

Özel Sayı / Special Issue

E-ISSN: 2687- 1750

EFL Teachers' Perceptions of Automated Written Corrective Feedback and Grammarly¹

Ali Dinçay AYAN² Dinhan ERDEMİR³

²MA student, Department of English Language Teaching, Süleyman Demirel University, Türkiye, <u>yl2230502004@ogr.sdu.edu.tr</u>

³Asst. Prof. Dr., Department of English Language Teaching, Süleyman Demirel University, Türkiye, <u>nihanerdemir@sdu.edu.tr</u> (Sorumlu Yazar/Corresponding Author)

Article Info	ABSTRACT
Article History	Automated Written Corrective Feedback (AWCF) tools have gained popularity in the instruction of writing
Received: 14.08.2023	in English as a foreign language (EFL) because of their ability to evaluate written drafts. Teachers have
Accepted: 10.10.2023	become interested in this aspect, as it can alleviate their workload, especially with lower-order concerns,
Published: 29.10.2023	such as vocabulary, grammar, and mechanics. However, little is known about EFL teachers' perspectives on automated feedback and how it can effectively complement their feedback regarding higher-order concerns,
Keywords:	such as organization and content. For this purpose, this study aims to examine EFL teachers' perceptions of
Automated Writtten	the integration of Grammarly Premium as an AWCF tool for providing feedback on writing assignments,
Corrective Feedback,	with a focus on addressing higher-order concerns (HOCs) and lower-order concerns (LOCs), particularly
Grammarly, Writing,	among undergraduate students. The study adopted a qualitative research design and employed semi-
English as a Foreign	structured interviews with a sample of one pilot teacher and ten teachers at the tertiary level for the main
Language Teacher	study. The data obtained from the study was analyzed using MAXQDA 22. The results revealed that most
6 6	participants responded favorably to AWCF and Grammarly. On the other hand, Grammarly is inefficient in
	terms of LOCs due to its incorrect vocabulary recommendations and tendency to highlight the same grammatical mistakes numerous times. Nevertheless, it is still found more useful in terms of LOCs compared
	to the aspects in HOCs because it failed to provide efficient feedback in terms of coherence/cohesion and
	still needs a human touch for this aspect. Further research can be conducted to investigate how <i>Grammarly</i> can be integrated into writing classes more efficiently, thereby limiting its drawbacks in terms of HOCs.

İngilizce Öğretmenlerinin Otomatik Yazılı Düzeltici Geribildirim ve Grammarly Kullanımına İlişkin Görüşleri

Makale Bilgileri	ÖZ
Makale Geçmişi Geliş: 14.08.2023 Kabul: 10.10.2023 Yayın: 29.10.2023 Anahtar Kelimeler: Otomatik Yazılı Düzeltici Geribildirim, Grammarly, Yazma, Yabancı Dil Öğretmeni Olarak İngilizce	Otomatik Yazılı Düzeltici Geribildirimi (OYDG) araçları, yazma öğretiminde, İngilizceyi yabancı dil olarak öğrenenler için yazılan ödevleri değerlendirme kabiliyeti nedeniyle popülerlik kazanmıştır. Öğretmenler, özellikle kelime dağarcığı, dilbilgisi ve mekanik gibi daha düşük seviyedeki hataların bulunmasında iş yüklerini hafifletebileceği için bu yönüne ilgi göstermektedirler. Ancak, OYDG programlarının verdiği dönütlere yönelik İngilizceyi yabancı dil olarak öğreten öğretmenlerin bakış açıları hakkında az bilgi bulunmaktadır. Otomatik dönütlerin nasıl etkili bir şekilde üst düzeydeki hataların düzeltilmesinde, örneğin paragraf akışı ve içerik hataları olmak üzere bu kapsamda öğretmenlerin bakış açısı incelenmektedir. Bu amaçla, bu çalışma İngilizceyi yabancı dil olarak öğreten öğretmenlerin, yazma ödevlerine geri bildirim sağlamak amacıyla <i>Grammarly</i> yabancı dil olarak öğreten öğretmenlerin, yazma ödevlerine geri bildirim sağlamak amacıyla Grammarly <i>Premium</i> 'un bir OYDG aracı olarak entegrasyonuna yönelik algılarını, özellikle lisans hazırlık öğrencileri arasında üst-düzey kategoriler (ÜDK) ve alt-düzey kategoriler (ADK) için çıkarımları ele almayı hedefleyerek incelemeyi amaçlamaktadır. Çalışma, nitel araştırma yöntemini benimsemiş ve pilot çalışma için üniversite düzeyinde derse giren bir öğretmen ve ana çalışma için 10 öğretmen ile yarı yapılandırılmış görüşmeler yapmıştır. Çalışmadan elde edilen veriler MAXQDA 22 kullanılarak analiz edilmiştir. Sonuçlar, çoğu katılımcının OYDG ve <i>Grammarly</i> 'ye olumlu yaklaştığını ortaya koymaktadır. Öte yandan, <i>Grammarly</i> yanlış kelime önerileri ve aynı dilbilgisi hatalarını defalarca vurgulaması nedeniyle bazı katılımcılar tarafından ADK açısından yetersiz bulunmuştur. Bununla birlikte, özellikle metnin anlaşılabilirliği açısından etkili geri bildirim sağlayamaması rağmen ADK için çıkarımları saptayabildiği için ÜDKya kıyasla hala kullanışlı bulunmaktadır. Bu durumda, ÜDK açısından hala insan müdahalesine ihtiyaç duyulmaktadır. <i>Grammarly</i> 'nin daha etkili bir şekild

Attf/Citation: Ayan, A. D., & Erdemir, N. (2023). EFL teachers' perceptions of automated written corrective feedback and Grammarly. *Ahmet Keleşoğlu Eğitim Fakültesi Dergisi (AKEF) Dergisi*, 5(3), 1183-1198.



"This article is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)"

¹ The preliminary findings of this study were presented at the 1st Altınbaş University SFL Conference, held on September 7-9, 2023.

INTRODUCTION

Educational technology has had a significant impact on English language teaching, particularly in the areas of language assessment and feedback. In recent years, automated written corrective feedback (AWCF) has become an example which refers to computer-based feedback on student works provided by automated programs (Stevenson & Phakiti, 2019). AWCF systems can quickly generate diagnostic reports for many essays, thereby reducing the workload of teachers (Bai & Hu, 2017). The emergence of AWCF tools, such as Grammarly, Criterion and Pigai, has offered a solution to teachers by providing automated feedback on various writing aspects, including grammar, vocabulary, and style. Therefore, the implementation of AWCF in writing courses has been the focus of academic debate, with a growing global adoption of automated programs and an agreement that teachers should play a key role in its integration (Chen & Cheng, 2008; Ersanlı & Yeşilel, 2022; Link et al., 2014; Stevenson, 2016; Wilson & Czik, 2016). An examination of how teachers view automated written corrective feedback as a complementary tool for their feedback can reveal diverse pedagogical approaches and help overcome the inherent drawbacks of AWCF (Cotos, 2018). It is critical to consider teachers' views on AWCF to prevent any adverse effect on students, as the students tend to imitate their teacher's attitudes towards AWCF (Chen & Cheng, 2008; Li, 2021). That is, if teachers hold a negative view of AWCF, students might adopt a similar stance, which prevent their engagement with these educational technologies. Moreover, teachers' perspectives on AWCF hold significant value as they offer essential evidence, which is commonly referred to as "social validity" (Wilson et al., 2021, p. 2). Therefore, fostering a positive collaborative relationship between teachers and AWCF tools may contribute to a more effective learning environment for students.

