Corrective Feedback of Grammarly in Enhancing L2 Writing by EFL Kurdish Students

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Abstract:

Background: Writing is the most difficult skill due to its complex communication mechanism. However, only a few studies have addressed the effect of technology on improving the writing skill.

Purpose: This study aims to analyze the types of errors in second-language writing committed by second-grade students before and after using Grammarly.

Methodology: This study used a qualitative approach employing three sources of data collection: 20 descriptive written essays before using Grammarly, 20 descriptive written essays after using Grammarly, and individual face-to-face interviews with 6 participants.

Findings: The results of the study indicate that errors committed without using Grammarly were 706 errors, namely omission (264), spelling (179), misformation (137), addition (118), and misordering (8). In contrast, the analysis of the written essays after using Grammarly application showed a great reduction in the errors of students, including omission (178), spelling (0), misformation (87), addition (27), and misordering (3). In other words, the free version of Grammarly has helped the students reduce their spelling, synonyms, vocabulary, articles, connecting ideas, location of the errors, and limited punctuation.

Research implications: Though most of the students affirmed that Grammarly is useful in the education process, particularly in EFL writing skills, other students stated that Grammarly can be used only by those whose level in English is good or intermediate. Pedagogically, the current study's findings could contribute to EFL students' writing progress, and the instructors could direct the learners to obtain the maximum benefits from such applications and avoid the possible challenges arising.

Keywords: Grammarly; L2 Writing; EFL; Duhok University; Iraq.

1   Introduction

Writing is considered a necessary skill in English as a foreign language. Therefore, technology could be employed as a medium to enhance teaching instructions and the achievement of students in writing. This encourages the EFL learning process, boosts learners' motivation to compose, and stimulates innovation. In this regard, several researchers agree that opportunities for teaching and learning English can be increased by sufficient possibilities of applying technology (Behzadi, 2015). Technology can also contribute to the learning and growth of the various abilities of learners. It is worth mentioning that learners are well-recognized as digital natives or Net Generation members. They were born in the modern age and are engaged early in digital technologies (Arteaga, Cortijo, & Javed, 2014; Prensky, 2001; Tapscott & Williams, 2010; Thompson, 2013). In their teaching process, teachers have introduced various methods of instruction, corrective suggestions, and Automatic Applications on the Internet to enhance L2 writing skills (Daniels & Leslie, 2013; Dodgson *et al.*, 2016; Jafarian, Soori, & Kafipour, 2012; Qassemzadeh & Soleimani, 2016). More specifically, the Internet has been used extensively to facilitate information for the learning process. It can enable students to be responsible for their learning and be viewed by teachers as a facilitator in teaching and learning (Kabilan & Rajab, 2010). In this context, Grammarly has emerged as a platform for online proofreading that can be utilized to detect grammatical errors in writing. Besides, it helps in punctuation corrections and synonyms (use of vocabulary). According to Schraudner (2014), Grammarly provides style-specific corrections, including context-optimized synonyms and an Adaptive Spell Checker that promises content-based recommendations for spelling and word choice. Further, opportunities for misleading terms, the ability to recognize fragments, and advice on verb forms are given. Sometimes, no proposed corrections are proposed, but clarifications are still given (Daniels & Leslie, 2013).

Instructors commonly use corrective feedback to inductively inform FL learners by presenting suggestions on students' work. For both educators and students, corrective input has been a requirement. Consequently, Grammarly's feedback is a constructive contribution that makes it easier for students to identify errors and improve their writing skills (Qassemzadeh & Soleimani, 2016). In their study, Saadi and Saadat (2015) revealed that using feedback presented by Grammarly provides students with a less intimidating environment. In addition, it is argued that offering electronic feedback creates a student-centered atmosphere in which FL learners become responsible for their learning, enhancing their language ability.

Further, Saadi and Saadat (2015) revealed that students feel guilty about their performance being corrected by their instructors because they often make many errors. However, limited studies have been conducted on the extent of the corrective feedback presented by Grammarly and the students' attitudes toward the feedback given by Grammarly. Therefore, this study aims to explore the role of Grammarly in enhancing the quality of writing skills and the perceptions of the students toward the feedback given by Grammarly.

