therefore, many studies have been carried out to investigate the effect of a combination of AF and teacher feedback on the learners' writing performance (Altuntas, 2021; Bako, 2023; Han & Sari, 2024; Link et al., 2022; Tang & Rich, 2017; Wilson & Czik, 2016). However, there is a need for further research which involves the comparison of the effect

of teacher feedback and combined feedback (AF and teacher feedback) on learners' writing performance in order to better understand the potential use of combined feedback in writing classes, especially with learners with different proficiency levels and contexts.

Apart from these, it has been stated in previous studies that EFL learners in almost all educational levels have difficulties in writing classes. To illustrate, EFL learners do not usually have clear and immediate goals for writing in English, so they might not be much motivated to practice writing activities (Reichelt, 2013). Besides, writing classes are not conducted as separate courses; rather they are integrated with other English language skills teaching in EFL settings; as a result, writing classes are less likely to be given enough time and importance during English classes (Lee, 2007; Reichelt, 2013). In addition, it has also been found that learners do not practice writing enough in English classes due to insufficient lesson hours and they do not usually receive timely and enough feedback on their writing because crowded classes make giving feedback challenging for teachers (Lee, 2007). Specifically, when it comes to the challenges that Turkish EFL learners face in writing classes, many factors have also been identified, which can be attributed to learners' poor writing skills. For instance, more emphasis is given on teaching certain language skills such as grammar and reading, but less attention is given on productive skills including speaking and writing in English, as a result, learners cannot learn how to write in English well (Yesilyurt & Kartal, 2018). Learners also have difficulties in writing in EFL because of L1 interference. It has been found to have a negative impact on learners' gaining EFL writing skills (Elkilic et al., 2009). Another important factor that causes learners to have poor English writing skills is that learners experience writing anxiety due to some reasons. For example, they fear that their teachers will evaluate their writing negatively (Ozturk & Saydam, 2014).

In short, it can be said that Turkish EFL students often have poor English writing skills and have difficulties in writing in English due to different reasons. However, it has been stated in previous studies that if enough feedback is provided to learners on their written works, learners are likely to enhance their writing performance in English (Baleghizadeh & Gordani, 2012). Besides, L2 learners are likely to be more receptive to and welcome other different types of feedback than teacher feedback (Biber et al., 2011). Based on these arguments, instructors should use various feedback practices while evaluating learners' writing and providing feedback to them in order to improve learners' writing

skill (Haddadian, 2024). For all these reasons, the integration of combined AF and teacher feedback to writing classes might help learners to develop their writing performance. There is a need for more studies that examine whether the combination of AF and teacher feedback has a facilitating role in coping with the issues faced by EFL learners in their writing classes.

In addition, since learners' views have been stated to influence learning outcomes (Yan et al., 2023), it is considered important to explore students' opinions on the use of combined AF and teacher feedback in L2 writing classrooms. Furthermore, the investigation of the learners' perceptions reveals some suggestions about how to design the use of AI-powered feedback tools (Roscoe et al., 2017). Gaining a deeper understanding of learners' opinions related to the strengths and weaknesses of both types of feedback might enlighten teachers about how to use a combination of them properly in writing classrooms. Thus, there is a need for further research which explores the learners' opinions of the use of AF supplemented by teacher feedback in writing classes.

Lastly, regarding the studies that investigate the use of the AF and teacher feedback in both Turkish and other EFL writing classrooms, it can be stated that almost all AF studies were carried out in tertiary educational settings. It can be recognized that few studies have been conducted to find out how AF can be integrated with teacher feedback when giving feedback to the written works of learners across various age groups (Ding & Zou, 2024). Therefore, more research that investigates how effectively AF can be integrated into the teacher feedback during the writing classes of middle school learners in order to develop their writing skills is needed.

1.3 Purpose of the Study

The main purpose of the present study is to compare the effects of teacher feedback and combined feedback (AF through *Grammarly*, which is one of AI-powered feedback tools and teacher feedback) on the paragraph writing performance of Turkish EFL middle school learners by using a process approach to writing instruction. This study also aims to investigate the learners' opinions about the use of both AF and teacher feedback when composing their written works. Based on the purposes mentioned, two research questions have been addressed in this study:

1) Is there a statistically significant difference between the teacher feedback group and the combined feedback group (AF through *Grammarly* and teacher feedback) in terms of paragraph writing scores?

2) What are the opinions of Turkish EFL middle school learners about the use of combined feedback (AF through *Grammarly* and teacher feedback) in their writing classes?

1.4 Significance of the Study

Given the fact that there is a growing need for incorporating technological developments into language learning and teaching, studies that investigate the integration of AF provided by AI-powered tools into classroom-based writing instruction have drawn many instructors' attention. In this respect, Altuntas (2021) has emphasized that there is a dearth of AI-powered feedback studies, which examine the effect of AI-powered feedback on learners' writing achievement and their opinions about the use of this feedback type in Turkish EFL contexts. Thus, the current study is considered to be an important attempt because it is believed to enrich the existing body of research which investigates the impact of integrating AI-powered feedback into the writing classes of Turkish EFL learners and their views of using both AF and teacher feedback in their writing classes.

In addition, as Asyifa and Daulay (2024) stated that AI-powered feedback studies might enlighten educators about how AF can be utilized best for enhancing learners' writing skills, the findings of this study are expected to enable teachers to understand and evaluate the potential use of a combination of AF and teacher feedback in their writing classes.

Besides, Fan (2023) has pointed out that few studies have been conducted to investigate the impact of this combined feedback type on learners' writing achievement. Therefore, the present study is likely to help and guide teachers who might want to be informed of the effect of such an integrated feedback type (a combination of AF and teacher feedback) on L2 learners' writing skill.

Furthermore, it may be crucial to explore students' opinions on the use of the AF and teacher feedback in L2 writing classrooms (K. Hyland & F. Hyland, 2006b) because such an exploration might contribute to the teachers' better understanding of learners' opinions related to the strengths and weaknesses of both types of feedback (Fan, 2023). For these reasons, this study is hoped to provide a better insight into how combined feedback affects

learners' writing performance compared to the teacher feedback and their opinions about receiving such combined feedback type in their writing classes.

All in all, the current study that examines the use of AF combined with teacher feedback in L2 writing classrooms, the impact of such a combined type of feedback on learners' writing skill, and the learners' opinions about the use of such combined feedback in L2 writing classrooms can be regarded as essential.



2 LITERATURE REVIEW

2.1 Writing in L2 Classrooms

Writing in English as a foreign or second language has often been stated to be an important component of language learning in many L2 writing studies. Attaining proficiency in L2 writing has been considered as an important skill which enables people to be successful in both academic and professional life (Polakova & Ivenz, 2024). As English has gained importance and prominence as the lingua franca all over the world, the significance of written communication in English has been acknowledged by researchers, teachers, and students. Language learners have recently been more reinforced and engaged in the practice of writing a variety of genres across all educational levels from primary education to higher education (Lee, 2016). That is to say, various learner populations compose different kinds of texts in various societal contexts for divergent purposes (Leki et al., 2008).

Nevertheless, writing in a language other than the native language is not as simple and linear as it seems for language learners (Choi, 2016). Writing in English as a foreign or second language has a complex, multifaceted, and variable nature (Leki et al., 2008). It has often been defined as a complicated and interactive process in which the writer attempts to develop, arrange, and transfer the ideas to the reader (Yangin-Eksi, 2012; Nunan, 2015). Therefore, writing instruction and learning to write in English have been considered to be a hard task for both teachers and learners (Silva & Matsuda, 2010). Learners often confront various challenges and issues in gaining proficient English writing skills due to a number of reasons. For instance, learners are given limited opportunities to practice writing because of many factors such as limited lesson hours, examination-driven teaching contexts, and so on (Tang, 2012). Thus, students and teachers often tend to ignore writing tasks and assignments during English classes. For example, both Turkish EFL learners and teachers attach less importance to writing activities during classes because learners' writing skills are not evaluated in high stakes university or high school entrance exams conducted in Turkey (Yesilyurt & Kartal, 2018). Besides, L1 negative transfer, which is also known as L1 interference, causes learners to have difficulties in composing their written works (Harmer, 2015). It has often been indicated in various studies that learners have problems in learning to write in a foreign or second language and fail in L2 lexical, syntactic, and discourse rules due to interference

from their L1 lexical, syntactic, rhetorical, and organization rules (Bennui, 2008; Elkilic, 2012). Besides, writing skill is a challenging construct that calls for learners to combine and use a variety of sub-skills such as grammatical knowledge, vocabulary choice, spelling, punctuation rules, content, and organization skills in their writing (Yangin-Eksi, 2012). Furthermore, learners have been found to suffer from some affective factors in previous L2 writing studies. To illustrate, it has been revealed that learners experience anxiety due to various reasons when writing in English (Cheng, 2004).

Not only L2 learners but also teachers have been found to face lots of problems ranging from teaching context-related problems to examination-driven educational system-related ones in their writing instruction. For instance, crowded classrooms and insufficient contact hours make it hardly possible for teachers to provide timely, useful and effective feedback on learners' multiple drafts of writing tasks (Thi & Nikolov, 2022). It has also been claimed in some studies that the challenges teachers encounter in their writing instruction might be attributed to the fact that their learners have limited vocabulary knowledge and insufficient grammatical competence (Amalia et al., 2021; Hidayati, 2018). Additionally, since some teachers do not have sufficient training on how to teach L2 writing and do not possess enough writing assessment literacy, they have been reported to have difficulties in providing useful feedback in order to improve their students' writing performance although they have favourable beliefs and attitudes towards the use of feedback in writing instruction (Leki, 2001). In addition to these, it has been reported by teachers that they usually have challenges in their writing instruction due to the fact that their students cannot transfer their L1 writing skills into L2 writing as they have already had little experience with writing in their L1 (Eryilmaz & Yesilyurt, 2020; Hirose, 2001). Last but not least, it has been stated that student writers are not given enough explanations about why L2 writing instruction matters that much for them. EFL teachers and administrators do not usually negotiate with EFL learners about the reasons for learning to write in EFL or the advantages which learning to write in EFL offers for their academic, professional or social life (Leki, 2001), and this poses a great challenge to EFL teachers in engaging learners in writing classes.

In order for learners to overcome the challenges they face in L2 writing classrooms, teachers have utilized certain writing approaches that support their writing instruction. Although these approaches have different perspectives about what writing is and how to

teach writing, teachers might tend to use a combination of them to offer more diverse and better learning opportunities to their learners (Hyland, 2008).

2.2 Approaches to Writing Instruction in EFL Contexts

There are certain approaches to writing instruction in L2 classrooms which attempt to identify what writing is and how effectively it can be taught. These approaches have been proposed by various researchers since EFL or ESL writing began to emerge as a distinctive area (Hyland, 2003; Matsuda, 2003). English language teachers have favoured and made use of certain writing approaches in their writing instruction by taking into account their learners' language proficiency levels, the purposes and functions of their writing courses, and instructional context-related factors.

The product-based approach, the process-based approach, and the genre-based approach are some common orientations to L2 writing instruction that have been employed for a few decades. The product-based approach and the genre-based approach concentrate on texts while the other well-known approach, the process-based one, focuses on the writer and the writing process (Hyland, 2008). Each of these approaches has its own affordances and shortcomings. Therefore, it would not be right to say that one approach can replace the other one (Hyland, 2008). In other words, no single writing approach can alone be sufficient to improve learners' writing skill given that language learners possess various linguistic and cognitive abilities (Kumaravadivelu, 2006). Instead, these approaches need to be seen as complementary and overlapping perspectives in order to teach the complex nature of the writing skill (Badger & White, 2000; Hyland, 2008).

2.2.1 The product-based approach

The product-based approach, which is widely known as traditional and teacher-based writing pedagogy, emphasizes the final written works learners compose. Writing is regarded as a product that is constructed by the writer regulating their lexical and grammatical knowledge. Linguistic knowledge, syntactic patterns, and cohesive devices are considered to constitute the crucial parts of texts. Thus, learning to write in L2 includes knowing these elements (Badger & White, 2000; Hyland, 2003).

In product-based writing classrooms, writing is tightly controlled by means of guided writing activities in which learners are given a short text and required to fill in the blanks, complete the sentences, transform the tenses or pronouns, and engage in similar practices

(Hyland, 2008). The focal point of all these activities is producing error-free texts. In other words, accuracy and clear expression are believed to be the main criteria of good writing (Hyland, 2003; Nunan, 1999).

By using the product-based approach, writing instruction is conducted in a four-stages-process (Hyland, 2008). First, a text is presented by the teacher to learners in order to make them comprehend certain vocabulary and grammar, which is called the familiarisation stage. Then, learners practice the target vocabulary and grammatical structures with controlled writing activities. Following the stage of controlled writing, learners strive to imitate the model texts provided in the familiarization stage. Finally, learners are given opportunities to write a text by using the grammatical structures and patterns they have studied, and this stage is known as free writing practice (see Figure 2.1).

Figure 2.1

The Four Stages of Writing Instruction in Product-Based Approach



As in many other techniques, methods, and approaches, language researchers and teachers have critically evaluated the product-based approach to L2 writing instruction. This approach has been stated to be very helpful in building vocabulary, scaffolding writing development, and increasing lower-level students' confidence (Hyland, 2003). However, its limitations have also been pointed out in some studies. To illustrate, it might lead learners to assume that the main purpose of writing classes is to compose error-free texts and not to communicate with others in written way (Nunan, 1991). It also impedes learners' creativity as it encourages them to engage in controlled and guided writing activities most of the time and to imitate the model texts supplied by teachers (Tong, 2007). Additionally, this approach focuses on producing accurate texts for teachers to evaluate or mark. It does not attach importance to the writing process itself through which texts are composed, and it disregards the efforts learners make when writing in another language (Harmer, 2015).

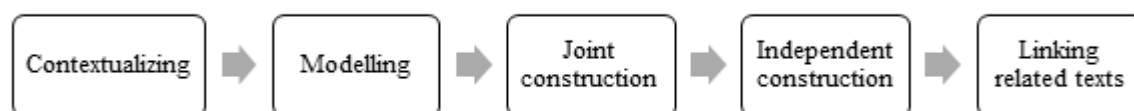
2.2.2 The genre-based approach

The genre-based approach, which is perceived as an extension of the product-based approach by some scholars, highlights the importance of exposing learners to different types of writing genres. Genres refer to abstract and socially recognized ways of using language for specific purposes (Hyland, 2003). They have typical patterns of rhetoric and organization (Harmer, 2001). In the genre-based approach, writing is regarded as an attempt to communicate with readers (Hyland, 2003). Therefore, writers are asked to take into consideration contextual factors and the audience they write for when they compose their texts (Harmer, 2015).

In genre-based writing classrooms, teachers help students to understand how genres differ from each other and encourage them to write more effectively. They have their learners analyse and study the genre in order to enable them to notice and recognize the text structure, grammar and vocabulary employed within that genre. They organize their classroom activities in a series of linked stages (Hyland, 2008). In the stage of contextualizing, learners try to understand the purpose of the studied genre and the context in which it is used. Next, learners focus on how language patterns are organized within that genre by a careful analysis of the text in the stage of modelling. Then, learners and teachers work together to construct the text in the stage of joint construction. Following the stage of joint construction, learners try to write their own texts in the final stage, which is called independent construction. Finally, what students have learnt is related to other genres or contexts by the teacher (see Figure 2.2).

Figure 2.2

The Stages of Writing Instruction in Genre-Based Approach



When it comes to the strengths of the genre-based approach, it can be stated that it promotes learners' writing development and confidence as learners interact and negotiate with a more knowledgeable person, namely their teacher, when producing their texts (Hyland, 2003). Although grammatical knowledge is given importance in this approach, it is not manipulated as much as in the product-based approach. Instead, learners make

use of grammar knowledge as the resource to produce well-formed and appropriate texts. On the other hand, the genre-based approach is often criticized for its possibility of stifling learners' creativity. If teachers cannot contextualize the language or ignore doing so, learners might assume that genres are rigid templates or a set of rules, which is likely to impede learners' creativity (Harmer, 2015; Hyland, 2008). Similarly, it might undervalue the linguistic skills included in producing written works and underestimate students' performance by seeing learners as passive most of the time (Imsa-ard, 2020; Selvaraj & Aziz, 2019).

2.2.3 The process-based approach

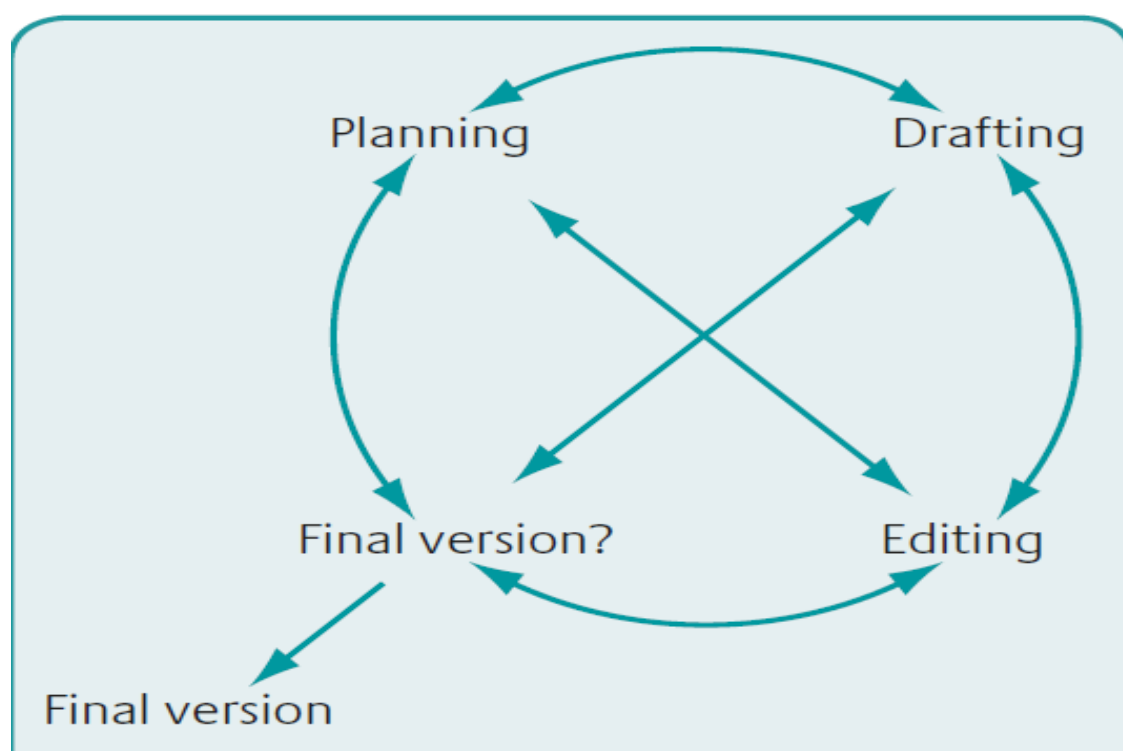
The process-based approach, which is predominantly known for its focus on cognitive processes involved in writing, stresses the various stages that learners go through when composing their texts, such as planning, drafting, revising, responding to written commentaries or feedback, and editing. Writing is considered to be an exploratory and generative process in which writers discover and construct their ideas as they try to create meaning (Hyland, 2008). Less emphasis is given on how to improve learners' linguistic knowledge such as grammatical and vocabulary knowledge. Rather, there is more attention to the development of the various stages, which any writing task demands, such as brainstorming, composing, revising, editing, and so on (Badger & White, 2000).

In the process-based writing classrooms, teachers attempt to facilitate and guide the learners' writing by involving them in the writing processes. Various writing models have been introduced in order to identify the stages learners undergo when producing their written works. To exemplify, the most well-known and widely accepted process writing model is the planning-writing-reviewing framework propounded in Hayes and Flower's study conducted in 1981 (Hyland, 2003). An elaborated version of this framework, which describes what happens at each stage of the writing process in a detailed way and integrates cognitive and social factors that influence writing has been established by Hayes in 2012. Another process writing model defined in Tribble's (1996) study includes a four-stages-writing-process such as pre-writing, composing, revising, and editing. All these process writing models have a lot in common. For example, learners try to generate their ideas about the writing prompts through brainstorming, note-taking, and outlining in the pre-writing stage, which is about the planning to write. Following this stage, learners begin to write their first drafts. After they are given feedback on their first drafts

by different kinds of sources such as teacher, peer, or technology-enhanced systems, learners revise and edit their first drafts. All these stages are not fixed and linear; rather, they are recursive and cyclical (Harmer, 2004). For instance, learners may return to the pre-writing stage and decide to include some more ideas in their texts when they are about to hand in their writing to the teacher (see Figure 2.3).

Figure 2.3

The Process Wheel (Harmer, 2015, p.364)



The process-based approach has usually been reported to make significant contributions to the writing process. Specifically, it enhances cooperative learning opportunities for students by means of feedback sessions including teachers' written feedback and commentaries, peer feedback, and teacher-student conferencing (Imsa-ard, 2020). In addition, it makes the writing activity and the writing process more dynamic and effective for learners as it requires learners to be more active and produce better texts through drafting. Furthermore, since it gives importance to the writing process and student writers as independent writers, the process-based approach is likely to increase learners' creativity (Selvaraj & Aziz, 2019). However, regarding the drawbacks of this approach, it often ignores the social and cultural aspects of writing and might lead learners to experience ambiguities because the language structures of a genre are not taught

explicitly; rather, learners are expected to discover them on their own or through teacher feedback on their drafts (Hyland, 2008). It also assumes that all kinds of writing require the same processes (Pramila, 2017). Additionally, it requires too much time and effort to implement this approach in classroom-based writing as it involves the processes of multiple drafting, providing feedback, revising, and editing (Imsa-ard, 2020).

In the current study, the process-based approach to L2 writing instruction is adopted because it enables learners to realize the actual writing stages, which most writers are involved in when composing a text, and apply them in their L2 writing process (Harmer, 2015). That is, this approach is considered to make contributions to learners' writing performance and help them to gain more accuracy and fluency in L2 writing by involving them in a series of stages such as planning, drafting, revising, editing when composing a text (Hedge, 2005).

2.3 Teacher Written Feedback

EFL or ESL learners are often inclined to make different types of errors when writing various texts ranging from a simple paragraph writing task to a more complex essay or research report writing task. Since language learners possess the deep knowledge of their L1 and are used to practicing it in almost every aspect of their daily life, their L1 knowledge usually interferes with the linguistic features of the newly studied language, namely L2, in terms of its sound, word usage, and grammar levels. Furthermore, they are likely to make developmental errors in the process of learning to write in a second or foreign language (Harmer, 2015). In other words, they overgeneralize or mix up the rules they have previously learnt with the new ones that are recently presented. These two main factors (L1 interference and the natural process of language learning) are considered to lead learners to make errors in L2 writing.

There are different ways of delivering feedback to written tasks of learners. Learners can receive feedback from their teachers in written or oral mode, their peers, themselves or via technological tools. Teachers have been regarded as the most important source of giving feedback to improve learners' writing as pointed out by many researchers (Lee, 2017). Teachers can respond to learners' written works either by writing their corrections, suggestions, and comments or by conducting oral conferencing sessions with their learners, in which they clarify meaning and explain ambiguities to learners (Ferris, 2014). Apart from teacher written or oral feedback, learners can comment on and critique each

other's written works in written or oral form, which is known as peer feedback (Liu & Hansen, 2002). Self-evaluation is another important feedback type, in which learners might act as critical readers or reviewers of their own texts (K. Hyland & F. Hyland, 2006b). Lastly, with the help of technological developments, learners have recently started to make use of AF provided by AWE systems when writing their texts, which offers them timely, diagnostic and useful feedback on their written works (Zhang, 2020). Although there are various types of feedback which can be employed to provide feedback to learners, teacher written feedback has remained to be used as the main feedback type in most L2 writing classrooms (K. Hyland & F. Hyland, 2006b).

Besides, written feedback by teachers, which they tend to supply for learners when reviewing their errors in their written works, has been regarded to be an essential part of writing instruction (Ellis, 2009). It refers to written comments or responses provided by teachers on learners' written scripts, targeting various dimensions of writing (Bitchener & Storch, 2016). However, there has been much debate related to the effectiveness of teacher written feedback among L2 writing researchers. On the one hand, as Truscott (1996) has asserted, teacher written feedback related to the grammar aspect of writing might be ineffective and even harmful for learners' writing achievement, and the provision of written feedback on the grammar aspect of learners' writing should be abandoned in L2 writing instruction. For instance, learners might tend to keep their writing short and simple in order to avoid being corrected (Truscott, 1996). Moreover, since learners have to allocate too much time for editing the grammatically inaccurate parts of their texts, they cannot focus on more productive activities such as story writing and creative group writing activities. In addition, since grammar correction is time-consuming for teachers, they cannot provide enough feedback on the other aspects of writing such as content and organization (Truscott, 1996). On the other hand, it has been pointed out in many studies that teacher written feedback, which is provided on the grammar aspect of learners' writing, might help them to improve their writing performance (Bitchener & Ferris, 2012; Ferris, 2006; Ferris & Roberts, 2001). For instance, it helps student writers to gain and raise their awareness about the differences between what they produce and the target language input (Doughty & Williams, 1998). It is also stated to be an important and useful intervention method to support learners' writing process and accelerate their writing output (Lee, 2013). For all these reasons,

teachers have strongly been advised to incorporate written feedback into their writing instruction in order to assist learners' progress in L2 writing (Nguyen & Chu, 2024).

Nonetheless, L2 writing researchers and teachers have often addressed and discussed what kind of teacher written feedback might enable learners to improve their writing performance more effectively. That is to say, there has been a significant number of studies which investigate what aspects of writing should be focused on through teacher written feedback, whether feedback should be presented in an explicit or implicit way, and whether feedback should be given comprehensively or some specific errors should be targeted when giving feedback. Therefore, various attempts have been made by L2 writing researchers in order to identify and classify written feedback in terms of its focus, extent or scope, and the strategies teachers use when giving feedback (Ellis, 2009; Lee, 2017; Sheen, 2011).

Regarding the focus of feedback, it can be stated that there are various aspects of writing which teachers concentrate on when giving feedback. Grammar, vocabulary use, spelling, punctuation, content, and organization are the main components of writing, which teacher written feedback might be based on (Biber et al., 2011). Some teachers might prefer drawing their learners' attention to linguistic features of a language when giving feedback on learners' writing, which is known as form-focused feedback (Long & Robinson, 1998). On the other hand, some communicative aspects of language learning including word choice, content, coherence and cohesion, genre, and register might be focused on when giving teacher written feedback, which is called content-focused feedback (Olson & Ratteld, 1987). Another classification about the focus of feedback has been made in Storch and Tapper's (2000) study. Written feedback on local issues consists of grammar, language expression, and mechanics whereas feedback on global issues involves such writing dimensions as ideas, content, and organization (Storch & Tapper, 2000). Regarding the issue of whether teacher written feedback should focus on form or whether it needs to concentrate on both form and content, L2 writing researchers have had different opinions. To illustrate, Bitchener et al. (2011) pointed out that feedback that focuses on form is less likely to be effective than feedback focusing on both form and content. Likewise, K. Hyland and F. Hyland (2006a) suggest that feedback should be based on all dimensions of writing in a balanced manner. Given the fact that it might be better and effective to provide both form-focused and content-focused feedback on

learners' writing (Bitchener et al., 2011), teacher written feedback, which focuses on both local and global aspects of learners' paragraph writing, is employed in this study.

Considering the extent or scope of written feedback, L2 writing researchers have also classified teacher written feedback as focused approach and unfocused approach. In the focused approach to written feedback, the teacher targets only one or a few linguistic errors, whereas the teacher attempts to respond to all or a wide range of linguistic errors in the unfocused approach (Lee, 2017). It has been maintained in some studies that the focused approach might be more beneficial for learners to acquire writing proficiency as it does not impose heavy cognitive or attentional load on learners (Bitchener & Ferris, 2012). Nevertheless, other researchers have argued that the unfocused approach to written feedback helps learners to improve their writing more effectively. Specifically, Ellis (2009) puts forward that the unfocused approach is more effective for learners' long-term writing improvement than the focused approach because it offers learners the corrected version of a wide array of errors. In addition, as the main purpose of providing feedback on learners' writing is to develop learners' overall writing improvement, the focused approach to written feedback, which targets just a few errors in learners' texts seems insufficient to reach this goal and might not be aligned with the expectations of naturalistic classroom instruction such as gaining improvements in overall writing accuracy (Van Beuningen et al., 2012; Storch, 2010). Since the current study attempts to improve learners' overall writing performance, the unfocused approach is adopted when giving feedback on learners' written works, in which a wide range of error types such as wrong word order, subject verb agreement, run-on sentences, wrong word choice, article errors, preposition errors, spelling and punctuation errors are addressed in the learners' paragraph writing.

When written feedback is analysed based on the strategies teachers employ in the process of providing it to the learners, it can be stated that some categorizations such as direct feedback, indirect feedback, and metalinguistic feedback have been introduced by researchers.

If students are given the correct forms of the erroneous parts in their texts by their teachers in an explicit way, it is called direct feedback (Ellis, 2009). Direct feedback can be provided in a variety of ways such as crossing out unnecessary parts, inserting missing words or phrases, giving the correct form near the errors (Ellis, 2009). Direct feedback

has been recognized to be more influential for lower-level students as learners are given clear and explicit guidance about how to correct their errors (Ferris & Roberts, 2001).

Another feedback type, indirect feedback refers to a kind of response by a teacher implying that an error exists in learners' writing without providing the correct forms (Ellis, 2009). Indirect feedback can take various forms such as underlining the errors and putting a cross at the end of the line which contains an error. The use of indirect feedback has been emphasized in some studies because it leads learners to guided learning and enhances their problem-solving skills (Bitchener & Knoch, 2008). It has also been claimed to be more likely to promote long term learning (Ferris & Roberts, 2001).

In addition to direct and indirect feedback, metalinguistic feedback stands out as an important type of strategy used by teachers in giving feedback. Students are given comments about the nature of the errors they have made in their texts (Ellis, 2009). Metalinguistic feedback can be presented in two different ways. Teachers either prefer using abbreviated labels for various kinds of errors, namely error codes, or supply metalinguistic explanations for the erroneous parts in learners' texts. While providing metalinguistic explanations about learners' errors has been stated to be less popular as it requires teachers to have a good command of linguistic knowledge and devote a considerable amount of time, the use of error codes has been considered to foster reflection and promote cognitive engagement in writing tasks more (Ellis, 2009; Ferris, 2011).

In the current study, direct feedback is preferred over the other two types of feedback, namely indirect and metalinguistic feedback, when responding to the errors learners have made in their paragraph writing tasks. It is because the learners are considered to have a lower-level language proficiency. For this reason, it is considered that they are not capable of correcting the erroneous parts in their texts on their own without the help of teacher written direct feedback (Shintani et al., 2014).

Teachers' written comments is another crucial issue that has aroused interest among L2 writing researchers. A great amount of research has been carried out to investigate what type of written comments have an impact on learners' writing improvement. To illustrate, the issue of placing written comments in texts has been examined by some researchers. They have investigated whether adding teacher comments at the beginning of the text, in the margins next to the errors, or in endnotes would be better for learners in their studies.

It has been reported that teachers should decide where to write their written commentaries based on their students' needs and preferences, and the genre of the text (Goldstein, 2004). Other researchers have studied what forms written comments should take such as questions, declarative statements, or imperatives. When the forms of delivering written comments are compared, the use of questions has been stated to be more favourable as it enhances learners' cognitive engagement and autonomy of learners as pointed out in several studies (Ferris, 2014). In addition, the use of imperatives has been reported to be more beneficial for younger learners because the indirectness in the use of questions may cause learners to have difficulty in understanding the real intention of teacher commentaries (Lee, 2017). Concerning the issue of praise and criticism in written commentary, it has been noted that teachers should bear in mind that the ways they present their criticisms or praises to learners are likely to influence their attitudes towards writing, so teachers need to involve both praise and constructive criticism when writing their commentary on students' writing (F. Hyland & K. Hyland, 2001). In the present study, written comments that are added in endnotes are preferred by the researcher. They are also presented in the form of imperatives in order to avoid any misunderstanding, and both the strengths and weaknesses of learners' written works are reported in a balanced way.

In conclusion, there are different ways of providing feedback on learners' writing, but in this study, teacher written direct feedback and commentary that is added in endnotes are used to give feedback to learners who are involved in the process-based writing instruction. Additionally, both local and global aspects of learners' paragraph writing are focused when giving feedback, and the unfocused approach is adopted when responding to linguistic errors that learners make in their writing.