Grammarly is a widely used AWCF tool that can identify and correct grammatical errors, offer suggestions for vocabulary and style, and provide feedback on writing clarity. The tool has become popular among students, instructors, and professionals who write in English. Thousands of educational institutions around the world, including Arizona State University and California State University, have granted *Grammarly* licenses to improve student writing outcomes (Grammarly, 2023). Research on *Grammarly*'s performance indicates that it accurately identifies and corrects frequent linguistic errors, and it provides corrections on a wider range of error categories compared to tools, such as Microsoft Word (Ranalli & Yamashita, 2022). However, there is a dearth of academic literature on *Grammarly* although it is the foremost automated proofreader globally and its increased usage in both K-12 and higher education institutions.

All in all, few studies have recently paid attention to how automated feedback might influence teachers' feedback practices (Chen & Cheng, 2008; Grimes & Warschauer, 2010; Li et al., 2014), and teachers' perceptions (Jiang et al., 2020; Link et al., 2020; Wilson & Czik, 2016). Consequently, this study aims to investigate English as a foreign language (EFL) teachers' perception of the use of AWCF and *Grammarly Premium*, as an AWCF tool for their writing classes.

Automated Written Corrective Feedback Tools

The tools were categorized under the three headings by their properties: Automated Written Corrective Feedback (AWCF) tools, Automated Writing Evaluation (AWE) tools and Microsoft Natural Language Processing (MS-NLP) (Ranalli, 2018; Ranalli & Yamashati, 2022). For example, *Grammarly* is included in the first category, on the other hand, *Criterion* and *MY Access!* are included in the second category, and *Office 365* is in the third category. Ranalli and Yamashati (2022) argue that the sophisticated tools, including *Grammarly* own "a distinct genre of writing-support technology that must be recognized and understood on its own terms," thereby being differentiated from the two categories (p. 14). Therefore, this study adheres to the term AWCF with the focus on higher- and lower- concerns.

Most research on AWCF tools focuses on how valid and reliable their assessment scoring systems are, often highlighting students' opinions of them, and a comparison between the AWCF tool's performance and teacher feedback (Dikli & Bleyle, 2014). To begin with the studies on students' perceptions of AWCF have shown different results (Fang, 2010; Hoon, 2006; Wang et al., 2013). Some (e.g., Dikli & Bleyle, 2014) have found

that students generally see them favorably because they are thought to improve grammatical accuracy. However, other research (e.g., Chen & Cheng, 2006) indicates that students were generally dissatisfied with the grammar corrections they received. The results of the study on student dissatisfaction emphasize the significance of the teacher's involvement in the process of giving feedback because the students' negative reviews were associated with their teacher's negative views of the program. In a similar vein, the studies conducted by Li (2021), and Ranalli and Yamashita (2022) showed that students also have concerns about the accuracy and reliability of those tools though they are in favor of using AWCF tools. There are also conflicting data on the student language level that benefits the most from automated feedback programs. Automated feedback, according to Dikli (2010), can overwhelm learners with little English competence, and Liao (2016) acknowledged that automated feedback is preferable for more proficient writers because they carry the metacognitive abilities to improve their grammatical accuracy over time. Because students need to have adequate grammatical knowledge to filter ideas that are inaccurate or those they regard as irrelevant and not valuable, Caveleri and Dianati (2016) stated that the tool may help more able writers. Moreover, students have expressed concerns that excessive reliance on *Grammarly* may result in decreased engagement with writing and could have an adverse impact on their writing abilities (Li, 2021).

There is limited research on teachers' perceptions of AWCF tools. Like the students' views, the tools' grammatical accuracy has also drawn criticism by teachers since it was found to be inadequate in several research (Barrot, 2023; Hoang & Kunnan, 2016; Li, 2023). For example, the editing capabilities of the tools were unfamiliar to one teacher and unimpressive to another. Moreover, some researchers (e.g., Cheng, 2017; Dikli & Bleyle, 2014) argue that AWCF tools can underperform when compared to human raters. Therefore, the literature suggests that teachers should act as intermediaries between students and feedback to remove the limitations of AWCFs (Chen & Cheng, 2008; Dikli & Bleyle, 2014; Fu et al., 2022; Hoang & Kunnan, 2016; Liao, 2016).

Grammarly

Grammarly has been a widely used and sophisticated AWCF tool by students and teachers (Ranalli & Yamashita, 2022). It offers a free online text editor as well as a paid upgrade called *Grammarly Premium*, and it claims to have 30 million daily users (Grammarly, 2022). Both versions use algorithms to detect mistakes in the uploaded document, with *Grammarly Premium* providing feedback on mistakes, such as contextual spelling, grammar, punctuation, clarity, etc. Problems are emphasized on the left side of the screen in the *Grammarly* feedback, and a possible solution for that error appears on the right (Figure 1). The application also provides an explanation under the possible correction and gives an overall score for the writing and the score can be seen at the right corner of the page (Figure 1).

Remember when you were a careless <mark>eight year old</mark> kid riding a bike with	 spellmo eight-year-old → eight-year-old 	46 Overall score See performance
your friends,racing each other around the neighborhood? Remember that feeling of absolute freedom as you felt the wind in your hair and the smile	It appears that eight year old is missing a hyphen. Consider adding the hyphen(s).	Goals 4 of 4 set >
it put on your face? I never thought I would feel that way as a grown up,until my friends presented me a red brand-new bike. At first,I was a bit	⑦ Learn more	All suggestions
skeptical about the total idea of commuting by bike. One morning a couple of days later_I changed completely my mind.	• ,racing · Add a space	Premium 16 Advanced suggestions
I was stuck at a traffic jam and saw in my rear mirror a man in a suit riding a classy bike with his laptop case in one hand and a handlebar in the	• grown up · Add a hyphen	Correctness
other. I figured out it would take him about 15 minutes to get to the office while I was still sitting in my car and waiting for the cars in line ahead to	• up, - Remove the comma	49 alerts
move, even if just for <u>a inch</u> . I was always very afraid of being late for my business meetings.	• ,until · Add a space	Very clear

Figure 1. Grammarly feedback

Grammarly also gives an overall report for the paper, and it is downloadable for the checker. It includes writing issues with the total number and type of mistakes (Figure 2).

3,302	624	41	2 min 29 sec	4 min 48 se
characte	ers words	sentences	reading time	speaking time
Score		WritingIs	sues	
46)	68 Issues left	49 Critical	19 Advanced
of all tex	t scores better than tts checked by Gram			
of all tex				
of all tex	ts checked by Gram			
of all tex	rts checked by Gram		_	
Writing	tts checked by Gram g Issues Correctness	marly	_	
Writing 49 5	tts checked by Gram g Issues Correctness Misspelled words	ng		
Writin 49 5 25	ts checked by Gram g Issues Correctness Misspelled words Improper formatti Punctuation in co	ng mpound/complex		
Writing 49 5 25 1	d Issues Correctness Misspelled words Improper formatti Punctuation in co sentences Wrong or missing	ng mpound/complex		

Figure 2. Grammarly report

The studies on *Grammarly* revealed some favorable features of the program by students. Japos (2013) found that using *Grammarly* increased undergraduate students' written accuracy. When Qassemzadeh and Soleimani (2016) investigated how it performed with passive voice errors, they discovered that learners remembered passive rules longer when they received feedback from *Grammarly* rather than from their instructors. Students' perceptions of the program were examined by Cavaleri and Dianati (2016) and O'Neill and Russell (2019), and both researchers found that most students found the comments provided by *Grammarly* to be helpful and user-friendly.