2   Literature Review

Writing is not "a single, homogenous, linear achievement towards which you strive and at which you one day arrive." Rather, writing is a continuous procedure that entails progressive progress, perfection, reflection, and fulfillment of several types with varied stages (Murray & Moore, 2006, p.5). Besides, Hartley (2008, p.10) argues that the process of L2 writing is characterized as "a hierarchically organized, goal-directed, problem-solving process." This indicates that L2 writing is a complex process (Hartley, 2008; Murray & Moore, 2006), which has four stages, namely planning, writing, editing, and reviewing, but these steps do not necessarily emerge in a static order (Hartley, 2008). Consequently, writing has attracted the attention of several researchers. While teaching, presenting feedback to students results in a process that involves an immense workload for teachers who have to correct a significant number of their student's written work; however, offering reliable and consistent holistic feedback becomes time-consuming and problematic (Warschauer & Grimes, 2008; Wilson & Czik, 2016). Adel (2015) reports that writing is not a language ability that can be learned instantly, especially for EFL students. To acquire strong writing skills such as sentence structure, word use, writing organization, coherence, and some other elements, several aspects or features need to be learned and mastered by the writer. Adel (2015) adds that writing is difficult because it is neither natural nor spontaneous, and writing problems are often divided into three categories: psychological, linguistic, and cognitive.

Error analysis is among the most effective methods for grammatical studies focusing on students' errors. Error Analysis is the study of inappropriate forms created by learners of another language, especially a foreign language (Crystal,1999, p.108). According to Corder (1967), error analysis is divided into two types: theoretical

and applied. The theoretical one concerns discovering what and how students acquire a second or foreign language. In contrast, the applied part focuses on enabling learners to study more successfully by pedagogically utilizing their language knowledge (Corder, 1967). In this regard, Ridha (2012, p. 26) defines error analysis as detecting, assessing, and recognizing deviations from the principles of a second language.

Consequently, error analysis can contribute to EFL learners and language instructors by indicating the methods the students apply to learning a language. Further, error analysis aids linguists in supporting second or foreign-language learners by helping teachers recognize students' writing errors and implementing suitable techniques (Kwok,1998, as cited in Al-Khasawneh, 2014). According to Al-Khasawneh (2014), writing is a cognitive process that entails developing ideas, writing them down in orderly phrases, and editing them for evaluation. Thus, an adequate understanding of grammatical rules, lexical objects, and logical links is required for good writing. However, students experience anxiety when constructing sentences with proper grammar due to insufficient knowledge (Mohamad & Moses, 2019). According to Nyang'au (2016), there is another source of anxiety for learners learning to write: poor spelling; insufficient spelling ability can make students' writing inadequate and incorrect.

For Norrish (1983), errors exist due to carelessness, the intervention of L1, and translations. Carelessness is usually associated with students' need for more motivation. Some learners may need more motivation for learning in the process carried out by teaching. The learning material or teachers' teaching style may not fit the students. Consequently, the material taught by the instructor or teacher needs to be understood because students have an insufficient desire to learn. The other source of committing errors is interference with students' first language. As stated by Norrish (1983), habit formation is known to be learning either native or foreign languages. When individuals choose to learn new habits, their old habits may hinder them from learning them. This cause of the error is known as the negative interference of the L1. Besides, translation has also been classified as one of the most common causes of linguistic errors. In other words, through translating from L1 word by word, students produce errors while writing in a foreign language, specifically English (Jomaa & Bidin, 2017).

In another taxonomy, classifying errors is based on a distinction between L2 acquisition error structure and some forms of constructions. The two key error categories in this taxonomy are formed by these comparisons: developmental errors and interlingual errors. These two are derived from two other types used in a comparative taxonomy analysis: ambiguous errors and other errors (Dulay, 1982).

- Developmental errors are equivalent to the errors committed by learners using the target language as their L1.
  e.g., He eat foods.
- In structure, interlingual errors are identical to a semantically equivalent word or a sentence in the native language of the learner. 40 interlingual errors refer to L2 errors expressing the structure of the native language, regardless of the internal processes or the external conditions under which they are produced.
- Ambiguous errors may be similarly defined as developmental or interlingual errors that reflect the structure of the native language. At the same time, these errors are similar to those children commit while acquiring their L1.
  e.g., "I have no a car."
- Varied errors without a random assortment for items that do not fit into other groups, whereby few taxonomies are complete.
  e.g., "She do hungry."

The difficulty of writing has made it difficult for teachers to seek successful teaching writing strategies for EFL students. In a study by Sandol (2010), technology was examined to show how it can enhance writing in the classroom. The results suggest that a word processor should be part of every classroom to assist students in their writing skills. The study's findings have demonstrated that technology often helps students write by providing more information to their writing parts and activating them. Another study was conducted by Hena (2017), which emphasized the effect of ICT on the progress of writing skills through online platforms. The results show that using introductory communication technology improves students' writing skills, as it stimulates their ability to write and increases their excitement, motivation, and self-confidence. In addition, using ICT enables them to expand their knowledge of grammatical, morphological, and syntactic patterns when expressing their views.