2.4 Automated Feedback

Technological developments in language education have enabled both L2 writing instructors and students to have various teaching and learning experiences. Learners have started to practice new writing tasks such as digital storytelling activities, blog-based writing tasks, and collaborative writing activities through Wikis in their L2 writing classroom (Lee, 2017). Incorporating technology into the language learning process has been stated to have the potential for enhancing learners' motivation and engagement in many studies. Just like students, teachers have also begun to apply innovative ways to

improve the quality and effectiveness of their L2 writing instruction with the help of technology. For example, they have guided their students to make use of concordance resources and special functions including spelling and grammar checker, and thesaurus opportunities supplied by the *Microsoft Office* programme (Lee, 2017). Also, they have started to get help from AI-powered tools, which offer AF on various aspects of learners' writing.

Generally, in L2 classroom writing instruction, teachers have made use of different feedback types when responding to learners' texts. Peer feedback, self-evaluation, and technology-enhanced feedback are some feedback types that have been increasingly given importance and employed in tandem with traditional teacher feedback recently. The use of peer feedback has been encouraged in various theoretical frameworks such as the process-based approach to L2 writing, collaborative learning theory, and the interactionist theory (K. Hyland & F. Hyland, 2006b). Peer feedback allows students to discuss their texts with their peers and learn others' interpretations of the texts they have composed. Nevertheless, it has been pointed out in some studies that although learners regard peer response as valuable, they consider teacher feedback more reliable than peer feedback, and mostly prefer receiving teacher feedback (Zhang, 1995). In addition, it has been emphasized in previous studies that instructing learners about how to conduct peer evaluation effectively is necessary and crucial because such training enables students to provide more relevant and useful feedback to their peers (Min, 2005). Self-evaluation is another feedback type that has gained popularity in L2 writing. Self-evaluation is a kind of strategy in which learners evaluate their own progress in the new language. In order to make learners notice their errors in various aspects of their written works, checklists can be utilized. In addition, learners can keep journals in order to evaluate their progress in language learning over time. No matter which tool is used for self-evaluation, there is a need for training provided by teachers about how self-evaluation can be conducted (Lee, 2017). Apart from peer feedback and self-evaluation, AF provided by the AI-powered tools has begun to spark both learners and teachers' attention in L2 writing instruction with the development of technology (Hoang, 2022; Lee, 2017). Teachers have introduced the concept of AF provided by AI-powered tools and made efforts to integrate this kind of feedback into their classes in order to provide correction, suggestion, or comments on learners' writing. The integration of such technology-enhanced feedback into L2 writing

instruction has been noted to make some contributions to learners' writing performance (Li et al., 2015)

It has been noted in the literature that AI-powered tools have two main functions such as automated scoring and providing automated feedback. The function of automated scoring refers to assessing or grading learners' writing by means of computer technologies (Shermis et al., 2013). Automated scoring function catered by the AWE systems has been reported to make various contributions to teachers and learners as they are capable of reducing cost and logistics in order to grade or mark lots of learners' written works, saving time, and enhancing the reliability features of writing assessment (Shermis & Burstein, 2003; Warschauer & Ware, 2006). In order to assess learners' texts easily, many researchers and testing companies have attempted to develop some automated scoring systems. To illustrate, *Project Essay Grader™ (PEG™)*, which was developed by Ellis Page in 1966, is regarded as the first automated scoring engine. Another well-known AWE engine, *Intelligent Essay Assessor™ (IEA™)*, which was developed in the 1990s, employs latent semantic analysis when evaluating the learners' texts. Even if this scoring engine is mainly known for its focus on content-related aspects of essay writing, it still gives importance to form-related aspects of an essay, including grammar and mechanics (Landauer et al., 2000). In addition to these two scoring engines, the *Electronic Essay Rater (e-rater®)*, which was developed by the Education Testing Service in the 1990s, relies on natural language processing (NLP) techniques in order to evaluate the quality of learners' written works (Burstein, 2003). *IntelliMetric™*, which is regarded as the first scoring engine utilizing AI technologies in order to evaluate essays, is also an important automated scoring engine.

Apart from their automated scoring functions, AI-powered tools have increasingly drawn researchers and teachers' attention thanks to their capability of providing immediate, useful, and diagnostic feedback on learners' written works. Automated feedback (AF), which is also known as computer-generated feedback, AI-powered feedback, or AWE feedback, denotes a kind of feedback that is given on learners' written works by computer software (Zhang & Hyland, 2018). Developers of the AI-powered systems have recently directed their attention to the issue of how these systems can be utilized for formative purposes, namely for offering constructive feedback on learners' writing (Lee, 2017; Shermis & Burstein, 2003). Furthermore, two main issues (the increasing number of

students in EFL and ESL writing classrooms and insufficient lesson hours), which teachers encounter when providing feedback, have rendered the use of AF a viable and necessary alternative in L2 writing instruction.

With the growing demand for the integration of AF into L2 writing classrooms for providing correction, suggestions, and comments, developers of AI-powered systems have introduced various AF tools for classroom use. The notion that AF provided by the AI-powered tools might be utilized as a tool for classroom writing instruction has led instructors to explore and understand the potential use of this feedback type in order to improve learners' writing. The AF tools generally offer learners opportunities to revise and edit their written works through multiple-drafting. They differ from each other in terms of their focus when providing feedback (Stevenson & Pakhiti, 2014). Some tools are capable of providing feedback on both global and local aspects of writing such as language use, content and organization while other tools can give feedback on only local aspects of writing such as grammar, spelling, and mechanics. In addition to the feature of providing feedback, the AI-powered feedback tools allow learners to make use of some other educational resources such as dictionaries, model essays, graphic organizers, thesauri, learner progress reports. To exemplify, *Criterion* is one of the widely used tools for providing feedback in L2 writing classrooms (Ding & Zou, 2024). It gives both form-focused and content-focused feedback to learners, and covers a wide range of genres and topics, which are aligned with various language proficiency levels (Dikli, 2006). Another well-known AF tool, *My Access!* gives feedback on learners' writing in terms of organization, content and development, language use and style, mechanics, and convention by using an AI-powered scoring engine, *IntelliMetric*TM. It also enables learners to receive multilingual and multilevel feedback (Dikli, 2006). That is, *My Access!* not only can give learners feedback in English, Spanish, or Chinese, but also provide feedback, which is suitable for learners' proficiency levels. In addition, *Grammarly* has recently begun to spark the interest of many teachers, learners, and researchers as an AF tool. It has been stated in the literature that *Grammarly* is a popular but less-researched AI-powered feedback tool (Barrot, 2023; Guo et al., 2022). It relies on AI systems, including deep learning and natural language processing to provide instant and diagnostic feedback to learners (Miranty & Widiati, 2021). It provides feedback on learners' errors in spelling, grammar, punctuation, style, and word choice (Japos, 2013).

When the affordances and advantages of AF are analysed, it can be said that the main affordance of this feedback type lies in its feature of providing timely and effective feedback for learners (Chen & Cheng, 2008; Cotos, 2011; Sadigzade, 2025). Immediate feedback supplied by the AI-powered systems has been maintained to be more influential and constructive than delayed feedback type. Delayed feedback becomes irrelevant for learners because they cannot access feedback until their teachers present it to them (Gibbs & Simpson, 2004). In addition to this, AF offers lots of opportunities for both learners and teachers in many ways. For instance, it is likely to lessen teachers' workload by partly addressing the issues related to the time-consuming nature of teacher feedback (Dikli & Bley, 2014; Shadiev & Feng, 2024). It also allows learners to receive diagnostic feedback on various dimensions of their writing, including vocabulary use, language use, syntax, semantics, and meaning (Benali, 2021). Furthermore, it enables learners to realize their strengths and weaknesses, and improve their writing as it engages them in multiple-drafting-process (Chen & Cheng, 2008). It also enhances learner autonomy by leading them to compose, revise, edit, and evaluate their writing tasks on their own (Chen & Cheng, 2008). Moreover, the instant nature of automated scores and feedback has been found to increase learners' competition and willingness to practice writing (Cheng, 2017). Additionally, AF helps instructors to concentrate on different aspects of writing instead of directing their efforts and attention to correct learners' repetitive surface-level errors in learners' texts and scoring these texts (Stevenson & Phakiti, 2014). Last but not least, it allows each learner to experience neutral feedback, which means that it is not affected by teachers' mood or state of mind (Barrot, 2023). That is, teachers have no impact on automated feedback.

Although the use of AF has been promoted for giving formative and diagnostic feedback on learners' writing considering its contributions to L2 writing instruction, its limitations have also been pointed out in previous studies. For example, AF fails to give dialogic feedback to learners (Merhabi-Yazdi, 2018). That is, learners cannot consult these systems when they want to receive a detailed explanation about their errors. Another obvious weakness of this feedback type is related to its focus when giving feedback. The majority of these systems are able to give feedback on surface-level error, and they still fail to give enough feedback on content-related aspects of writing although there are various attempts to develop this dimension (Wang et al., 2020; Teng, 2024). It might lead learners to compose their texts by giving more importance to these surface-level aspects

of writing and ignoring other important dimensions, such as developing ideas, elaborating ideas, and organizing ideas in a meaningful way (Stevenson & Phakiti, 2014). Furthermore, learners might not be able to cope with heavy cognitive overload imposed by this AI-powered feedback type as it has a comprehensive and unfocused nature (Ranalli, 2018). Finally, it has been stated that both teacher and learners cannot make the most of this kind of feedback as they have not fully understood how to utilize AF yet, which has not resulted in desired progress in learners' writing performance (Wang et al., 2020).

Based on all these discussions related to the strengths and weaknesses of the AF, combining the AF with teacher feedback has been stated to be effective when giving feedback on learners' texts (Chen & Cheng, 2008; Chen, 2025). Teachers might offer their students a more influential feedback type that contributes to improvements in their overall writing performance and address their learners' errors in texts by benefiting from the affordances of both AF and teacher feedback (Haddadian, 2024). Teacher feedback can assume a crucial role to make up for the shortcomings of the AF (Haddadian, 2024). Specifically, since the AF is not capable of providing a communicative and dialogic negotiation with learners, and learners usually need their instructors' guidance in the process of multiple drafting, teacher feedback is essential to accomplish the goal of writing for communicative purposes (Chen & Cheng, 2008). Moreover, the AF supplies the same and generic explanations to all learners without taking into account their language abilities or individual differences, which makes it difficult to utilize the feedback. Therefore, teacher feedback might serve as a complementary practice to assist learners by clarifying the metalinguistic explanations provided by AI-powered tools that are sometimes difficult to understand for learners (Woodworth & Barkaoui, 2020). To summarise, combined automated and teacher feedback present various opportunities for learners to receive feedback from diverse sources (Stevenson, 2016). Therefore, teachers are expected to understand that AI-powered feedback can be used as a helpful supplement, but it cannot be considered as a replacement of teacher feedback (Link et al., 2022). They also need to bear in mind that combined feedback has been stated to be more influential than each feedback type in isolation (Haddadian, 2024).

2.5 Related Studies on the Use of Automated Feedback and Teacher Feedback in L2 Writing Classrooms

Technological advancements have allowed EFL and ESL teachers to integrate the AF provided by the AI-powered systems into their writing instruction. With the increasing importance attached to the use of this feedback type in L2 writing classrooms, there have been a great number of both naturalistic classroom-based studies and large-scale studies that aim to examine the integration of such a feedback type into writing classes. On the one hand, some studies have focused on how the AF can be embedded into L2 writing instruction in order to improve learners' writing and whether such an integration has an impact on learners' writing accuracy, quality, or performance. On the other hand, some other researchers have explored the learners' attitudes, perceptions, views, or opinions on utilizing this kind of feedback when writing their papers, assignments, or in-class tasks. Based on a detailed review of the AF studies in the literature, it can be stated that they have revealed various results related to the impact of using AF in writing classes. They have also found that learners have had diverse attitudes, perceptions, and opinions about employing such feedback in their writing classes.

2.5.1 Studies on the integration of AF into L2 writing instruction

When the studies that examine how AF can be integrated into L2 writing instruction in order to improve learners' writing skills and support teacher feedback are analysed, it can be stated that they have reported differing results. To illustrate, Warschauer and Grimes (2008) tried to investigate how AF provided by two AWE systems, *Criterion* and *MY Access!*, was utilized by a group of ESL learners who were studying at four secondary schools in the USA. Data were collected through semi-structured interviews with learners, classroom observations, a survey, and reports of learners' essays, which were given by the AWE systems. The results indicated that the learners did not utilize AF in their writing classes frequently, although they had favourable views of using AF when writing their essays. It was also shown in their study that the learners' revision practices were narrow and limited, although teachers argued that AF enhanced their students' revisions. Moreover, almost all of the revisions were made in three aspects of writing such as spelling, word choice, and grammar.

Likewise, Liu and Kunnan (2016) aimed to find out how AF through *WriteToLearn* could be incorporated into the writing classes of Chinese EFL university students in their study.

It was indicated in this study that the AI-powered tool could not always provide accurate and useful feedback to the learners, although it consistently provided timely feedback to them. Additionally, the results showed that the AF was not so capable of identifying certain error types as the use of articles, prepositions, and word choice made by Chinese undergraduate English major students, and it could not detect off-topic essays.

Besides, it has been pointed out in many studies that the integration of AF provided by AI-powered tools into writing classes significantly improved learners' writing accuracy, quality, and performance. For example, Wang et al. (2013) investigated the effect of using AF through *Correct English* on Taiwanese EFL university students' writing accuracy and learner autonomy. The results of their experimental study pointed out significant differences between the experimental group who received AF and the control group who received teacher feedback on their writing in terms of writing accuracy. The experimental group made fewer errors in their written works compared to the control group. However, the AF was found to be limited in providing feedback related to content and organization. It was also revealed in the study that the learners who received AF were more willing to produce more and better texts, and complete their writing tasks.

In order to examine how the use of AF in writing classes might affect the writing performance of Saudi EFL learners, Aluthman (2016) probed into the effect of AF through *Criterion* on Saudi EFL university learners' writing skill. They completed 10 essay writing tasks by receiving feedback through *Criterion*. The results indicated that there was a significant difference between the scores of their first essay writing task and the last essay writing task. That is, AF was found to be very effective in improving the learners' overall writing performance.

In the same vein, Liao (2016) investigated the effect of using AF provided by *Criterion* on reducing the grammatical errors which Taiwanese EFL university students made in their writing. A time-series research design, in which measurements of grammatical errors in student writing were taken at various points during a nine-week programme, was adopted in the study. The results revealed that using AF as a supplementary feedback tool facilitated the local aspects of writing (e.g., grammar, mechanics, and punctuation) and improved the learners' grammatical accuracy in writing.

In another experimental study, Ghufroon and Rosyida (2018) explored the impact of using AF through *Grammarly* on reducing Indonesian EFL university students' errors in

writing. The control group received teacher feedback while the experimental group received only AF on their writing. Their study concluded that the AF helped the learners to reduce their errors in three aspects of writing such as vocabulary use, grammar, and mechanics, but it could not improve the dimensions of writing including content and organization as much as teacher feedback.

Similarly, Hassanzadeh and Fotoohnejad (2021) attempted to find out the effect of AF through *Criterion* on Iranian EFL university students' writing quality. Learners were assigned into two groups: the AF group and teacher feedback group. Both groups of the learners completed six writing tasks, including a writing task as pre and post-test, and five writing tasks on which they received feedback through either *Criterion* or teacher feedback. It was indicated that both the experimental and the control group gained significant improvements from the pre- to post-writing tasks. The results also showed that the AF group significantly outperformed the control group in the post-writing task.

Likewise, Wei et al. (2023) aimed to find out whether the computer-generated feedback through *Grammarly* had an impact on Chinese EFL students' writing skill in terms of task achievement, coherence and cohesion, lexicon, and grammatical accuracy or not. Learners were randomly assigned into control and experimental groups. The experimental group learners received feedback on their essays through *Grammarly*, followed by a writing workshop practice which was held in one-hour sessions every week for a period of 12 weeks and aimed to complement the AF by instructing learners about how to improve their writing skills. A traditional writing instruction was applied to the control group learners, in which they wrote their essays for a period of 8 weeks, and their essays were graded based on a rubric including the aspects of spelling, grammar, vocabulary, and organization. Just like the experimental group, the control group also attended a writing workshop every week, which informed them about how to develop their writing skills. The results showed that AF through *Grammarly* had a positive impact on L2 writing skills of learners, especially for lower proficiency learners.

However, it has been also revealed in the literature that the AF did not enable learners to significantly outperform their peers who received traditional teacher feedback. For instance, Bae and Jung (2024) aimed to examine the effect of two feedback types as teacher feedback and AI-powered feedback on Korean EFL middle school learners' writing skills in their experimental study. The experimental group completed their writing

tasks by receiving feedback through *Grammarly* while the control group received traditional teacher feedback on the errors they made in their essays. Quantitative data were collected through a pre-essay writing task and post-essay writing task, which both groups of the learners completed on the *Write & Improve* platform. The results showed that both AI-powered feedback and teacher feedback group learners performed better significantly in their post-essay writing tasks, but there was not a significant difference between the post-essay writing scores of the experimental group and control group. That is, although the type of feedback did not significantly affect the levels of learners' writing improvement, each feedback type had a great potential to improve and support learners' writing proficiency on its own.

Based on the idea that a combination of AF and teacher feedback might be more effective in improving learners' writing skill than each feedback type in isolation (Haddadian, 2024), some studies have examined the impact of such a combined feedback type on learners' writing performance. For example, Link et al. (2022) investigated the impact of using combined feedback (AF through *Criterion* and teacher feedback) on Iranian EFL learners' text revision practices and their writing improvement in both short and long terms. The results showed that the use of AF affected the students' revision practices positively. It was also indicated in the study that both the control group who received only teacher feedback and the experimental group who received a combination of AF and teacher feedback improved their writing accuracy. Moreover, the experimental group who received combined feedback could retain their improvement in writing accuracy in the long term compared to the control group learners in the teacher feedback condition.

In addition, Cheng and Zhang (2024) conducted an experimental study with a group of Chinese EFL undergraduate students, who were English majors in order to investigate the impact of a combined feedback type (AF through *Pigai* and teacher feedback) on the writing performance of learners. The control group received only teacher feedback on their writing tasks and revised them while the experimental group received AI-powered feedback on their first drafts, and then they received teacher feedback and revised their writing tasks. The results showed that the experimental group performed better than the control group in their post writing tasks in terms of vocabulary, language use, content, and organization. In addition, it was also noted in their study that the experimental group improved their writing performance substantially from the pre-writing task to post-

writing task in terms of all writing aspects while there was not a significant improvement from the pre-writing task to the post-writing task in the control group except in the aspect of language use.

2.5.2 Studies on the learners' views of using AF and teacher feedback in L2 writing classrooms

It has been pointed out in previous studies that the study of AF in naturalistic classroom settings is crucial and students' perceptions of the strengths and shortcomings of AF should be investigated in order to enable teachers to make informed decisions about how this feedback type might be used in L2 writing classrooms more effectively (Fan, 2023). Therefore, some researchers have focused on only the investigation of the learners' attitudes, opinions, views, or perceptions of using AF and teacher feedback in their writing classes. It has been revealed in such studies that both AF and teacher feedback have their own advantages and disadvantages.

A pivotal study by Chen and Cheng (2008) investigated how AF through *MY Access!* could be integrated into Chinese EFL college students' writing classes and their perceptions of using AF in writing. The results demonstrated that using AF alone was not perceived very positively by students. Learners held more positive attitudes towards AF that was followed by human feedback such as peer or teacher. It was also noted in their study that teachers need to take into account learning goals and learner proficiency levels when integrating AF into classroom-based writing instruction.

In addition, O'Neill and Russell (2019) aimed to explore a group of ESL learners' perceptions of using AF through *Grammarly* when writing their texts. An experimental study was conducted with a group of ESL learners who were enrolled for a degree or preparing for university in the English Language Centre at an Australian university. Experimental group learners received feedback through *Grammarly*. They were also given explanations by their instructor when they had difficulties in understanding metalinguistic explanations provided by the system. As for the control group learners, they received feedback from their teachers by means of the feature of track changes provided by the *Microsoft Office Word Programme*. A survey was applied to learners in order to learn their perceptions of the feedback type they received. The results showed that the learners who received AF agreed that *Grammarly* gave enough support and assistance to them, and the suggestions provided by *Grammarly* were easy to understand

and useful. They also stated that AF both enhanced their confidence in accomplishing their writing assignments and improved the quality of their writing assignments. However, some shortcomings related to using AF in writing classes were also reported by the learners. Learners reported that the AF sometimes gave inaccurate feedback to them and could not identify or misidentified some errors. Regarding teacher feedback used by the control group, the learners stated that teacher feedback was similar to AF in terms of its being useful and easy to understand. Teacher feedback was also perceived to improve their confidence in language skills. Nevertheless, it was pointed out in their study that the control group learners were less satisfied with the amount of time allocated for teacher feedback, the amount of feedback provided, and its short- and long-term benefits compared to the experimental group learners.

Besides, Miranty and Widiati (2021) explored the perceptions of Indonesian English major students on the usefulness of AF provided by an AI-powered tool, *Grammarly* through questionnaires and semi-structured interviews. The results showed that receiving immediate and comprehensive feedback through *Grammarly* was perceived as useful and necessary by many learners across all years (the 1st, 2nd, 3rd year students) to revise their writings. However, some students stated that the AF through *Grammarly* was not clear enough and did not meet their expectations.

In the same vein, Alnasser (2022) attempted to explore Saudi EFL university students' perceptions of using AF through *Criterion* in their writing classes. A questionnaire was administered to the learners before and after the AF intervention in order to identify any changes in the perceptions of learners towards the use of AF. The results indicated that the learners already had positive perceptions of AF before receiving AF on their essays, and they had greater positive perceptions after they experienced writing by receiving feedback through *Criterion*. Nevertheless, there were a few students who were hesitant to regard the AF as a reliable feedback source before the intervention, but they started to consider it more reliable after their experiences with the AF. The results also showed that there were only a few students who expressed that they had technical difficulties during their writing experiences.

Furthermore, Chen and Pan (2022) examined the differences between the AF provided by *Aim Writing*, and traditional teacher feedback. They also explored Chinese EFL learners' perceptions of feedback types and their preferences for feedback type. The

learners completed three essay writing tasks during one semester. Learners first received traditional teacher feedback on their writing tasks, and then they uploaded their assignments to the *Aim Writing* platform to get automated feedback. Semi-structured interviews were conducted to identify any similarities or differences between AF and teacher feedback. The findings demonstrated that learners could receive instant feedback through *Aim Writing* whereas they usually received teacher feedback one week after they handed in their writing tasks. Feedback immediacy provided by the *Aim Writing* was considered by the sample to affect their motivation to revise their writing positively. It was also found out in this study that both AF and teacher feedback were perceived to enhance their grammatical competence. Moreover, it was indicated that the focus of AF was on grammatical errors while teacher feedback included comments in terms of grammar, content, and organization. As for their preferences, they stated that a hybrid feedback model, which consisted of both AF and teacher feedback would be better for them.

Similarly, a recent study by Wilson et al. (2024) probed into the perceptions of a group of ESL middle school learners who received AF through *MI Write* on their writing. Data were collected through an online survey, various scales, and open-ended survey questions in order to identify the learners' views of the usefulness, usability, and desirability of AF. The findings revealed that the system was perceived as easy to use and desirable by most learners. It was also found out in their study that most students believed that the AF was useful as it enabled them to revise their texts and recognize their weaknesses. However, some students criticized the AF because it sometimes provided inaccurate feedback. They also stated that the AF could have included more instructional guidance on how to correct their errors.

2.5.3 Studies investigating both the impact of using AF and teacher feedback and learners' views

Some researchers have examined both the impact of AF and teacher feedback on learners' writing performance and the learners' views on receiving such types of feedback in order to gain a deeper insight into their experiences with AF and teacher feedback.

Some of them have revealed that the use of AF had a positive impact on the learners' writing skill and the learners had positive attitudes or views on using AF in their writing classes. For example, El-Ebyary and Windeatt (2010) investigated the impact of using

AF through *Criterion* on Egyptian EFL university students' writing process and product. They also aimed to explore the learners' attitudes towards using AF in writing classes. Data were collected through pre- and post-treatment questionnaires, interviews, and the learners' progress reports given by the tool. The results showed that the AF enabled learners to reduce their grammatical errors in their writing. It was also reported by the learners that the AF allowed them to produce their multiple drafts more willingly.

Similarly, Cheng (2017) also examined both the impact of AF on the quality of Chinese EFL university students' writing performance and their perceptions of using AF in their reflective journal writing tasks. The experimental group learners were given AF through a web-based classification system, which adopted the A-S-E-R framework (Analysis, Reformulation and Future Application, Strategy Application, External Influences, Report of Events or Experiences) developed by Chau and Cheng (2012) to evaluate learners' reflective journals. However, the control group learners could not receive AF on their reflective journals. The results demonstrated that the AF was able to improve the reflective journal writing of the learners significantly. It was also pointed out in this study that most of the learners had positive attitudes towards receiving AF in their reflective journal writing. Learners reported that the AF was user-friendly and quick, and it was capable of identifying the aspects of writing that needed improvement easily and providing suggestions and examples.

In addition, it has been shown in some other studies that learners could significantly improve their writing skill thanks to the AF. However, the learners pointed out some issues related to the use of AF although they mostly enjoyed using AF in their writing classes. For instance, Li et al. (2015) investigated the impact of AF through *Criterion* on the writing practice and performance of ESL undergraduate learners in the USA. They also explored their views of using such a feedback type in their writing classes. Learners completed four essay writing tasks by receiving AF. Data were collected through reports given by *Criterion*, which showed the learners' error rates and number of submissions. Semi-structured interviews were also conducted in order to explore their perceptions of using AF in their essay writing tasks. The results indicated that AF through *Criterion* significantly improved learners' writing accuracy (grammar, usage, mechanics, and style). In addition, the qualitative findings showed that learners were usually satisfied with the use of AF as it helped them to resolve their language-related problems. They also

stated that the AF led them to engage in writing tasks and improve their linguistic accuracy. However, they had contrary opinions about whether the AF was useful for improving the content and organization aspects of writing or not.

Parra and Calero (2019) also carried out a study in order to investigate the impact of using AF through two AI-powered tools, *Grammarly* and *Grammarly*, on the writing performance of EFL teacher trainees studying at an Ecuadorian public university. They also aimed to find out the learners' attitudes towards using AF in their writing classes. The results showed that the learners' writing performance significantly improved in terms of grammar, mechanics, and style thanks to AF. Nevertheless, it was also found out in the study that human feedback was needed to compensate for the limitations of AF, such as being insufficient in providing feedback in the aspects of content and organization. Additionally, the learners generally held positive attitudes towards using AF in writing classes, although some learners stated that they were dissatisfied with using AF as it lacked meaningful interaction with learners.

In addition, Wang and Han (2022) aimed to compare the effects of teacher feedback and AF through *Pigaiwang* on Chinese EFL learners' revision quality and writing proficiency in their experimental study. They also explored the learners' perceptions of usefulness, ease of use, strengths, and weaknesses of two types of feedback. The experimental group learners received AF while the control group learners received teacher feedback. It was revealed that the experimental group outperformed the control group significantly in terms of writing proficiency. Concerning the learners' views of each feedback type, it was pointed out that teacher feedback had higher ratings in terms of the usefulness and ease of use than the AF. The qualitative findings also showed that teacher feedback had some advantages such as providing balanced comments about both positive and negative aspects of learners' writing, being clear and encouraging for learners, although it had some shortcomings such as lack of detailed explanations and including too many comments. Regarding the affordances of AF, learners reported that it helped learners to identify and correct their errors easily by providing suggestions and detailed explanations. As for its drawbacks, many learners expressed that the AF was ambiguous and incomprehensible. It was also reported to focus on mechanical problems too much.

Besides, Barrot (2023) carried out an experimental study in order to investigate the effect of AF through *Grammarly* on the writing accuracy of EFL learners who were studying at

a university in the Philippines and their views of using this feedback type when writing their essays. The experimental group learners received feedback through *Grammarly* on their argumentative essays while the control group learners did not receive any feedback on their essays. The results pointed out that the learners who were given AF enhanced their writing accuracy in their post writing tasks. The findings of the open-ended questionnaire revealed that many learners found the feature of metalinguistic explanations given by *Grammarly* as useful as it enabled them to learn and comprehend grammar rules. In addition, nearly half of the learners stated that the suggested corrections through *Grammarly* helped them to take control of their learning. It was also pointed out in the study that suggested corrections were effective as they allowed learners to notice the gaps between what they produced and the correct forms of language use. Nevertheless, a few learners mentioned some challenges they experienced with *Grammarly*. Specifically, they reported that *Grammarly* could not offer them enough linguistic explanation. They also stated that overcorrection provided by *Grammarly* caused them to suffer from cognitive overload.

However, it has also been pointed out in the literature that the AF did not enable learners to gain significant improvements in writing performance. To illustrate, Huang and Renandya (2020) carried out an experimental study to investigate the impact of using AF through *Pigai* on Chinese EFL lower proficiency university students' revision quality in a process-based writing classroom and the learners' perceptions of using such a feedback type in their writing classes. The experimental group learners were first given AF through *Pigai* on their writing tasks, and then they participated in peer feedback sessions in which they evaluated each other's texts and gave feedback. As for the control group learners, they also gave peer feedback to each other's compositions after they completed writing them. However, they did not receive any feedback through either *Pigai* or the teacher. Data were collected by means of pre- and post-writing tasks, and a questionnaire about their views. It was indicated in their study that there were no significant differences between the experimental and control group in terms of revision quality of texts. However, most of the students perceived AF as clear and comprehensible. They also considered that the AF was helpful for them to identify their writing problems and enhance their writing performance. Nevertheless, they also expressed that the AF had some shortcomings, such as the use of indirect feedback, confusing technical terms, lack of feedback on content and organization aspects of writing.

Based on the argument that a combination of AF and teacher feedback might be better in order to improve students' writing performance (Chen, 2025; Liu & Kunnan, 2016), researchers have increasingly tended to investigate the impact of using combined AF and teacher feedback on learners' writing performance, and their views related to the use of such a combined feedback type in their writing classes. For example, Lee et al. (2013) investigated whether a blended feedback type (computer-generated feedback through *Essay Critiquing System (ECS)* and teacher feedback) had an impact on the writing skill of EFL secondary school learners in terms of content and organization. They also explored the learners' opinions about the use of such a blended feedback type in their writing classes. There were two groups as a control group, who received only teacher feedback, and an experimental group, who received both AF and teacher feedback. Learners' opinions were collected through semi-structured interviews. The results indicated that there was a significant difference between the control and experimental group learners in terms of their second and fifth essay scores. That is, the experimental group learners made greater improvements in writing than the control group learners. As for the qualitative findings, it was found out in the study that many learners stated that the computer-generated feedback helped them to write better in terms of development of ideas and organization, although it could not notice their grammatical errors in their essays.

In the same vein, Wilson and Czik (2016) investigated the impact of two feedback types as teacher feedback and combined feedback (AF and teacher feedback) on the writing quality of a group of ESL middle school learners in the USA in their experimental study. This study also explored the impact of such feedback types on the learners' writing motivation. Two teachers agreed to participate in this study. Two intact classes from each teacher's schedule were assigned to the combined feedback condition while two classes from the same two teachers' schedules were defined as the control group. The control group learners received teacher feedback while the experimental group learners received both teacher feedback and AF through *PEG Writing* on their writing. Data were collected through reports given by the tool, which showed the learners' levels and analytic writing scores. The results showed that there were no significant differences between the experimental and control groups in the amount of feedback that the teachers gave to students. However, there were significant differences between two groups in terms of the focus of the feedback that these two teachers provided. That is, teachers mainly focused

on the capitalization errors of the control group learners while they gave more feedback on the aspect of sentence structure and idea development in the experimental group. In addition, the results revealed no significant differences between two groups in terms of writing quality. Besides, the findings revealed that combined feedback type increased learners' writing motivation.

Similarly, Tang and Rich (2017) examined whether the use of combined feedback (teacher feedback and AF through *Writing Roadmap*) affected the writing performance of both Chinese EFL secondary and university students in their large-scale study. The learners' perceptions and experiences with using such a feedback type in their writing classes were also explored in this study. The control group learners received only teacher feedback on their writing while the experimental group learners were given both AF and teacher feedback on their written works. The results revealed that the experimental group outperformed the control group in terms of writing performance. It was also indicated in the study that the learners who received a combination of AF and teacher feedback were more motivated to revise their essays and using this feedback type enabled them to become more autonomous via dynamic interaction with both feedback types.