There is still limited research on teachers' perceptions of *Grammarly* when they use it when giving feedback on students' writing. A few research on teachers' perceptions indicated teachers' positive and negative experiences with *Grammarly*. For example, Wang et al. (2013) conducted a survey of EFL teachers in China and found that while most teachers were aware of *Grammarly*, only a small number of them used the tool for providing feedback on student writing. Teachers who used *Grammarly* reported that it helped in identifying surface-level errors, such as grammatical errors, but they also expressed their concerns that the tool may not be able to provide feedback on more complex writing issues, such as organization and coherence (Thi & Nikolov, 2022).

Higher-Order and Lower-Order Concerns

Previous research has shown that the writing feedback was divided into two levels. Higher-order concerns (HOCs) focus on the discourse level, such as content, organization, coherence, and cohesion; lower-order concerns (LOCs) focus on the form level, such as vocabulary, grammar, syntax, morphology, and mechanics (Koltovskaia, 2022). It has been observed that students in Australia, for example, were found to have difficulties in adhering to grammatical forms and vocabulary usage in accordance with the academic conventions at the tertiary level; however, teachers could not allocate sufficient time to students' problems with LOCs due to time limitations and give importance to HOCs (O'Neill & Russell, 2019). Researchers argue that teacher feedback with the integration of AWCF tools might become less time-consuming and labor saving for EFL teachers because these tools could successfully handle LOCs and give space to teachers for HOCs (Jiang et al., 2020; Li et al., 2015; Ranalli & Yamashita, 2022; Wilson & Czik, 2016). To emphasize, previous research suggests that "AWE is likely to be more effective for error correction than for higher-level conceptual feedback and that an effective way of utilizing AWE in the writing classroom could be to use it for error correction purposes, in

conjunction with higher-level conceptual feedback from teachers" (Stevenson & Phakiti, 2019, p. 138). In a similar vein, Weigle (2013) and Wang (2015) propose the hybrid use of machine and teacher feedback so that AWCF tools could contribute to LOCs while teachers could deal with HOCs. The findings of Link et al. (2020) supported this hybrid use. They indicated that the ratio of teacher feedback on HOCs has significantly increased with the integration of AWCF tool compared to the solely teacher feedback group. In contrast to these positive perceptions of AWCF tools regarding their contribution to LOCs, Jiang et al. (2020) found a surprising result. In their study, teachers had to concentrate on "students' problems' with lower-level writing skills of their students particularly when they were approached by students for confusions over automated feedback on word choices and sentence structure" (p. 10). Considering all these problems at the higher- and lower- order concerns, researchers make enhancements to the AWCF integration. However, there is still limited research on teachers' perspectives. Therefore, with the aim of understanding how automated feedback might influence teachers' feedback practices, the current study aspires to find an answer to the research questions below:

- 1. What are the perceptions of EFL instructors towards using automated written corrective feedback in L2 writing classrooms?
- 2. What are the perceptions of EFL instructors towards *Grammarly* for providing feedback on writing assignments in terms of 'higher-order' and 'lower-order' concerns at the tertiary level?

METHOD

This study aims to investigate the perspectives of English language teachers on the use of AWCF and *Grammarly* in providing writing feedback. Therefore, the qualitative research design was chosen as it allows the researcher to explore the participants' experiences and perspectives in depth, which is particularly important in a new and relatively unexplored area of research (Dörnyei, 2007; Merriam & Tisdell, 2015). Semi-structured interviews were chosen as the data collection method as they allowed the participants to express their views and experiences in their own words, enabling the researcher to gain rich and detailed insights into the topic (Silverman, 2016).

Participants

A total of 11 participants were included in this study. One participant was interviewed for a pilot study to ensure the validity and reliability of the interview questions and the data collection procedures. The 10 participants were interviewed for the main study. Teachers had an average of 6 years of teaching experience, ranging from 2 to 14 years. The participants had experience in teaching L2 writing for an average of 4 years ranging from 2 to 14 years and were familiar with *Grammarly* with an average of 3 years, ranging from 1 to 5 years as a tool for providing feedback on writing assignments. The demographic information about the participants is shown in Table 1.

PARTICIPANTS	EXPERIENCE OF ENGLISH LANGUAGE TEACHING	EXPERIENCE WITH TEACHING L2 WRITING	EXPERIENCE WITH GRAMMARLY
T1	6 years	2 years	3 years
T2	5 years	2 years	2 years
Т3	2 years	2 years	5 years
T4	5 years	2 years	1 year
T5	6 years	2 years	3 years
Т6	3 years	3 years	2 years
Τ7	10 years	10 years	3 years

Table 1. Demographic Information of the Participants

Т8	14 years	14 years	4 years
Т9	5 years	3 years	4 years
T10	3 years	2 years	4 years

The participants in this study were English language teachers who work at different state universities in Türkiye including Dokuz Eylül University, National Defence University, Bursa Technical University, Süleyman Demirel University, Anadolu University, Burdur Mehmet Akif Ersoy University and have experience using *Grammarly* as an AWCF tool for providing feedback on student writing in English language teaching. A purposive sampling technique was used (Dörnyei, 2007) so that the participants, who have a *Grammarly Premium* account, have at least one year of teaching experience, and work at the tertiary level, could be included.

Data Collection Tool and Procedure

Data for this study were collected from semi-structured interview questions adapted from Koltovskaia (2022), Ene & Upton (2014), and Ferris (2006) (Appendix 1). To ensure the clarity of interview questions, first, opinions were taken from two ELT experts on possible solutions. Second, an interview with an ELT teacher was conducted. After the interview, possible modifications were discussed. Last, the study comprised eight questions that sought to explore the participants' perspectives on AWCF and *Grammarly* in terms of higher- and lower-order concerns. The error categories rubric designed by Koltovskaia (2022) was used during the interviews (Appendix 2). This rubric categorized the writing feedback into two feedback levels: HOCs focused on the discourse level such as content, organization, coherence, and cohesion, and LOCs focused on the form level such as vocabulary, grammar, syntax, morphology, and mechanics.

Semi-structured interviews were employed with a sample of one pilot teacher and ten teachers for the main study. In the study, the pilot teacher was interviewed in advance to check the validity and reliability of the interview questions and modify them if needed. The main study included ten participants who had experience using *Grammarly* to provide feedback on their students' writing. The interviews were conducted in May 2023, and each took 15-20 minutes. The interviews were recorded via the online meeting platform, Zoom, and extracted recordings were transcribed via Trint (https://trint.com).

Data Analysis

Content analysis was used to analyze the transcriptions of the interviews since it is a helpful research technique when attempting to gather information about people's beliefs, values, or worldviews from a collection of qualitative data (Creswell, 2012; McCombes, 2023). Content analysis was conducted using a qualitative software program, MAXQDA 22 as is seen in Figure 1.