A similar study was conducted by ALhusban (2016) to examine the effect of modern technological tools on students' writing skills at the University of Jordan. It was revealed that nowadays, EFL learners are following new ways of learning languages and changing the nature of English; they depend on technology to correct all their errors in writing. The study also indicated that students today have difficulty distinguishing between formal and informal writing due to electronic and communication devices. On the other hand, it lessens students' mental energy and persistence, indicating that students have become so familiar with taking shortcuts and writing in small boxes, then failing to see the purpose of writing, editing, and rewriting.

In their study, Ghufron and Rosyida (2018) focused on the effect of Grammarly in enhancing FL students' writing skills. Based on the findings, it was illustrated that Grammarly software reduces errors, namely vocabulary and language use, spelling, and punctuation. However, its effect in developing the content and organizing writing for students is less. Therefore, it is suggested that instructors confirm that their students are adequately skilled in using this technology. Similarly, Karyutry (2018) focused on the use of Grammarly as a tool to improve students' writing quality. The study showed that using Grammarly is a successful way of improving students' writing skills, as well as indicates that students have positive attitudes toward using Grammarly to correct their writing errors.

Based on Dulay et al. (1982), errors are divided based on the surface strategy taxonomy into four categories, namely: (1) Omission, (2) Addition, (3) Misformation, and (4) Misordering. Since Grammarly has emerged as one of the prominent applications for enhancing writing skills, several studies have been conducted on using Technology (GRAMMARLY), including EFL students in different countries (Ghufron & Rosyida, 2018; Para & Calero, 2019; Saepuloh, 2018; Rao *et al.*, 2019; Auseileek, 2006). The findings of some studies have shown a positive view toward using Grammarly software to improve students' writing skills. Also, previous studies have demonstrated that learners can learn and enhance their writing skills independently since Grammarly application is useful in reducing writing errors by students. Consequently, the present study uses the qualitative approach to explore the role of Grammarly in enhancing the quality of writing by EFL undergraduates at Duhok University. The present study adopted Dulay *et al.*'s (1982) surface strategy taxonomy, James's (1998) framework, and Sawalmeh's (2013) suggestion of spelling to answer the following questions:

- What are the types of errors made by EFL undergraduates before using Grammarly?
- What are the types of errors made by EFL undergraduates after using Grammarly?
- What are students' attitudes toward using Grammarly software in EFL writing?

3   Methodology

3.1 Research Design

The current study used the qualitative approach, including document analysis and conducting interviews. According to Creswell (2012), qualitative research involves interviewing participants and asking them a wide range of comprehensive questions to acquire rich information based on their experiences. Studies that adopt qualitative research designs usually involve gathering information from a small population to learn about their perspectives on a certain phenomenon (Creswell, 2012; Dorney, 2007; Jomaa & Bidin, 2017).

3.2 Sampling

The sampling of the current study included students in the second grade of the English department. Their age ranged from 20 to 24. Some of them were bilingual, and they were all from the northern region of Iraq. The sampling involved analyzing 40 essays (20 essays before using Grammarly and 20 essays after using Grammarly) as well as purposefully selecting six participants to conduct interviews with them. The following two tables present information about the sampling chosen in the current study.

Table (1): Description of the Document Analysis

No	Mother tongue	Department	Level	Age	Gender	Country
1	Kurdish	English	2	23	Male	Iraq
2	Kurdish	English	2	22	Male	Iraq
3	Kurdish	English	2	21	Male	Iraq
4	Kurdish	English	2	21	Female	Iraq
5	Kurdish	English	2	22	Male	Iraq
6	Kurdish	English	2	21	Female	Iraq
7	Kurdish	English	2	21	Female	Iraq
8	Kurdish	English	2	20	Female	Iraq
9	Kurdish	English	2	20	Male	Iraq
10	Kurdish	English	2	23	Male	Iraq
11	Kurdish	English	2	21	Male	Iraq
12	Kurdish	English	2	20	Female	Iraq
13	Kurdish	English	2	20	Male	Iraq
14	Kurdish	English	2	21	Male	Iraq
15	Kurdish	English	2	21	Female	Iraq
16	Kurdish	English	2	23	Male	Iraq
17	Kurdish	English	2	21	Male	Iraq
18	Kurdish	English	2	21	Female	Iraq
19	Kurdish	English	2	23	Male	Iraq
20	Kurdish	English	2	23	Male	Iraq