Salavatizadeh and Tahriri (2020) also investigated the effect of using combined AF and teacher feedback on Iranian EFL students' essay writing performance and the learners' perceptions regarding the use of such feedback type in their writing classes. The experimental group learners were given both AF through *Paper-Rater* and teacher feedback while the control group received only teacher feedback. The result showed that the combined feedback type enabled learners to perform better in their essay writing tasks. In addition, it was indicated in this study that most of the learners had positive perceptions of using combined feedback type in their essay writing tasks. They also reported that combined feedback could identify their weaknesses in their writing tasks and provide suggestions and examples on them, which increased their motivation. However, some drawbacks of using combined feedback were also reported by learners. For instance, a bit boring and long-lasting feedback process, scoring method deficiency, unreliable feedback due to teacher tiredness were some disadvantages of using combined feedback in writing classes.

In another study, Thi and Nikolov (2022) probed into both the impact of integrating AF through *Grammarly* into writing instruction to support teacher feedback on the writing

performance of English major students at a university in Myanmar, and the learners' views on usefulness of each feedback type in essay writing. During the feedback intervention, learners received teacher feedback on their first essay writing tasks. They received AF through *Grammarly* on their second essay writing tasks. They received a combination of AF and teacher feedback on their third and fourth essay writing tasks. After they completed their essay writing tasks, a self-assessment questionnaire was conducted to find out their views of usefulness of each feedback type. The results showed that learners made significant improvements from their pre-writing tasks to post-writing tasks in terms of writing performance. Regarding the learners' views of the usefulness of each feedback type, the learners reported that AF was more influential in improving their grammar and vocabulary than the other two feedback types, namely teacher feedback and combined feedback. However, no students reported that the AF contributed to improvement in content and organization aspects of writing. When it comes to the content and organization aspects of writing, teacher feedback and combined feedback was highly influential in improving these dimensions of writing. Additionally, the results showed that the combined feedback had a positive impact on improving each dimension of writing.

Moreover, Fan (2023) explored the impact of AF through *Grammarly* on Chinese EFL university students' writing quality and their perceptions of the use of AF in their writing tasks. The experimental group learners received combined automated and teacher feedback on their written works whereas the control group learners got only teacher feedback on the errors of their texts. It was revealed in this study that the learners who were given both AF and teacher feedback did not outperform their peers who were given only teacher feedback. The results of the questionnaire about their perceptions of the use of AF in their writing classes demonstrated that more than half of the learners regarded AF as clear to comprehend and helpful to improve their grammar and vocabulary knowledge, and enhance their writing performance. The researcher also concluded that although the majority of the students had positive perceptions of using AF, there were few students who had negative attitudes towards AF.

In addition, Mohammadi et al. (2023) investigated the impact of three feedback modes, such as teacher feedback, AF through *Virtual Writing Tutor*, and a combination of AF and teacher feedback on Iranian EFL learners' writing improvement in their experimental

study. They also explored the learners' perceptions of using these three feedback modes in their writing classes. The results showed that the combined feedback group outperformed the AF group in terms of writing quality although no significant difference was found between the combined feedback group and teacher feedback group in terms of writing quality. It was also pointed out in their study that the teacher feedback group outperformed the AF group in terms of writing quality. Additionally, the learners generally showed positive attitudes towards using each feedback mode they received on their writing. Nevertheless, they stated that receiving both AF and teacher feedback on their writing could be better than receiving either of them in isolation when they were asked about their preferences for their future writing assignments.

Likewise, a recent study by Haddadian (2024) also investigated the impact of three feedback types as AF through *Criterion*, teacher feedback, and integrated feedback (AF and teacher feedback) on the writing accuracy and writing apprehension of Iranian EFL learners who were preparing for TOEFL exams at nine private language schools. They were assigned into three groups, including teacher feedback, AF, and integrated feedback group and their writing apprehension levels were also examined by means of questionnaires. The results showed that there was a significant difference between the combined feedback group and the other two groups in terms of writing accuracy. The combined feedback group learners performed better than the learners of the other two groups in their post-tests. However, there was not a significant difference between teacher feedback and AF group in terms of writing accuracy. It was also found out in the study that the integrated feedback group showed more reduction in writing apprehension than the other two groups. The teacher feedback group also showed more reduction in writing apprehension than the AF group.

2.5.4 Studies on the use of AF and teacher feedback and learners' views about feedback types in the Turkish EFL context

When the literature concerning AF studies in Turkish EFL context is analysed, it is noted that there are certain studies that aim to find out whether the use of AF and teacher feedback has an impact on Turkish EFL learners' writing performance or not, and the learners' views of using these kinds of feedback in their writing classes.

In some studies, researchers have compared the impact of AF and teacher feedback on the learners' writing performance and reported different results. To illustrate, Erdal-Bulut

(2019) investigated the impact of AF provided by *PEG Writing Scholar* on Turkish EFL university students' writing achievement through an experimental study. The control group learners received teacher feedback, whereas the experimental group learners received AF on their writing. Data were collected through various paragraph and essay writing tasks. The findings of this study revealed that the experimental group performed better than the control group significantly in their post writing tasks, although both groups gained significant improvements in their writing performance from pre-tests to post-tests.

Likewise, Yildiz and Gonen (2024) investigated the impact of AF provided by *Criterion* on the writing accuracy of Turkish EFL university students, and the learners' views of using such feedback type when writing their essays. The findings pointed out significant differences between the experimental group who received feedback through *Criterion* and the control group who received traditional teacher feedback in terms of correcting ill-formed verbs, articles and punctuation errors. That is, the learners in the experimental group performed better than the control group learners when correcting ill-formed verbs, articles, and punctuation errors. However, there was not a significant difference between the experimental group and the control group learners in terms of correcting spelling, preposition, wrong word usage, subject-verb agreement, sentence structure, run-on and fragment sentence errors. Regarding the learners' views of using AF in their writing classes, learners stated that they were satisfied with the quality and quantity of the feedback given by *Criterion*. They also reported that AF had a positive effect on gaining autonomy and enhancing their motivation. When learners were asked about their preferences for feedback in their next writing tasks, they said that receiving a combination of AF and teacher feedback would be better for them.

In other studies, researchers have compared the impact of teacher feedback and combined feedback (AF and teacher feedback) on the learners' writing performance. For example, Altuntas (2021) probed into the impact of AF provided by two AI-powered tools, *Grammarly* and *Pro Writing Aid*, on Turkish EFL undergraduate students' writing achievement, and the learners' views of using AF in their writing. Learners were divided into three groups: A control group who received teacher feedback, an experimental group who received AF through *Grammarly* and teacher feedback, and another experimental group who received AF provided by *Pro Writing Aid* and teacher feedback. Data were collected through six writing tasks, open-ended survey questions, and focus group

interviews. The results revealed that there was no significant difference between the control group and experimental groups in terms of focus, content, and organization aspects of writing, but the learners in the two experimental groups outperformed the control group learners in terms of vocabulary use, grammar, spelling, and mechanics. It was also found out in this study that learners had positive opinions about the use of AF in writing classes because it was useful and helped them to understand their errors and save time allocated for the process of editing writing tasks. Nevertheless, it was also pointed out that the AF was not capable of providing feedback on content and organization, and it sometimes provided inaccurate feedback.

Likewise, Bako (2023) investigated the impact of receiving combined feedback (AF through *Criterion* and teacher feedback) on the writing achievement of Turkish EFL university students, and their perceptions of using such feedback type when writing their written works. A quasi-experimental design, in which the control group received teacher feedback while the experimental group received combined feedback, was employed in this study, and their perceptions were explored through semi-structured interviews. The results showed that there was no significant difference between the experimental group and control group in terms of writing achievement. Regarding the improvements in writing within groups, it was revealed that the experimental group significantly performed better in their post writing tasks, but there was not a significant difference between the scores of pre-writing tasks and post-writing tasks in the control group. The findings of the semi-structured interviews indicated that learners had positive attitudes towards using AF through *Criterion* and combined feedback in their writing classes, and most of the students preferred using both AF and teacher feedback in their writing classes when they were asked about their feedback preferences. The learners also reported that the AF usually focused on lower-level writing aspects, including grammar and mechanics while teacher feedback provided a detailed suggestion and explanation on the content and organization aspects of writing. Moreover, the learners mentioned that receiving AF improved their writing skills especially in terms of grammar, usage, and mechanics. They also stated that the AF was helpful in improving the content and organization aspects of writing. Regarding the strengths and drawbacks of using AF when writing their essays, the learners pointed out that the AF was easy to use and effective as it enabled learners to write various drafts, and provided immediate feedback. However, some learners stated

that the AF provided by *Criterion* was difficult to understand and insufficient, and the AF tool did not have an appealing interface.

Lastly, Han and Sari (2024) examined the impact of employing both AF through *Criterion* and teacher feedback on Turkish EFL university students' writing performance, and the learners' perceptions of receiving combined feedback on their writing. Based on a between-groups research design, the control group learners received only teacher feedback on their writing while the experimental group learners received a combination of AF through *Criterion* and teacher feedback. The results showed that the experimental group improved their writing scores as much as the control group. It was also indicated in the study that the experimental group learners made fewer errors in grammar and mechanics than the control group learners. Additionally, most of the learners were found to favour the use of AF in their writing classes because it was useful, motivating, detailed, and rich in examples. Nevertheless, some learners expressed their dissatisfaction towards using it as they found AF unclear and vague, and it had no focus on content development.

All in all, when the literature related to the use of AF and teacher feedback in writing classes is analysed, it can be recognized that a significant number of studies which have included various learner populations and research designs have been conducted to better understand the potential of using AF and teacher feedback in improving learners' writing performance. It has been pointed out in many studies that the integration of AF into EFL writing instruction as a complementary tool for teacher feedback enables learners to improve their writing skills. In addition, learners have usually reported that they prefer receiving a combination of AF and teacher feedback when composing their written works when the affordances and shortcomings of each feedback type are taken into consideration. Moreover, the analysis of the related studies conducted in the Turkish EFL context revealed that almost none of them investigated the impact of combined feedback (AF and teacher feedback) on the writing skills of Turkish EFL middle school learners; rather, they focused on university students. Therefore, the current study is believed to make contributions to the literature on how effectively combined feedback can be integrated into EFL writing instruction for the learners studying at the middle school level.

3 METHODOLOGY

3.1 Research Design

A mixed-methods explanatory sequential research design was adopted in the current study because quantitative data were collected and analysed first, and then qualitative data were collected and analysed in two consecutive phases within one study to gain a better understanding of the research problems (Creswell, 2005; Ivankova et al., 2006).

In order to find out the impact of combined feedback type on the learners' paragraph writing, a quasi-experimental study was designed in which pre- and post- writing tasks of experimental and control groups of learners were first collected and analysed. Then, to uncover their views of using such a kind of feedback in their writing classes, semi-structured interviews were conducted with the experimental group of learners and the learners' responses given to the interview questions were analysed to explain the statistical results obtained in the quantitative phase more in depth (Creswell, 2003).

That is, in the quantitative phase of the study, a quasi-experimental research design was used because the learners could not be assigned randomly to experimental and control groups because of the school regulations (Creswell, 2012). In the qualitative phase of the study, data were collected through semi-structured interviews. After collecting and analysing both forms of data, quantitative and qualitative findings were interpreted in order to gain a better insight about the effect of the combined automated and teacher feedback on the learners' paragraph writing performance and the learners' views of using such a feedback type when completing their writing tasks.

3.2 Participants and Research Context

A total of 38 EFL learners who were in the 7th grade and studied at a public middle school in Konya, Turkey took part in this study. Convenience sampling was used because the researcher also worked as an English teacher at the school in which the current study was conducted and the learners were easy for the researcher to access and keep in touch with (Dörnyei, 2007). There were two intact classes in this study (Class A $n=18$; Class B $n=20$), and these two classes were randomly assigned to the feedback conditions as the experimental group and control group. Class A was identified as the control group while Class B was defined as the experimental group. There were 19 females and 19 males in total in the sample. Their ages ranged from 12 to 14. It is stated in the English Curriculum

defined by the Turkish Ministry of National Education (MoNE) that the learners' English language proficiency levels are assumed to be A2, which is aligned with the Common European Framework of Reference for Languages (CEFR) (MoNE, 2018). They had compulsory four-lesson hours of English a week. The course book, which was provided by the MoNE and titled *English 7*, consisted of topics and functions aligned with A2 proficiency level in the CEFR. In EFL writing classes, Turkish EFL learners at this level usually focus on various paragraph writing tasks including descriptive, narrative, process, invitation, opinion paragraph writing tasks, which are appropriate for their language proficiency levels and the functions of the English curriculum (see Appendix-1). A detailed description of the participants and research context is presented in Table 3.1 below.

Table 3.1

Characteristics of the Participants and Research Context

Sample Characteristics	Control Group	Experimental Group
Number of the learners	18	20
Gender	10 females 8 males	9 females 11 males
Age Range	12-14	12-14
Proficiency Level	A2	A2
Grade Level	7-A	7-B
Weekly English Lesson Hours	4	4

3.3 Data Collection Instruments

Both quantitative and qualitative data collection tools were employed in the current study in order to investigate the impact of combined AF and teacher feedback on the learners' writing performance, and their opinions on receiving a combination of AF and teacher feedback when writing their different types of paragraphs. In the quantitative part of the study, both groups of the learners were asked to write a self-introduction text as the pre- and post-writing task. Regarding the qualitative part of the study, semi-structured interviews were administered to the experimental group learners to gain a better understanding of their views of using both AF and teacher feedback in their paragraph writing tasks.

3.3.1 Pre- and post-writing tasks

Before the feedback intervention started, a pre-writing task was administered to the learners in both the control and experimental group in order to identify whether or not these two groups differed from each other significantly in terms of writing performance. Learners were given a one-lesson hour (40 minutes) to write a 50-100 words length self-introduction text in English, including their personal information, appearance and personality, daily routines, and free time activities (see Appendix-2). They were not allowed to utilize any kind of resources such as their course books, dictionaries, and study notes, or to interact with each other when completing their pre-writing tasks. In the development and design of this pre-writing task, one colleague who worked in the same institution as an English teacher was consulted, and her suggestions and opinions were taken into consideration in order to avoid any misunderstandings or confusion related to the task. Furthermore, the learners' proficiency levels and interests, and the topics and functions defined in the English curriculum adopted during the academic years of 2024 and 2025 were considered. Following the development of this task, another expert in the same field of study gave opinions about the appropriateness of the content and design of the tasks and accordingly, some further revisions were made.

Regarding the post-writing task, both groups of the learners accomplished a post-writing task in order to understand whether the feedback intervention had an impact on their writing performance. The post-writing task was the same as the pre-writing task in terms of content and structure (see Appendix-3). Learners were given 40 minutes again and asked to write a 50-100 words length self-introduction text in English. Just like the pre-writing task conditions, they were not permitted to use any kind of educational resources or ask for help from each other during the task. In order to ensure inter-rater reliability, both pre- and post-writing tasks of the control and experimental group learners were evaluated by the researcher and a second rater, who worked as an English teacher in another public middle school and had a teaching experience of 20 years.

3.3.2 Writing scoring rubric

A writing scoring rubric, which was developed by Wang and Liao (2008), was used in order to evaluate the learners' pre- and post-writing tasks in this study (see Appendix-4). This rubric offers teachers a detailed description of the learners' writing skill as it makes use of an analytic evaluation, which enables teachers to evaluate different aspects of

learners' written products (Weigle, 2013). It consists of five sub-skills, including focus, content, organization, spelling and grammar, and word usage. Learners' pre- and post-writing tasks are scored for each sub-skill of the mentioned rubric, and then, these scores are summed to constitute the learner's holistic score for their overall writing performance. Each sub-skill can be given maximum 10 points or minimum one point. That is, a learner's overall writing performance can be scored between 5 and 50 points based on this rubric.

3.3.3 Semi-structured interviews

In the qualitative part of the study, semi-structured interviews were employed as the data collection tool. Semi-structured interviews enable the learners to clarify their points of views and elaborate on a subject matter (Cohen et al., 2007). Following the week in which the post-writing task was administered to control and experimental group learners, semi-structured interviews were carried out to explore the experimental group learners' opinions on the use of combined AF and teacher feedback in their writing classes. A total of 12 experimental group learners volunteered to participate in the semi-structured interviews. Prior to conducting semi-structured interviews, they were given an informed consent form and asked to read and sign the form to make sure that they took part in these interviews voluntarily (see Appendix-5a for the Turkish version). The interviews were carried out in the learners' native language, Turkish, so that the learners could feel more comfortable and better express themselves. Besides, in order to avoid any ambiguities or misunderstandings, a Turkish language teacher was consulted in order to check the Turkish translation of the questions asked in the interviews. Each interview took about 10 minutes and were audio-recorded by taking permission from the interviewees. After the interviews were over, the researcher started to transcribe them in order to conduct a thematic analysis on the responses by the learners. The total duration of the interviews recorded is nearly 2 hours, and the interview transcripts include a total of 11 627 words.

As for the questions that were asked to the learners during the interview, the opinions and feedback of some experts, who were in the same field of study were granted about their appropriateness for the interview. There were seven questions, which were generally related to the learners' experiences and opinions of using combined AF and teacher feedback when completing their writing tasks. Specifically, the questions were related to the learners' general opinions about the use of AF and teacher feedback in their writing

classes, and the advantages and shortcomings of AF and teacher feedback. Learners were also asked about whether receiving such combined feedback improved their writing performance and if so, in which aspects they performed better, and which aspects of writing they still found challenging to improve at the end of the feedback intervention. Lastly, learners' feedback preferences for future writing tasks and their reasons were asked in the interview (see Appendix-6b for the English version).

3.4 The Feedback Intervention Design and Delivery

In order to determine whether a combination of AF and teacher feedback significantly improved the learners' paragraph writing performance or not, two intact classes were randomly assigned to the feedback conditions. Both classes were involved in an 8-week feedback intervention process. They constructed the first drafts of their assigned four different paragraph writing tasks. Then, they revised and edited their first drafts based on the feedback type they received through either the teacher only or the combination of AF and teacher. Finally, they submitted them to the teacher as the final versions of their writing tasks.

3.4.1 Feedback intervention tools

During the feedback intervention process, some tools including weekly paragraph writing tasks, an AI-powered feedback tool, *Grammarly*, and the writing scoring rubric were employed when providing feedback in order to improve the learners' writing performance.

3.4.1.1 Weekly paragraph writing tasks

Throughout the feedback intervention, both groups of the learners were asked to write four different types of paragraphs in English as a descriptive paragraph (see Appendix-7), a process paragraph (see Appendix-8), an invitation paragraph (see Appendix-9), and an opinion paragraph (see Appendix-10). In order to develop paragraph writing tasks, which were aligned with the learners' proficiency levels, the topics covered in the course book, and the functions defined by the English curriculum (MoNE, 2018), the researcher negotiated with and asked for opinion from one colleague, who worked in the same institution. After making some changes as a result of some suggestions provided by the colleague, the supervisor of the researcher was consulted, and her opinions, suggestions, and feedback were granted. Thus, the final versions of paragraph writing tasks were

developed by the researcher. All these paragraphs had to include between 50 and 100 words. Learners in both the experimental group and control group were engaged in writing these different kinds of paragraphs with various topics for a period of eight weeks. While the learners in the experimental group received a combination of teacher feedback and AF on their paragraph writing performance, the learners in the control group received only teacher feedback. Learners were required to write the first drafts of these paragraphs. After they received feedback based on the feedback types they were provided, they were asked to revise and edit their first drafts, and submit them to their teacher again.

3.4.1.2 Grammarly

As an AF tool, *Grammarly* was chosen to provide feedback to the experimental group learners in the study. The *Grammarly* software is one of the widely used AI-powered feedback tools (Barrot, 2023). It has been used as an AI-powered feedback tool since 2009 (Cavaleri & Dianati, 2016). It provides learners with opportunities both to learn their holistic scores immediately, and receive instant and diagnostic feedback related to their writing. It can be easily accessed through various web browsers such as *Firefox*, *Chrome*, and *Microsoft Edge*. It enables learners to choose the variety of English they want to use. Learners can notice and correct their errors in grammar, vocabulary, spelling, and punctuation immediately as they compose their written works on the editing textbox. In addition, it provides learners with both direct and indirect feedback. Learners' texts are shown on the left side of the screen and erroneous parts in the texts are underlined while direct feedback and metalinguistic explanations appear on the right side of the screen (see Appendix-11). It is up to learners to accept or dismiss the corrections or suggestions made by the tool. Furthermore, *Grammarly* has both free and pro versions. In its free version, learners are given feedback related to basic grammar, vocabulary, spelling and punctuation errors in their written works. Its pro version provides learners with vocabulary enhancement suggestions and ideas about how to better rewrite their texts in addition to AI-powered writing assistant, and plagiarism checking. In the present study, learners made use of the free version of the tool because it might be challenging for the learners to purchase its pro version.

As for the reasons why *Grammarly* is selected for the current study, it can be stated that since it is a widely used AI-powered feedback tool, the investigation of its potential use in L2 writing classrooms has steadily increased since 2021 (Dizon & Gayed, 2024). In

addition, it makes use of cutting-edge AI technologies and NLP to offer learners instant, quick, and diagnostic feedback on their writing (Miranty & Widiati, 2021). It also does not require learners to sign in a virtual class as in *Criterion* or other tools (Guo et al., 2022). Moreover, its reliability and accuracy in identifying errors have been reported in several studies (Barrot & Gabinete, 2021). For all these reasons, *Grammarly* is chosen for the study in order to provide error correction, suggestion and metalinguistic explanations for the experimental group learners.

3.4.1.3 Writing scoring rubric for providing teacher feedback

In addition to its use as a scoring tool, the writing scoring rubric developed by Wang and Liao (2008) was employed by the teacher when providing feedback on the writing tasks of the learners in both groups. In other words, the teacher offered written feedback on the learners' word choice and usage, their spelling and grammar knowledge, how to develop the paragraph content and focus, and how to organize their ideas in their written works by taking into consideration this rubric.

For both the control and experimental groups, the teacher tried to keep the time interval between the collection of learners' first drafts and giving feedback on them as short as possible, and made efforts to provide both written and oral feedback on both groups of the learners' first drafts within the same week. For each group, teacher feedback was provided in a direct and unfocused approach in addition to written comments given in endnotes.

Regarding the control group learners' writing, the teacher used this rubric to focus on grammar and spelling, punctuation, vocabulary use, focus, content, and organization aspects of the learners' texts (see Appendix-12).

As for the experimental group learners, the teacher mostly gave feedback on the vocabulary use, content, and organization aspects of their paragraph writing because the majority of the learners' errors in grammar, spelling, and punctuation aspects were already corrected by *Grammarly* (see Appendix-13). However, there were still some grammatical, spelling, punctuation errors in the learners' first drafts. This is because the learners might not have understood or misunderstood some metalinguistic explanations, and could not correct their errors. Therefore, the teacher still offered form-focused feedback on the experimental group learners' paragraph writing when needed.

3.4.2 Feedback intervention process

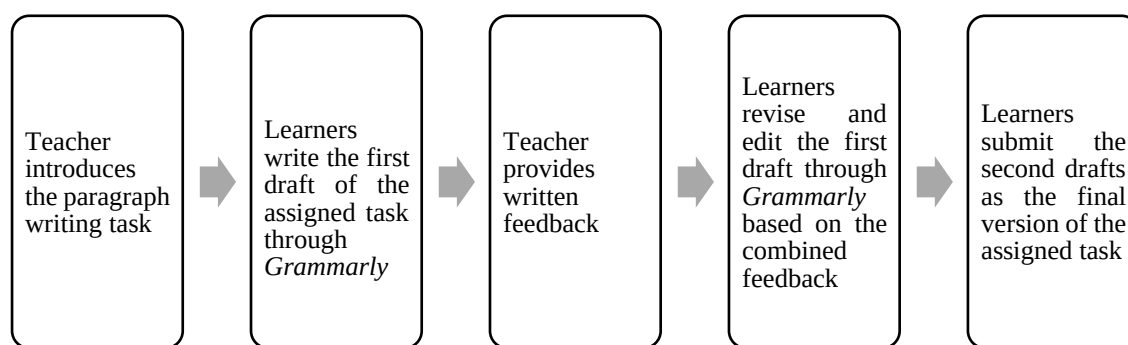
After the completion of the pre-writing task in both groups, the feedback intervention, which lasted for 8 weeks, started. During the feedback intervention, both groups of the learners finished four various paragraph writing tasks. Throughout the feedback intervention, both groups were provided with the same syllabus, course book, amount of time allocated for writing instruction, and paragraph writing topics in order to lessen the factors which might affect the research results. In addition, the researcher was the teacher of both experimental group and control group.

3.4.2.1 Feedback intervention process for the experimental group

The experimental group learners wrote the first drafts of the assigned paragraph writing tasks by receiving immediate AF through *Grammarly* in the school computer lab, and then they received teacher feedback on their first drafts in the same week. They revised and edited their first drafts based on both AF and teacher feedback by using *Grammarly* in the school computer the following week, and gave them to the teacher as the final version of the assigned tasks. An overview of the procedure of providing feedback on the learners' paragraph writing is indicated in Figure 3.1 below.

Figure 3.1

The General Procedure of Providing Feedback to the Experimental Group



This feedback intervention procedure was applied for the four assigned paragraph writing tasks over a period of eight weeks. By the third week of the study, the feedback intervention process started in the experimental group. In the third week, the teacher introduced how to write a descriptive paragraph to the learners and got them to analyse descriptive paragraph examples in the course book. Then, the learners were required to write a descriptive paragraph about their favourite TV programme, which included details such as type, main characters, theme, channel information, learners' opinions about it in

one class hour (40 minutes). They wrote the first drafts of their descriptive paragraphs by using the AF tool *Grammarly* in the school lab in one lesson hour. That is, they received immediate feedback and corrected their errors in grammar, spelling, vocabulary, and punctuation as they wrote their paragraphs on the editing text box of *Grammarly*. While they were completing their tasks, the teacher walked around and helped the learners who had difficulty in understanding the metalinguistic explanations given by the system or had technical problems. It was observed in this monitoring process that some learners wrote their paragraphs in 20 minutes or less, and then continuously attempted to increase their holistic score by making modifications while others continued to write their task until the last minutes. After they wrote their paragraphs, the learners were asked to download the file to the computer and hand in the printed versions of their paragraphs to the teacher. Then, they received teacher feedback on their first drafts within the same week. The teacher mainly focused on the focus, content, organization, and vocabulary use aspects of the experimental group learners' paragraphs because most of the learners' errors in spelling and grammar aspects were already corrected through *Grammarly*. However, the teacher continued to give feedback on the spelling and grammar aspects of some learners' writing because those learners possibly did not comprehend the metalinguistic explanations and direct feedback provided by *Grammarly*. In the fourth week of the study, learners in the experimental group rewrote their descriptive paragraphs on the editing text box of *Grammarly* by reviewing both timely AF and teacher feedback in one class hour. The teacher monitored them again while they were revising and editing their first drafts and offered assistance when needed. Upon completing their second drafts, they downloaded them to the computer, printed them out and submitted them to the teacher as the final version (see Appendix-14).

In the fifth week of the study, the learners were instructed about how to compose a process paragraph and they analysed the example process paragraphs in the course book. Then, they were asked to write a process paragraph about how to organize a birthday party in their classroom in one lesson hour through *Grammarly* in the school lab. As in the implementation of the descriptive paragraph writing task, the experimental group learners received teacher written and oral feedback on their process paragraph writing, mostly in terms of content, organization and vocabulary use within the same week. In the sixth week, learners were asked to revise and edit their first drafts of the process paragraph writing task by using *Grammarly* based on both AF and teacher feedback they received,

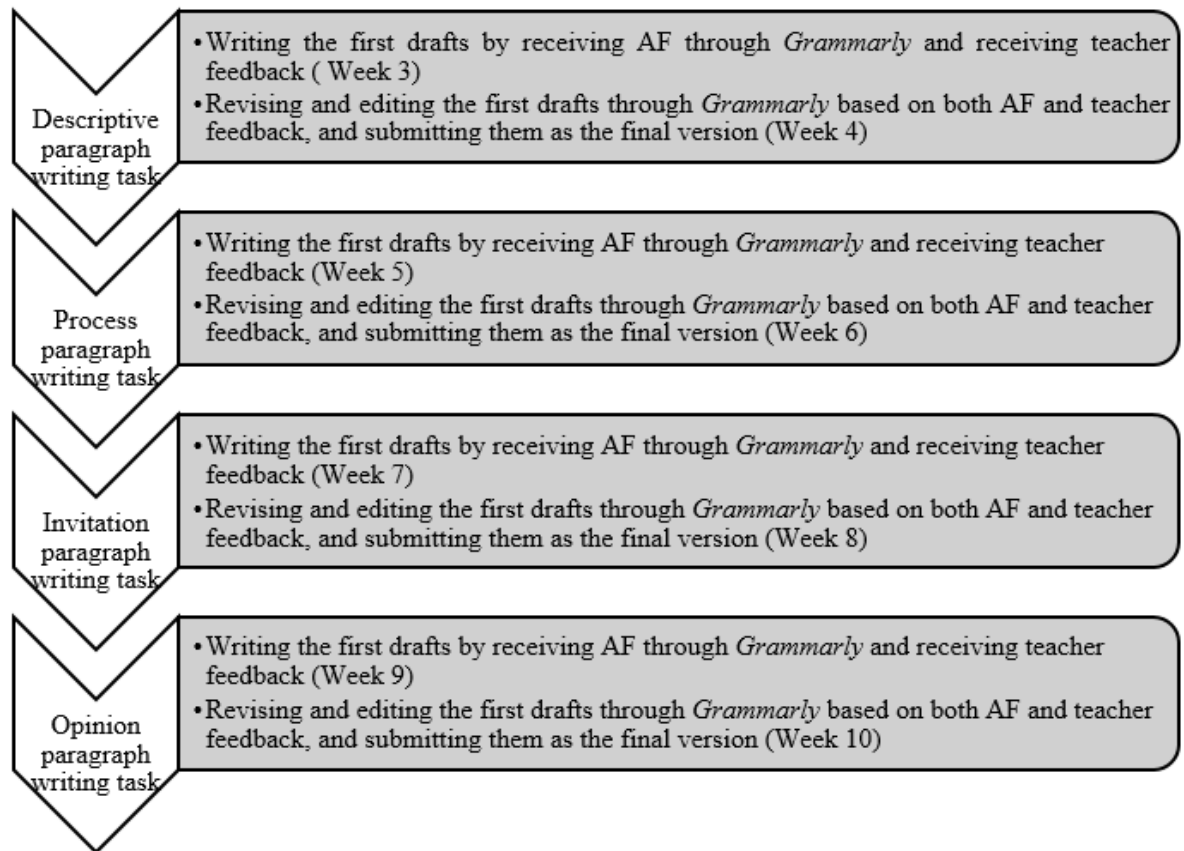
and submit them to the teacher as the final version. They were monitored by the teacher again in order to see whether they applied the suggestions, corrections, or comments to their drafts.

In the seventh week of the study, they received training about how to write an invitation card for an activity and they studied several invitation card examples. Then, they completed their invitation paragraph writing tasks, in which they prepared an invitation card for an imaginary birthday party. As in the descriptive and process paragraph writing tasks, they wrote the first drafts of the invitation paragraph writing tasks by using *Grammarly* in the school computer lab. Then, they received both teacher written and oral feedback on their invitation cards within the same week. In the eighth week, they made some changes in their invitation cards based on a combination of AF and teacher feedback by using *Grammarly* under the supervision of their teacher, and submitted the printed versions to the teacher.

In the ninth week of the study, the teacher focused on how to write an opinion paragraph and asked the learners to write an opinion paragraph about whether they were a TV addict or not. After they finished writing the first drafts of their opinion paragraphs through *Grammarly*, the same teacher feedback procedure implemented for the previous paragraph writing tasks was followed. In the tenth week, the same procedure, which was conducted in the fourth, sixth, and eighth weeks, was applied. That is, they wrote the second drafts of the opinion paragraph writing tasks by considering the feedback they received, and handed them in as the final version. An overview of the feedback intervention process applied in the experimental group can be seen in Figure 3.2 below.