Kod Sistemi 🔎 省 🖙 🔭 🔹 🔻 🛠	ЯX	K Ø Belge Tarayıcısı: T3 (21 Paragraflar)		
🕝 Kod Sistemi	166	s for HOCs > Problems	about	Coherence/Cohesion 🗸 👌 🏡 🍐 🌶 🌶 🌶 🌶 🄌 🤭 🥱
> • 💽 Demographic Information	30			
• • • • • • • • • • • • • • • • • • •	0	Grammar 👌		points of writing such as grammar, punctuation, and alternative vocabulary. However, the premium account offers additional features such as suggesting changes from passive to active voice for better
✓ ● @ Benefits	0	Pricing of the app δ	account oners additional features such as suggesting changes from passive to a	meaning. Although I considered purchasing the premium account when the currency was lower, I
 e Benefits of Grammarly for LOCs 	0			still find the non-premium account helpful as it corrects general mistakes and offers alternatives to
• 💽 Grammar	21	1		convey the intended meaning of the writing. In terms of higher-order concerns, Grammarly is
• G Mechanics	12	Content 👌		excellent at identifying areas where a student's writing lacks clarity. It has been particularly helpful
• 💽 Vocabulary	12			when I cannot understand what a student is trying to convey. By utilizing Grammarly's
✓ ● ● Benefits of Grammarly for HOCs	0	Content		recommendations, I can better understand their intentions and provide constructive feedback. While
Organization	11	Organization		it helps with content and organization, I believe that coherence and cohesion require additional
Content	10	Problems about Coh		attention. According to my teaching experience, we as educators shouldn't forget that from the
Coherence/Cohesion	4	Grammar		perspective of L2 learners, I should also mention one simple advantage of Grammarly correcting
V C Other benefits	0	L		simple mistakes such as writing an uncountable object as countable or the opposite. I mean it might
Reducing workload/saving time	8			seem familiar or easy to understand for us to categorize or distinguish countable/uncountable
◎ ⊙ As a second eye	2			differences from each other, it is not the same for a person who is not in a relationship with the language. Even though I mentioned only one of them, there are more we can see when we go into
V I Trawbacks	0			deep. Overall, I find Grammarly to be a valuable resource for providing written feedback for each
V C Drawbacks for LOCs	0		1 / /	age group.
Inaccurate vocabulary recommendatio	8			nga Broakt
Showing same grammar mistakes	4		20	8. In your opinion, what are the main drawbacks of using Grammarly in providing feedback on
✓ ● ● Drawbacks for HOCs	0		students' writing assignments in terms of HOCs and LOCs?	students' writing assignments in terms of HOCs and LOCs?
Comparison Contract Content C	17		21	Many learners find Grammarly intimidating because encountering multiple mistakes and corrections
Problems about Content	10			can make them feel like their language skills are insufficient. This can lead to losing motivation or
Problems about Organization	8	1		confidence in their ability to learn a new language. Additionally, when Grammarly repeatedly flags
✓ ● Call Other drawbacks	0	Showing same grami		the same error, it can become distracting and cause the user to lose focus on the task. Also while
Reliability of Grammarly correction	4			checking the errors with the help of Grammarly, when I see the same error over and over again, I
• Callsufficiency of the app	3			lose my focus on it and obviously, the people who are using this app would be in the same idea as
● @ Pricing of the app	2	Mechanics δ		me, it suggests unimportant changes and this change affects all of the meaning of that sentence. It is helping a lot by means of the mechanics but sometimes the one single dot is added to the sentence, it

Figure 1. Data analysis in MAXQDA

With the help of MAXQDA, the first rater generated main themes and aligned their views under the themes. The answers were categorized under three main topics: demographic information, teachers' previous experience with AWCF tools, and teachers' perceptions of *Grammarly* to supplement L2 writing feedback. That is, they shared their experiences with *Grammarly* in terms of *organization, content, coherence/cohesion* for HOCs, and *grammar, mechanics, and vocabulary* for LOCs. While deciding the benefits of *Grammarly* for HOCs and LOCs, the researchers followed the participants' answers, and some other benefits such as *a second eye* and *reduced workload of teachers* were discovered. The categories of LOCs which are *syntax* and *morphology* were excluded because they were not mentioned by the participants. The same system was applied to the last category of drawbacks. The main drawbacks that were mentioned by the participants for HOCs and LOCs were determined for LOCs as *inaccurate vocabulary recommendations* and *showing the same grammar mistakes*. In addition, for HOCs, the drawbacks were identified as *problems with coherence/cohesion, problems with content,* and *problems with organization*. The participants mentioned some drawbacks of the application itself such as *the reliability of Grammarly correction, insufficiency of the application,* and *pricing of the application*. After the categorization of the items by focusing on the interview questions, coding was done through MAXQDA. An example extract of how the coding was done is below:

I think it is useful regarding grammar, vocabulary, and mechanics mistakes. It saves teachers' time finding these mistakes. But I am not sure about HOCs, as it may be insufficient. I don't think that it is useful for HOC errors because sometimes Grammarly can't find errors related to cohesion and coherence. Also, teachers' own feedback is a useful tool to see the students' progress in their writing (T2).

For the benefit of LOCs, this transcribed extract was coded as *grammar*, *vocabulary*, and *mechanics*. On the other hand, considering the drawbacks of HOCs, the extract was coded as *cohesion and coherence* mistakes.

To test the interrater reliability of coding, the second rater coded in accordance with the themes and codes. Then, two raters compared using the formula (the number of agreements/the number of agreements (x) the number of disagreements multiplied by 100) of Tawney and Gast (1984), and the interrater reliability level between the raters was found .85 and indicated a high degree of reliability.

Ethic

The Ethics Committee Approval was received from Süleyman Demirel University on March 22, 2023, numbered 134/18. All procedures performed in this study involving human participants followed the ethical standards of the institutional research committee. The aim of the study and the participants' rights, including the option of rejecting any questions, were described on a consent form, and they were made aware of the study's objectives, the steps involved, and the confidentiality and anonymity of their responses.

RESULTS

This study aimed to identify EFL teachers' perceptions of AWCF tools and *Grammarly* for providing feedback on writing assignments in terms of HOCs and LOCs at the tertiary level, and English language teachers were asked to answer the questions about their prior experience with AWCF tools and perceptions of *Grammarly* to supplement their feedback.

Prior Experience with AWCF Tools

In response to the questions about teachers' previous experience, all had experience with *Grammarly*, and they were aware of some other AWE/AWCF tools, such as *Quillbot*, *ChatGPT*, *Microsoft Editor*, and *Writelab*. 9 participants were generally positive about the usage of AWCF tools in L2 writing classrooms and using *Grammarly* to supplement feedback on writing assignments of students. Teachers mostly favor their adeptness in identifying basic mistakes, helping clarity and coherence, facilitating student learning through automated feedback, alleviating teachers' workload, and referred to AWCF tools as effective, fruitful, and applicable. Extracts below indicate favor for AWCF tools:

These systems are very *effective* and *result-oriented* for checking our own writings. They *help both for clarity and coherence* of the text. Therefore, those systems are *second eye* for the writers. I have been using Grammarly and online Microsoft Word (T4).

I think it is *fruitful* and it is *applicable* in writing classrooms (T5).

These tools **save teacher times**. They should be used when giving feedback to writing papers in my opinion. They are really **good at finding basic mistakes** and in this way, **teacher can focus more on bigger problems** of the paper. It **gives teachers a room and an extra time** (T9).

While students pay attention to the recommendations coming from AWE tools, they get used to the correct form of the words and they can **learn from their own mistakes** (T10).

On the other hand, 3 participants were positive but also hesitant towards AWCF tools. They were against solely relying on the feedback given by these tools. Furthermore, they emphasized the significance of personalized teacher feedback for addressing HOCs like content, organization, coherence, and cohesion. According to them, these aspects were believed to necessitate human guidance as follows:

I can say that using AWCF tools reduces teachers' workload. But still teachers shouldn't trust the feedback directly given by Grammarly (T1).

While these tools can be useful in identifying and correcting certain lower order concerns (LOCs) such as grammar and spelling errors, they cannot replace the personalized feedback that teachers can provide to students. HOCs such as content, organization, coherence, and cohesion are essential aspects of effective writing that require personal interaction and guidance from teachers (T7).