Table (2): Description of the interview sampling

| NO.	Mother tongue	Department	Level	Age	Gender	Country
1	Kurdish	English	Second	21	Female	Iraq
2	Kurdish	English	Second	21	Female	Iraq
3	Kurdish	English	Second	21	Male	Iraq
4	Kurdish	English	Second	20	Male	Iraq
5	Kurdish	English	Second	22	Male	Iraq
6	Kurdish	English	Second	23	Male	Iraq

3.3 Data Collection

Table (3): Sources of Data Collection

Essays analyzed before using Grammarly	Essays analyzed after using Grammarly	Interviews
The importance of technology in the educational process	The impact of early marriage on society	Six students were interviewed
20 essays	20 essays	Second-grade students.
20 students	20 students	4 male and 2 female students

Qualitative data were collected by document analyses [essay writing analysis] and making interviews. A group of 20 students in the second year of the English department was asked to write an essay using a pen and paper, and then Grammarly was explained to them. After explaining Grammarly, the students were asked to write another essay using the Grammarly application. Besides, six students were chosen to be interviewed. To collect the data for the interview, the researcher interviewed them based on open-ended questions, employing face-to-face individual interviews, and the interviews were audio-recorded, transcribed, translated, and analyzed. There are two types of Grammarly applications: free and premium versions. The current study used the free one because the students could not pay for the premium version.
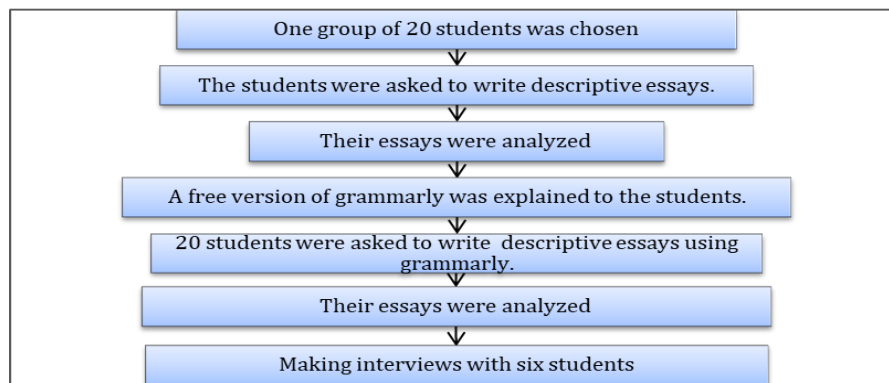
Figure (1): Stages of conducting the study

3.4 Data Analysis

The data of the current study were analyzed using the Surface Strategy Taxonomy by Dulay, Burt, and Kashen (1982), James's (1998) framework, and Sawalmeh's (2013) spelling suggestion. Open coding techniques and axial analysis analyzed the interview data. The current study used Gass and Selinker's (2008) steps of error analysis except for the last step, which was the cause and source of errors.
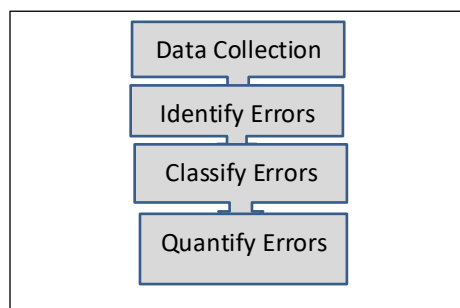
Figure (2): Gass and Selinker's (2008) steps of error analysis

3.5 Interview

This study adopted a qualitative approach to explore the students' attitudes toward using GRAMMARLY, relying on semi-structured face-to-face interviews with the participants to collect part of the data. As stated by Creswell (2012), semi-structured interviews can be employed to obtain comprehensive and meaningful information from the participants. The interviews were audio-recorded, transcribed, and translated into English after getting permission from the six participants. Hand analyses and visual and mind mapping were adopted to analyze the interviews. The first step was to read the text several times. Next, the main idea was coded, and code connections were created. After that, the similar codes were grouped under one major theme. According to Punch (2005; as cited in Banat *et al.* 2019), breaking down, analyzing, comparing, interpreting, and categorizing data are all part of the coding process.

3.6 Trustworthiness

To achieve trustworthiness, a pilot study was conducted, whereby two students were involved, and the analysis of 4 essays was carried out (2 essays before using Grammarly and 2 essays after using Grammarly). Two individual face-to-face interviews followed the analysis of these documents. The interview questions were sent to an expert in the field and modified before and after conducting the pilot study. A member-checking technique was adopted, whereby after the analysis of the interview and its interpretation, the interview analysis and interpretation were sent back to the participants to ensure that the coded ideas represented their perspectives.