Figure 3.2

The Feedback Intervention Process for the Experimental Group

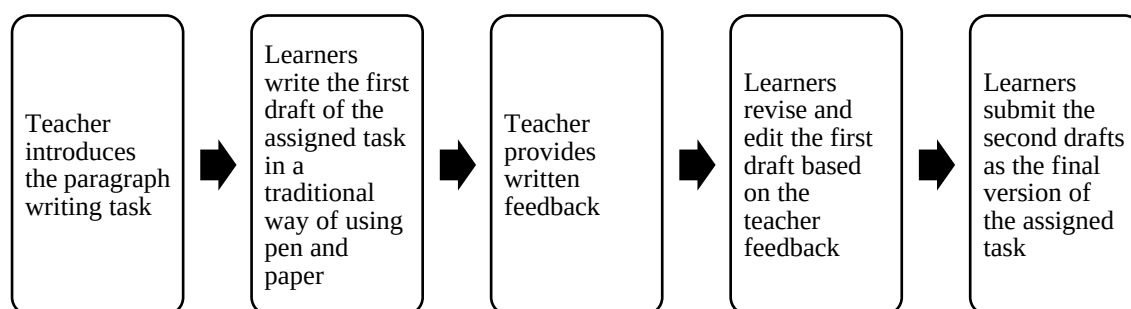


3.4.2.2 Feedback intervention process for the control group

The control group learners wrote the first drafts of the assigned paragraph writing tasks in a traditional manner using pen and paper, and then they received teacher feedback on their first drafts in the same week. They revised and edited their first drafts based on the teacher feedback they received the following week, and submitted them to the teacher as the final versions of the assigned tasks. A summary of the feedback procedure applied in the control group can be seen in Figure 3.3 below.

Figure 3.3

The General Procedure of Providing Feedback to the Control Group.



This feedback procedure was applied for the four assigned paragraph writing tasks over a period of eight weeks. By the third week of the study, the feedback intervention process started in the control group. Just like the procedure of the experimental group, the control group learners were instructed about how to write a descriptive paragraph and they were asked to analyse descriptive paragraph examples in the course book. Then, they wrote a descriptive paragraph about their favourite TV programme, which included details such as type, main characters, theme, channel information, learners' opinions about it in one class hour (40 minutes). They wrote the first drafts of their descriptive paragraphs in a traditional way of using pen and paper in one class hour and submitted them to the teacher. The teacher continuously monitored the learners, and offered them help when they needed help during the process of paragraph writing. Then, the learners received teacher feedback on the spelling and grammar, vocabulary use, focus, content, and organization aspects of their first drafts within the same week. In the fourth week of the study, the learners revised and edited their first drafts of the descriptive paragraph writing by taking into consideration teacher feedback. As in the experimental group, the teacher monitored the learners while they were editing their first drafts in order to check how learners engaged with the teacher feedback and offer help when needed. After they finished writing their second drafts, they submitted the final versions of their descriptive paragraphs (see Appendix-15).

In the fifth week of the study, learners were given information about how to compose a process paragraph and they analysed the example process paragraphs in the course book. Then, they were asked to write a process paragraph about how to organize a birthday party in their classroom in one lesson hour under the supervision of the teacher. As in the implementation of the descriptive paragraph writing task, both form- focused and content-

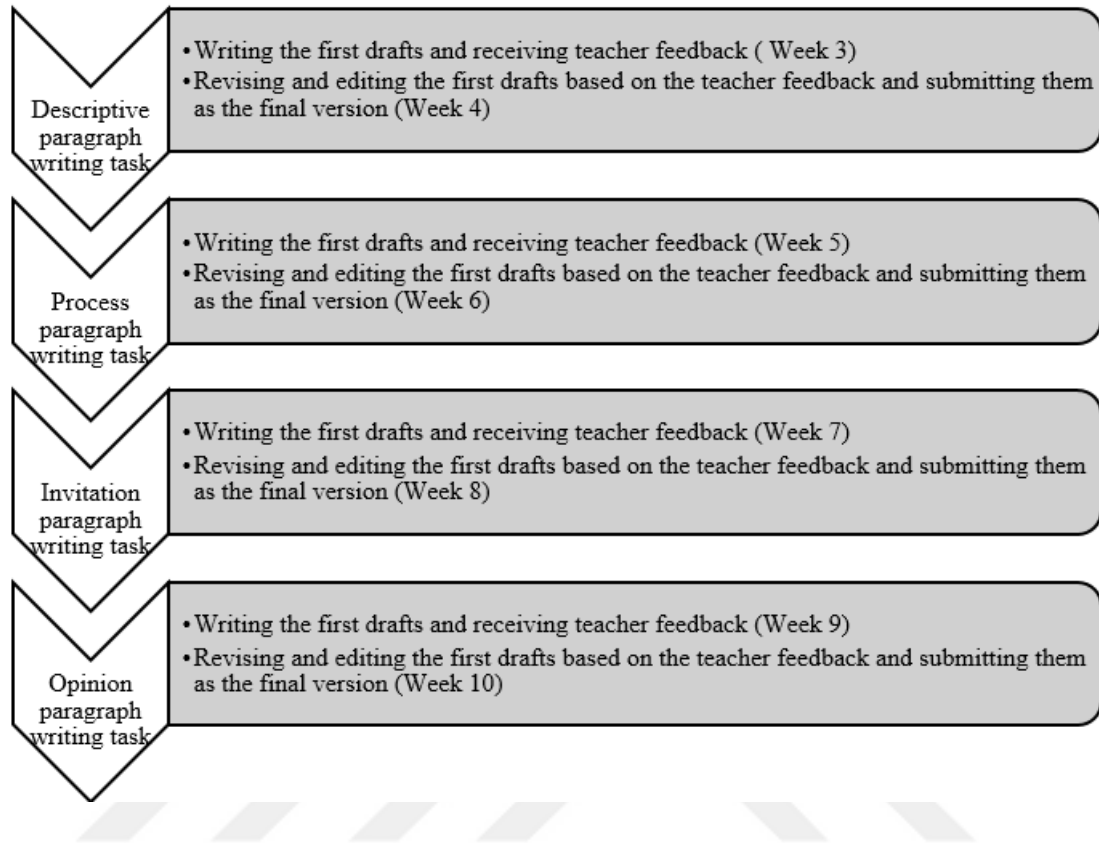
focused feedback were given on the first drafts of the learners' process paragraph writing in written and oral mode within the same week. In the sixth week, they were asked to revise and edit their first drafts of the process paragraph writing task, and submit them to the teacher based on the teacher feedback they received as the final version. They were also monitored by the teacher again in order to see whether they applied the suggestions, corrections, or comments to their second drafts.

In the seventh week of the study, they were taught about how to write an invitation card for an activity and they analysed several invitation card examples. Then, they finished the first drafts of their invitation paragraph writing tasks in the classroom in one lesson-hour. As in the descriptive and process paragraph writing tasks, they received teacher written and oral feedback on their invitation cards within the same week. In the eighth week, the learners revised and edited the first drafts of their invitation cards based on the teacher feedback, and gave them to the teacher as the final version. The learners were monitored by the teacher when they were completing both the first and second drafts of their invitation cards.

In the ninth week of the study, learners focused on how to write an opinion paragraph, and then they were asked to write an opinion paragraph about whether they were a TV addict or not. After they finished writing their opinion paragraphs, the same teacher feedback procedure implemented for the previous paragraph writing tasks was followed within the same week. In the tenth week, the same procedure, which was conducted in the fourth, sixth, and eighth weeks of the study, was applied. That is, they wrote the second drafts of their opinion paragraph writing tasks by reviewing the teacher feedback they received, and handed them in. An overview of the feedback intervention process applied in the control group is shown in Figure 3.4 below.

Figure 3.4

The Feedback Intervention Process for the Control Group



3.5 Data Collection Procedure

The data collection procedure took place in the spring term of the academic year of 2024 and 2025. The procedure began after the necessary permissions and approvals were taken from the Research Ethics Committee of Anadolu University (Protocol No: 825028 issued on 23rd of December, 2024) (see Appendix-16) and Konya Provincial Directorate of National Education (see Appendix-17). It lasted 12 weeks in total, from the beginning of February to the end of April. Two intact classes (class A and class B), which were instructed by the same teacher, were chosen as the participants of the study. These two classes were randomly assigned to the control and experimental group conditions; as a result, class A was defined as the control group and class B was the experimental group. Both classes were given detailed information about the procedure of the study first. They took a pre-writing task the following week. Then, the feedback intervention process started. Starting from the third week of the study until the eleventh week, over a period of eight weeks, both groups of the learners wrote various paragraph writing tasks, received feedback based on the feedback condition they were engaged in, and rewrote

their paragraphs by reviewing the feedback offered to them. Next, they took a post-writing task in order to determine the impact of the feedback intervention process on their paragraph writing performance. Finally, the experimental group learners were asked to participate in the semi-structured interviews in order to explore their views of using AF and teacher feedback in their paragraph writing process. A detailed explanation of the data collection process is presented in the following sections.

3.5.1 The process before the feedback intervention

Prior to having both groups accomplish paragraph writing tasks and providing them with teacher feedback or combined feedback, a detailed explanation about the goals and procedure of the study was offered in the first week of the study. That is, both the experimental and control group were given detailed information about the process in which they would engage in some writing tasks such as the pre-writing task, four paragraph writing tasks assigned during the feedback intervention, and the post-writing task. They were also informed about the feedback intervention in which they would be involved in planning, drafting, revising and editing their paragraph writing based on the feedback type in a process-based writing instruction. Following the introduction of the research study, parent permission forms (see Appendix-18a and 18b) and informed consent forms for the general procedure of the study (see Appendix-19a and 19b) were handed out to the learners, and they were asked to read the forms carefully, sign and return them to the researcher in order to ensure that the study was conducted on a voluntary basis. It was also guaranteed by the researcher that the research results would be kept confidential and used only for research purposes, and would not affect learners' English exam scores. In the second week of the study, learners in both groups took the pre-writing task in order to better understand their writing performance and identify any significant differences between two groups at the beginning of the study. The pre-writing tasks of both groups were first evaluated by the researcher based on the writing scoring rubric adopted from the study of Wang and Liao (2008). In order to ensure inter-rater reliability and avoid the researcher bias, one colleague, who worked as English teacher in another public middle school, was requested to evaluate the learners' pre-writing tasks by using the mentioned scoring rubric. The final scores of both groups of the learners were calculated by averaging the scores given by the two raters for the pre-writing task. After the pre-writing tasks were implemented, the experimental group learners were taken to

the school computer lab and introduced to the features of *Grammarly* and how to create free accounts on *Grammarly* within the same week. Then, the feedback intervention, which would last from the third week to the eleventh week of the study, started in both groups.

3.5.2 The process after the feedback intervention

After the feedback intervention process ended, both groups of the learners took a post-writing task, which was the same as the pre-writing task in terms of content and structure, in the eleventh week of the study. Like the pre-writing tasks, the post-writing tasks were evaluated by the researcher first and then, the same English teacher evaluated the post-writing tasks as a second rater by using the scoring rubric by Wang and Liao (2008). In the last week of the study, the experimental group learners were invited to take part in the semi-structured interviews in order to uncover their views of using both AF and teacher feedback when writing their paragraphs. A total of 12 experimental group learners volunteered to attend semi-structured interviews. Before conducting semi-structured interviews, they were given informed consent forms and asked to read, sign, and hand them in. The interviews were conducted in the learners' native language (Turkish), so that they could state their opinions easily and clearly. Each interview lasted nearly 10 minutes, and the learners' opinions were audio recorded and transcribed in order to be thoroughly analysed later. Table 3.2 below summarizes the data collection procedure of the study.

Table 3.2

Data Collection Procedure for the Control and Experimental Groups

Weeks	Data Collection Procedure for Control Group Learners [Teacher Feedback Group]	Data Collection Procedure for Experimental Group Learners [Combined Feedback Group]
Week 1 (Intro)	- Informing learners and parents about the research study and collecting parent permission forms and informed consent forms	- Informing learners and parents about the research study and collecting parent permission forms and informed consent forms
Week 2 (Pre-task)	- Applying the self-introduction text to learners as the pre-writing task	- Applying the self-introduction text to learners as the pre-writing task - Introducing <i>Grammarly</i> to learners and creating account on <i>Grammarly</i>

Table 3.2 (Continued) *Data Collection Procedure for the Control and Experimental Groups*

Week 3 (Feedback Intervention)	- Introducing to descriptive paragraph writing - Assigning descriptive paragraph writing task to learners - Providing teacher feedback on their first drafts	- Introducing to descriptive paragraph writing - Assigning descriptive paragraph writing task to learners - Providing teacher feedback on students' first drafts, which were initially given by the AF tool <i>Grammarly</i>
Week 4 (Feedback Intervention)	- Revising and editing the first draft of descriptive paragraph writing task based on teacher feedback, and submitting the final version	- Revising and editing the first draft of descriptive paragraph writing task based on both AF and teacher feedback, and submitting the final version.
Week 5 (Feedback Intervention)	- Introducing to process paragraph writing - Assigning the process paragraph writing task to learners - Providing teacher feedback on their first drafts	- Introducing to process paragraph writing - Assigning the process paragraph writing task to learners - Providing teacher feedback on students' first drafts, which were initially given by the AF tool <i>Grammarly</i>
Week 6 (Feedback Intervention)	- Revising and editing the first draft of process paragraph writing task based on teacher feedback, and submitting the final version	- Revising and editing the first draft of process paragraph writing task based on both AF and teacher feedback, and submitting the final version
Week 7 (Feedback Intervention)	- Introducing to invitation paragraph writing - Assigning the invitation paragraph writing task to learners - Providing teacher feedback on their first drafts	- Introducing to invitation paragraph writing - Assigning the invitation paragraph writing task to learners - Providing teacher feedback on students' first drafts, which were initially given by the AF tool <i>Grammarly</i>
Week 8 (Feedback Intervention)	- Revising and editing the first draft of invitation paragraph writing task based on teacher feedback, and submitting the final version	- Revising and editing the first draft of invitation paragraph writing task based on both AF and teacher feedback, and submitting the final version
Week 9 (Feedback intervention)	- Introducing to opinion paragraph writing - Assigning the opinion paragraph writing task to learners - Providing teacher feedback on their first drafts	- Introducing to opinion paragraph writing - Assigning the opinion paragraph writing task to learners - Providing teacher feedback on students' first drafts, which were initially given by the AF tool <i>Grammarly</i>

Table 3.2 (Continued) *Data Collection Procedure for the Control and Experimental Groups*

Week 10 (Feedback Intervention)	- Revising and editing the first draft of opinion paragraph writing task based on teacher feedback, and submitting the final version	- Revising and editing the first draft of opinion paragraph writing task based on both AF and teacher feedback, and submitting the final version
Week 11 (Post-task)	- Applying the self-introduction text to learners as the post-writing task	- Applying the self-introduction text as the post-writing task
Week 12 (Interview)	- Conducting semi- structured interviews	

3.6 Data Analysis

In the process of analysing the quantitative data obtained from the pre- and post-writing tasks of both groups of the learners, the Statistical Package for Social Sciences (SPSS) software version 25.0 was used in order to conduct statistical analyses. The pre- and post-writing scores of both groups of the learners were compared both within and between the groups in order to investigate the impact of teacher feedback and combined AF and teacher feedback on the learners' paragraph writing performance.

Prior to conducting statistical analyses to compare the pre- and post-writing scores both between groups and within groups, the analysis of normality was conducted through the Shapiro-Wilk test in order to identify whether the scores of both groups of the learners were distributed normally or not, and choose what kind of statistical tests to administer. The Shapiro-Wilk test is one of the most employed tests to determine the normal distribution (Demir, 2022). Since the pre-writing scores showed normal distribution as a result of the Shapiro-Wilk test, an independent samples t-test was employed to determine whether there was a statistically significant difference between the experimental and control group in terms of their writing performance before the feedback intervention started. Additionally, in order to find out whether the feedback intervention affected the writing performance of the experimental and control group significantly or not, an independent samples t-test was carried out on the post-writing scores of both groups because the post-writing scores were normally distributed according to the Shapiro-Wilk test.

Apart from comparing these two groups in terms of their writing performance in pre- and post-writing tasks, other data analysis methods were also used to identify whether each group significantly performed better in their post-writing tasks compared to their pre-writing tasks thanks to the feedback intervention. For that, a paired samples t-test was used to determine any statistically significant differences within the experimental group from their pre-writing task to post-writing task. In the same vein, a paired samples t-test was utilized in order to determine whether there was a statistically significant difference between the pre-writing scores and post-writing scores of the control group after the feedback intervention.

As it was mentioned before, the pre-writing tasks of both groups of the learners were evaluated by two raters (by the researcher and another EFL teacher) to obtain the consistency of scores. Therefore, in order to ensure inter-rater reliability, an intraclass correlation coefficient (ICC) was measured through the SPSS version 25.0. For the experimental group learners' pre-writing scores, the ICC values showed that there was a high reliability between the two raters. As for the control group learners' pre-writing scores, the ICC values indicated that there was a high consistency between these two raters. A detailed description of the ICC values for the pre-writing scores of both the experimental and control group is shown in Table 3.3 below.

Table 3.3

The Intraclass Correlation Coefficient Values for the Pre-Writing Scores of Both Groups

Group	Measurement	ICC	CI	CI	F	df1	df2	p
Experimental Group	Single Measures	0.997	0.992	0.999	593.248	19	19	0.000
	Average Measures	0.998	0.996	0.999				
Control Group	Single Measures	0.992	0.976	0.997	268.761	17	17	0.000
	Average Measures	0.996	0.988	0.998				

In the same vein, the post-writing tasks of two groups of learners were also evaluated by the same two raters (by the researcher and another EFL teacher) in order to ensure inter-rater reliability. Just like the procedure of the pre-writing task, an intraclass correlation coefficient (ICC) was measured through the SPSS version 25.0. For the experimental group learners' post-writing scores, the ICC values pointed out that there was a high agreement between two raters. As for the control group learners' post-writing scores, the ICC values showed that the scores given by two raters were highly consistent. The ICC values for the post-writing scores of both groups can be seen in Table 3.4 below.

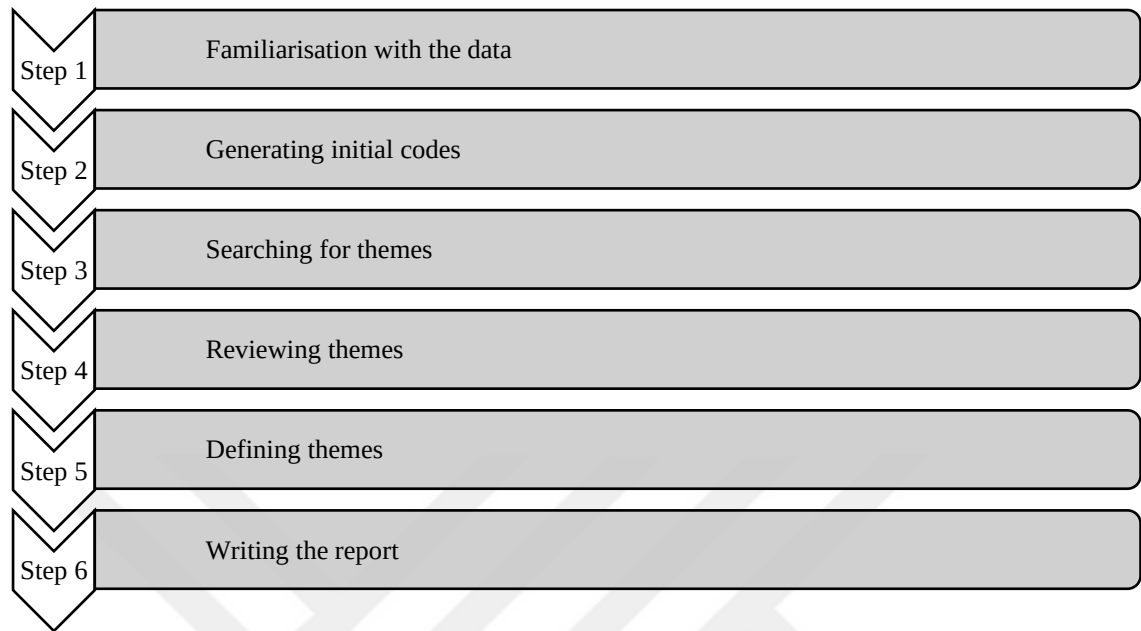
Table 3.4*The Intraclass Correlation Coefficient Values for the Post-Writing Scores of Both Groups*

Group	Measurement	ICC	CI	CI	F	df1	df2	p
Experimental Group	Single Measures	0.965	0.896	0.987	69.677	19	19	0.000
	Average Measures	0.982	0.945	0.993				
Control Group	Single Measures	0.988	0.970	0.996	179.578	17	17	0.000
	Average Measures	0.994	0.985	0.998				

When it comes to qualitative analysis, a thematic analysis was conducted on the learners' responses collected through semi-structured interviews in order to gain a deeper understanding of the learners' opinions about using combined AF and teacher feedback in the paragraph writing process. Thematic analysis has been noted to be a widely used method for analysing qualitative data (Braun & Clarke, 2006). Unlike other approaches to qualitative analysis, it offers accessibility and flexibility to researchers as it does not depend on any predetermined specific theoretical frameworks and can be used within many theoretical frameworks (Terry et al., 2017). In this study, a six-phase-analysis process as established by Braun and Clarke (2006) was employed (see Figure 3.5). The recordings of the interviews were first transcribed into texts in order to familiarise with the data. Next, initial codes were explored through the detailed reading of the texts. Then, the researcher started to search for the major and minor themes, and the emerging themes were reviewed. After that, themes and sub-themes were defined and named. The defined themes, codes under the themes and sub-themes, and sample different quotes of the learners for each code were sent to another researcher in the same field of study in order to ensure inter-coder agreement. For that, the percentage agreement was calculated through the formula of coding reliability as proposed by Miles and Huberman (1994). The percentage agreement between the coders was found as 88% in this study, which is regarded as acceptable.

Figure 3.5

The Six-Steps of Conducting a Thematic Analysis



4 RESULTS AND DISCUSSION

The current study aimed to compare the effects of teacher feedback and combined feedback (AF through *Grammarly* and teacher feedback) on Turkish EFL middle school learners' paragraph writing performance, and explore the learners' opinions about receiving combined feedback for their paragraphs in a process-based writing instruction. To this end, two research questions were addressed in the study. The first question investigated whether there was a statistically significant difference in the post-writing scores between the experimental group who received combined feedback and the control group who received teacher feedback on their paragraph writing. As for the second research question, it attempted to uncover the learners' views of receiving combined feedback in their writing classes.

In order to find answers to the research questions stated above, a mixed-methods explanatory sequential design was employed in the study. That is, quantitative data were first collected through pre- and post-writing tasks of both groups of the learners. Then, semi-structured interviews were conducted with 12 experimental group learners to identify their opinions about receiving both AF and teacher feedback on their writing. A detailed description of both quantitative results and qualitative findings was presented in the following sections.

4.1 Quantitative Results

In the present study, the first research question examined the impact of receiving both AF through *Grammarly* and teacher feedback on Turkish EFL middle school learners' paragraph writing performance. For this reason, the quantitative data obtained from the pre- and post-writing scores of both groups of the learners were analysed using the SPSS 25.0 version. First of all, as the test of normality, a Shapiro-Wilk test was conducted in order to determine whether the pre- and post-writing scores of both the experimental group and control group showed a normal distribution or not. Besides, skewness and kurtosis values were taken into consideration in order to define whether the learners' scores were normally distributed or not. The descriptive statistics related to the normality analysis are presented in Table 4.1.

Table 4.1

Summary of the Shapiro-Wilk Normality Test Results for the Pre- and Post-Writing Scores of Both Groups

Group	Writing task	<i>n</i>	<i>M</i>	<i>SD</i>	<i>W</i>	<i>df</i>	<i>p</i>	<i>Skewness</i>	<i>Kurtosis</i>
Experimental Group	Pre-writing task	20	27.30	14.31	0.927	20	0.135*	-0.297	-1.128
	Post-writing task	20	35.45	12.05	0.923	20	0.115*	-0.662	-0.583
Control Group	Pre-writing task	18	25.94	15.17	0.897	18	0.052*	-0.089	-1.610
	Post-writing task	18	29.56	14.43	0.920	18	0.130*	-0.169	-1.469

**If *p* value is greater than 0.05, it is significant.*

When the results of the Shapiro-Wilk test are analysed, it can be seen that the *p* values for both the pre- and post-writing scores of the experimental group and control group are greater than 0.05. These results revealed that the scores showed a normal distribution. In the Shapiro-Wilk test, if the significance level is greater than 0.05, it means that data show a normal distribution (Pallant, 2007). In addition, it can be seen that the skewness and kurtosis values are between -2 and +2, which confirmed that the scores were normally distributed. Therefore, parametric tests were employed to conduct statistical analyses in this study.

After ensuring the normal distribution in the quantitative data, an independent samples *t*-test was conducted in order to identify whether there was a statistically significant difference between these two groups in terms of paragraph writing performance at the beginning of the study. The results of the independent samples *t*-tests computed for the pre-writing scores of the experimental and control group are illustrated in Table 4.2 below.

Table 4.2

The Results of the Independent Samples t-tests for the Pre- and Post-Writing Scores of the Experimental and Control Group

Writing Task	Group	n	M	SD	t	df	p
Pre-Writing Task	Experimental Group	20	27.30	14.31	0.283	36	0.779
	Control Group	18	25.94	15.17			
Post-Writing Task	Experimental Group	20	35.45	12.05	1.372	36	0.179
	Control Group	18	29.56	14.43			

**If p value is less than 0.05, it is significant*

According to the results of the independent samples t-test computed for the pre-writing scores, the mean scores of the experimental and control group for the pre-writing task are similar to each other ($M=27.30$, $SD=14.31$ for the experimental group and $M=25.94$, $SD=15.17$ for the control group). Besides, there is no statistically significant difference between the pre-writing scores of the experimental group and control group ($t(36) = 0.283$; $p = 0.779$). Based on these results, it can be stated that the experimental and control group showed similar performance in paragraph writing before the feedback intervention started.

After the 8-week feedback intervention was over, an independent samples t-test was also conducted in order to find out whether one group significantly performed better than the other group in their post-writing tasks thanks to the feedback they received. The results of the independent samples t-test for the post-writing scores of the experimental and control group can be seen in Table 4.2 above. Based on the results of the independent samples t-test for the post-writing scores, the mean score of the experimental group is higher than the mean score of the control group ($M= 35.45$, $SD=12.05$ for the experimental group and $M= 29.56$, $SD=14.43$ for the control group). However, there is not a statistically significant difference between the post-writing scores of the experimental and control group after the feedback intervention ($t(36) = 1.372$; $p=0.179$). That is, both groups of the learners were similar to each other regarding their writing performance in their post-writing tasks, which shows that the feedback type the groups received did not have a significantly greater impact on the paragraph writing performance of the learners in any group (see Table 4.2).

Since there is a non-significant difference between the post-writing scores of the experimental and control group after the feedback intervention, further analysis was conducted in order to find out whether there was a statistically significant difference from the pre-writing task to post-writing task in each group thanks to the feedback type they received. For this aim, paired samples t-tests were conducted to identify any differences from the pre- to post-writing scores within groups. Table 4.3 below shows the results of the paired samples t-tests computed for the pre- and post-writing scores of the experimental and control group.

Table 4.3

The Results of the Paired Samples t-tests for the Experimental and Control Group

Group	Writing Task	n	M	SD	Mean Difference	SD	t	df	p
Experimental Group	Pre-Writing Task	20	27.30	14.31					
	Post-Writing Task	20	35.45	12.05	-8.15	3.6	-10.118	19	0.000
Control Group	Pre-Writing Task	18	25.94	15.17					
	Post-Writing Task	18	29.56	14.43	-3.61	2.73	-5.621	17	0.000

**If p value is less than 0.05, it is significant*

As it is seen in Table 4.3, the experimental group obtained a higher mean score in the post-writing task compared to the pre-writing task ($M=27.30$, $SD= 14.31$ for the pre-writing task and $M=35.45$, $SD= 12.05$ for the post-writing task). Besides, there is a statistically significant difference between the pre-writing scores and post-writing scores of the experimental group ($t(19) = -10.118$; $p= 0.000$). In other words, the experimental group showed significantly greater improvements in their post-writing task thanks to the combined feedback they received.

In a similar vein, the average of the post-writing scores of the control group is higher than the average of their pre-writing scores ($M= 25.94$, $SD= 15.17$ for the pre-writing task and $M= 29.56$, $SD= 14.43$ for the post-writing task). In addition, the results of the paired

samples t-test for the control group revealed that the control group gained significantly better results in their post-writing task thanks to the teacher feedback they received ($t(17) = -5.621$; $p = 0.000$). That is, the teacher feedback intervention enabled learners to improve their paragraph writing performance significantly from the pre-writing task to post-writing task.

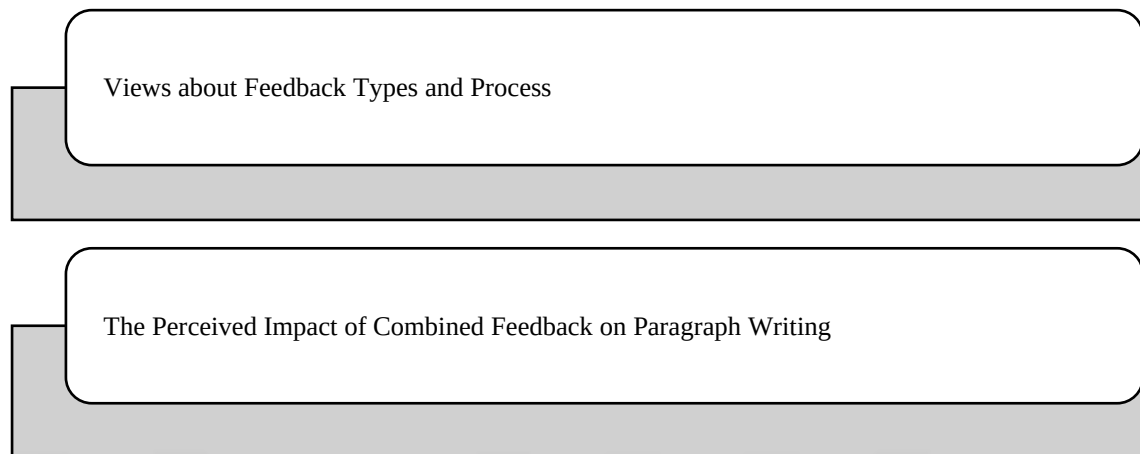
In conclusion, it can be stated that each feedback type led the learners in both the experimental and control group to improve their paragraph writing performance from their pre-writing task to post-writing task significantly. However, the experimental group had higher mean scores in post-writing tasks than the control group although both groups gained significant improvements from the pre- to post-writing task. Regarding the comparisons between the control group and the experimental group in the post-writing task, it can be stated that there is not a statistically significant difference between the post-writing scores of the experimental group and control group. In other words, the feedback type did not lead any group to significantly outperform the other group in terms of paragraph writing performance. Although the experimental group gained a higher mean score in their post-writing task than the control group, it can be concluded that this increase was not statistically significant.

4.2 Qualitative Findings

In this study, the second research question explored the learners' opinions about the use of combined AF through *Grammarly* and teacher feedback in their writing classes. Thus, semi-structured interviews were carried out with 12 experimental group learners in the last week of the study. A thematic analysis was conducted on the learners' responses given to the questions in the interviews to uncover their opinions about this feedback process. The findings of the thematic analysis revealed two main themes and seven minor themes related to learners' opinions about receiving both AF through *Grammarly* and teacher feedback on their paragraph writing performance (see Appendix-20). The two main themes were defined as the views about feedback types and process, and the perceived impact of combined feedback on paragraph writing. These emerging main themes from the thematic analysis are presented in Figure 4.1.

Figure 4.1

The Main Themes Related to the Learners' Opinions about Receiving Combined Feedback



4.2.1 Views about feedback types and process

The first main theme that emerged from the learners' answers through the thematic analysis was the learners' views about feedback types and the writing process they were involved. Three minor themes were also identified under this theme as the benefits of feedback types and process, shortcomings of feedback types and process, and learners' reasons for their preferences of feedback types.

With regards to whether the learners enjoyed receiving both AF and teacher feedback in their writing classes or not, all of them stated that they favoured receiving both AF through *Grammarly* and teacher feedback when completing their writing tasks although some shortcomings related to both feedback types were reported. When they were asked why they favoured receiving AF and/or teacher feedback on their writing, they pointed out many benefits for each one.