AWCF tools can be **helpful** in L2 writing classrooms but **should not be relied upon as the sole means of evaluation**. They should be used in conjunction with human evaluation and in a way that supports student learning and development (T8).

1 participant was clearly hesitant, and he expressed his hesitation as follows by suggesting that AWCF tools should serve as complementary tools rather than replacements for human evaluation:

They (AWCF tools) cannot replace the personalized feedback and guidance that teachers can provide to students and as an English teacher at the tertiary level who values traditional teaching methods and personalized feedback, I have mixed feelings about using Grammarly to supplement my feedback on writing assignments of my students (T7).

Perceptions of Grammarly

The analysis of questions related to teachers' perceptions of *Grammarly* revealed three main themes: *lower-order concerns, higher-order concerns, and additional benefits and drawbacks*.

Higher-order Concerns

The analysis of semi-structured interviews indicated that *Grammarly* is beneficial when considering 'organization' (N=11) 'content' (N=10) and 'coherence/cohesion' (N=4). Particularly, *Grammarly* was most praised for its ability to improve 'paragraph organization,' 'sentence order' and 'word order.' Teachers highlighted its proficiency in aiding 'clarity,' 'topic sentence selection,' and enhancing the 'content' of writings. That is, it seems *Grammarly* could provide beneficial suggestions for 'organization' and 'content' more than 'coherence/cohesion.' Extracts below indicate teachers' favor for organization and content:

It (Grammarly) is useful for the topic sentence selection and the paragraph organization (T1).

Grammarly is excellent at identifying areas where a student's writing lacks clarity (T3)

It suggests good improvements for organization and the content of writings (T9).

Regarding the drawbacks, the analysis indicated three critical limitations with HOCs: 'coherence/cohesion' (N=17), 'content' (N=10) and organization' (N=8). The most prominently mentioned drawback is

'coherence/cohesion' because teachers reported that corrections for 'coherence/cohesion' require human judgment and comprehension. Also, some participants stated that since *Grammarly* cannot adapt to specific requirements and conventions of assignments, it often leads to inappropriate and irrelevant suggestions. Additionally, teachers expressed that it is inefficient in some elements of HOCs, such as 'accuracy of information,' 'truth value of claim,' and 'accuracy of interpretation.' Extracts below indicate teachers' disfavor with inefficiency of HOCs and unreliability:

Automated tools **may not provide effective feedback** on other aspects of writing such as **organization** and **coherence** (T2).

While it helps with content and organization, I believe that **coherence and cohesion require additional** *attention* (T3).

Grammarly may **not always take into account the special requirements of assignments**, which could lead to suggestions that are **not appropriate or relevant to the writing task** (T5).

It (Grammarly) cannot evaluate higher-order concerns such as content, organization, coherence, and cohesion (T7).

In terms of HOCs, since it (Grammarly) is an artificial program, it can't be trusted for coherence and cohesion. It can't comprehend the text like a human being. That's why, I think it has drawbacks for coherence and cohesion like clarity and understandability. Also, in terms of accuracy of information or interpretation of information should not be trusted fully and should be checked one more time from another source of that information (T9).

A few participants stated that AWCF tools are still in progress and there is no adequate application to fully take teacher's feedback. They stated their hesitancy in terms of detecting HOCs. Extracts below indicate:

I am not sure about HOCs, as it (Grammarly) may be insufficient. I don't think that it is useful for HOC errors (T2).

I can say it needs more improvements (T3).

Lower-order Concerns

The analysis of semi-structured interviews indicated that *Grammarly* is found to be beneficial when detecting mistakes in 'grammar,' 'mechanics' and 'vocabulary.' According to the participants, grammar mistakes (N=21) were most mentioned, while both mechanics (N=12) and vocabulary (N=12) occurred in fewer numbers. 'Verb tense,' 'verb form,' 'noun endings (singular/plural,' 'subject-verb agreement,' 'conjunctions,' 'pronouns,' 'prepositions,' and 'articles/determiners' corrections are the most mentioned in terms of grammar mistakes. The tool's proficiency in addressing 'punctuation' is the most favored aspect in terms of mechanics. Additionally, it was seen as valuable in identifying word choice such as adding 'missing words' and correcting 'extra words, redundancies, or repetitions' in terms of vocabulary. Extracts below indicate teachers' favor for grammar, mechanics, and vocabulary:

It (Grammarly) is beneficial in terms of the word selection and recommendation of alternative vocabulary by adding new words or deleting the unnecessary ones (T1).

Using Grammarly for checking mechanics and grammar mistakes is useful. I think especially for verb agreements, prepositions, and conjunctions. (T5).

It detects grammar and mechanic mistakes perfectly such as spelling and punctuation (T10).

Regarding the drawbacks, the participants stated two negative aspects: 'inaccurate vocabulary recommendations' (N=8) and 'showing the same grammar mistakes' (N=4). Some participants stated that some vocabulary recommendations of *Grammarly* are contextually inappropriate and wordy, and some lack accuracy, resulting in misleading suggestions for 'word choice' and 'word form.' Extracts below indicate teachers' disfavor for inaccuracy and repeated feedback:

Grammarly may not always provide accurate recommendations for correcting grammatical errors (T1).

Grammarly offers some words to make the writing look more academic, but it makes the writing wordy (T5).

Grammarly sometimes **suggests inappropriate words for particular context**. Normally the word it suggests is okay for that sentence but if you take the flow or the content of the paper into consideration it does not make sense. Probably that is because it is an artificial program and can't fully comprehend the text (T9).

It (Grammarly) detects the same mistakes many times. I think it is enough to mention one mistake once in each writing. Another drawback might be unnecessary corrections. Sometimes it gives unrelated corrections in terms of vocabulary and grammar (T10).

The findings underscore the significant assistance of *Grammarly* in addressing a wide range of lower-order concerns within written compositions.

Additional Benefits and Drawbacks

All in all, the results indicated that the participants in general underlined the additional benefits of *Grammarly*. For example, they found *Grammarly* helpful in terms of 'reducing the workload' (N=8) of teachers while giving feedback, and it is 'a second eye' (N=2) for teachers as is seen in the extracts below:

While focusing on the text, sometimes writers do not see any mistake in the writing. Therefore, those systems are a second eye for the writers (T4).

I can check punctuation via Grammarly to reduce my workload (T5).

I can say that it is more time saving considering the traditional feedback methods (T10).

On the other hand, the overall results showed that teachers mostly stressed additional drawbacks of *Grammarly*. For example, they stated the 'unreliability of *Grammarly*'s correction' (N=4), '*Grammarly*'s insufficiency for detecting mistakes' (N=3), and 'pricing of premium version of *Grammarly*' (N=2). These findings collectively imply that teachers have no complete assurance on automated writing evaluation, even as they consider the facilitating aspects of these tools as is seen in the extracts below:

Teachers **shouldn't trust the feedback** *directly* given by Grammarly. They should revise it by themselves *as* well (T1).

I also recognize that automated tools are not perfect and may not catch all errors (T2).

Nevertheless, these tools are not completely reliable (T6).

To summarize, these findings collectively imply that teachers have no complete assurance on automated written corrective feedback, even as they consider the facilitating aspects of these tools and *Grammarly*. Moreover, this study revealed more satisfaction with HOCs in *Grammarly* use as different from the findings of previous research which presented disfavor with HOCs.

DISCUSSION

The findings of this study shed light on the perceptions of EFL teachers regarding AWCF tools and *Grammarly* for providing feedback on writing assignments in terms of HOCs and LOCs. The study involved ten English language instructors with varying levels of teaching experience who used *Grammarly Premium* to provide feedback on their students' writing. The findings revealed noteworthy insights into *Grammarly*'s utility and shortcomings concerning HOCs and LOCs.