4   Findings

The findings include three sections; each section addresses one of the three research questions raised earlier.

Table (4): Errors in second language writing before using Grammarly

NO.	types of errors	number of errors	percentage of errors
1	Omission	264	37.4%
2	Addition	118	16.7%
3	Misformation	137	19.4%
4	Spelling	179	25.4%
5	Misordering	8	1.1%
Total		**706**	**100%**

After analyzing all the data of written essays (20) by students using a pen and paper, the researchers identified 706 student errors. These included 264 omission errors (37.4), 179 spelling errors (25.4%), 137 misformation errors (19.4%), 118 addition errors (16.7%), and only 8 misordering errors (1.1%). These errors are analyzed according to the surface strategy taxonomy (Dulay *et al.*, 1982), and the spelling errors are analyzed according to Sawalmeh's (2013) study. The omission errors represented the highest percentage, whereas misordering represented the lowest percentage. This can be attributed to the possible familiarity with the grammar rules of the English language. However, they either need to remember or learn the specific rules of English. The most frequent error type was omission. Based on the findings, the students had 264 omission errors. Omission is the absence of an item that must appear in a well-formed utterance, including errors related to punctuation, singular plural, verb, article, prepositions, subject-verb agreement, conjunctions, and pronouns. Spelling errors with 179 errors followed the omission. Third, 137 out of 706 errors were misformation errors. Misformation is using the wrong form of a morpheme or a structure in the right form. Several types of misformation include misformation of word formation, capitalization, punctuation, verb tense, singular plural, prepositions, word choice, articles, and subject-verb agreement.

Addition was the fourth most frequent error in students' essays. Addition errors numbered 118 errors out of the total number of errors. Addition is to add an item that must not appear in a well-formed utterance. Addition types are verb, punctuation, capitalization, conjunction, preposition, subject-verb agreement, articles, subject pronoun, and *-ing* noun inflection. The least frequent error type among the four is misordering, with only 8 student errors. These include misordering of adverbs, adjectives, negation, and subject-verb order. Misordering incorrectly places a morpheme or a group of morphemes in an utterance.

The following examples show the types of errors made by the students.

1. **Omission of punctuation**

(×): know how to use it *and how to arrange time**. (Participant.2/M)**

(√): know how to use it**,** and how to arrange time.

2. **Omission of singular/ plural**

(×): Many other application*. **(Participant.4/M)**

(√): Many other **applications.**

3. **Omission of verb**

(×): some types of applications that* used in classes. **(Participant.1/M)**

(√): some types of applications that **are** used in classes.

4. **Omission of article**

(×): Technology has many benefits not just for* educational process. **(Participant.8/M)**

(√): Technology has many benefits, not just for **the** educational process.

5. **Omission of preposition**

(×): If you want* work in an organization or any other works. **(Participant.11/F)**

(√): If you want **to** work in an organization or any other works.

6. **Omission of subject-verb agreement**

(×): The process of education get* more benefit at this time. **(Participant.3/M)**

(√): The process of education **gets** more benefit at this time.

7. **Omission of conjunction**

(×): You can read a book* watch the movies. **(Participant.10/F)**

(√): You can read a book, **and** watch movies.

8. **Omission of object pronoun**

(×): There are very useful applications on the internet that we can use*for improving our English**. (Participant.17/F)**

(√): There are very useful applications on the internet that we can use **them** for improving our English.

1. **Addition of verb**
2. **(×):** Technology can make you ***be** influential in any field. **(Participant 16/ F)**
3. **(√):** Technology can make you influential in any field.
4. **Addition of punctuation**

(×): At the present Iraq suffer from many conflicts***,** due to that many students cannot go to schools, and university. **(Participant 19/ M)**

(√): At present, Iraq suffers from many conflicts due to that many students cannot go to schools and university.

5. **Addition of capitalization**

(×): Nowadays, technology has an important ***Role** in the process of education at many classes. **(Participant 20/F)**

(√): Nowadays, technology has an important **role** in the process of education at many classes.

6. **Addition of conjunction**

(×): ***So** in order to get benefits from technology, we ought to use positively. **(Participant 2/M)**

(√): In order to get benefits from technology, we ought to use positively.

7. **Addition of preposition**

(×): We can also use the internet for searching ***about** our topic that we have. **(Participant 17/F)**

(√): We can also use the internet for searching our topic that we have.