Regarding the benefits of receiving only AF through *Grammarly*, the most stated advantageous part was that AF helped learners to notice, correct and reduce the spelling, punctuation, and grammatical errors in their writing tasks. To illustrate, S10 made the following comment related to this benefit:

There are not many spelling errors in my paragraph writing tasks anymore. I think I am better at spelling the words. (S10)

In a similar vein, S4 expressed his thought like:

I have recognized that there are many words that I misspelt. I have learnt how they are spelt and started to write them in a correct way. (S4)

Another important benefit emphasised by some of the learners was the timely feedback provided by *Grammarly*. S1 stated her opinion in the following statement:

What I liked most about *Grammarly* is that it corrects our errors immediately and presents the corrected version in the part next to the editing text box. (S1)

In addition, some learners reported that AF through *Grammarly* helped them to construct sentences easily and construct more meaningful and longer sentences compared to before. For example, S3 said in his interview that:

I used to compose short and incomplete sentences, but now I can make more meaningful sentences. (S3)

Besides, a few learners mentioned the practicality of receiving AF through *Grammarly* as it provided the corrected version of errors. S6 emphasised this benefit in her response in the interview like:

Whenever I misspell a word, *Grammarly* shows the corrected version immediately. It is very practical. (S6)

Furthermore, some learners stated that they found the idea of using technology in writing classes very enjoyable. To illustrate, S9 expressed his thoughts in the following comment:

In my opinion, completing our writing tasks by utilizing the computer was fun. In addition, *Grammarly* is a useful programme. (S9)

Few learners also said in their interviews that *Grammarly* could identify the missing parts or unnecessary parts of their words, phrases, and sentences, and guide them about how to correct these erroneous parts. For instance, S3 stated his opinion like:

When I write a word or phrase, *Grammarly* shows me what comes before and after that word or phrase. (S3)

Apart from these, two students also mentioned the positive impact of AF on raising learners' awareness about punctuation rules. S2 also expressed that *Grammarly* could notice and identify even minor errors in spelling, punctuation, and grammar which the teacher sometimes missed out. It was also reported by S11 that the holistic score assigned to learners' texts increased their motivation to compose better sentences and texts. Besides, S6 pointed out that *Grammarly* had an appealing interface because the visuals and encouraging quotations that came out before they started to write their texts were very motivating for her. Lastly, S5 expressed that AF through *Grammarly* enhanced learner autonomy because she could check and correct her errors in their vocabulary,

grammar, speaking assignments other than writing tasks easily. To sum, the most reported benefit of AF was its instant nature, which allowed the learners to notice, correct, and reduce their spelling, punctuation, and grammatical errors in their texts. Some of the learners also stated that it was easier to construct sentences for them through AF, and it was easy, practical and enjoyable to receive feedback from a computer.

As for the benefits of receiving combined feedback (teacher feedback after AF through *Grammarly*), learners had lots of various comments about it. For instance, nearly half of them stated that they could better understand their errors through negotiating and interacting with the teacher. In this respect, S4 made the following comment about this issue:

Teacher feedback is more useful because the teacher also provides oral feedback to us. I mean, the teacher provides suggestions about how to correct our errors, what supporting details to add, or what can replace the erroneous parts of our sentences. Teacher feedback is more beneficial than *Grammarly*. (S4)

Likewise, S5 emphasised this benefit of teacher feedback like:

The feedback provided by the teacher is better because we just click on and correct our errors on *Grammarly*. However, the teacher provides not only written feedback but also oral feedback on our errors, and explains why our errors occur in a detailed way. (S5)

Besides, many learners pointed out that teacher feedback was very useful in improving the content aspect of their paragraph writing performance. For instance, S2 stated her opinion about this advantage of teacher feedback in the following statement:

Both teacher and *Grammarly* helped us to improve our paragraphs. However, the teacher provided more suggestions about how to develop the content aspect of writing compared to *Grammarly*. (S2)

Furthermore, some learners reported that teacher feedback was more explanatory and clearer. For example, S5 said in her interview:

The explanations provided by the teacher are more beneficial. We just click on and correct our errors while using *Grammarly*. I mean, it does not contribute to our writing performance much. However, the teacher provides better explanations by interacting with us. (S5)

It was also stated by S5 that teacher feedback enhanced her self-efficacy in writing through more support and guidance. Furthermore, S2 stated that teacher feedback enabled her to enrich vocabulary knowledge. Apart from these comments, S12 pointed out that receiving teacher feedback promoted permanent learning. To summarize, learners

reported that teachers' suggestions on how to develop the content of their paragraphs and a better understanding of their errors thanks to negotiation opportunities were the most obvious benefits of teacher feedback. Being more explanatory and clearer was also regarded as another important positive side of teacher feedback.

In the interviews, learners also mentioned some characteristics of both feedback types that they found as disadvantageous. When they were asked what challenged them during this feedback process, they underlined some shortcomings related to receiving a combination of AF and teacher feedback in their writing classes.

With regards to the shortcomings of receiving only AF through *Grammarly*, most learners stated that AF failed to understand what they meant exactly by their sentences as it lacked human interaction and inferencing skills. One of the interviewees pointed out this negative side in the following statement:

AI cannot understand what I mean exactly and turns it into a different sentence. This is the most obvious disadvantage. (S4)

Similarly, another student (S3) said in his interview related to this fact:

Grammarly just indicates the corrected version of errors, and I do not understand my errors much. However, the teacher provides a detailed explanation about our errors through negotiation. (S3)

A few learners also pointed out that *Grammarly* corrected only spelling, grammar, and punctuation errors in their paragraphs, but it could not provide suggestions about how to develop the content aspect of their paragraph writing performance. For instance, S5 expressed her opinion in the following statement:

The teacher offers suggestions about how to develop the content of our paragraphs, but *Grammarly* just corrects our spelling, punctuation or grammatical errors. (S5)

In addition, S6 reported that it would have been better if *Grammarly* had provided metalinguistic feedback in their native language. Moreover, S1 mentioned the fact that *Grammarly* could not recognize and appreciate their efforts and attempts to compose better paragraphs as it was a machine. In sum, the lack of human interaction and inferencing skills in AF was the most mentioned shortcoming, and the second factor mostly emphasized as the negative side was that AF could not provide feedback on content and organization aspects of learners' paragraphs.

When it comes to the shortcomings of combined feedback (teacher feedback after AF through *Grammarly*), the majority of learners reported that teacher feedback had no shortcomings, but very few learners mentioned some drawbacks related to teacher feedback. They stated that it was sometimes a bit boring to receive teacher feedback after AF. For instance, S1 made the following comment:

It sometimes caused boredom, but not much. I sometimes got bored with the process because AF and teacher feedback were offered one after the other. (S1)

In addition, S5 reported that teacher feedback required too much time and effort on both parts — teachers and students. S6 also expressed that teacher feedback was sometimes delayed, but not much. In short, although most of the learners stated that teacher feedback had no shortcomings, very few learners mentioned some issues related to teacher feedback such as being a bit boring to receive AF and teacher feedback one after the other, its time-consuming nature, and being sometimes delayed.

Regarding the learners' feedback preferences for their future paragraph writing tasks and their reasons, almost all the learners stated that they preferred receiving both AF and teacher feedback because they were complementary to each other. To illustrate, five students expressed that *Grammarly* provided feedback to them on their spelling, punctuation, and grammatical errors while the teacher gave feedback on the meaning-related aspects of writing, such as word choice, content, and organization. They pointed out that they could compose better paragraphs thanks to this combined feedback. For example, S6 stated her opinion like:

I prefer receiving feedback from both sources. On the one hand, *Grammarly* corrects our spelling and grammatical errors. On the other hand, our teacher provides suggestions about how to improve the content of our paragraphs. Therefore, we can go on receiving both of them in our next writing tasks. (S6)

In addition, while explaining their reasons for their preferences of combined feedback, a few learners stated that AF enabled them to notice and correct the spelling, punctuation, and grammatical errors in their paragraphs while the teacher provided detailed explanations on their errors. For instance, S3 said in his interview:

I would like to receive both AF and teacher feedback. First, I can notice and correct my errors through *Grammarly*. Then, I can understand why those parts are incorrect through teacher feedback. (S3)

Furthermore, S5 reported that teacher feedback provided opportunities to interact and negotiate with a human; that is, a real person, something that *Grammarly* as an AI-powered feedback tool lacked.

Apart from these students, two students (S1 and S9) expressed that they preferred receiving only AF through *Grammarly* because it was more enjoyable and practical to receive immediate feedback from a computer programme. In addition, S8 stated that she wanted to receive only teacher feedback in her future writing tasks because the teacher provided more and better explanations about her errors. In sum, the majority of the learners stated that it was better to receive a combination of AF and teacher feedback on their future writing tasks because AF and teacher feedback compensated for each other's shortcomings.

All in all, it can be concluded that the learners generally had positive opinions about receiving both AF through *Grammarly* and teacher feedback in their writing classes although some negative sides were underlined. They also reported that since both feedback types were complementary to each other, they desired to receive a combination of AF and teacher feedback on their future writing tasks. That is, combined feedback type was perceived to be a good combination for them to improve their paragraph writing performance.

4.2.2 The perceived impact of combined feedback on paragraph writing

The second major theme was identified as the perceived impact of combined feedback on paragraph writing. This impact was categorized as four minor themes, including the improvements in local aspects of writing, improvements in meaning-related aspects of writing, improvements in both local and meaning-related aspects of writing, and ineffectiveness of combined feedback in certain aspects of writing. When the learners were first asked about whether receiving combined feedback had an impact on their paragraph writing performance, all of the learners agreed that combined feedback enhanced their paragraph writing performance. Then, their opinions were explored in order to find out in which aspects of writing they performed better compared to before thanks to combined feedback.

Regarding the aspects of writing in which they performed better, the learners had various opinions. Some learners reported that they improved their writing skills in terms of local aspects of writing the most such as grammar, spelling, and punctuation. To illustrate, half

of the learners stated that receiving combined feedback helped them to perform better in local aspects of writing such as spelling and grammar. They stated that they made less spelling errors and constructed sentences more easily because this feedback type enhanced their awareness about how to spell words and increased their grammatical knowledge. For instance, S7 and S8 pointed out that:

I think I am better in how to write the words in the correct way and my grammatical knowledge has increased. (S8)

I think I am better at constructing sentences because I could not construct sentences well before. (S7)

In addition, some other learners stated that they were better at the meaning-related aspects of writing more such as content, organization, and word choice thanks to combined feedback. For example, S10 expressed his thought like:

I have learnt how I should start and conclude my sentences and paragraphs thanks to this feedback process. (S10)

Similarly, S5 stated her thoughts like:

I think I can enrich the content of my paragraph because I try to use various words and phrases in my sentences. (S5)

Likewise, S11 made the following comment related to the impact of combined feedback:

I think I am better at choosing appropriate vocabulary when completing my paragraph writing tasks. (S11)

However, only one student reported that she performed better in both local and meaning-related aspects of writing. She said in her interview that:

I think I have improved the spelling, grammar, and the content aspects of my paragraph writing through this feedback process. (S2)

With regards to the aspects of paragraph writing in which learners still had difficulties and found the combined feedback ineffective, almost all learners reported that choosing appropriate words and organizing their paragraphs were challenging aspects for them. They stated that they had problems in either one of these two aspects or both of them. For instance, S8 stated her opinions like:

The aspect in which I still have problems is word choice. Besides, I have difficulties in connecting sentences. (S8)

Similarly, S6 pointed out this issue in the following comment by focusing on vocabulary:

In word choice, I think I still cannot find appropriate vocabulary to use when writing my paragraphs. (S6)

In addition, S4 and S9 expressed their thoughts about this issue like:

I still have some difficulties in organizing my sentences. I think it is challenging to organize my sentences in a coherent way. (S4)

I find it still difficult to connect sentences to each other. I mean, I have difficulties in the organization of the paragraph. (S9)

Besides, two students said that they still had problems in improving the content aspect of their paragraph writing. For example, S12 said in her interview:

Indeed, I can improve the content of my paragraph, but I still feel that I am not good enough at enriching the content of the paragraph. (S12)

To conclude, all of the learners pointed out that receiving both AF and teacher feedback enabled them to improve their paragraph writing performance in different aspects of writing. However, they had different opinions about in which aspects of writing they performed better compared to before. Some learners thought that they were better at meaning-related aspects of writing while the others believed that they performed better in local aspects of writing such as spelling, grammar, and punctuation. In addition to this, when they were asked about in which aspect of writing they still had problems, they reported that some meaning-related aspects of writing such as word choice, content, and organization were still challenging for them.

4.3 Discussion

The present study attempted to compare the impact of teacher feedback and combined feedback type on the paragraph writing performance of Turkish EFL middle school learners, and the learners' opinions about receiving different types of feedback and writing process. Some quantitative results and qualitative findings were obtained related to the impact of the use of such feedback types in writing classes. In the following two sections, these results and findings were discussed in relation to the research questions addressed in this study.

4.3.1 Discussion on the impact of combined AF and teacher feedback on the learners' writing performance

In the current study, the first research question aimed to find out whether receiving combined feedback significantly improved the paragraph writing performance of Turkish EFL middle school learners or not. To this end, some statistical analyses were conducted by comparing the pre- and post-writing scores of both the experimental and control group, and some comparisons between the post-writing scores of the experimental group and control group learners were made.

The quantitative results obtained from the statistical analyses showed that there was no statistically significant difference between the post-writing scores of the experimental group and control group, which indicates that the feedback type did not allow one group to significantly outperform the other group in terms of paragraph writing performance after the feedback intervention. The comparison made between the post-writing scores of the experimental group and control group indicated that both feedback types had a similar impact on the paragraph writing performance of the learners in their post-writing tasks. In other words, neither of the groups showed significant improvements in the post-writing task compared to the other group. Likewise, the results of some previous studies pointed out that receiving combined feedback (AF and teacher feedback) did not significantly affect the writing performance of learners (Bako, 2023; Fan, 2023; Han & Sari, 2024; Mohammadi et al., 2023; Wilson & Czik, 2016). To illustrate, the study of Wilson and Czik (2016) revealed no significant difference between the teacher feedback group and combined feedback group in terms of holistic writing quality although the writing persistence of the experimental group learners increased. In a similar vein, the study of Fan (2023) demonstrated that the experimental group who received combined feedback did not significantly outperform the control group who received only teacher feedback in terms of syntactic and lexical complexity, writing accuracy and fluency.

Considering the fact that some efforts were made by the teacher to offer the same feedback procedures to both groups of the learners in terms of feedback focus, scope, and strategies, it can be inferred that the non-significant difference between the groups' writing performance in the post-writing task might have stemmed from AF-related issues, learner characteristics, and some other reasons. For instance, although it has been reported that AF was beneficial for improving learners' writing performance in some studies, the

AF provided by the AI-powered tools is a relatively new construct to learners (Ware, 2011). That is, learners might have few experiences and knowledge about such a feedback type and this might have caused them not to benefit from it sufficiently (Fan, 2023; Huang & Renandya, 2020). Besides, the learners' lower-proficiency levels might have impeded their comprehension of the AF (Aluthman, 2016; Fan, 2023; Ghufroon & Rosyida, 2018). Since the metalinguistic explanations provided by *Grammarly* were not given in the learners' native language, it may have been challenging for the learners to understand them even if the teacher provided help when needed. This was also reported in the interviews by one student, who expressed the necessity of metalinguistic explanations in their native language. In addition to these possible reasons, the regular practice of traditional teacher feedback might have prevented the learners to internalize AF and employ it effectively (Mohammadi et al., 2023). This was also pointed out by most of the learners who stated that AF had to be supplemented by the teacher feedback while expressing their feedback preferences for future writing tasks in the interviews. In addition, the duration of the feedback intervention might not have been sufficient for the combined feedback to have an impact on the learners' writing performance because writing is a complex and productive language skill and requires time to improve (Wilson & Czik, 2016). Lastly, in the current study, enough importance was given to the feedback provision process in both the experimental and control group, and the feedback conditions were kept the same for the both groups (Bako, 2023; Wilson & Czik, 2016). That is, the experimental group did not receive only AF through *Grammarly*, which usually provided correction or suggestion on the errors in spelling, grammar, punctuation, and vocabulary use to the learners; rather, they received AF combined with teacher feedback, which offered comments on the content and organization aspects of their writing. Likewise, the control group were not exposed to any condition in which they did not receive any feedback on their writing; rather, they received both form-focused and content-focused feedback on their writing by the teacher. This situation might have led to no significant differences in their writing performance between the experimental and control group (Han & Sari, 2024).

Nevertheless, the non-significance difference found between the experimental and control group in the current study is contrary to some previous studies' results (Cheng & Zhang, 2024; Haddadian, 2024; Lee et al., 2013; Link et al., 2022; Salavatizadeh & Tahriri, 2020; Tang & Rich, 2017). It was demonstrated in such studies that the experimental group who

received both AF and teacher feedback significantly outperformed the control group who received only teacher feedback on their writing. To exemplify, the study of Tang and Rich (2017) indicated that the experimental group learners who received both AF and teacher feedback significantly performed better than the control group who received only teacher feedback in the post-writing test. Besides, the study of Haddadian (2024) pointed out significant differences between the teacher feedback group and combined feedback group in terms of writing accuracy. That is, the combined feedback group gained significant improvements in writing accuracy compared to the teacher feedback group. The significant improvements might be due to the fact that the participants in those studies were generally high school and university students, who might have made the most of AF thanks to their high proficiency levels. However, the participants in the current study had lower-level language proficiency levels, which might have prevented them from taking advantage of AF sufficiently. For example, it was emphasised in the interviews that metalinguistic explanations should be given in their native language. In addition to this, no detailed explanations related to the focus and extent of the teacher feedback, or the strategies used by the teacher when giving feedback were provided in those studies. That is, the feedback provision applied in these studies might have differed from the one applied in the present study, which might have led to contradictory results (Han & Sari, 2024).

When the comparisons within groups from the pre-writing scores to post-writing scores are analysed in detail, it can be seen that both the experimental and control group significantly performed better in their post-writing tasks regarding paragraph writing performance as a result of the feedback provision they were involved in the current study. This result is in line with some previous studies such as Lee et al. (2013) and Han and Sari (2024), which revealed that both the experimental group who received combined feedback (AF and teacher feedback) and the control group who received teacher feedback significantly improved their writing performance after the feedback intervention they were provided. For example, in the study of Han and Sari (2024), both the teacher feedback group and the combined feedback group gained significant improvements in writing proficiency from their pre-writing tasks to post-writing tasks. Moreover, the significant improvements in the paragraph writing performance of both groups thanks to the feedback provision they were engaged in might be attributable to some reasons. To illustrate, providing more opportunities for learners to practice writing and receive

suggestions and corrections in a process-based approach might have supported their writing performance (Bae & Jung, 2024). Besides, both the experimental and control group learners had opportunities to practice writing and more effective interaction with their teachers, which might have affected their writing performance positively (Aluthman, 2016). This significant result is also corroborated by the learners who reported that they enhanced their writing performance thanks to combined feedback in the interviews.

However, the significant developments in writing skills within groups of the present study contradict with the results reported by some previous studies (Bako, 2023; Cheng & Zhang, 2024). It was indicated in these two studies that although the experimental group who were given both AF and teacher feedback significantly performed better in their post-writing tasks compared to the pre-writing tasks thanks to the combined feedback, there was not a statistically significant difference between the pre- and post-writing scores of the control group who received only teacher feedback. This result, which was pointed out in these two studies, can be explained by the fact that a combination of AF and teacher feedback might have enhanced learners' engagement with the feedback types they received compared to the only teacher feedback. Besides, this type of combined feedback might have aroused more interest in learners and encouraged them to revise their texts (Cheng & Zhang, 2024). This was also emphasised by the learners in a way that receiving AF through the computer was enjoyable and interesting in the interviews.

To summarize, it can be inferred from the discussions that both the experimental and control group have made significant improvements in their paragraph writing performance through the feedback type they received. This might have been thanks to the fact that the learners had more opportunities to interact with their teacher when receiving both AF through *Grammarly* and teacher feedback, and they also took part in paragraph writing tasks and various feedback processes better than before. However, a non-significant difference was found between the post-writing scores of the experimental and control group. This may be because the learners might not have made the most of both AF and teacher feedback due to their lower-level proficiency, few experiences and knowledge about this type of combined feedback, being used to traditional teacher feedback more, and some other reasons. However, in general, they had positive opinions about receiving both AF and teacher feedback.

4.3.2 Discussion on the learners' opinions about receiving combined feedback in their writing classes

The second research question aimed to uncover the learners' opinions about receiving combined feedback in their writing classes. Thus, a thematic analysis was conducted on the learners' responses obtained from the semi-structured interviews. The qualitative findings revealed two major themes related to learners' opinions about the use of combined feedback when completing their paragraph writing tasks. These two themes were identified as the views about feedback types and process, and the perceived impact of combined feedback on paragraph writing.

The first major theme was defined as the learners' views about the feedback types and the writing process. It was also categorized under three minor themes: the benefits of feedback types and process, shortcomings of feedback types and process, and the learners' reasons for their preferences of feedback types.

With regards to receiving both AF through *Grammarly* and teacher feedback, all of the learners stated that they enjoyed receiving such combined feedback on their paragraph writing performance despite the fact that there were some issues related to both types of feedback that challenged them. This finding is in line with the findings of some previous studies in the literature (Altuntas, 2021; Fan, 2023; Han & Sari, 2024; Salavatizadeh and Tahriri, 2020). The findings of these studies also emphasised that although some shortcomings related to this type of combined feedback were underlined by the learners, they usually enjoyed receiving both AF and teacher feedback.

In the current study, when the learners were specifically asked why they liked receiving AF through *Grammarly* on their writing, they explained that the AF facilitated the process of noticing and correcting the errors in spelling, grammar, punctuation aspects of their written works. This finding is consistent with some previous studies' findings (Alnasser, 2022; Ghufon & Rosyida, 2018; Huang & Renandya, 2020; Parra & Calero, 2019; Wang & Han, 2022), all of which pointed out that learners recognized and corrected their grammatical, lexical, and spelling errors easily thanks to AF. In addition, the findings of this study indicated that AF enabled learners to reduce their spelling, grammatical, and punctuation errors. The findings of several studies supported this finding of the current study by showing that learners made less errors in spelling, grammar and punctuation aspects of writing thanks to AF (Ghufon & Rosyida, 2018; Japos, 2013; Liao, 2016).

The learners in the present study also mentioned the fact that AF could provide timely corrections or suggestions to them, which was regarded as another benefit of AF. The instant nature of AF, which is considered to be beneficial for improving their writing performance by the learners, was also reported in some studies (Bae & Jung, 2024; Chen & Pan, 2022). To illustrate, it was revealed in the study of Chen and Pan (2022) that the time of the feedback affected their willingness in writing and the AF provided by AI-powered feedback tool was immediate while the teacher feedback was slower. Furthermore, some learners stated that they found AF through *Grammarly* very practical as it offered them the corrected version of their errors immediately, which is supported by the finding of Chen & Pan's (2022) study. They revealed that AF provided the correct forms of their errors to the learners in addition to helping them to notice their errors. Moreover, a few learners in this study expressed that it was an enjoyable experience to receive feedback from a computer and complete the writing tasks by using technology. This finding is in congruence with the suggestion made by Han and Sari (2024) that integrating technology into writing classes can be interesting for learners. Besides, it was found out in the current study that the holistic score assigned to the learners' texts by *Grammarly* increased their willingness to compose better texts. This finding is in line with the findings of the studies by Chen and Cheng (2008) and Wang et al. (2013), which pointed out that AF motivated learners to write better texts. Lastly, another prominent finding in the current study was that AF enhanced the learners' awareness about punctuation rules. This finding can suggest that the provision of consistent and diagnostic suggestions on the learners' punctuation errors by *Grammarly* might have helped them to understand the importance of punctuation rules in English writing, and perform better in the punctuation aspect of writing (Yildiz & Gonen, 2024).

As for the benefits of receiving teacher feedback after AF through *Grammarly*, all of the learners stated that they liked receiving teacher feedback after AF on their paragraph writing. When the learners were asked why they liked teacher feedback, it was emphasised that teacher feedback offered opportunities for them to negotiate and interact with a human about the suggestions and corrections; as a result, it made contributions to their better understanding of the errors they made when writing their paragraphs. This finding is similar to the finding of the study by Zhang and Hyland (2018), in which interaction opportunities provided by teachers were stated to be really useful for improving the learners' writing quality. In addition, the learners emphasized the fact that

teacher feedback was very effective in developing the content aspect of paragraph writing. Likewise, the study of Yildiz and Gonen (2024) revealed a parallel finding that teacher feedback guided learners to develop the content aspect of writing better than AF. Besides, teacher feedback was stated to be more explanatory and clearer than AF by the learners in the present study. In the same vein, Wang and Han (2022) maintained that teacher feedback was clear and easy to comprehend for learners.

Apart from the benefits of receiving both feedback types, some shortcomings related to the use of both AF and teacher feedback in writing classes were also mentioned by the learners in the interviews. For instance, some of the learners pointed out that AF was unable to understand what was exactly meant by them as it lacked human inferencing and interaction skills. Wang et al. (2013) reported a similar finding in their study that the AF could not comprehend the learners' true meaning because they did not have meaningful interaction with the learners. Likewise, Zhang and Hyland (2018) maintained that AF did not provide many opportunities for teachers and learners to discuss and negotiate about the feedback. In a similar way, Bae and Jung (2024) emphasized the fact that AF did not offer interactive support, which teachers provided to learners when giving feedback. In addition, a few learners stated that the AF focused on only spelling, punctuation, and grammatical errors of the learners, but it could not give any feedback on the content and organization aspects of their writing. This finding was corroborated by the findings of the studies by Chen and Cheng (2008) and Lai (2010), which revealed that the AF lacked giving feedback on the writing aspects of idea development, coherence, and cohesion. It was also found out in this study that the learners needed metalinguistic explanations in their own native language, but *Grammarly* could not provide it. This is consistent with the finding of Ding's (2008) study, which showed that the monolingual feedback provided by AI-powered tools was not much helpful for lower-proficiency level students. Lastly, some learners reported that the AF was not able to recognize and appreciate their attempts to compose better texts. This finding is supported by Zhang's (2017) study, which showed that the AI-powered tools could not notice the learners' efforts.

With regards to the shortcomings of receiving teacher feedback after AF, although many learners reported that teacher feedback had no shortcomings, very few learners mentioned certain concerns related to teacher feedback. To illustrate, teacher feedback was sometimes delayed. This is also reported in Yildiz and Gonen's (2024) study that the

teacher could not provide timely feedback due to some reasons such as crowded classrooms, limited class hours, and teachers' workload. Some of the learners also stated that receiving both AF and teacher feedback one after the other was sometimes boring for them. This may have resulted from the fact that the learners felt that the feedback process lasted a bit long, and required too much time and effort for both sides: teachers and learners (Salavatizadeh & Tahriri, 2020).

When it comes to the learners' feedback preferences for future writing tasks and their reasons, most of the learners stated that they preferred receiving combined feedback on their future writing tasks. This finding is in congruence with the findings of the studies by Chen and Pan (2022) and Yildiz and Gonen (2024). These two studies revealed that the most preferred way to receive feedback on writing was a combination of AF and teacher feedback. While explaining the reasons of their feedback preferences for combined feedback, the learners of this study stated that they could not only notice and correct their grammatical and spelling errors through immediate feedback provided by *Grammarly* easily, but also they could receive more specific and detailed suggestions on how to develop content and organization aspects of their writing through teacher feedback. That is, they were reported to compensate for each other's shortcomings; as a result, they were more willing to receive this combined feedback type on their future writing tasks. Some previous studies also supported the need for such a combined feedback type in writing classes (Chen & Cheng, 20008; Dikli & Bleyle, 2014; Warschauer & Grimes, 2008). For instance, the study of Dikli and Bleyle (2014) revealed that learners had more positive perceptions related to the use of AI-powered feedback when it was supported by teacher feedback. In addition, some learners in the present study said that they preferred receiving only AF through *Grammarly* on their future writing tasks because they really liked the idea of using technology in their writing classes and receiving immediate feedback through an AI-powered tool. This might be explained by the finding of Prensky's (2001) study that some learners, who are called as digital natives, show preferences for speed, intolerance of slow-paced environment, and expectation for technology in learning environment. Apart from those learners, only one of the learners reported that it was better to receive only teacher feedback because she could better understand her errors through more explanations provided by the teacher. This is in line with the findings of Yang et al.'s (2006) study, which showed that some learners held the view that the most reliable source of information was the teacher.

The second major theme that emerged from the learners' responses was described as the perceived impact of combined feedback on paragraph writing. Regarding this issue, all of the learners pointed out that combined feedback enabled them to improve their writing performance. This finding is also supported by the quantitative results of the present study, which showed that the experimental group learners significantly improved their writing performance from the pre-writing task to the post-writing task thanks to the combined feedback they received. Specifically, the learners were also asked about in which aspects of writing they performed better and they still had difficulties when writing their paragraphs after the feedback intervention. Half of the learners reported that their grammatical knowledge increased and spelling errors decreased thanks to the combined feedback. This finding is consistent with the findings of some previous studies (Haddadian, 2024; Han & Sari, 2024; Link et al., 2022). It was pointed out in these studies that learners' writing accuracy significantly increased thanks to the combined feedback. In addition, some of the learners in this study reported that combined feedback allowed them to perform better in meaning-related aspects of writing such as word choice, content, and organization. It may be because the teacher might have allocated more time to provide suggestions and comments on how to use appropriate vocabulary, improve the content and organization of the paragraph as the majority of the spelling and grammatical errors were already handled by *Grammarly* (O'Neill & Russell, 2019; Thi & Nikolov, 2022). Apart from those learners, one of them particularly stated that she performed better in both local and meaning-related aspects of writing thanks to this kind of feedback. Likewise, Cheng and Zhang (2024) found the same finding in their study. They showed that the experimental group gained significant improvements in all aspects of writing such as content, organization, language use, and vocabulary from the pre-writing task to post-writing task thanks to the combined feedback they received.

On the other hand, most of the learners mentioned the fact that they still had difficulties in meaning-related aspects of writing including word choice, content, and organization. This finding may be attributable to some reasons. One of the reasons might be the complex nature of some writing aspects such as word choice and sentence structure. These two aspects of writing are described as untreatable errors by Ferris (1999), who claimed that no handbooks or set of rules can be consulted to fix these kinds of errors, so teachers need to employ a combination of strategy training and direct correction to help learners with these errors. Another reason may be that although the teacher may have

believed that both local and global aspects of writing should be focused on when providing feedback, she might have given more emphasis on form-focused feedback. This was also emphasised in the study by Lee (2009), which indicated that teachers usually focus on language form although they believe that feedback should be given on not only language forms but also organization and development of ideas.

To conclude, it was pointed out in the present study that the learners had various opinions about the benefits and shortcomings of receiving both AF and teacher feedback when completing their writing tasks, which were also emphasized in previous AF-related studies. Based on the findings related to combined feedback, it should be underlined that although the learners mentioned some shortcomings of both feedback types, they usually had positive opinions about the use of both AF and teacher feedback. Besides, it was reported in the interviews that the learners believed that receiving such combined feedback on their paragraphs improved their writing performance, but it is hardly possible to say that the learners who received a combination of AF and teacher feedback significantly outperformed their peers who received only teacher feedback in the post-writing task after the feedback intervention considering the statistical results. Thus, it is crucial to remember that although learners' opinions and beliefs might influence the impact of feedback types, some factors such as their engagement with the combined feedback, proficiency levels, and the duration of the feedback provision are likely to play a role in determining the success of this feedback type on improving learners' performance. Furthermore, most of the learners stated that they preferred using combined feedback type in their future writing tasks, which was also pointed out in many previous studies. That is, they appeared to enjoy the idea of receiving suggestions and corrections on their writing through both cutting-edge technologies and traditional feedback sources. Therefore, it can be said that all of the learners enjoyed receiving both AF and teacher feedback on their writing, and they mostly wanted to receive such combined feedback on their future writing tasks although some negative sides related to both feedback types were pointed out.

5 CONCLUSION

5.1 Summary

The present study aims to find out the impact of combined feedback (AF through *Grammarly* and teacher feedback) on the paragraph writing performance of Turkish EFL middle school learners, and their opinions about receiving both AF and teacher feedback on their paragraph writing. A mixed-methods explanatory sequential research design was employed in order to determine whether receiving a combination of AF and teacher feedback significantly influenced the learners' paragraph writing performance or not, and their opinions related to using such a feedback type in their writing classes.

In the quantitative part of this study, a quasi-experimental research design was adopted. For that reason, there were two groups randomly assigned as being an experimental and control group. A total of 38 learners, who studied at the 7th grade at a public middle school and had A2 proficiency level, completed a pre-writing task at the beginning of the study. Next, the feedback intervention process started. Throughout this process, both groups of the learners wrote the assigned paragraphs in a process-based writing approach. To illustrate, the control group learners completed four paragraph writing tasks in a process-based writing instruction over a period of eight weeks. They received written teacher feedback on their paragraph writing. Likewise, the experimental group learners were asked to complete the same four paragraph writing tasks, which were assigned to the control group, over a period of eight weeks. However, unlike the control group, they first received AF through *Grammarly*, which is an AI-powered tool, and then they received written teacher feedback on their paragraph writing. Both groups of the learners revised and edited their first drafts of paragraph tasks based on the feedback they received, and submitted their final versions to the teacher. After the feedback intervention ended, both groups of the learners were asked to complete a post-writing task in order to determine the effect of the combined feedback type on their paragraph writing performance. Following the administration of the post-writing tasks, semi-structured interviews were conducted with the experimental group learners to find out their opinions on making use of combined feedback when completing their writing tasks. Through the statistical analyses and thematic analysis, which were conducted on the pre- and post-writing scores of the learners and their responses given to the interview questions, some quantitative results and qualitative findings were obtained.