The current study discovered most teachers responded favorably to AWCF tools' and *Grammarly*'s input, similar to the findings of the studies by Cavaleri and Dianati (2016) and O'Neill and Russell (2019), which examined *Grammarly* from students' perspectives. The in-depth analysis of the data showed that EFL teachers

are mostly positive towards using Grammarly when giving feedback on students' writing. First, Grammarly is found as a useful tool for finding and correcting mistakes in 'grammar', 'mechanics,' and 'vocabulary' in student writing from the perspective of teachers. 'Verb tense,' 'verb form,' 'noun endings (singular/plural),' 'subjectverb agreement,' 'conjunctions,' 'pronouns,' 'prepositions,' and 'articles/determiners' corrections are the most mentioned in terms of grammar mistakes. The tool's proficiency in addressing 'punctuation' is the most favored aspect in terms of mechanics. Grammarly's automatic nature enables it to catch these types of problems efficiently, saving teachers time during the feedback process. Additionally, it was seen as valuable in identifying word choice such as adding 'missing words,' and correcting 'extra words, redundancies, or repetitions' in terms of vocabulary. This result is consistent with the result of the previous research (e.g., Bai & Hu, 2017; Link et al., 2014, Thi & Nikolov, 2022) which the teachers in these studies found AWCF tools useful for developing students' writing ability, reducing teachers' workload, and offering grammar and vocabulary criticism. This study has also found the similar result that *Grammarly* reduces the workload of teachers and offers effective grammar corrections for LOCs. However, in contrast to previous studies (e.g. Link et al., 2020; O'Neill & Russell, 2019; Wang et al., 2013), which have mostly found AWCF tools inefficient terms of HOCs and even offered a hybrid use of machine and teacher feedback to address to both LOCs and HOCs, this study surprisingly showed that Grammarly was particularly most praised for its ability to improve 'paragraph organization,' 'sentence order' and 'word order.' Teachers highlighted its proficiency in aiding 'clarity,' 'topic sentence selection,' and enhancing the 'content' of writings, as well.

On the other hand, besides the considerable benefits of *Grammarly* for LOCs and HOCs, its inability to detect mistakes in HOCs was the most mentioned drawback by the teachers in the current study. Particularly, it was found the most inefficient in terms of coherence/cohesion aspect. That is, while Grammarly is found to provide beneficial suggestions for 'organization' and 'content,' its effectiveness in addressing the aspects of 'coherence/cohesion' appears to be limited. According to teachers, the reason for such a result might derive from the fact that 'coherence/cohesion' still requires human judgment and comprehension. The teachers are still found to have the same concerns as in previous research (e.g. Barrot, 2023; Link et al., 2014; Ranalli & Yamashita, 2022) about the AWCF tools' reliability, thereby leading to misleading comments. All participants except for participant T7 held positive views towards Grammarly as a helpful tool despite acknowledging its limitations in the same way as previous studies (e.g., Grimes & Warschauer, 2010; Li, 2021; Link et al., 2014) and found that teachers had concerns about the AWCF tools' accuracy and reliability. In a similar way, since Grammarly cannot adapt to specific requirements and conventions of assignments, it was often found to lead to inappropriate and irrelevant suggestions. Additionally, teachers expressed that it is inefficient in some elements of HOCs, such as 'accuracy of information,' 'truth value of claim,' and 'accuracy of interpretation.' Similar results were found in previous research. For example, the study conducted by Wang et al. (2013) showed that most teachers were aware of Grammarly, but only a small number of them used the tool before to provide feedback on student writing. Though the teachers often emphasized that Grammarly was helpful in detecting grammar mistakes and improving the fluency of writing efficiently, they also stated their concerns that *Grammarly* may not be able to provide effective feedback for organization and coherence. Therefore, the findings of this study suggest that Grammarly has still been found to provide inefficient feedback in terms of HOCs, and teachers argued that they might not completely rely on AWCF for coherence/cohesion, content, and organization, even as they consider the facilitating aspects of these tools. Teachers are suggested to employ AWCF to address LOCs in the early drafting and revising stages, and then, shift towards addressing HOCs, "contributing to more human-oriented writing (Grimes & Warschauer, 2010) and increased student-teacher interactions (Fu et al., 2022)" (as cited in Li, 2023, p. 786).

Additionally, previous studies suggest that AWCF tools and *Grammarly* are often perceived by teachers as an additional source of support, referred to as "extra voice", "extra helper" (Li, 2021, p. 5), "second pair of eyes" (Grimes & Warschauer, 2010, p. 21) or a "good partner with the classroom teacher" (Wilson et al., 2021, p. 5). The results of this study supported these findings, and in a similar vein, EFL teachers in this study stated that they perceived *Grammarly* as 'a second eye' for them.

CONCLUSION

The purpose of this study was to investigate EFL instructors' perspectives regarding AWCF tools and Grammarly to provide feedback on writing assignments in terms of HOCs and LOCs. The qualitative research design was used, and semi-structured interviews were conducted with one EFL teacher for the pilot and 10 teachers for the main study. Teachers considered AWCF tools and Grammarly valuable for LOCs by means of detecting and correcting grammatical, mechanics, and vocabulary errors. As reported by several participants, it was especially successful in finding grammar errors. In terms of HOCs, teachers emphasized the advantages of *Grammarly* for detecting students' writing organization and content mistakes. Furthermore, teachers praised Grammarly's benefits in lowering teacher effort and giving a second set of eyes for reviewing student work. On the other hand, *Grammarly* might sometimes be inefficient in terms of LOCs due to its incorrect vocabulary recommendations and tendency to highlight the same grammatical mistakes numerous times. Nevertheless, participants witnessed that Grammarly is still more useful in terms of LOCs compared to the aspects in HOCs because it could not efficiently evaluate the writings in terms of coherence/cohesion. Therefore, teachers still seem to have much workload in terms of HOCs. This situation might have led teachers to hold back from using Grammarly regularly. Moreover, EFL teachers shared their additional perceptions about the reliability of suggestions, the limitations of detecting mistakes in several areas, and its cost. Further research can be conducted to investigate how AWCF tools and Grammarly can be integrated into writing classes more efficiently, thereby limiting their drawbacks in terms of HOCs.

REFERENCES

- Bai, L., & Hu, G. (2016). In the face of fallible awe feedback: How do students respond? *Educational Psychology*, 37(1), 67–81. <u>https://doi.org/10.1080/01443410.2016.1223275</u>
- 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
- 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. https://journal.aall.org.au/index.php/jall/article/view/393
- Chen, C., & Cheng, W. (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. http://elc.msu.edu/llt/vol12num2/chencheng.pdf
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research.* Pearson Education Inc.
- Cotos, E. (2018). Automated writing evaluation. *The TESOL Encyclopedia of English Language Teaching*, 1–7. https://doi.org/10.1002/9781118784235.eelt0391
- Dikli, S. (2006). An overview of automated scoring of essays. *The Journal of Technology, Learning and Assessment*, 5(1). <u>https://ejournals.bc.edu/index.php/jtla/article/view/1640</u>
- Dikli, S., & Bleyle, S. (2016). 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
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies.* Oxford University Press.
- Ene, E. & Upton, T. A. (2014) Learner uptake of teacher electronic feedback in ESL composition. *System*, 46, 80–95. <u>https://doi.org/10.1016/j.system.2014.07.011</u>
- Ersanlı, C.Y., Yeşilel, D.B.A. (2022). The use of automated writing evaluation tools to foster ESL writing instruction. In G. Yangın-Ekşi, S. Akayoglu & L. Anyango (Eds.), *New directions in technology for writing instruction (Vol.* 30) (pp. 193-209). Springer. https://doi.org/10.1007/978-3-031-13540-8_10
- Ferris, D. R. (2006) Does error feedback help student writers? New evidence on the short-and long-term effects of

written error correction. In K. Hyland, & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (2nd ed.). Cambridge University Press, (pp. 81–104). https://doi.org/10.1017/CBO9781139524742.007