8. **Addition of subject-verb agreement**

(×): Instructors ***uses** technology to make the material easy for the students. **(Participant 18/F)**

(√): Instructors **use** technology to make the material easy for the students.

9. **Addition of article**

(×): ***The** technology has given us many different ways to study**. (Participant 7/M)**

(√): Technology has given us many different ways to study.

10. **Addition of subject pronoun**

(×): Online technique in Iraq ***it** is not really good**. (Participant 11/F)**

(√): Online technique in Iraq is not really good.

11. **Addition of – ing verb inflection**

(×): Students can get what they want faster and do not ***wasting** their time. **(Participant 13/M)**

(√): Students can get what they want faster and do not **waste** their time.

1. **Misformation of word formation**
2. **(×):** Technology has its ***important** in the process of education. **(Participant 3/M)**
3. **(√):** Technology has its **importance** in the process of education.
4. **Misformation of capitalization**

(×): ***technology** is one of the most important things in the world. **(Participant 12/ M)**

(√): Technology is one of the most important things in the world.

5. **Misformation of punctuation**

(×): if we talk about it***.** It will help us to understand reading more clearly. **(Participant 11/F)**

(√): if we talk about it***,** It will help us to understand reading more clearly.

6. **Misformation of verb tense**

(×): technology today ***connected** the world to each other**. (Participant 10/ F)**

(√): technology today **connects** the world to each other.

7. **Misformation of singular plural**

(×): students can get ***many information** from different websites. **(Participant 13/ M)**

(√): students can get **much information** from different websites.

8. **Misformation of preposition**

(×): people will benefit***** of** it. **(Participant 17/ F)**

(√): people will benefit **from** it.

9. **Misformation of word choice**

(×): I am ***looking at** movies, and English video**. (Participant 4/ M)**

(√): I am **watching** movies and English video.

10. **Misformation of articles**

(×): so for us as ***a students** technology has both sides the bad side, and the good side. **(Participant 6/ F)**

(√): so, for us as **the students,** technology has both sides, the bad side and the good side.

11. **Misformation of subject-verb agreement**

(×): Each course ***have** some lectures**. (Participant 8/ M)**

(√): Each course **has** some lectures.

1. **Spelling errors**

(×): Technology helps us to know the general ***knowladge** about things**.**
     (Participant 12/M)

(√): Technology helps us to know the general **knowledge** about things**.**

1. **Misordering of negation**

(×): even if there are some problems ***to not** go school or college. **(Participant 1/M)**

(√): even if there are some problems **not to** go school or college**.**

2. **Misordering of adverb**

(×): it is with you ***always. (Participant 12/M)**

(√): it is **always** with you.

3. **Misordering of adjective**

(×): in the process ***educationa**l. **(Participant 12/M)**

(√): in the **educational** process.

4. **Misordering of subject-verb order**

(×): computer is another technique ***should we** have it. **(Participant 11/M)**

**(√):** computer is another technique **we should** have it.

Table (4): Types of errors by using Grammarly Application

No.	Types of errors	number of errors	The percentage of errors
1	Omission	178	60.3%
2	Misformation	87	29.5%
3	Addition	27	9.2%
4	Misordering	3	1.0%
5	Spelling	0	0.0%
Total		**295**	**100%**

After analyzing all the data of students' essays written using the free Grammarly application, 295 errors were identified. These included 178 omission errors (60.3), 87 misformation errors (29.5), 27 addition errors (9.2), and only three misordering errors (1). These errors were analyzed according to the surface strategy taxonomy and are classified under misformation, omission, addition, and misordering, whereas no spelling errors were used. As stated above, 178 out of 295 errors are omission errors, representing the most frequent error type. Omission is the absence of an item that must appear in a well-formed utterance. Omission types included punctuation, conjunction, *-ing* verb inflection, singular plural, -s verb inflection of third person singular, and verbs. The second most frequent type of error is misformation, with 87 errors. Misformation is using the wrong morpheme or structure instead of the right form. There are several types of misformation, such as misformation of word choice, punctuation, verb formation, capitalization, verb tense, word formation, singular plural, and preposition. The third most frequent error type was addition, with 27 addition errors, which are the addition of verbs *to be*, prepositions, *-ing* verb inflection, punctuation, conjunction, and subject-verb. Addition is the presence of an item that must not appear in a well-formed utterance. The least frequent error type among the four error types was misordering. Misordering errors were 3 out of the total errors. More specifically, misordering incorrectly places a morpheme or group of morphemes in an utterance. Misordering error types are misordering of negation, adjectives, and adverbs.