First, the quantitative results indicated that both experimental and control group learners significantly improved their paragraph writing performance from the pre-writing task to post-writing task thanks to the feedback type they were provided. However, the experimental group obtained higher mean scores than the control group in their post-writing task although both groups significantly performed better in their post-writing task compared to their pre-writing task. It was also pointed out in the current study that there was a non-significant difference between the experimental group who received combined feedback and control group who received teacher feedback in terms of paragraph writing performance after the feedback intervention. In other words, both experimental and control group learners showed similar performance in their post-writing task, which indicated that any feedback type did not lead one group to significantly outperform the other group regarding paragraph writing performance.

Second, the qualitative findings revealed two main themes related to the learners' opinions about receiving combined feedback in writing classes. These two themes were defined as the views about feedback types and process, and the perceived impact of combined feedback on paragraph writing. With regards to the first main theme identified as the views about feedback types and process, all the learners pointed out that they enjoyed receiving both AF through *Grammarly* and teacher feedback although they reported some shortcomings related to these feedback types.

During the interviews, the learners mentioned various benefits related to the use of AF in their writing classes. For instance, the timely corrections or suggestions provided by *Grammarly* were reported to enable them to notice, correct, and reduce their errors in spelling, grammar, and punctuation by most of the learners. Some of them also stated that the AF was practical as it presented the corrected version of the spelling and grammatical errors immediately for learners. In addition, the practice of using technology in writing classes was welcomed by the learners, as it was enjoyable to receive feedback from an AI-powered tool. Besides, it was pointed out by a few learners that the AF could identify the missing or unnecessary parts of the words, phrases, and sentences, and allowed them to construct more meaningful sentences easily. Apart from the benefits of AF through *Grammarly*, the learners emphasised that receiving teacher feedback after AF had many benefits for them. For example, teacher feedback was stated to help the learners to understand their errors better as it offered them opportunities to negotiate with a human.

It was also underlined by the learners that teacher feedback was more explanatory and clearer than AF through *Grammarly*. Besides, teacher feedback was found more effective in developing the content aspect of writing.

When it comes to the shortcomings of feedback types, the learners reported some issues related to both feedback types. For instance, AF was stated to lack human inferencing and interaction skills; as a result, it could not comprehend what learners meant exactly by their sentences. It was also emphasised that AF focused on only spelling, grammatical, and punctuation aspects of writing, but it could not provide any feedback on the content and organization aspects of writing. Regarding the shortcomings of teacher feedback, although most of the learners stated that teacher feedback had no disadvantages, very few learners mentioned a few issues. To exemplify, they said that it sometimes caused boredom for them to receive AF and teacher feedback one after the other. Teacher feedback was also stated to be sometimes delayed and time-consuming.

With regards to the learners' reasons for their preferences of feedback types, almost all of the learners preferred receiving combined feedback in their future writing tasks because AF and teacher feedback complemented each other's shortcomings. For instance, AF could provide correction and suggestions on the spelling and grammatical errors in their texts while the teacher provided detailed and more explanatory feedback on the meaning-related aspects of writing. Besides, AF was timely while teacher feedback could provide interaction and negotiation opportunities to learners, which AF lacked. In short, they were emphasised to be complementary to each other.

The other main theme that emerged from the learners' responses given to the interview questions was the perceived impact of combined feedback on paragraph writing. It was pointed out by all of the learners in the current study that receiving combined feedback on their writing enhanced their paragraph writing performance. When the learners were asked in which aspects of writing they performed better, most of them stated that they were better in grammar and spelling aspects of writing. There were also some learners who thought that they performed better in the meaning-related aspects of writing as content, organization, and vocabulary use. When it comes to the writing aspects in which they still had difficulties, all of the learners stated that it was challenging for them to develop vocabulary use, content and organization aspects of writing.

To conclude, the current study is believed to make a contribution to the better understanding of the impact of receiving combined feedback on the paragraph writing performance of Turkish EFL students at the middle school level. It is also considered to provide a better insight into the learners' opinions related to receiving both AF and teacher feedback in their writing classes.

5.2 Implications

Based on the quantitative results and qualitative findings of this study, some implications can be offered for EFL writing teachers and learners about the potential use of combined feedback based on a process-based writing instruction.

First of all, the quantitative results revealed that both teacher feedback and combined feedback enabled the learners to significantly improve their paragraph writing performance from the pre- to post-writing task. Based on this result, it can be suggested that teachers need to provide a learning environment for learners in which they can engage in writing tasks better than before and receive effective feedback on a regular basis (Bae & Jung, 2024; El-Ebyary & Windeatt, 2010). The quantitative results also showed that the combined feedback type did not lead learners to significantly outperform their peers who received only teacher feedback in the post-writing task. The non-significant difference between the experimental and control group after the feedback intervention might be the result of some factors such as few experiences and knowledge about this kind of feedback, lower-level proficiency levels, being used to traditional teacher feedback, or feedback process-related factors. Thus, teachers should take into account their learners' language proficiency levels while integrating this kind of feedback into their feedback provision process (Aluthman, 2016). While integrating AF into the writing classes of learners, especially with lower language proficiency levels, it can be suggested that teachers should always offer their monitoring, guidance, and individual support to them (Fan, 2023). Besides, since the duration of the feedback provision process was short and both groups of the learners could not write many drafts for the writing tasks due to the limited time in the current study, it can be inferred that the learners could not gain enough familiarity with combined feedback type. For this reason, teachers might be advised to extend the duration of the feedback provision process and have learners write as many drafts of the writing tasks as they can in order to increase their familiarity with this combined feedback process (Ding & Zou, 2024). Furthermore, it would be better for

educational institutions to offer training opportunities for both teachers and learners about how to present and engage with this combined feedback type in their writing classes in order to maximise its benefits for both sides (Li, 2021).

Secondly, the qualitative findings of this study pointed out that all of the learners enjoyed receiving both AF through *Grammarly* and teacher feedback on their paragraph writing. Based on this finding, it can be recommended that teachers might offer opportunities for their learners to experience the use of this combined feedback type in their writing classes. The learners also reported that although receiving both feedback types had some shortcomings, it was very advantageous for them to improve their writing performance. For instance, AF allowed them to notice, correct, and reduce their spelling and grammatical errors through its immediate nature, but it lacked human interaction and inferencing skills, and it could not provide any suggestions on how to develop the content aspect of writing. However, although teacher feedback had many characteristics, which learners found as advantageous, it had some shortcomings. To illustrate, it enabled the learners to better understand their errors in their texts as it was more explanatory and clearer, but it was sometimes boring, delayed and time-consuming. Based on all these findings, it might be suggested that teachers should adjust how to combine AF and teacher feedback by taking the affordances of both feedback types and considering the limitations of each feedback type (Chen & Cheng, 2008). That is, teachers need to involve their learners in a well-designed combined feedback process which supports their writing improvement by combining the advantages of AI-powered feedback including timely and enjoyable nature, highly consistent and accurate feedback on the grammar, spelling, and punctuation with the strengths of teacher feedback such as better guidance and interaction opportunities, and addressing meaning-related aspects of writing (Chen, 2025).

In addition, although all of the learners stated that receiving combined feedback enhanced their writing performance in the interviews, the statistical analyses showed that they could not significantly outperform their peers who received teacher feedback in the post-writing tasks. Thus, teachers need to be aware that the integration of additional feedback into EFL writing classes does not necessarily result in significant improvements in learners' writing performance or make the job of writing instruction easier (Huang & Renandya, 2020). Therefore, it can be suggested that both learners and teachers should adopt a critical

approach to the use of combined AF and teacher feedback in their writing classes, and avoid over-reliance on it (Sadigzade, 2025; Setiawan & Alkhowarizmi, 2025).

The findings also revealed that the learners had mixed opinions related to which aspects of writing improved more through combined feedback, but most of them agreed that they still had difficulties in meaning-related aspects of writing such as word choice, content, and organization at the end of the combined feedback process. Therefore, teachers might make the most of AF provided by AI-powered tools in order to correct the learners' spelling, punctuation, and grammatical errors so that they might allocate more time to give their own effective feedback on the meaning-related aspects of writing (Thi & Nikolov, 2022). Lastly, most learners pointed out that they preferred receiving not only teacher feedback but also AF through AI-powered tools on their future writing tasks. Considering this finding and the fact that most of the learners are digital natives, who show preference for immediacy and technology use in the learning environment, teachers should offer the timely feedback opportunities provided by AI-powered tools to their students and allow them to make use of technological devices while completing their writing tasks instead of just traditional pen and paper writing tasks (Han & Sari, 2024).

In conclusion, teachers need to employ a more careful pedagogical design while combining technology-enhanced feedback with their own feedback in order to provide more effective feedback conditions in L2 writing instruction, and hence, to improve the writing skills more (Chen & Cheng, 2008).

5.3 Suggestions for Further Research

The quantitative results and qualitative findings of this study are believed to offer a better understanding of the impact of combined feedback type on Turkish EFL middle school learners' writing performance, and their opinions about using this feedback type in their writing classes. By taking into consideration the results, findings, and implications emphasised in the current study, some suggestions can be made for future research.

To start with, in order to increase the generalizability of the findings, future studies might include a larger sample size (O'Neill & Russell, 2019). In addition, since there are not many studies which investigate the impact of combined feedback on the writing performance of high and middle school level learners, and the learners with lower-proficiency levels, the present study is considered to provide a better insight into the impact of such a combined feedback type on the learners' writing performance.

Nevertheless, it can be suggested to carry out more studies that investigate the effect of such a feedback type on the writing performance of the learners across various age groups and language proficiency levels (Ding & Zou, 2024) so that it would be possible to evaluate the effect of this feedback type on the writing performance from different perspectives. Furthermore, in this study, the long-term impact of such a combined feedback type on the learners' writing skill could not be investigated through delayed post-writing tasks due to the limited time. Thus, future studies that include delayed post-writing tasks can be carried out to examine the long-term effect of the combined feedback type on the learners' writing performance (Chen & Cheng, 2008). Besides, since the present study could not offer opportunities for the learners to write more than one draft for the paragraph writing tasks due to the limited time, it would be better to carry out further studies in which learners are asked to write multiple drafts by allocating more time for them to revise and edit their texts based on the feedback type received in a process-based writing instruction in order to enlighten the effect of combined feedback type on their writing performance more (Fan, 2023). Apart from these, additional research can be carried out across different writing tasks and genres to gain a better understanding of the impact of combined feedback on the learners' writing performance (Wilson & Czik, 2016). Additionally, previous studies have shown that some affective factors such as writing self-efficacy, writing motivation, and writing anxiety might influence the learners' writing performance (Cen & Zheng, 2024), and feedback process plays an essential role in learners' motivation in writing (Lee, 2017). Therefore, since in this study, only the opinions related to the feedback process were gathered, it can be suggested for researchers to investigate the complex relationship between learners' motivation, anxiety, self-efficacy in writing, and their engagement with combined feedback type. Moreover, it should not be ignored that teachers' beliefs and views on the use of AF in writing classes might shape the learners' attitudes towards receiving such a feedback type on their writing. Thus, future research might explore the perceptions and opinions of teachers about integrating AF into EFL writing classes (Chen & Cheng, 2008). It can also be useful to conduct more research, which lasts for a longer term and in which learners might receive sufficient training about how to make the most of both AF provided by AI-powered tools and teacher feedback and become more familiar with such a feedback type (Ding & Zou, 2024). Besides, it can be recommended to conduct future studies in which different AI-powered feedback tools other than *Grammarly* are utilized to provide AF to

learners, and their impacts on learners' writing performance. Lastly, AF-related studies are still in progress and more emphasis has been given on the practical aspects or functionalities of AF in previous studies (Ding & Zou, 2024). As a result, a well-established theoretical framework, which guides AF research, has still been a gap in the literature. Therefore, future research might focus on developing a theoretical framework, which is specific to AF.

All in all, since the practice of combining AF with teacher feedback is recommended in many previous AF-related studies, and seems promising for improving learners' writing performance, it can still be recommended to carry out further research in which the impact of this combined feedback type is investigated and evaluated in terms of various age groups, proficiency levels, and research designs.

REFERENCES

- Alnasser, S. M. (2022). EFL Learners' perceptions of integrating computer-based feedback into writing classrooms: Evidence from Saudi Arabia. *Sage Open*, 12(3), <https://doi.org/10.1177/21582440221123021>
- Altuntas, T. (2021). *The use of automated writing evaluation in EFL writing classes: Effects on achievement, motivation and self-efficacy* (Publication No. 667676) [Master's Thesis, Gazi University]. National Thesis Centre.
- Aluthman, E. S. (2016). The effect of using automated essay evaluation on ESL undergraduate students' writing skill. *International Journal of English Linguistics*, 6(5), 54-67. <https://doi.org/10.5539/ijel.v6n5p54>
- Amalia, H., Abdullah, F., & Fatimah, A. S. (2021). Teaching writing to junior high school students: A focus on challenges and solutions. *Journal of Language and Linguistic Studies*, 17(2), 794–810. <https://doi.org/10.17263/jlls.904066>
- Ashwell, T. (2000). Patterns of teacher response to student writing in a multiple-draft composition classroom: Is content feedback followed by form feedback the best method? *Journal of Second Language Writing*, 9(3), 227-257.
- Asyifa, P. A., & Daulay, E. (2024). The influence of Grammarly application to improve students' writing skills in recount text. *Allure Journal*, 4(2), 97–105. <https://doi.org/10.26877/allure.v4i2.19272>
- Attali, Y. (2011). Automated subscores for TOEFL iBT® independent essays. *ETS Research Report Series*, 2011(2), i-16.
- Bae, Y., & Jung, Y. (2024). The effect of feedback types on learner engagement and L2 writing development. *English Teaching*, 79(3), 159-180. <https://doi.org/10.15858/engtea.79.3.202409.159>
- Badger, R., & White, G. (2000). A process genre approach to teaching writing. *ELT Journal*, 54(2), 153–160. <https://doi.org/10.1093/elt/54.2.153>
- Bako, M. (2023). *The impact of automated writing evaluation and combined automated-teacher feedback on EFL learners' writing performance* (Publication No. 814422) [Master's Thesis, Yildiz Technical University]. National Thesis Centre.

- Baleghizadeh, S., & Gordani, Y. (2012). Academic writing and grammatical accuracy: The role of corrective feedback. *Gist: Education and Learning Research Journal*, 6, 159-176.
- Barrot, J. S. (2023). Using automated written corrective feedback in the writing classrooms: Effects on L2 writing accuracy. *Computer Assisted Language Learning*, 36(4), 584-607. <https://doi.org/10.1080/09588221.2021.1936071>
- Barrot, J., S. & Gabinete, M. K. (2021). Complexity, accuracy, and fluency in the argumentative writing of ESL and EFL learners. *International Review of Applied Linguistics in Language Teaching*, 59(2), 209-232. <https://doi.org/10.1515/iral-2017-0012>
- Benali, A. (2021). The impact of using automated writing feedback in ESL/EFL classroom contexts. *English Language Teaching*, 14(12), 189-195. <https://doi.org/10.5539/elt.v14n12p189>
- Bennui, P. (2008). A study of L1 interference in the writing of Thai EFL students. *Malaysian Journal of ELT Research*, 4(1), 72-102.
- Biber, D., Nekrasova, T., & Horn, B. (2011). The effectiveness of feedback for L1-English and L2-writing development: A meta-analysis. *ETS Research Report Series*, 2011(1). <https://doi.org/10.1002/j.2333-8504.2011.tb02241.x>
- Bitchener, J., & Ferris, D. R. (2012). *Written corrective feedback in second language acquisition and writing*. Routledge. <https://doi.org/10.4324/9780203832400>
- Bitchener, J., & Knoch, U. (2008). The value of written corrective feedback for migrant and international students. *Language Teaching Research*, 12(3), 409-431. <https://doi.org/10.1177/1362168808089924>
- Bitchener, J., & Storch, N. (2016). *Written corrective feedback for L2 development*. Multilingual Matters.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Bulut, S. E. (2019). *The effects of automated writing evaluation on EFL students' writing achievement and motivation towards writing* (Publication No. 547104) [Master's Thesis, Istanbul University]. National Thesis Centre.

- Burstein, J. (2003). The e-rater scoring engine: Automated essay scoring with natural language processing. In M. D. Shermis & J. C. Burstein (Eds.), *Automated essay scoring: A cross disciplinary approach* (pp. 113–121). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cavaleri, M., & Dianati, S. (2016). You want me to check your grammar again?: The usefulness of an online grammar checker as perceived by students. *Journal of Academic Language and Learning*, 10(1), A223-A236.
- Cen, Y., & Zheng, Y. (2024). The motivational aspect of feedback: A meta-analysis on the effect of different feedback practices on L2 learners' writing motivation. *Assessing Writing*, 59, 100802. <https://doi.org/10.1016/j.asw.2023.100802>
- Chen, C. F. E., & Cheng, W. Y. E. C. (2008). Beyond the design of automated writing evaluation: Pedagogical practices and perceived learning effectiveness in EFL writing classes. *Language Learning & Technology*, 12(2), 94-112.
- Chen, H., & Pan, J. (2022). Computer or human: A comparative study of automated evaluation scoring and instructors' feedback on Chinese college students' English writing. *Asian-Pacific Journal of Second and Foreign Language Education*, 7(1), 34. <https://doi.org/10.1186/s40862-022-00171-4>
- Chen, Q. (2025). Students' perceptions of AI-powered feedback in English writing: Benefits and challenges in higher education. *International Journal of Changes in Education*. <https://doi.org/10.47852/bonviewIJCE52025580>
- Cheng, G. (2017). The impact of online automated feedback on students' reflective journal writing in an EFL course. *The Internet and Higher Education*, 34, 18–27. <https://doi.org/10.1016/j.iheduc.2017.04.002>
- Cheng, Y. S. (2004). EFL students' writing anxiety: Sources and implications. *English Teaching & Learning*, 29(2), 41-62.
- Cheng, X., & Zhang, L. J. (2024). Examining second language (L2) learners' engagement with AWE-teacher integrated feedback in a technology-empowered context. *The Asia-Pacific Education Researcher*, 33(4), 1023-1035. <https://doi.org/10.1007/s40299-024-00877-8>

- Cheville, J. (2004). Automated scoring technologies and the rising influence of error. *English Journal*, 93(4), 47-52. <https://doi.org/10.58680/ej20042688>
- Cohen, L., Manion, L., & Morison, K. (2007). *Research methods in education* (6th ed.). London: Routledge.
- Cotos, E. (2011). Potential of automated writing evaluation feedback. *Calico Journal*, 28(2), 420-459.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. (2nd ed.) Thousand Oaks, CA: Sage.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Boston: Pearson.
- Demir, S. (2022). Comparison of normality tests in terms of sample sizes under different skewness and kurtosis coefficients. *International Journal of Assessment Tools in Education*, 9(2), 397-409. <https://doi.org/10.21449/ijate.1101295>
- Dikli, S. (2006). An overview of automated scoring of essays. *The Journal of Technology, Learning and Assessment*, 5(1).
- Dikli, S., & Bleyle, S. (2014). Automated essay scoring feedback for second language writers: How does it compare to instructor feedback? *Assessing Writing*, 22, 1-17. <https://doi.org/10.1016/j.asw.2014.03.006>
- Ding, T. (2008). A study of an E-Comment generating system: Development & application. [Unpublished master's thesis]. National Tsinghua University of Education, Beijing, China.
- Ding, L., & Zou, D. (2024). Automated writing evaluation systems: A systematic review of Grammarly, Pigai, and Criterion with a perspective on future directions in the age of generative artificial intelligence. *Education and Information Technologies*, 29(11). <https://doi.org/10.1007/s10639-023-12402-3>
- Dizon, G., & Gayed, J. M. (2024). A systematic review of Grammarly in L2 English writing contexts. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2397882>
- Dornyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.

- Doughty, C., & Williams, J. (1998). Pedagogical choices in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 197–261). New York, NY: Cambridge University Press.
- El-Ebyary, K., & Windeatt, S. (2010). The impact of computer-based feedback on students' written work. *International Journal of English Studies*, 10(2), 121-142.
- El-Garawany, M. S. M. (2024). The effects of a QuillBot-Based intervention on English language majors' EFL writing performance, apprehension, and Self-Efficacy. *Language Teaching Research Quarterly*, 43, 167–189. <https://doi.org/10.32038/ltrq.2024.43.10>
- Elkilic, G. (2012). Mother tongue traces of Turkish university students on composition papers written in English. *Procedia-Social and Behavioral Sciences*, 47, 656-664. <https://doi.org/10.1016/j.sbspro.2012.06.713>
- Elkilic, G., Han, T., & Aydin, S. (2009). Punctuation and capitalisation errors of Turkish EFL students in composition classes: An evidence of L1 interference. In *International Symposium on Sustainable Development* (pp. 279-284).
- Ellis, R. (2009a). A typology of written corrective feedback types. *ELT Journal*, 63(2), 97-107. <https://doi.org/10.1093/elt/ccn023>
- Ellis, R. (2009b). Corrective feedback and teacher development. *L2 Journal: An Electronic Refereed Journal for Foreign and Second Language Educators*, 1(1).
- Ellis, R. (2010). Epilogue: A framework for investigating oral and written corrective feedback. *Studies in Second Language Acquisition*, 32(2), 335-349. <https://doi.org/10.1017/s0272263109990544>
- Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, 36(3), 353-371. <https://doi.org/10.1016/j.system.2008.02.001>
- Ersanli, C. Y., & Yesilel, D. B. A. (2022). The use of automated writing evaluation tools to foster ESL writing instruction. In G. Yangin-Eksi, S. Akayoglu & L. Anyango (Eds.), *New directions in technology for writing instruction* (pp. 193-209). Cham: Springer International Publishing.

- Eryilmaz, A., & Yesilyurt, Y. E. (2020). Foreign language writing as a developmental process (foundation, expansion, development, and completion): The FEDCom model. *International Journal of Contemporary Educational Research*, 7(2), 307-334. <https://doi.org/10.33200/ijcer.768768>
- Fan, N. (2023). Exploring the effects of automated written corrective feedback on EFL students' writing quality: A mixed-methods study. *Sage Open*, 13(2). <https://doi.org/10.1177/21582440231181296>
- Ferris, D. R. (1995). Student reactions to teacher response in multiple-draft composition classrooms. *TESOL Quarterly*, 29, 33– 53. <https://doi.org/10.2307/3587804>
- Ferris, D. R. (1999). The case for grammar correction in L2 writing classes: A response to Truscott (1996). *Journal of Second Language Writing*, 8(1), 1-11. [https://doi.org/10.1016/S1060-3743\(99\)80110-6](https://doi.org/10.1016/S1060-3743(99)80110-6)
- Ferris, D. R. (2006). Does error feedback help student writers? In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (pp. 81–104). New York: Cambridge University Press. <https://doi.org/10.1017/cbo9781139524742.007>
- Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition*, 32(2), 181-201. <https://doi.org/10.1017/s0272263109990490>
- Ferris, D. R. (2011). *Treatment of error in second language student writing*. University of Michigan Press. <https://doi.org/10.1016/J.JSLW.2012.05.001>
- Ferris, D. R. (2014). Responding to student writing: Teachers' philosophies and practices. *Assessing Writing*, 19, 6-23. <https://doi.org/10.1016/j.asw.2013.09.004>
- Ferris, D. R., & Roberts, B. (2001). Error feedback in L2 writing classes: How explicit does it need to be? *Journal of Second Language Writing*, 10(3), 161-184. [https://doi.org/10.1016/S1060-3743\(01\)00039-X](https://doi.org/10.1016/S1060-3743(01)00039-X)
- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition & Communication*, 32(4), 365-387.

- Furneaux, C., Paran, A., & Fairfax, B. (2007). Teacher stance as reflected in feedback on student writing: An empirical study of secondary school teachers in five countries. *International Review of Applied Linguistics in Language Teaching*, 45(1), 69–94. <https://doi.org/10.1515/IRAL.2007.003>
- Ghufron, M. A., & Rosyida, F. (2018). The role of Grammarly in assessing English as a Foreign Language (EFL) writing. *Lingua Cultura*, 12(4), 395-403. <https://doi.org/10.21512/lc.v12i4.4582>
- Gibbs, G., & Simpson, C. (2004). Does your assessment support your students' learning?. *Journal of Teaching and Learning in Higher Education*, 1(1), 1-30.
- Gielen, S., Tops, L., Dochy, F., Onghena, P., & Smeets, S. (2010). A comparative study of peer and teacher feedback and of various peer feedback forms in a secondary school writing curriculum. *British Educational Research Journal*, 36(1), 143-162. <https://doi.org/10.1080/01411920902894070>
- Goldstein, L. M. (2004). Questions and answers about teacher written commentary and student revision: Teachers and students working together. *Journal of Second Language Writing*, 13(1), 63-80. <https://doi.org/10.1016/j.jslw.2004.04.006>
- Guo, Q., Feng, R., & Hua, Y. (2022). How effectively can EFL students use automated written corrective feedback (AWCF) in research writing?. *Computer Assisted Language Learning*, 35(9), 2312–2331. <https://doi.org/10.1080/09588221.2021.1879161>
- Haddadian, G. (2024). Comparing the effects of teacher feedback, automated feedback, and integrative feedback on EFL learners' writing accuracy and writing apprehension. *Computer-Assisted Language Learning Electronic Journal*, 25(3), 124-147.
- Han, T., & Sari, E. (2024). An investigation on the use of automated feedback in Turkish EFL students' writing classes. *Computer Assisted Language Learning*, 37(4), 961-985. <https://doi.org/10.1080/09588221.2022.2067179>
- Harmer, J. (2004). *How to teach writing*. England: Pearson Education.
- Harmer, J. (2015). *The practice of English language teaching*. London: Pearson.

- Hassanzadeh, M., & Fotoohnejad, S. (2021). Implementing an automated feedback program for a Foreign Language writing course: A learner-centric study: Implementing an AWE tool in a L2 class. *Journal of Computer Assisted Learning*, 37(5), 1494-1507. <https://doi.org/10.1111/jcal.12587>
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112. <https://doi.org/10.3102/003465430298487>
- Hayes, J. R. (2012). Modelling and remodelling writing. *Written Communication*, 29(3), 369-388. <https://doi.org/10.1177/0741088312451260>
- Hedge, T. (2005). *Writing*. Oxford, UK: Oxford University Press.
- Henderson, M., Ryan, T., & Phillips, M. (2019). The challenges of feedback in higher education. *Assessment & Evaluation in Higher Education*, 44(8), 1237–1252. <https://doi.org/10.1080/02602938.2019.1599815>
- Hidayati, K. H. (2018). Teaching writing to EFL learners: An investigation of challenges confronted by Indonesian teachers. *LANGKAWI: Journal of the Association for Arabic and English*, 4(1), 21-31. <http://doi.org/10.31332/lkw.v4i1.772>
- Hirose, K. (2001). Realizing a giant first step toward improved English writing: A case in a Japanese university. In I. Leki (Ed.), *Academic writing programs* (pp.35-46). Alexandria, VA: TESOL.
- Hoang, G. T. L. (2022). Feedback precision and learners' responses: A study into ETS Criterion automated corrective feedback in EFL writing classrooms. *The JALT CALL Journal*, 18(3), 444-467. <https://doi.org/10.29140/jaltcall.v18n3.764>
- Huang, S., & Renandya, W. A. (2020). Exploring the integration of automated feedback among lower-proficiency EFL learners. *Innovation in Language Learning and Teaching*, 14(1), 15-26. <https://doi.org/10.1080/17501229.2018.1471083>
- Hyland, K. (2003). *Second language writing*. Cambridge. Cambridge University Press.
- Hyland, K. (2008). Writing theories and writing pedagogies. *Indonesian JELT: Indonesian Journal of English Language Teaching*, 4(2), 1-20. <https://doi.org/10.25170/ijelt.v4i2.1569>

- Hyland, F., & Hyland, K. (2001). Sugaring the pill: Praise and criticism in written feedback. *Journal of Second Language Writing*, 10(3), 185-212.
[https://doi.org/10.1016/S1060-3743\(01\)00038-8](https://doi.org/10.1016/S1060-3743(01)00038-8)
- Hyland, K., & Hyland, F. (Eds.). (2006a). *Feedback in second language writing: Contexts and issues*. New York: Cambridge University Press.
- Hyland, K., & Hyland, F. (2006b). Feedback on second language students' writing. *Language Teaching*, 39(2), 83-101.
<https://doi.org/10.1017/S0261444806003399>
- Imsa-ard, P. (2020). Being an effective writing teacher: understanding writing theories behind the product, process, and genre approaches. *International Journal of Linguistics and Translation Studies*, 1(2), 35-47.
<https://doi.org/10.36892/ijlls.v1i2.31>
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3-20.
<https://doi.org/10.1177/1525822X05282260>
- Japos V. (2013). Effectiveness of coaching interventions using *Grammarly* software and detection software in reducing grammatical errors and plagiarism of undergraduate researchers. *JPAIR Institutional Research*, 1(1), 97-109.
<https://doi.org/10.7719/irj.v1i1.207>
- Kumaravadivelu, B. (2006). TESOL methods: Changing tracks, challenging trends. *TESOL Quarterly*, 40, 59-81. <https://doi.org/10.2307/40264511>
- Lai, Y. H. (2010). Which do students prefer to evaluate their essays: Peers or computer program. *British Journal of Educational Technology*, 41(3), 432-454.
<https://doi.org/10.1111/j.1467-8535.2009.00959.x>
- Landauer, T., Laham, D., & Foltz, P. (2000). The Intelligent Essay Assessor. *IEEE Intelligent Systems* 15(5): 27-31.
- Lee, I. (2007). Feedback in Hong Kong secondary writing classrooms: Assessment for learning or assessment of learning?. *Assessing Writing*, 12(3), 180-198.
<https://doi.org/10.1016/j.asw.2008.02.003>

- Lee, I. (2009). Ten mismatches between teachers' beliefs and written feedback practice. *ELT Journal*, 63(1), 13-22. <https://doi.org/10.1093/elt/ccn010>
- Lee, I. (2013). Research into practice: Written corrective feedback. *Language Teaching*, 46(1), 108-119. <https://doi.org/10.1017/S0261444812000390>
- Lee, I. (2016). EFL writing in schools. In R. M. Manchón & P. K. Matsuda (Eds.), *Handbook of second and foreign language writing* (pp.45-64). Walter de Gruyter GmbH & Co KG.
- Lee, I. (2017). *Classroom writing assessment and feedback in L2 school contexts*. Singapore: Springer Singapore. <https://doi.org/10.1007/978-981-10-3924-9>
- Lee, C., Cheung, W. K. W., Wong, K. C. K., & Lee, F. S. L. (2013). Immediate web-based essay critiquing system feedback and teacher follow-up feedback on young second language learners' writings: An experimental study in a Hong Kong secondary school. *Computer Assisted Language Learning*, 26(1), 39-60. <https://doi.org/10.1080/09588221.2011.630672>
- Leki, I. (2001). Material, educational, and ideological challenges of teaching EFL writing at the turn of the century. *International Journal of English Studies*, 1(2), 197-209.
- Leki, I., Cumming, A., & Silva, T. (2008). *A Synthesis of Research on Second Language Writing in English* (1st ed.). Routledge. <https://doi.org/10.4324/9780203930250>
- Li, Z. (2021). Teachers in automated writing evaluation (AWE) system-supported ESL writing classes: Perception, implementation, and influence. *System*, 99, 102505. <https://doi.org/10.1016/j.system.2021.102505>
- Li, J., Link, S., & Hegelheimer, V. (2015). Rethinking the role of automated writing evaluation (AWE) feedback in ESL writing instruction. *Journal of Second Language Writing*, 27, 1–18. <https://doi.org/10.1016/j.jslw.2014.10.004>
- Liao, H. C. (2016). Using automated writing evaluation to reduce grammar errors in writing. *ELT Journal*, 70(3), 308-319. <https://doi.org/10.1093/elt/ccv058>
- Link, S., Mehrzad, M., & Rahimi, M. (2022). Impact of automated writing evaluation on teacher feedback, student revision, and writing improvement. *Computer Assisted Language Learning*, 35(4), 605-634. <https://doi.org/10.1080/09588221.2020.1743323>

- Liu, J., & Hansen, J. (2002). *Peer response in second language writing classrooms*. Ann Arbor: University of Michigan Press.
<https://doi.org/10.1002/9781405198431.wbeal0902>
- Liu, S., & Kunnan, A. J. (2016). Investigating the application of automated writing evaluation to Chinese undergraduate English majors: A case study of WriteToLearn. *CALICO Journal*, 33(1), 71–91.
<https://doi.org/10.1558/cj.v33i1.26380>
- Long, M., & Robinson, P. (1998). Focus-on-form: Theory, research and practice. In C. Doughty & J. Williams (Eds.), *Focus-on-form in classroom second language acquisition* (pp. 15–41). Cambridge: Cambridge University Press.
- Matsuda, P. K. (2003). Second language writing in the 20th century: A situated historical perspective. In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 15–34). New York: Cambridge University Press.
- Mehrabi-Yazdi, O. (2018). Short communication on the missing dialogic aspect of an automated writing evaluation system in written feedback research. *Journal of Second Language Writing*, 41, 92-97. <https://doi.org/10.1016/j.jslw.2018.05.004>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.
- Min, H. T. (2005). Training students to become successful peer reviewers. *System*, 33(2), 293–308. <https://doi.org/10.1016/j.system.2004.11.003>
- MoNE [Ministry of National Education]. (2018). *English language curricula (2nd -8th grades)*. <http://mufredat.meb.gov.tr/ProgramDetay.aspx?PID=327>
- Miranty, D., & Widiati, U. (2021). Automated writing evaluation (AWE) in higher education: Indonesian EFL students' perceptions about Grammarly use across student cohorts. *Pegem Journal of Education and Instruction*, 11 (4), 126–137.
<https://doi.org/10.47750/pegegog.11.04.12>
- Mohammadi, M., Zarrabi, M., & Kamali, J. (2023). Formative assessment feedback to enhance the writing performance of Iranian IELTS candidates: Blending teacher and automated writing evaluation. *International Journal of Language Testing*, 13(1), 206-224.