- Fu, Q., Zou, D., Xie, H., & Cheng, G. (2022). A review of AWE feedback: Types, learning outcomes, and implications. Computer Assisted Language Learning, 1–43. <u>https://doi.org/10.1080/09588221.2022.2033787</u>
- Grammarly. (2023). About Us. Retrieved April 21, 2023, from https://www.grammarly.com/about
- Grimes, D., & Warschauer, M. (2010). Utility in a fallible tool: A multi-site case study of automated writing evaluation. *The Journal of Technology, Learning, and Assessment, 8(6),* 4-43. https://ejournals.bc.edu/index.php/jtla/article/view/1625.
- Jiang, L., Yu, S., & Wang, C. (2020). Second language writing instructors' feedback practice in response to automated writing evaluation: A sociocultural perspective. System, 93, 1-12. https://doi.org/10.1016/j.system.2020.102302
- Koltovskaia, S. (2022). Postsecondary L2 writing teachers' use and perceptions of Grammarly as a complement to their feedback. *ReCALL*, 1-15. <u>https://doi.org/10.1017/S0958344022000179</u>
- Li, Z. (2021). Teachers in automated writing evaluation (AWE) system-supported ESL writing classes: Perception, implementation, and Influence. *System*, 99, 102505. <u>https://doi.org/10.1016/j.system.2021.102505</u>
- Li, R. (2023). Still a fallible tool? Revisiting effects of automated writing evaluation from activity theory perspective. *British Journal of Educational Technology*, 54(3), 773-789. <u>https://doi.org/10.1111/bjet.13294</u>
- Li, Z., Link, S., Ma, H., Yang, H., & Hegelheimer, V. (2014). The role of automated writing evaluation holistic scores in the ESL classroom. System, 44, 66–78. <u>https://doi.org/10.1016/j.system.2014.02.007</u>
- Link, S., Dursun, A., Karakaya, K., & Hegelheimer, V. (2014). Towards better ESL practices for implementing automated writing evaluation. *CALICO Journal*, 31(3), 323–344. <u>https://doi.org/10.11139/cj.31.3.323-344</u>
- Link, S., Mehrzad, M. & Rahimi, M. (2020). Impact of automated writing evaluation on teacher feedback, student revision, and writing improvement. *Computer Assisted Language Learning*, 35(4), 605–634. <u>https://doi.org/10.1080/09588221.2020.1743323</u>
- Merriam, S. B. & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation (4th ed.)*. John Wiley & Sons.
- McCombes, S. (2023). What is a research design. Types, guide & examples. *Scribbr*. <u>https://www.scribbr.com/methodology/research-design/</u>
- 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
- Ranalli, J., & Yamashita, T. (2022). Automated written corrective feedback: Error correction performance and timing of delivery. *Language Learning & Technology*, 26(1), 1–25. <u>http://hdl.handle.net/10125/73465</u>
- Silverman, D. (2016). *Qualitative research (4th ed.)*. Sage Publications.
- Stevenson, M. (2016). A critical interpretative synthesis: The integration of automated writing evaluation into classroom writing instruction. *Computers and Composition*, 42, 1–16. https://doi.org/10.1016/j.compcom.2016.05.001
- Stevenson, M., & Phakiti, A. (2019). Automated feedback and second language writing. *Cambridge University Press eBooks*, 125–142. <u>https://doi.org/10.1017/9781108635547.009</u>
- Tawney, J. W., & Gast, D. L. (1984). Single subject research design in special education. OMerill Publishing Company.

- Thi, K. N., & 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
- Qassemzadeh, A., & Soleimani, H. (2016). The impact of feedback provision by Grammarly software and teachers on learning passive structures by Iranian EFL learners. *Theory and Practice in Language Studies*, 6(9), 1884-1894. <u>http://dx.doi.org/10.17507/tpls.0609.23</u>
- Wang, P. L. (2015). Effects of an automated writing evaluation program: Student experiences and perceptions. *Electronic Journal of Foreign Language Teaching*, 12(1), 79–100. <u>https://e-flt.nus.edu.sg/v12n12015/wang.pdf</u>
- 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. <u>https://doi.org/10.1080/09588221.2012.655300</u>
- Warschauer, M. & Grimes, D. (2008) Automated writing assessment in the classroom. *Pedagogies: An International Journal*, 3(1), 22–36. <u>https://doi.org/10.1080/15544800701771580</u>
- Weigle, S. C. (2013). English language learners and automated scoring of essays: Critical considerations. Assessing Writing, 18(1), 85–99. <u>https://doi.org/10.1016/j.asw.2012.10.006</u>
- Wilson, J. M., & 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. <u>https://doi.org/10.1016/j.compedu.2016.05.004</u>
- Wilson, J., Ahrendt, C., Fudge, E. A., Raiche, A., Beard, G., & MacArthur, C. (2021). Elementary teachers' perceptions of automated feedback and automated scoring: Transforming the teaching and learning of writing using automated writing evaluation. *Computers & Education*, 168, 104208. <u>https://doi.org/10.1016/j.compedu.2021.104208</u>

Appendix 1. Semi-structured Interview Questions Adapted from Koltovskaia (2022), and Ene & Upton (2014) and Ferris (2006)

Demographic information

- 1. Do you have L2 teaching writing experience? If yes, how long have you been teaching L2 writing?
- 2. What's your overall English language teaching experience?
- 3. Do you use standard or premium version of Grammarly? How long?

Questions about prior experience with AWE

- 4. What do you know about automated writing evaluation (AWE) systems and similar tools? Have you ever used one before?
- 5. What is your general attitude toward using AWE in L2 writing classrooms?

Questions about teachers' perceptions of Grammarly to supplement their feedback

- 6. How do you feel about using Grammarly to supplement your feedback on writing assignments of your students?
- 7. In your opinion, what are the main benefits of using Grammarly in providing feedback on students' writing assignments in terms of higher order and lower order concerns?
- 8. In your opinion, what are the main drawbacks of using Grammarly in providing feedback on students' writing assignments in terms of HOCs and LOCs?