The results of the written essays with the free Grammarly application show an improvement compared to the written essays without using Grammarly. In other words, the Grammarly application offers immediate corrective feedback for varied linguistic errors, such as articles, prepositions, spelling, verb formation, synonyms, and limited punctuation when used wrongly. Also, this application gives some other feedback, but not immediately, only informing the students that there is something wrong with the type of error by underlying it with a yellow color since these features work within the premium version of the Grammarly application. These features are capitalization, punctuation, word choice, and conjunctions. The features offered by the free version of the Grammarly application are underlined with a red color and inform the type of corrective feedback, but students sometimes need to remember to select the feedback that Grammarly offers; therefore, they face some problems in their writing skills.

Figure 3 shows a comparison of grammatical errors before using Grammarly and after using Grammarly.
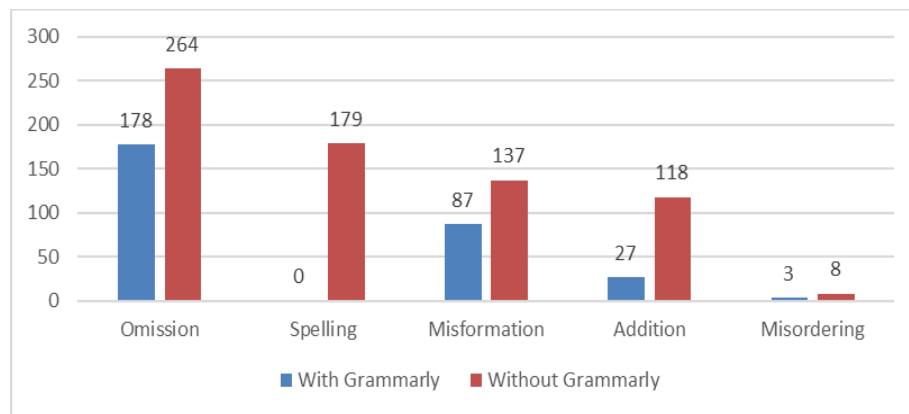
Figure (3): Grammatical errors before and after using Grammarly

There is a difference between the written essays of students before using Grammarly and after using Grammarly. The written essays before using Grammarly have some errors compared to the Grammarly application usage. The students had (706) errors, namely omission (264), spelling (179), misformation (137), addition (118), and the last was misordering errors (8). In contrast, written essays after using Grammarly included (295) errors, namely omission errors (178), misformation errors (87), misordering errors (3), addition errors (27), and zero spelling errors.

Perspectives of Students on Using Grammarly in L2 Writing:

Table 5 presents results related to students' perspectives on using Grammarly to improve their L2 writing skills.

Table (5): Students' perspectives on using Grammarly

NO	Major themes
1	Mistake correction
2	Challenges in writing skills
3	Preferred Grammarly feedback
4	English level after using Grammarly

Four themes were identified Regarding students' perceptions of using the Grammarly application.

Mistake correction:

The participants in the current study are asked about managing mistakes and how they can correct them while writing English texts. They usually request the help of English experts or use the Internet. The majority of the participants indicated that they managed their mistakes by using internet tools and English experts. In contrast, only two participants revealed they corrected and managed their mistakes independently. Managing mistakes on the internet is the most frequent strategy among the participants. Mistakes and error correction can lead students to learn a language correctly. According to Banat *et al.* (2019), error correction assists teachers in evaluating their students' competence levels, and learners must recognize the right linguistic forms to prevent making the same mistakes in their future L2 writing.

Challenges in writing skills:

The participants indicate difficulty in grammar, spelling, coherence, and vocabulary. Participant 1 shows that coherence is a difficult issue for her. In addition, Participants 2, 3, 4, and 5 express that spelling and grammar are difficult for them while writing texts in English, whereas only one participant needs help with vocabulary and grammar. The majority of them need help with spelling and grammar. These results are in harmony with Banat *et al.* (2019), who found that the most prevalent areas of difficulty for them are grammar, spelling, and vocabulary. They also indicated that the students should receive feedback on the aforementioned areas of linguistics.

 Extract 8*: I have difficulty in grammar, spelling.* (Participant 3/M)

Extract 9: *I have difficulty in coherence. I do not know to connect my ideas together*. (Participant1/F)

Extract 10: *I have difficulty in spelling and grammar tents*. (Participant 2/F)

Extract 11*: I have found difficulty in vocabulary and grammar when I write a text.* (Participant 6/M)

Preferred Grammarly feedback:

The participants approved that the feedback suggested by Grammarly included positive feedback, namely the location of the error, grammar, spelling, and synonyms. The majority of the participants indicated that they liked the spelling feedback that Grammarly offers. Only participant number 2 liked the location of errors and synonyms. Moreover, Participant 3 preferred both grammar and spelling feedback. In addition, Participant 6 preferred the feedback presented by Grammarly, namely synonyms and spelling. For participant 5, he preferred all feedback offered by Grammarly. In this regard, Banat *et al.* (2019) state that feedback is essential for learners to master their writing skills in L2 learning at various levels.