- NCTE [National Council of Teachers of English]. (2013). *Machine scoring fails the test*. NCTE Position Statement on Machine Scoring. http://www.ncte.org/positions/statements/machine_scoring
- Nguyen, H. M., & Chu, T. A. (2024). Written corrective feedback in second language writing: A review of research. *Reflections*, 31(2), 858-870. <https://doi.org/10.61508/refl.v31i2.275269>
- Nunan, D. (1991). *Language teaching methodology. A textbook for teachers*. Prentice Hall.
- Nunan, D. (1999). *Second language teaching and learning*. New York: Heinle & Heinle.
- Nunan, D. (2015). *Teaching English to speakers of other languages: An introduction* (1st ed.). Routledge. <https://doi.org/10.4324/9781315740553>
- Olson, M. W., & Raffeld, P. (1987). The effects of written comments on the quality of student compositions and the learning of content. *Reading Psychology: An International Quarterly*, 8(4), 273-293. <https://doi.org/10.1080/0270271870080404>
- O'Neill, R., & Russell, A. (2019). Stop! Grammar time: University students' perceptions of the automated feedback program Grammarly. *Australasian Journal of Educational Technology*, 35(1), 42-56.
- Ozturk, G., & Saydam, D. (2017). Anxiety and self-efficacy in foreign language writing: The case in Turkey. *Baskent University Journal of Education*, 1(2), 10-21.
- Pallant, J. (2007). *Survival manual. A step by step guide to data analysis using SPSS for Windows* (3rd ed.). McGraw Hill: Open University Press.
- Paris, B. (2022). Instructors' perspectives of challenges and barriers to providing effective feedback. *Teaching and Learning Inquiry*, 10. <https://doi.org/10.20343/teachlearninqu.10.3>
- Parra G., L., & Calero S., X. (2019). Automated writing evaluation tools in the improvement of the writing skill. *International Journal of Instruction*, 12(2), 209-226. <https://doi.org/10.29333/iji.2019.12214a>

- Polakova, P., & Ivenz, P. (2024). The impact of ChatGPT feedback on the development of EFL students' writing skills. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186x.2024.2410101>
- Pramila, N. (2017). Approaches to teaching English writing: A research note. *Studies in Foreign Language Education*, 39, 141-148.
- Prensky, M. (2001). *Digital game-based learning*. New York: McGraw-Hill. <https://doi.org/10.1145/950566.950596>
- Ranalli, J. (2018). Automated written corrective feedback: How well can students make use of it?. *Computer Assisted Language Learning*, 31(7), 653-674. <https://doi.org/10.1080/09588221.2018.1428994>
- Reichert, M. (2013). ESL and EFL Writing Instruction: Challenges and opportunities. *Perspectives on Foreign Language Learning*, 9-21.
- Roscoe, R. D., Wilson, J., Johnson, A. C., & Mayra, C. R. (2017). Presentation, expectations, and experience: Sources of student perceptions of automated writing evaluation. *Computers in Human Behavior*, 70, 207–221. <https://doi.org/10.1016/j.chb.2016.12.076>
- Sadigzade, Z. (2025). AI-Powered feedback in ESL writing classes: Pedagogical opportunities and ethical concerns. *Journal of Azerbaijan Language and Education Studies*, 2(4), 5–17. <https://doi.org/10.69760/jales.2025004000>
- Salavatizadeh, M., & Tahriri, A. (2020). The effect of blended online automated feedback and teacher feedback on EFL learners' essay writing ability and perception. *Journal of Teaching Language Skills*, 39(39), 181–225. <https://doi.org/10.22099/jtls.2021.38753.2899>
- Selvaraj, M., & Aziz, A. A. (2019). Systematic review: Approaches in teaching writing skill in ESL classrooms. *International Journal of Academic Research in Progressive Education and Development*, 8(4), 450-473. <http://doi.org/10.6007/IJARPED/v8-i4/6564>
- Setiawan, N. F., & Alkhowarizmi, N. A. (2025). Exploring an artificial intelligence as automated feedback program in EFL writing. *ETERNAL (English Teaching Journal)*, 16(1), 202–224. <https://doi.org/10.26877/eternal.v16i1.1206>

- Shadiev, R., & Feng, Y. (2024). Using automated corrective feedback tools in language learning: A review study. *Interactive Learning Environments*, 32(6), 2538-2566. <https://doi.org/10.1080/10494820.2022.2153145>
- Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, 41(2), 255-283. <https://doi.org/10.1002/j.1545-7249.2007.tb00059.x>
- Sheen, Y. (2011). *Corrective feedback, individual differences and second language learning*. New York: Springer. <https://doi.org/10.1007/978-94-007-0548-7>
- Shermis, M. D., & Burstein, J. C. (2003). *Automated essay scoring: A cross-disciplinary perspective*. Routledge. <https://doi.org/10.4324/9781410606860>
- Shermis, M. D., Burstein, J., & Bursky, S. A. (2013). Introduction to automated essay evaluation. In M. D. Shermis & J. Burstein (Eds.), *Handbook of automated essay evaluation: Current applications and new directions* (pp. 1–15). Routledge/Taylor & Francis Group.
- Shintani, N., Ellis, R., & Suzuki, W. (2014). Effects of written feedback and revision on learners' accuracy in using two English grammatical structures. *Language Learning*, 64(1), 103-131. <https://doi.org/10.1111/lang.12029>
- Silva, T., & Matsuda, P. K. (2010). *Practicing theory in second language writing*. Parlor Press
- Stevenson, M. (2016). A critical interpretative synthesis: The integration of automated writing evaluation into classroom writing instruction. *Computers and Composition*, 42, 1-16. <http://doi.org/10.1016/j.asw.2013.11.007>
- Stevenson, M., & Phakiti, A. (2014). The effects of computer-generated feedback on the quality of writing. *Assessing Writing*, 19, 51-65.
- Storch, N., & Tapper, J. (2000). The focus of teacher and student concerns in discipline-specific writing by university students. *Higher Education Research & Development*, 19(3), 337-355. <https://doi.org/10.1080/758484345>
- Tang, J., & Rich, C. S. (2017). Automated writing evaluation in an EFL setting: Lessons from China. *The JALT CALL Journal*, 13(2), 117–146. <https://doi.org/10.29140/jaltcall.v13n2.215>

- Tang, R. (2012). *Academic writing in a second or foreign language: Issues and challenges facing ESL/EFL academic writers in higher education contexts*. Bloomsbury Publishing.
- Terry, G., Hayfeld, N., Braun, V., & Clarke, V. (2017). Thematic analysis. In C. Willig & W. Stainton-Rogers (Eds.), *The SAGE handbook of qualitative research in psychology* (pp. 17–37). Sage Publications, London.
- Thi, N. K., & Nikolov, M. (2022). How teacher and Grammarly feedback complement one another in Myanmar EFL students' writing. *The Asia-Pacific Education Researcher*, 31(6), 767-779. <https://doi.org/10.1007/s40299-021-00625-2>
- Thompson, P. (2013). The digital natives as learners: Technology use patterns and approaches to learning. *Computers & Education*, 65, 12-33. <https://doi.org/10.1016/j.compedu.2012.12.022>
- Tong, H. (2007). The contrast experiment of product approach and process approach. *Journal of Basic English Education*, 4(9), 58-81.
- Tribble, C. (1996). *Writing*. Oxford: Oxford University Press.
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, 46(2), 327-369. <https://doi.org/10.1111/j.1467-1770.1996.tb01238.x>
- Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2012). Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning*, 62(1), 1-41. <https://doi.org/10.1111/j.1467-9922.2011.00674.x>
- Wang, E. L., Matsumura, L. C., Correnti, R., Litman, D., Zhang, H., Howe, E., Magooda, A., & Quintana, R. (2020). eRevis(ing): Students' revision of text evidence use in an automated writing evaluation system. *Assessing Writing*, 44, <https://doi.org/10.1016/j.asw.2020.100449>
- Wang, Y. H., & Liao, H. C. (2008). The application of learning portfolio assessment for students in the technological and vocational education system. *Asian EFL Journal*, 10(2), 132-154.

- Wang, Y. J., Shang, H. F., & Briody, P. (2013). Exploring the impact of using automated writing evaluation in English as a foreign language university students' writing. *Computer Assisted Language Learning*, 26(3), 234-257. <https://doi.org/10.1080/09588221.2012.655300>
- Wang, Z., & Han, F. (2022) The effects of teacher feedback and automated feedback on cognitive and psychological aspects of foreign language writing: A mixed-methods research. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.909802>
- Ware, P. (2011). Computer-generated feedback on student writing. *TESOL Quarterly*, 45(4), 769-774. <https://doi.org/10.5054/tq.2011.272525>
- Warschauer, M., & Grimes, D. (2008). Automated writing assessment in the classroom. *Pedagogies: An International Journal*, 3(1), 22-36. <https://doi.org/10.1080/15544800701771580>
- Warschauer, M., & Ware, P. (2006). Automated writing evaluation: Defining the classroom research agenda. *Language Teaching Research*, 10(2), 157-180. <https://doi.org/10.1191/1362168806lr190oa>
- Wei, P., Wang, X., & Dong, H. (2023). The impact of automated writing evaluation on second language writing skills of Chinese EFL learners: A randomized controlled trial. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1249991>
- Weigle, S. C. (2013). English language learners and automated scoring of essays: Critical considerations. *Assessing Writing*, 18(1), 85-99. <https://doi.org/10.1016/j.asw.2012.10.006>
- Wilson, J., & Czik, A. (2016). Automated essay evaluation software in English Language Arts classrooms: Effects on teacher feedback, student motivation, and writing quality. *Computers & Education*, 100, 94-109. <https://doi.org/10.1016/j.compedu.2016.05.004>
- Wilson, J., Zhang, F., Palermo, C., Cordero, T. C., Myers, M. C., Eacker, H., Potter, A., & Coles, J. (2023). Predictors of middle school students' perceptions of automated writing evaluation. *Computers & Education*, 211, 104985. <https://doi.org/10.1016/j.compedu.2023.104985>

- Woodworth, J., & Barkaoui, K. (2020). Perspectives on using automated writing evaluation systems to provide written corrective feedback in the ESL classroom. *TESL Canada Journal*, 37(2), 234-247. <https://doi.org/10.18806/tesl.v37i2.1340>
- Xu, T. S., Zhang, L. J., & Gaffney, J. S. (2023). A multidimensional approach to assessing the effects of task complexity on L2 students' argumentative writing. *Assessing Writing*, 55, 100690. <https://doi.org/10.1016/j.asw.2022.100690>
- Yan, Z., Panadero, E., Wang, X., & Zhan, Y. (2023). A systematic review on students' perceptions of self-assessment: usefulness and factors influencing implementation. *Educational Psychology Review*, 35(3), 81. <https://doi.org/10.1007/s10648-023-09799-1>
- Yang, M., Badger, R., & Yu, Z. (2006). A comparative study of peer and teacher feedback in a Chinese EFL writing class. *Journal of Second Language Writing*, 15(3), 179-200. <https://doi.org/10.1016/j.jslw.2006.09.004>
- Yangin-Eksi, G. (2012). Peer review versus teacher feedback in process writing: How effective. *International Journal of Applied Educational Studies*, 13(1), 33-48.
- Yesilyurt, Y. E., & Kartal, G. (2018). L2 writing pedagogy in Turkey: Challenges and suggestions in line with current practices. In S. Durak Uguten, F. Sanal, & F. Bukel Ekizer (Eds.), *Current pathways in foreign language teaching* (pp. 29-40). Cizgi Kitabevi, Konya, Turkey.
- Yildiz, H., & Gonen, S. I. K. (2024). Automated writing evaluation system for feedback in the digital world: An online learning opportunity for English as a foreign language students. *Turkish Online Journal of Distance Education*, 25(3), 183-206. <https://doi.org/10.17718/tojde.1169727>
- Zhang, S. (1995). Re-examining the affective advantage of peer feedback in the ESL writing class. *Journal of Second Language Writing*, 4(3), 209-222. [https://doi.org/10.1016/1060-3743\(95\)90010-1](https://doi.org/10.1016/1060-3743(95)90010-1)
- Zhang, Z. (2017). Student engagement with computer-generated feedback: A case study. *ELT Journal*, 71(3), 317-328. <https://doi.org/10.1093/elt/ccw089>

- Zhang, Z. V. (2020). Engaging with automated writing evaluation (AWE) feedback on L2 writing: Student perceptions and revisions. *Assessing Writing*, 43, 100439. <https://doi.org/10.1016/j.asw.2019.100439>
- Zhang, Z. V., & Hyland, K. (2018). Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing*, 36, 90-102. <https://doi.org/10.1016/j.asw.2018.02.004>
- Zhao, R., Zhuang, Y., Zou, D., Xie, Q., & Yu, P. L. (2023). AI-assisted automated scoring of picture-cued writing tasks for language assessment. *Education and Information Technologies*, 28(6), 7031-7063. <https://doi.org/10.1007/s10639-022-11473-y>
- Zhou, D. (2015). An empirical study on the application of process approach in non-English majors' writing. *English Language Teaching*, 8(3), 89-96. <http://doi.org/10.5539/elt.v8n3p89>

APPENDICES

APPENDIX-1. Sample Pages from English Language Curriculum Defined by the Ministry of Turkish National Education

7. SINIF / 7th GRADE

Unit / Theme	Functions & Useful Language	Language Skills and Learning Outcomes	Suggested Contexts, Tasks and Assignments
5 Television	Describing what people do regularly I never/sometimes/often/usually/always watch football matches at weekends. I can't wait for it. Expressing preferences I prefer movies to TV series. S/he prefers talk shows to reality shows. My favorite TV program is ... Stating personal opinions Talk shows are usually amusing, but I think reality shows are pretty boring. Talking about past events Did you watch the wild life documentary last night? —I watched it last night, and it was fantastic. appear channel, -s commercial, -s director, -s discussion, -s documentary, -ies news quiz show, -s reality show, -s recommend remote control, -s series sitcom, -s soap opera, -s talk show, -s	Listening E7.5.L1. Students will be able to understand simple oral texts about daily routines and preferences. Spoken Interaction E7.5.SI1. Students will be able to ask questions about preferences of other people. E7.5.SI2. Students will be able to talk about past events and personal experiences. Spoken Production E7.5.SP1. Students will be able to state their preferences. E7.5.SP2. Students will be able to describe past events in a simple way. Reading E7.5.R1. Students will be able to understand simple texts about daily routines and preferences. E7.5.R2. Students will be able to understand simple texts about past events. Writing E7.5.W1. Students will be able to write pieces about daily routines and preferences.	Contexts Advertisements Blogs Diaries/Journal Entries E-mails Illustrations Magazines News Reports Podcasts Posters Questionnaires Stories Tables Videos Websites Tasks/Activities Drama (Role Play, Simulation, Pantomime) Find Someone Who ... Games Guessing Information/Opinion Gap Information Transfer Labeling Matching Questions and Answers Reordering Storytelling True/False/No information Assignments • Students choose two types of TV programs that they frequently watch and prepare a poster giving information about the programs.

7. SINIF / 7th GRADE

Unit / Theme	Functions & Useful Language	Language Skills and Learning Outcomes	Suggested Contexts, Tasks and Assignments
6 Celebrations	Making simple suggestions (Accepting and refusing) Would you like some cake? —Yes, please. Just a little. I'll get a sandwich. Would you like one? —No, thanks. I am full. Making arrangements and sequencing the actions It is easy to organize a birthday party. First, you should prepare a guest list. Then, you should decorate your place. Finally, you should prepare lots of food. Expressing needs and quantity We need some/a lot of balloons. I have a lot of/many/one or two/some presents. arrange attend beverage, -s decorate fancy guest, -s host, -s invitation card/message invite organize refuse wrap	Listening E7.6.L1. Students will be able to recognize utterances related to suggestions, needs and quantity of things. Spoken Interaction E7.6.SI1. Students will be able to talk about arrangements and sequences of actions. Spoken Production E7.6.SP1. Students will be able to make suggestions. E7.6.SP2. Students will be able to express needs and quantity. Reading E7.6.R1. Students will be able to understand texts about celebrations. Writing E7.6.W1. Students will be able to write invitation cards.	Contexts Advertisements Blogs Diaries/Journal Entries E-mails Illustrations Lists Magazines News Reports Notes and Messages Podcasts Posters Questionnaires Stories Tables Videos Websites Tasks/Activities Drama (Role Play, Simulation, Pantomime) Find Someone Who ... Games Guessing Information/Opinion Gap Information Transfer Labeling Matching Questions and Answers Reordering Storytelling True/False/No information Assignments • Students keep expanding their visual dictionary by including new vocabulary items. • Students organize a birthday party. They prepare a list for needs, guests and food. They also prepare an invitation card.

APPENDIX-2. Pre-Writing Task

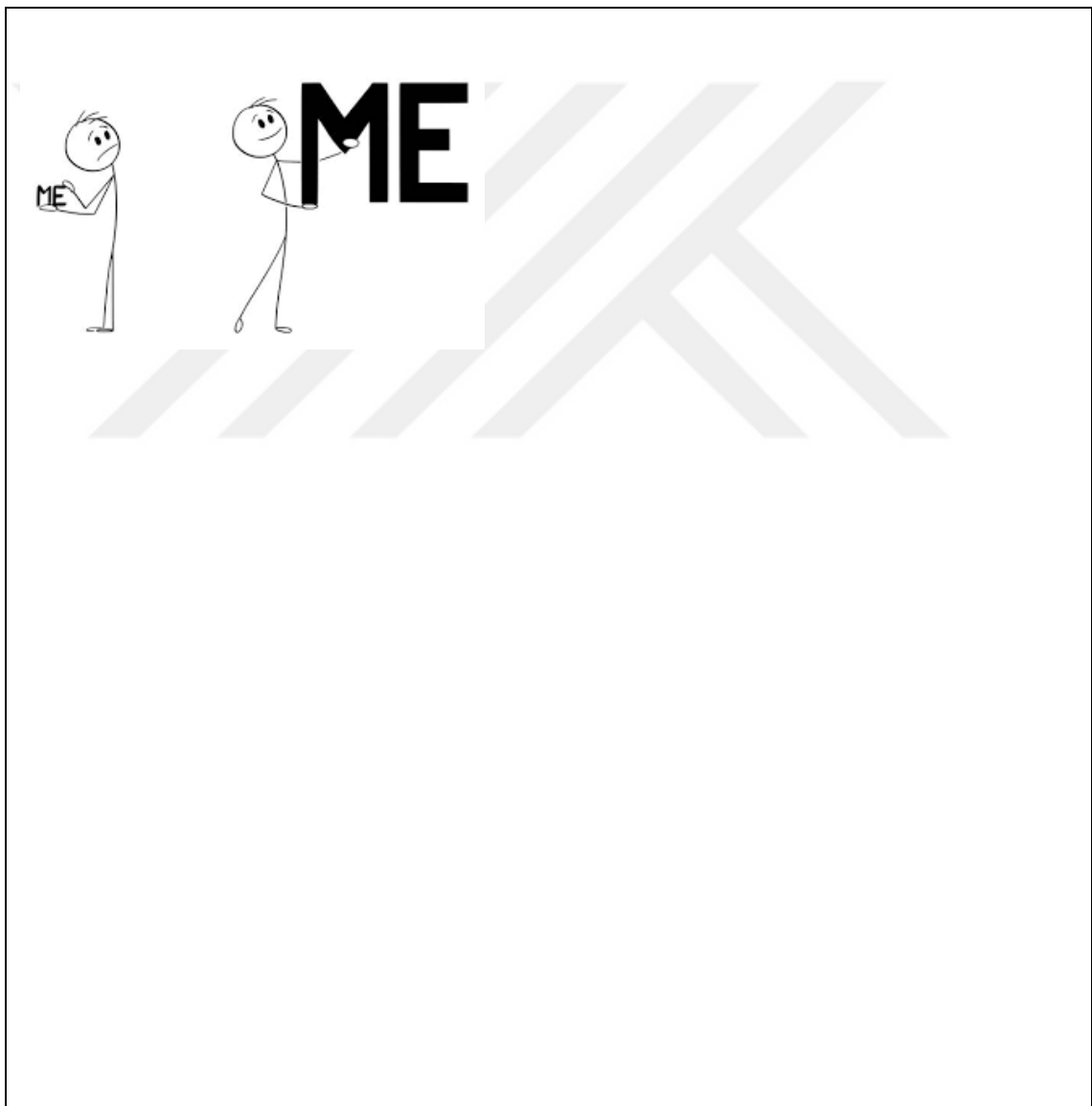
NAME/SURNAME:

CLASS:

DATE:

PRE-WRITING TASK (40 minutes)

Imagine that you join an English learning messaging group to practice your language. The group admin asks everyone to write a paragraph about introducing themselves. Write a paragraph about yourself, including your personal information, appearance and personality, daily routines, and free time activities. (Your text must have between 50 and 100 words.)



APPENDIX-3. Post-Writing Task

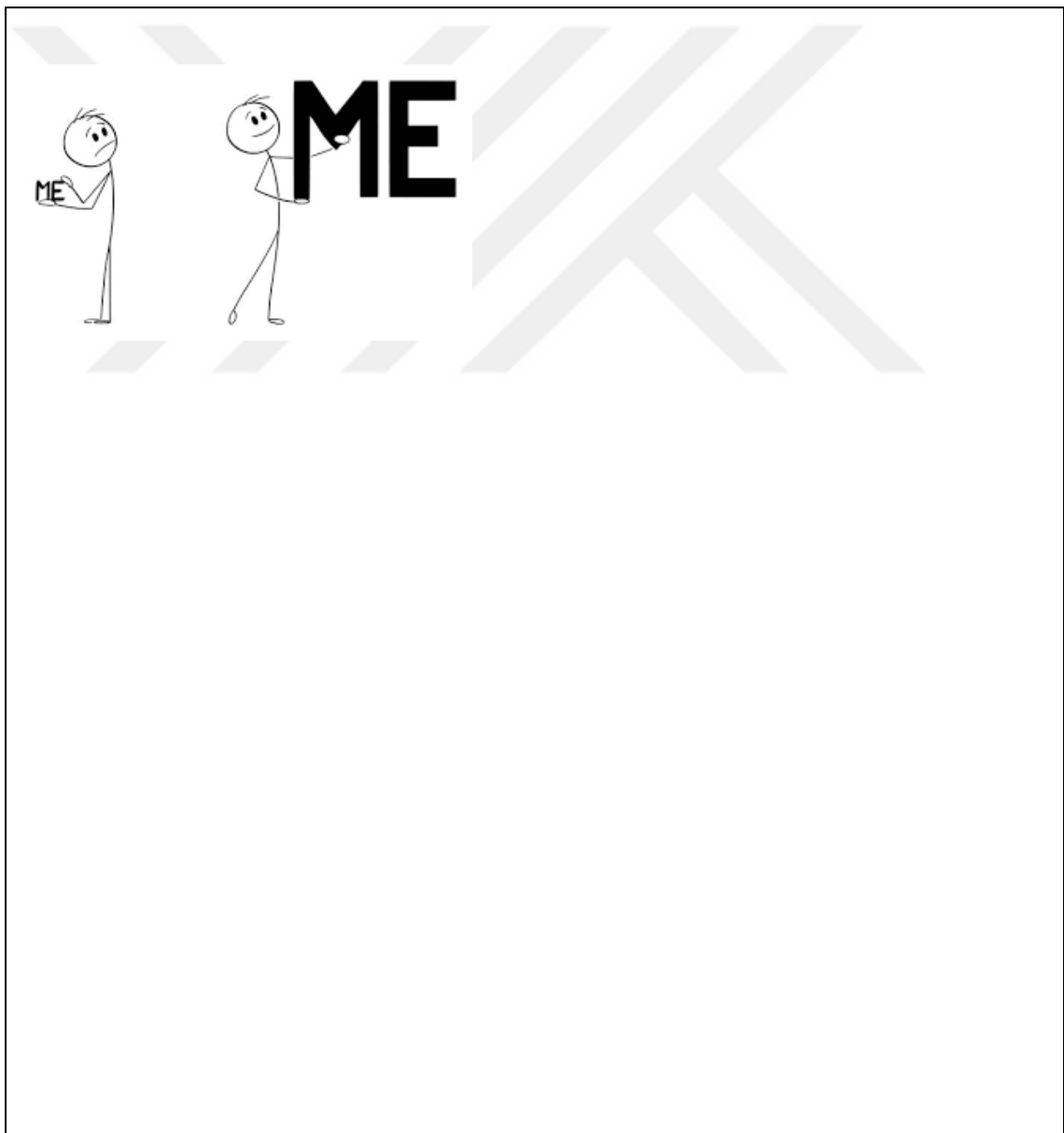
NAME/SURNAME:

CLASS:

DATE:

POST-WRITING TASK (40 minutes)

Imagine that you join an English learning messaging group to practice your language. The group admin asks everyone to write a paragraph about introducing themselves. Write a paragraph about yourself, including your personal information, appearance and personality, daily routines, and free time activities. (Your text must have between 50 and 100 words.)



APPENDIX-4. Writing Scoring Rubric (Wang & Liao, 2008)

Category	Criteria	Score
Focus	Specifically addressing the writing task.	10-9
	Addressing most of the writing task.	8-7
	Addressing the writing task adequately but sometimes straying from the task	6-5
	Inadequately addressing the writing task	4-3
	Having problems with focus or failing to address the writing task	2-1
Content	Using specific appropriate details to support topics or illustrate ideas	10-9
	Using appropriate details to support topics or illustrate ideas	8-7
	Using some details to support topics or illustrate ideas	6-5
	Using inappropriate or insufficient details to support topics or illustrate ideas	4-3
	Using few or no details or irrelevant details to support topics or illustrate ideas	2-1
Organization	Being specifically well-organized and well-developed	10-9
	Being generally well-organized and well-developed	8-7
	Mostly well-organized and well-developed	6-5
	Being inappropriately well-organized and well-developed	4-3
	Being seriously disorganized or underdeveloped	2-1
Spelling and Grammar	Spelling and grammar are perfect or nearly perfect	10-9
	Spelling and grammar are almost accurate	8-7
	Spelling and grammar are fair with some minor errors	6-5
	Spelling and grammar are inappropriate with obvious errors	4-3
	Spelling and grammar are poor with frequent errors.	2-1
Word usage	Using specific appropriate words	10-9
	Using appropriate words	8-7
	Using adequate but sometimes inappropriate words	6-5
	Using noticeably inappropriate words	4-3
	Containing severe writing errors.	2-1

**YARI YAPILANDIRILMIŞ GÖRÜŞME İÇİN AYRINTILI BİLGİLENDİRME
VE GÖNÜLLÜ KATILIM FORMU**

Değerli öğrenciler,

Bu araştırma “Öğretmen Geri bildirimi ve Birleştirilmiş Otomatik Geri bildirim ve Öğretmen Geri bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması” başlığıyla Anadolu Üniversitesi’nde Dr. Öğr. Üyesi Aylin Sevimel Şahin’ in yönetiminde İngiliz Dili Eğitimi Tezli Yüksek Lisans öğrencisi Fatma Uzman tarafından yürütülmektedir. Bu araştırmanın amacı öğretmen geri bildiriminin ve birleştirilmiş otomatik ve öğretmen geri bildirim modelinin ortaokul seviyesindeki yabancı dil olarak İngilizce öğrenen öğrencilerin paragraf yazma performansı üzerindeki etkisini karşılaştırmaktır. Bu kapsamda yarı yapılandırılmış görüşmeler aracılığıyla sizden veriler toplanacaktır ve bu görüşmeler sırasında ses kaydı alınacaktır. Görüşmeler yaklaşık 15 dakika sürecek ve bireysel olacaktır.

Bu araştırma T.C. Milli Eğitim Bakanlığının izni ile gerçekleştirilmektedir ve bu araştırmaya katılımınız gönüllülük esasına dayanmaktadır. Araştırmaya katılıp katılmamakta özgürsünüz. Araştırma herhangi bir istenmeyen etki ya da risk taşımamaktadır. Katılımınız tamamen sizin isteğinize bağlıdır, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılım sağlanamaması veya araştırmadan ayrılma durumunda okul ile ilgili ilişkileriniz etkilenmeyecektir. Araştırmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Araştırmada cevaplar gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Araştırma uygulamaları, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta özgürsünüz. Araştırmaya katıldıktan sonra istediğiniz an vazgeçebilirsiniz. Böyle bir durumda veri toplama aracını uygulayan kişiye, araştırmayı tamamlamayacağınızı söylemeniz yeterli olacaktır. Araştırmaya katılmamak ya da katıldıktan sonra vazgeçmek size hiçbir sorumluluk getirmeyecektir. Onay vermeden önce konu ile ilgili herhangi bir sorunuz varsa aşağıda iletişim bilgileri verilen araştırmacıya sorabilirsiniz.

Araştırmacı Adı:.....

Adres:.....

İş Tel:.....

Cep Tel:.....

Yukarıda bilgileri bulunan araştırmaya katılmayı kabul ediyorum. .../.../.....

İmza:

Katılımcının Adı-Soyadı:

Ses / Görüntü Kaydı Onamı

Yalnızca ses kaydı alınmasına izin veriyorum.

Görüntü kaydı alınmasına izin veriyorum.

Ses ve görüntü kaydı alınmasına izin

vermiyorum.

Herhangi bir katılımcı, ses/görüntü kaydının alınmasını onaylamadığı takdirde katılımcıdan kayıt alınmayacaktır.



APPENDIX-5b. Informed Consent Form for the Semi-Structured Interviews (English Version)

INFORMED CONSENT FORM FOR THE SEMI-STRUCTURED INTERVIEWS

Dear students,

This research study, which is titled “Comparing the Impact of Teacher Feedback and Combined Automated Feedback and Teacher Feedback Model on EFL Learners' Paragraph Writing Performance”, is conducted by Fatma Uzman, who is a student in English Language Teacher Training MA Programme at Anadolu University under the supervision of Assist. Prof. Dr. Aylin Sevimel Şahin. The aim of this study is to compare the effects of teacher feedback and combined AF and teacher feedback model on the paragraph writing performance of EFL learners at the middle school level. To this end, data will be collected from you through semi-structured interviews and audio recordings will be taken during these interviews. The interviews will last approximately 15-20 minutes and will be individual.

This research study is conducted with the permission of the Ministry of Turkish National Education and your participation in this research is voluntary. You are free to participate or not. The research study does not carry any undesirable effects or risks. Your participation is entirely voluntary and you can refuse or withdraw at any stage. Failure to participate or withdrawal from the research study will not affect your relationships with the school. No personal identity information is requested from you in the research. The answers will be kept confidential and will only be evaluated by the researchers. The research study does not include questions and situations that may cause personal discomfort. However, if you feel uncomfortable with the questions or for any other reason during participation, you are free to stop answering and leave. After participating in the research study, you may withdraw at any time. In such a case, it will be sufficient to tell the person administering the data collection tool that you will not complete the research study. Not participating in the research study or withdrawing after participating will not bring you any responsibility. If you have any questions about the subject before giving consent, you can ask the researcher whose contact information is given below.