Appendix 2. Error Categories Rubric (Koltovskaia, 2022)

	-Content	-Clarity and understandability
HOCS	-Organization	-Development or lack of development
(HIGHER-ORDER	-Coherence	-Accuracy of information, truth value of claim,
CONCERNS)	-Cohesion	accuracy of interpretation
		-Transitions
		-Thesis statement
		-Topic sentence
		-Coherence, cohesion
		-Idea placement
		-Paragraph order
	-Vocabulary	-Word choice, collocations, phrasing
LOCS	-Grammar	-Sentence structure
(LOWER-ORDER	-Syntax	-Word choice
CONCERNS)	-Morphology	-Verb tense
	-Mechanics	-Verb form
		-Noun endings (singular/plural)
		-Word form
		-Articles/determiners
		-Pronouns
		-Preposition
		-Conjunctions
		-Subject-verb agreement
		-Punctuation
		-Missing word
		-Extra word, redundancy, or repetition
		-Overall quality of grammar
		-Spelling
		-Documentation or attribution
		-Formatting and style

GENİŞLETİLMİŞ ÖZET

Giris: Bu çalışma, İngilizcevi yabancı dil olarak öğreten öğretmenlerin otomatik yazılı düzeltici geribildirim (OYDG) araçlarına yönelik algılarını incelemekte ve özellikle Grammarly üzerinde odaklanarak, üst-düzey kategoriler (ÜDK) ve alt-düzey kategoriler (ADK) açısından yazma ödevlerine geri bildirim sağlama üzerine görüşlerini araştırmaktadır. OYDG araçları, yazılan metnin çeşitli yönlerine otomatik geri bildirim sağlarlar; bunlar arasında dilbilgisi, kelime dağarcığı ve stil bulunur. Bu araçlar, hızlı bir şekilde düzeltme ve rapor oluşturma becerileri sayesinde öğretmenlerin iş yükünü azaltmaları bakımından son zamanlarda popülerlik kazanmıştır. Öğretmenlerin bu araçlar hakkındaki görüşleri, öğrencilerin eğitim teknolojileri ile etkileşimlerini etkileyebileceğinden dolayı bu çalışma öğretmenlerin görüşlerini araştırmayı amaçlamıştır. Grammarly, yaygın olarak kullanılan bir OYDG aracıdır. Hem ücretsiz hem de premium sürümleri bulunmaktadır, bu çalışma sadece premium sürümünü kapsamaktadır. Grammarly, dilbilimsel hataları doğru bir şekilde tanımlama ve düzeltme yeteneği ile çok sayıda hata kategorisinde geri bildirim sağlama konusunda övgü almaktadır ve Microsoft Word gibi araçları geride bırakmaktadır. Eğitim kurumlarında global düzeyde popülerliğine rağmen, literatürde Grammarly üzerine henüz sınırlı çalışma bulunmaktadır. Bu sebeple bu çalışma, yazma dersinde verilen düzeltici geri bildirimi üst- ve alt-düzey kategorilere ayırarak Grammarly'nin hangi kategori için daha faydalı olduğunu anlamaya çalışmaktadır. ÜDK, içerik ve organizasyon gibi metin düzeyi hatalara odaklanırken; ADK, dilbilgisi ve kelime dağarcığı gibi biçim düzeyi hataları ele alır. Önceki çalışmaların bazıları, OYDG araçlarının ADKdeki hataları ele almak için etkili çalıştığını ve böylelikle öğretmenlere ÜDKdeki hatalara daha fazla geribildirim vermeye odaklanma fırsatı sunabildiği için faydalı olduğunu savunurken, bazı çalışmalar ise öğretmenlerin hem ÜDK hem de ADK deki hatalar için zaman kaybettiğini ve bu yüzden daha yorucu olabileceğini iddia etmektedir.

Yöntem: Bu çalışma, 10 İngilizce dil öğretmeni ile yapılan yarı yapılandırılmış görüşmeleri içeren nitel bir araştırma tasarımı kullanmaktadır. Bu öğretmenler, öğrencilerinin yazılarının geri bildirimini sağlamak için *Grammarly Premium*

kullannışlardır. Veri analizi, MAXQDA 22 yazılımı kullanılarak içerik analizinin yapılmasıyla tamamlanmıştır. Görüşmelerden ortaya çıkan çıkarımlar, öğretmenlerin OYDG araçları ile önceki deneyimlerini ve *Grammarly*'nin ÜDK ve ADK için avantaj ve dezavantajlarına yönelik görüşlerini içerir. Hata kategorilerinin rubriği, yazma geri bildirimini iki kategoriye ayırarak incelemiştir: ÜDK, içerik, düzen, tutarlılık ve uyumluluk gibi söylem düzeyindeki yönleri içerirken, ADK kelime dağarcığı, dilbilgisi, sözdizimi, morfoloji ve mekanik gibi biçim düzeyindeki unsurları ele alır (Koltovskaia, 2022).

Bulgular: Çalışmanın bulgularına göre, öğretmenlerin *Grammarly, Quillbot, ChatGPT, Microsoft Edito*r ve *Writelab* gibi OYDG araçlarına yönelik önceki deneyimleri, bu araçlara karşı genel olarak olumlu bir tutumu yansıtmaktadır. Katılımcılar, bu araçların temel hataları tanımlama, netlik ve tutarlılık konularında yardımcı olma ve öğretmenlerin iş yükünü azaltma konularında etkili olduğunu savunmaktadır. Bununla birlikte, bazı öğretmenler öğretmen geri bildiriminin içerik, düzen, tutarlılık ve uyumluluk gibi ÜDK kategorisinde yetersiz bulduklarını vurgulayarak çekimser kalmışlardır. Öğretmenlerin *Grammarly*'e olan görüşlerine gelirsek, *Grammarly*, özellikle dilbilgisi, mekanik ve kelime dağarcığı gibi ADKdeki hataları ele almak için oldukça faydalı bulundu. Öğretmenler, *Grammarly*'nin özne-fiil uyumu, noktalama işareti ve kelime seçimi gibi dilbilgisi hatalarını düzeltme yeteneğini takdir ettiler. Bununla birlikte, *Grammarly* özellikle tutarlılık ve uyumluluk gibi ÜDKdeki hataları ve düzeltmeleri ele almak konusundaki etkililiği sınırlı bulundu ve genellikle yanlış veya ilgisiz önerilerde bulunduğu tespit edildi. Yine de öğretmenler, *Grammarly*'i iş yüklerini azaltmak ve öğrenci çalışmalarını gözden geçirmek için 'ikinci bir göz' olarak faydalı buldular. Bununla birlikte, öğretmenler *Grammarly*'nin önerilerinin güvenilirliği, ÜDKdeki hataları tespit etmedeki sınırlılığı ve premium sürümünün maliyeti gibi konularda endişelerini dile getirdiler.

Sonuç, Tartışma ve Öneriler: Sonuç olarak, İngilizce öğretmenleri, öğrenci yazılarının ADKdeki hataları ele almak için *Grammarly* gibi OYDG araçlarının kullanımını genel olarak olumlu karşıladılar. Bu araçların dilbilgisi, mekanik ve kelime dağarcığı hataların tespit etme ve düzeltme konusunda faydalı olduğunu buldular ve sonuçta iş yüklerini azalttığını söylediler. Ancak bu araçların ÜDKdeki hataları ele almak konusunda daha az etkili olduğu ve öğretmenlerin yazılan yazılara geribildirim verirken ÜDKdeki hataları için otomatik yazılı düzeltici geri bildirime güvenme konusunda dikkatli yaklaştıklarını söylemişlerdir. Bu nedenle, bu çalışma, yazma dersinde geri bildirim için ADKdeki hataları ele almak için *Grammarly*'nin potansiyel faydalarını vurgularken, ÜDKdeki hataları etkili bir şekilde ele almak için ise hem otomatik hem de öğretmen tarafından geribildirim verilerek dengenin korunmasının önemini vurgulamaktadır. Bu çalışmanın bulguları, öğretmenlerin bu araçları nasıl gördüğü ve nasıl kullandığına dair görüşleri sunmayı ve dil eğitiminde bu araçlarını rolü üzerine devam eden araştırmalara katkıda bulunmayı amaçlamıştır. Gelecekteki araştırmalar, OYDG araçlarının yazma sınıflarına daha etkili bir şekilde nasıl entegre edilebileceğini, özellikle ÜDKdeki hataları ele almak için nasıl daha etkili olabileceğini araştırabilir.