Name:.....

Adress:.....

Contact Number:.....

Contact Number:.....

I agree to participate in the research study with the above information. .../.../.....

Signature:

Name-Surname of Participant:

Audio / Video Recording Consent

I only give permission for voice recording

I give permission for video recording

I do not give permission for audio and voice

recording.

If any participant does not give permission for audio/video recording, the participant will not be recorded.



APPENDIX-6a. Semi-Structured Interview Questions (Turkish Version)

1) Paragrafınızı yazarken Grammarly tarafından verilen geri bildirim hakkında ne düşünüyorsunuz?

1.1.) Beğendiniz mi beğenmediniz mi? Niçin?

2) Paragrafınızı Grammarly ile yazdıktan sonra öğretmeninizden aldığınız geri bildirim hakkında ne düşünüyorsunuz?

2.1.) Beğendiniz mi, beğenmediniz mi? Niçin?

3) Hem Grammarly aracılığıyla geri bildirim hem de öğretmen geri bildirimi almanın paragraf yazma performansınızı artırdığını düşünüyor musunuz?

3.1) Eskiye kıyasla artık paragraf yazımına daha kolay odaklanabildiğinizi düşünüyor musunuz?

3.2.) Aldığınız geribildirim türleri sayesinde paragraflarınızın içeriğini eskisine göre daha iyi geliştirdiğinizi düşünüyor musunuz?

3.3.) Eskiye kıyasla artık iyi organize edilmiş paragraflar yazabildiğinizi düşünüyor musunuz?

3.4.) Eskiye kıyasla artık daha az yazım ve dilbilgisi hatası yaptığınızı düşünüyor musunuz?

3.5) Paragraf yazarken uygun kelimeleri seçme konusunda daha iyi olduğunuzu düşünüyor musunuz?

4) Bir önceki soruda bahsedilen paragraf yazma performansınızın çeşitli yönlerini (odaklanma, içerik geliştirme, organizasyon, yazım ve dilbilgisi ve kelime kullanımı) göz önünde bulundurursak,

4.1.) Bir paragraf yazarken hangi yönlerde eskiye kıyasla daha iyi olduğunuzu düşünüyorsunuz?

4.2.) Bir paragraf yazarken hangi yönlerde hala zorluk çekiyorsunuz?

5) Grammarly aracılığıyla geri bildirim aldığınız süreci göz önünde bulundurursak,

5.1.) Grammarly'nin paragraf yazma sürecindeki faydaları nelerdir?

5.2.) Grammarly'nin paragraf yazma sürecindeki eksiklikleri nelerdir?

6) Öğretmen geri bildirimi aldığınız süreci göz önünde bulundurursak,

6.1.) Paragraf yazma sürecinde öğretmen geri bildirimi almanın avantajları nelerdir?

6.2.) Paragraf yazma sürecinde aldığınız öğretmen geribildiriminin eksiklikleri nelerdir?

7) Bir sonraki paragraf yazma ödevlerinizi düşünürsek,

7.1) Hem Grammarly'den hem öğretmeninizden geri bildirim almayı tercih eder misiniz? Niçin?

7.2.) Yoksa sadece Grammarly üzerinden mi geri bildirim almak istersiniz? Niçin?

7.3.) Yoksa sadece öğretmen geri bildirimi almayı mı tercih edersiniz? Niçin?

APPENDIX-6b. Semi-Structured Interview Questions (English Version)

- 1) What do you think about the feedback through Grammarly on your paragraph writing?
 - 1.1.) Did you like it or not? Why/why not?
- 2) What do you think about the teacher feedback you received on your paragraph writing after Grammarly?
 - 2.1.) Did you like it or not? Why/why not?
- 3) Do you think receiving both AF through Grammarly and teacher feedback improved your paragraph writing performance?
 - 3.1) Do you think that you can now address the writing task more easily compared to before?
 - 3.2.) Do you think that you develop the content of your paragraphs better than before?
 - 3.3) Do you think that you can now write well-organized paragraphs compared to before?
 - 3.4.) Do you think that you now make less grammar and spelling errors compared to before?
 - 3.5) Do you think that you are better at choosing appropriate words for your paragraph writing?
- 4) Considering the various aspects of paragraph writing mentioned in the previous question (focus, developing content, organization, spelling and grammar, and vocabulary use),
 - 4.1.) in which aspects of paragraph writing do you think that you are better compared to before?
 - 4.2.) in which aspects of paragraph writing do you think that you still have difficulties?
- 5) Considering the process in which you receive feedback through Grammarly,
 - 5.1.) What are the benefits of Grammarly on your paragraph writing?
 - 5.2.) What are the disadvantages of Grammarly on your paragraph writing?
- 6) Considering the process in which you receive teacher feedback,
 - 6.1.) What are the advantages of teacher feedback on your paragraph writing?
 - 6.2.) What are the shortcomings of teacher feedback on your paragraph writing?
- 7) Considering your next paragraph writing assignments,
 - 7.1) Would you prefer to receive both AF through Grammarly and teacher feedback? Why/why not?
 - 7.2.) Or would you like to receive only AF through Grammarly? Why/why not?
 - 7.3.) Or do you prefer receiving only teacher feedback? Why /why not?

APPENDIX-7. Descriptive Paragraph Writing Task

Name/Surname:

Class:

Date:

DESCRIPTIVE PARAGRAPH (40 minutes)

Imagine that you have a TV programme blog and you write a TV programme review you watched in your blog every week. You see in the comments box that your readers request you to write your favourite TV programme review this week. Write a paragraph about your favourite TV programme by considering the details such as its genre, main characters, theme, and your opinion (you recommend or not) about it (Your paragraph must have between 50 and 100 words.)



APPENDIX-8. Process Paragraph Writing Task

Name/Surname:

Class:

Date:

PROCESS PARAGRAPH (40 minutes)

Imagine that you work at an event organisation company and one of your friends sends you an e-mail. S/he says that s/he is organizing a birthday party for her or his mother this weekend and asks for your help about how to plan a birthday party best. Write a reply to her or him about how to plan a birthday party best. (Your paragraph must have between 50 and 100 words)



APPENDIX-9. Invitation Paragraph Writing Task

Name/Surname:

Class:

Date:

WRITING AN INVITATION

Imagine that you organize a surprise birthday party for your little sister/brother or your best friend and you prepare an invitation card to invite her or his close friends. Don't forget to include such details as place, time, and date in your card. (Your invitation card must have between 50 and 100 words)



APPENDIX-10. Opinion Paragraph Writing Task

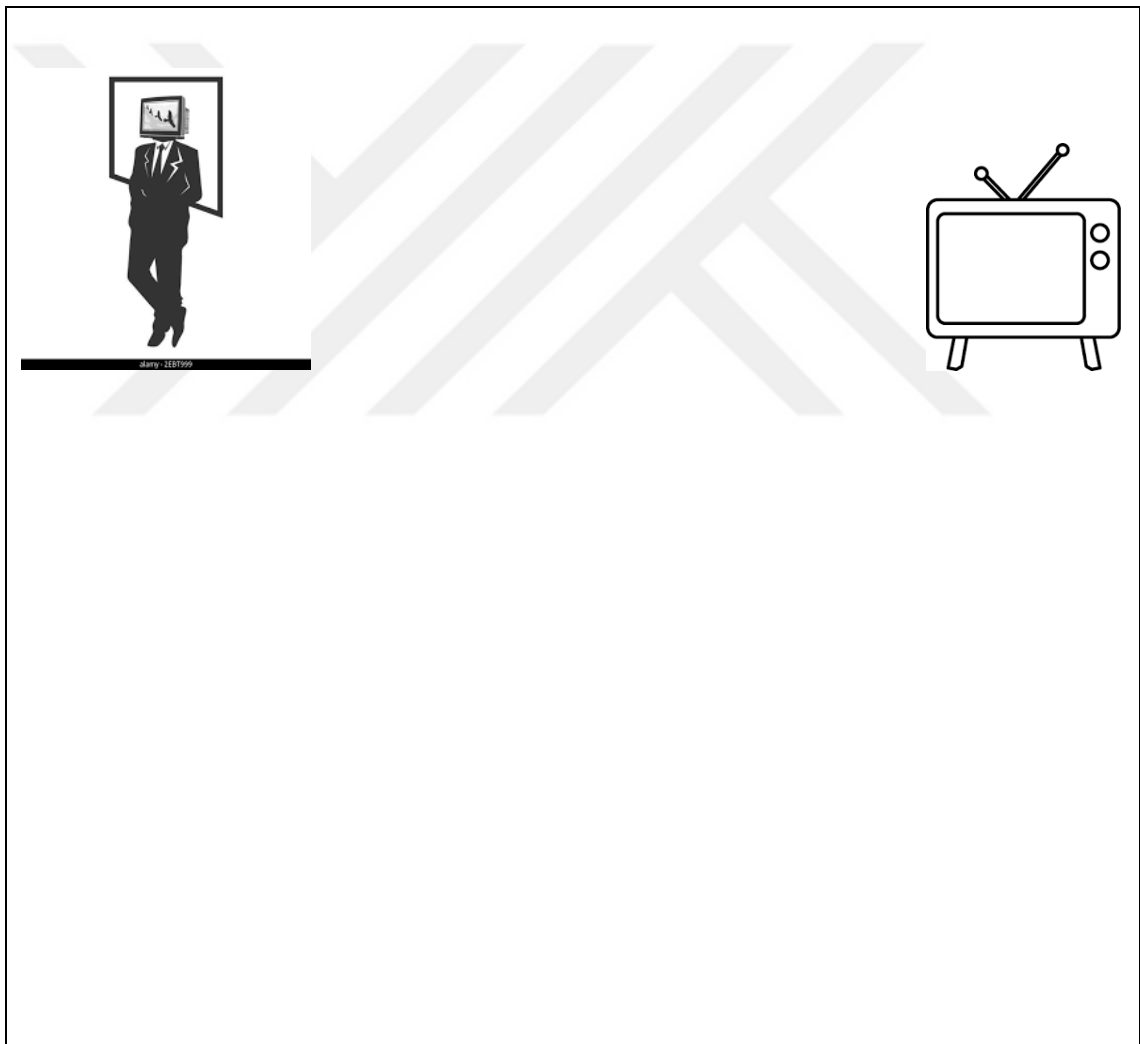
Name/Surname:

Class:

Date:

OPINION PARAGRAPH (40 minutes)

Imagine that your school counsellor does research about TV addiction among the students and asks for your opinion about whether you are a TV addict or not. Write a paragraph and explain why you think you are a TV addict or not by considering your TV habits. (Your paragraph must have between 50 and 100 words.)



APPENDIX-11. AF Through Grammarly

Sample 1.

Goals

49 Overall score

Untitled document

HOW TO ORGANIZE A BIRTHDAY PARTY

Hi Fatma,

First you shold call the guests. Next you shold buy and prepare the food.

Then you shold decorate the place. After that you shold make a cake.

Next you shold buy and wrap gifts. Next you shold choose the music cd.

Finally ,you have a nice time.

See you later

B I U | H1 H2 | | | | |

60 words ^

Review suggestions

Write with generative AI

Check for AI text & plagiarism

Review suggestions 13

Correctness

Clarity

Engagement

Delivery

Correctness · Correct your spelling

First you shold should call the guests...

Accept Dismiss

Add a comma

Next

Correct your spelling

shold

Correct your spelling

shold

Correct your spelling

shold

Check for plagiarism and AI text

Sample 2.

Goals

76 Overall score

Untitled document

MY FAVOURITE TV PROGRAMME

Hi, guys. Today I want to talk about my favorite TV show. My favorite TV programme is "Gönül Dağı". It is a drama and love series. It is a show TRT 1 channel. It start at 09.00 p.m. and 12.00 p.m. finish. The story of three young cousin inventors. I think it's a series that teaches you that some things are not impossible and not to give up. I reccommend you watch it.

B I U | H1 H2 | | | | |

77 words ^

Review suggestions

Write with generative AI

Check for AI text & plagiarism

Review suggestions 5

Correctness

Clarity

Engagement

Delivery

Pro suggestions 2

Change the spelling

favorite

Rephrase

TRT

Correctness · Change the verb form

It start starts at 09.00 p.m....

Accept Dismiss

Correct your spelling

reccommend

Check for plagiarism and AI text

APPENDIX-12. Control Group: Teacher Feedback (One Student Sample)

Name/Surname: XXXXXXXXXX
 Class : 7/A
 Date: 21st of February, 2015

DESCRIPTIVE PARAGRAPH (40 minutes)

Imagine that you have a TV programme blog and you write a TV programme review you watched in your blog every week. You see in the comments box that your readers request you to write your favourite TV programme review this week. Write a paragraph about your favourite TV programme by considering the details such as its genre, main characters, theme, and your opinion(you recommend or not) about it (Your paragraph must have between 50 and 100 words.)

Add a title, please.

Hi everyone. Today, I want to talk about my ^{favorite} ~~favorite~~ TV ^{programmes} ~~series~~.
 My favorite TV ^{programme} ~~series~~ is "Family By Choice". It's about 3 close friends' confusing love story. This series ^{is} ~~not~~ shown on Turkish TV channel because ~~it's~~ ^{it is} a Korean series. It's shown on Korean TV channel but I don't know ^{which} ~~it's~~ channel it's shown. ~~It starts at~~ ^{It} starts at 7 p.m. and ~~finishes at~~ ^{finishes} 8 p.m. My favorite character is Kim San-Ha. ^{If you like soap opera, I'm sure you like it.}

Tell what kind of series it is

I recommend you can add your opinion about the series "I think it is fantastic"

😊 You are really good at focusing on your writing task. You also use appropriate specific details to support your ideas successfully. Your paragraph is usually well organized & designed.

⚠ Be careful about minor spelling errors and grammar usage.








APPENDIX-13. Experimental Group: Teacher Feedback (One Student Sample)

Name/Surname: [REDACTED]
Class: 7-B
Date: 20th of February, 2025

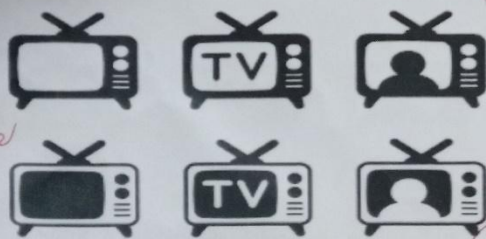
DESCRIPTIVE PARAGRAPH (40 minutes)

Imagine that you have a TV programme blog and you write a TV programme review you watched in your blog every week. You see in the comments box that your readers request you to write your favourite TV programme review this week. Write a paragraph about your favourite TV programme by considering the details such as its genre, main characters, theme, and your opinion(you recommend or not) about it (Your paragraph must have between 50 and 100 words.)

MY FAVOURITE TV PROGRAMME

Hello, today I will tell you about my favourite television ^{(TV) programme (BE)} ~~program~~. My favourite çocuklar duymasin. This programme starts on weekends between three thirty and six thirty in the afternoon. It is a ^{?? programme ??} ~~program~~ about comedy. It is about the lives of Meltem and Haluk, a married couple. I think it is very entertaining and funny. I recommend it to everyone.

? My favourite programme is "Çocuklar Duymasin."
?? You can divide this sentence into two clear sentences.
 " This programme is shown at weekends"
 " It is shown between ---- and ----"
??? You can name it as "sit-com"



😊 You focus on your writing task adequately

😊 You give enough details to describe your favourite programme.

😊 Your paragraph is generally well-organized

⚠ Be careful about some grammatical errors.

You can add your favourite character and why you like that character

APPENDIX-14. Experimental Group: Last Version (One Student Sample)

Name/Surname: [REDACTED]

Class:7-B

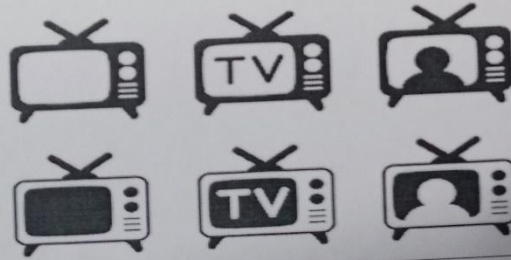
Date:27th of February,2025

DESCRIPTIVE PARAGRAPH (40 minutes)

Imagine that you have a TV programme blog and you write a TV programme review you watched in your blog every week. You see in the comments box that your readers request you to write your favourite TV programme review this week. Write a paragraph about your favourite TV programme by considering the details such as its genre, main characters, theme, and your opinion(you recommend or not) about it (Your paragraph must have between 50 and 100 words.)

MY FAVOURITE TV PROGRAMME

Hello! Today I will tell you about my favourite TV programme. My favourite programme is "çocuklar duymasın." This programme is shown on weekends. It is shown between three thirty and six thirty in the afternoon. It is a sitcom. It is about the lives of Meltem and Haluk, a married couple. My favourite character is Haluk. I think it is very entertaining and funny. I recommend it to everyone.



APPENDIX-15. Control Group: Last Version (One Student Sample)

Name/Surname: [REDACTED]

Class : 7/A

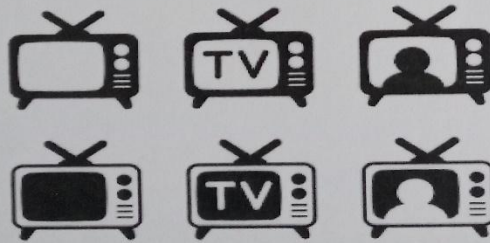
Date: 28th February, 2025

DESCRIPTIVE PARAGRAPH (40 minutes)

Imagine that you have a TV programme blog and you write a TV programme review you watched in your blog every week. You see in the comments box that your readers request you to write your favourite TV programme review this week. Write a paragraph about your favourite TV programme by considering the details such as its genre, main characters, theme, and your opinion(you recommend or not) about it (Your paragraph must have between 50 and 100 words.)

MY FAVORITE SERIES

Hi guys. Today, I want to talk about my favourite TV Programme. My favourite TV programme is Series and movies. But I prefer series to movies. My favourite series is "Family by choice". This is about 3 close friends' sad life and confusing love story. It's drama, comedy and soap opera. This series is not shown on Turkish Channel because it is a Korean Series. And I don't know on which channel it's shown. It starts at 7 p.m. and finishes at 8 p.m. My favourite character is Kim San-Ha. I think it was annoying, confusing but nice series. If you like drama or soap opera, I'm sure you liked it.



APPENDIX-16. Approval from the Research Ethics Committee of Anadolu University

Evrak Kayıt Tarihi: 13.12.2024

Protokol No: 825028

Tarih: 23.12.2024



ANADOLU ÜNİVERSİTESİ
SOSYAL VE BEŞERÎ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
KARAR BELGESİ

ÇALIŞMANIN TÜRÜ:	Yüksek Lisans Tez Çalışması
KONU:	Eğitim Bilimleri
BAŞLIK:	Öğretmen Geri Bildirimi ve Birleştirilmiş Otomatik Geri Bildirim ve Öğretmen Geri Bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması
PROJE/TEZ YÜRÜTÜCÜSÜ:	Dr. Öğr. Üyesi Aylin SEVİMEL ŞAHİN
TEZ YAZARI:	Fatma UZMAN
ALT KOMİSYON GÖRÜŞÜ:	-
KARAR:	Olumlu

APPENDIX-17. Approval from the Konya Provincial Directorate of National Education



T.C.
MİLLÎ EĞİTİM BAKANLIĞI
ARAŞTIRMA UYGULAMA İZNİ BELGESİ



Başvuru No: MEB.TT.2025.015976.01

T.C. Kimlik No:

Adı Soyadı: FATMA UZMAN

Araştırmanın Adı: Öğretmen Geri Bildirimi ve Birleştirilmiş Otomatik Geri Bildirim ve Öğretmen Geri Bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması

Araştırmanın Niteliği: Yüksek Lisans Tezi

Araştırmanın Örneklem / Çalışma Grubu: Öğrenci

Veri Toplama Aracının Başlığı: 1)Yazma Etkinlikleri 2)Yarı Yapılandırılmış Görüşme Soruları 3)İngilizce Yazma Becerisi Değerlendirme Formu

Araştırma Uygulama İzninin Kabul Tarihi: 14.01.2025

Araştırma Uygulama İzninin Bitiş Tarihi: 14.01.2026

Yukarıda kimliği yazılı araştırmacı "Araştırma Uygulama İzinleri Genelgesine (2024/41)" göre belirtilen kapsamda araştırmasını yapmayı taahhüt etmiştir. Araştırmacının bilgi ve belgelerinin uygunluğu kontrol edilmiş olup aşağıda ifade edilen bilgiler kapsamında araştırma uygulama izni Millî Eğitim Bakanlığı ilgili birimleri tarafından onaylanmıştır.

Uygulama Yapılacak iller	Uygulama Yapılacak Birimler	Uygulama Yapılacak MEB Teşkilatları	Uygulama Yapılacak MEB Teşkilatının Kurum Kodu
KONYA	Ortaokul	İçerişumra Zafer Ortaokulu	

Not: Okul/kurum yöneticileri tarafından "Araştırma Uygulama İzni" belgesinin ve veri toplama araçlarının (araçlardaki maddelerinin) modülde yer alan belge ve araçlarla aynı olduğu kontrol edilmelidir. Belgeler aynı olmadığı durumda araştırma uygulama izni verilmeyecektir.

APPENDIX-18a. Parent Permission Form (Turkish Version)

VELİ ONAM FORMU

Değerli Veliler;

Çocuğunuzun katılacağı bu araştırma “Öğretmen Geri bildirimi ve Birleştirilmiş Otomatik Geri bildirim ve Öğretmen Geri bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması” başlığıyla Anadolu Üniversitesi’nde Dr. Öğr. Üyesi Aylin Sevimel Şahin’ in yönetiminde İngiliz Dili Eğitimi Tezli Yüksek Lisans öğrencisi Fatma Uzman tarafından yürütülmektedir. Bu araştırmanın amacı öğretmen geri bildiriminin ve birleştirilmiş otomatik ve öğretmen geri bildirim modelinin ortaokul seviyesindeki yabancı dil olarak İngilizce öğrenen öğrencilerin paragraf yazma performansı üzerindeki etkisini karşılaştırmaktır. Araştırmanın amacı doğrultusunda, 10 hafta boyunca (her hafta birer ders saati olmak üzere 10 ders saati) sürecek yazma etkinlikleri ve yarı yapılandırılmış görüşmeler aracılığıyla öğrencilerden veriler toplanacaktır.

Araştırma T.C. Milli Eğitim Bakanlığı’nın ve okul yönetiminin de izni ile gerçekleştirilmektedir. Araştırmaya katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çocuğunuz araştırmaya 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 katılmama veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilenmeyecektir. Araştırmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Araştırmada cevaplar tamamıyla gizli tutulacak ve sadece araştırmacı tarafından değerlendirilecektir. Araştırma, 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 araştırmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Araştırmaya katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir. Onay vermeden önce konu ile ilgili herhangi bir sorunuz varsa aşağıda iletişim bilgileri verilen araştırmacıya sorabilirsiniz.

Araştırmacı: Fatma Uzman

İletişim bilgileri:.....

E-posta :.....

Velisi bulunduğum sınıfı numaralı öğrencisi

.....

.....'in yukarıda açıklanan araştırmaya katılmasına izin veriyorum. (Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz*).

...../...../.....

Veli Adı-Soyadı :

İmza :

Ses / Görüntü Kaydı Veli Onamı

Yalnızca ses kaydı alınmasına izin veriyorum.

Görüntü kaydı alınmasına izin veriyorum.

Ses ve görüntü kaydı alınmasına izin vermiyorum.

Herhangi bir veli, çocuğunun ses/görüntü kaydının alınmasını onaylamadığı takdirde
çocuktan kayıt alınmayacaktır.

APPENDIX-18b. Parent Permission Form (English Version)

PARENT PERMISSION FORM

Dear Parents

This research in which your child will participate will be conducted between February and April in the second semester of the 2024-2025 academic year with the title “Comparing the Impact of Teacher Feedback and a Combined Automated and Teacher Feedback Model on the Paragraph Writing Performance of EFL Learners”. This study aims to compare the effects of teacher feedback and a combined automated and teacher feedback model on EFL learners' paragraph writing performance at the secondary school level. For the purpose of the study, data will be collected from students through writing tasks and semi-structured interviews that will last for ten weeks (10 class hours, one class hour each week).

The research is conducted with the permission of the Ministry of Turkish National Education and the school administration. Participation in the research is completely voluntary. Your child is free to participate in the research or not. The research does not carry any undesirable effects or risks for your child. Your child's participation is entirely voluntary and you can refuse or withdraw at any stage. Not participating or withdrawing from the research will not affect students' academic achievement or their relationships with their school and teachers. No personal identity information is requested from the students in the research. The answers will be kept completely confidential and will be evaluated only by the researcher. The research does not include questions and situations that may cause personal discomfort. However, if your child feels uncomfortable with the questions or for any other reason during participation, he/she is free to stop answering and leave. In this case, the necessary assistance will be provided to alleviate the discomfort. Your child may withdraw at any time after participating in the study. In such a case, it will be sufficient for him/her to tell the person administering the data collection tool that he/she will not complete the study. Not participating in the research or withdrawing after participating will not bring any responsibility to your child. If you have any questions about the subject before giving consent, you can ask the researcher whose contact information is given below.

Name: Fatma Uzman

Contact Information:.....

E-mail:

I give permission form y son/daughter, who is a student in Class and whose school number to participate in the research described above (Please sign the form and return it to school with your child*).
...../...../.....

Parent Name-Surname:

Signature:

Audio / Video Recording Consent

- ☐ I only give permission for voice recording
- ☐ I give permission for video recording
- ☐ I do not give permission for audio and voice recording.

If any participant does not give permission for audio/video recording, the participant will not be recorded.

APPENDIX-19a. Informed Consent Form for the General Procedure of the Study
(Turkish Version)

**ARAŞTIRMA İÇİN AYRINTILI BİLGİLENDİRME VE GÖNÜLLÜ KATILIM
FORMU**

Değerli öğrenciler,

Bu araştırma “Öğretmen Geri bildirimi ve Birleştirilmiş Otomatik Geri bildirim ve Öğretmen Geri bildirimi Modelinin Yabancı Dil Olarak İngilizce Öğrenen Öğrencilerin Paragraf Yazma Performansı Üzerindeki Etkisinin Karşılaştırılması” başlığıyla Anadolu Üniversitesi’nde Dr. Öğr. Üyesi Aylin Sevimel Şahin’ in yönetiminde İngiliz Dili Eğitimi Tezli Yüksek Lisans öğrencisi Fatma Uzman tarafından yürütülmektedir. Bu araştırmanın amacı öğretmen geri bildiriminin ve birleştirilmiş otomatik ve öğretmen geri bildirim modelinin ortaokul seviyesindeki yabancı dil olarak İngilizce öğrenen öğrencilerin paragraf yazma performansı üzerindeki etkisini karşılaştırmaktır. Bu kapsamda 10 hafta boyunca (her hafta birer ders saati olmak üzere 10 ders saati) sürecek belirli yazma etkinlikleri ve yarı yapılandırılmış görüşmeler aracılığıyla sizden veriler toplanacaktır.

Bu araştırma T.C. Millî Eğitim Bakanlığının izni ile gerçekleştirilmektedir ve bu araştırmaya katılımınız gönüllülük esasına dayanmaktadır. Araştırmaya katılıp katılmamakta özgürsünüz. Araştırma herhangi bir istenmeyen etki ya da risk taşımamaktadır. Katılımınız tamamen sizin isteğinize bağlıdır, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılım sağlanamaması veya araştırmadan ayrılma durumunda okul ile ilgili ilişkileriniz etkilenmeyecektir. Araştırmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Araştırmada cevaplar gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Araştırma, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta özgürsünüz. Araştırmaya katıldıktan sonra istediğiniz an vazgeçebilirsiniz. Böyle bir durumda veri toplama aracını uygulayan kişiye, araştırmayı tamamlamayacağınızı söylemeniz yeterli olacaktır. Araştırmaya katılmamak ya da katıldıktan sonra vazgeçmek size hiçbir sorumluluk getirmeyecektir. Onay vermeden önce konu ile ilgili herhangi bir sorunuz varsa aşağıda iletişim bilgileri verilen araştırmacıya sorabilirsiniz.

Araştırmacı Adı:.....

Adres:.....

İş Tel:.....

Cep Tel:.....

***Yukarıda bilgileri bulunan araştırmaya katılmayı kabul ediyorum.** .../.../.....*

İmza:

Katılımcının Adı-Soyadı:

Ses / Görüntü Kaydı Onamı

veriyorum.

Yalnızca ses kaydı alınmasına izin

Görüntü kaydı alınmasına izin veriyorum.

Ses ve görüntü kaydı alınmasına izin

vermiyorum.

Herhangi bir katılımcı, ses/görüntü kaydının alınmasını onaylamadığı takdirde katılımcıdan kayıt alınmayacaktır.



APPENDIX-19b. Informed Consent Form for the General Procedure of the Study
(English Version)

**INFORMED CONSENT FORM FOR THE GENERAL PROCEDURE OF THE
STUDY**

Dear students,

This research study, which is titled “Comparing the Impact of Teacher Feedback and Combined Automated Feedback and Teacher Feedback Model on EFL Learners' Paragraph Writing Performance”, is conducted by Fatma Uzman, who is a student in English Language Teacher Training MA Programme at Anadolu University under the supervision of Assist. Prof. Dr. Aylin Sevimel Şahin. The aim of this study is to compare the effects of teacher feedback and combined AF and teacher feedback model on the paragraph writing performance of EFL learners at the middle school level. To this end, data will be collected from you through some paragraph writing tasks that will last for 10 weeks (one class hour each week, 10 class hours in total) and semi-structured interviews.

This research study is conducted with the permission of the Ministry of Turkish National Education and your participation in this research is voluntary. You are free to participate or not. The research study does not carry any undesirable effects or risks. Your participation is entirely voluntary and you can refuse or withdraw at any stage. Failure to participate or withdrawal from the research study will not affect your relationships with the school. No personal identity information is requested from you in the research. The answers will be kept confidential and will only be evaluated by the researchers. The research study does not include questions and situations that may cause personal discomfort. However, if you feel uncomfortable with the questions or for any other reason during participation, you are free to stop answering and leave. After participating in the research study, you may withdraw at any time. In such a case, it will be sufficient to tell the person administering the data collection tool that you will not complete the research study. Not participating in the research study or withdrawing after participating will not bring you any responsibility. If you have any questions about the subject before giving consent, you can ask the researcher whose contact information is given below.

Name:.....

Adress:

Contact Number:

Contact Number:

I agree to participate in the research with the above information. .../.../.....

Signature:

Name-Surname of Participant:

Audio / Video Recording Consent

I only give permission for voice recording

I give permission for video recording

I do not give permission for audio and voice

recording.

If any participant does not give permission for audio/video recording, the participant will not be recorded.



APPENDIX-20. Major and Minor Themes Identified Through Thematic Analysis

MAJOR THEMES	MINOR THEMES
Views about Feedback Types and Process	Benefits of Feedback Types and Process • Only AF through <i>Grammarly</i> • Combined Feedback: Teacher Feedback after AF
	Shortcomings of Feedback Types and Process • Only AF through <i>Grammarly</i> • Combined Feedback: Teacher Feedback after AF
	Learners' Reasons for Their Preferences of Feedback Types • Only AF through <i>Grammarly</i> • Only Teacher Feedback • Combined Feedback: Teacher Feedback after AF
The Perceived Impact of Combined Feedback on Paragraph Writing	Improvements in Local Aspects of Writing
	Improvements in Meaning-Related Aspects of Writing
	Improvements in Both Local and Meaning-Related Aspects of Writing
	Ineffectiveness of Combined Feedback in Certain Aspects of Writing

CURRICULUM VITAE

Name and Surname : Fatma UZMAN

Foreign Languages : English

Place and Year of Birth :

E-mail :

Educational Background:

2014, BA Degree, Necmettin Erbakan University, Ahmet Keleşoğlu Faculty of Education, Department of English Language Education

Work Experience:

2025-present, English Language Teacher, Meram Science High School (Meram/KONYA)

2023-2025, English Language Teacher, İçeriçumra Zafer Middle School (Çumra/KONYA)

2021-2023, English Language Teacher, Abditolu Middle School (Çumra/KONYA)

2017- 2021, English Language Teacher, Hotamış Mehmetçik Middle School (Karapınar/KONYA)

2014-2017, English Language Teacher, Toki Yavuz Selim Middle School (Karapınar/KONYA)