Extract 12: *The most liked feedback was synonyms and spelling*. (Participant 6/M)
Extract 13: *Most liked feedback was spelling and grammar*. (Participant 3/M)
Extract 14: I liked the error location feedback and synonyms. (Participant 2/F)
Extract 15: *I liked all feedbacks which Grammarly offered.* (Participant /5M)

English level after using Grammarly:

The results indicated that their L2 writing has improved in terms of spelling, grammar, synonyms, punctuation, and vocabulary. The majority of them state that their level of spelling has improved. Five participants stated that their writing has improved in spelling, whereas only one indicated that his L2 writing improved in terms of vocabulary and synonyms. Others affirmed that their writing improved spelling, vocabulary, synonyms, grammar, and location of errors.

Extract 16: *After using Grammarly my writing got improved a lot in term of spelling, error location, grammar.* (Participant 6/M)
Extract 17: *After using Grammarly my writing became good in term of spelling, vocabulary, grammar to limited level, and the most important one was synonyms*. (Participant 2/F)
Extract18: *After using Grammarly my writing has been improved in term of spelling, punctuation, and grammar. (Participant 4/M)*
Extract 19: *After using Grammarly my writing got better in term of vocabulary, synonyms.* (Participant 5/M)

According to the interview results, Grammarly has helped the participants to a limited extent, namely in terms of spelling, synonyms, grammar, punctuation, and connecting ideas. Thus, Grammarly is a supportive application for EFL learners. Based on the participants' responses to the questions, they needed help regarding grammar, vocabulary, error location, punctuation, and the most fundamental one, spelling. After using Grammarly, many students indicated that their spelling, grammar, synonyms, and vocabulary were improved.

5   Discussion

The current study is based on a qualitative approach employing a document analysis and conducting interviews. The results showed an improvement in L2 writing skills while using Grammarly. Without using Grammarly, omission occupied the first rank of errors, followed by spelling, misformation, addition, and misordering. These findings align with a study conducted by Jomaa and Derşevi (2022), which revealed that Turkish students in both Arabic and English had substitution and omission errors as the most frequent ones. These errors could be attributed to the interference of students' first language, educational level, and learning style (Hung & Zhang, 2022).

Similarly, after using Grammarly, omission also had the highest percentage of errors, whereas no errors were committed in spelling. This result agrees with Ghufron and Rosyida (2018), who affirmed that Grammarly can help students reduce spelling, punctuation, vocabulary, and grammar errors. Besides, Grammarly can improve students' writing skills in terms of spelling, a limited number of punctuations, articles, prepositions, and synonyms.

The participants' perspectives on using Grammarly supported the analysis of the written essays. More specifically, Grammarly has helped the participants with spelling, synonyms, grammar, punctuation, location of errors, articles, and connecting ideas. Therefore, several students expressed their attitudes towards using Grammarly positively, but others expressed their attitudes towards using it partially positively. They claimed that only students with intermediate levels in English can use it because it is unreliable. On the other hand, some students indicated that Grammarly must be used in education. Similarly, Karyuatry *et al*. (2018) indicated that using Grammarly effectively improves students' writing skills and that the study participants have a

positive feeling toward using Grammarly. These findings also show that Grammarly can reduce the errors committed by students.

Another study by Saepuloh (2018) showed that most students affirm that using the Grammarly application is very beneficial. Furthermore, many students indicated that Grammarly is very easy and functional, and students are very interested in using it and are willing to utilize it continuously. Also, students prefer Grammarly feedback more than the teacher's feedback. However, in the current study, some students affirm that Grammarly is unreliable and that students should only depend on it partially. A similar study by Fadhilah *et al.* (2019) showed that using the Grammarly application for writing English abstracts is useful in detecting linguistic errors. The findings also indicated that Grammarly is used as an improvement tool for L2 writing of the students and to correct their grammar. However, the study's findings are not completely in line with the current study, but only in terms of spelling, a limited number of punctuations, not all sentence structure, and word choice.

Another study by Nova (2018) on utilizing Grammarly to enhance academic writing skills showed both the application's benefits and drawbacks. The benefits included presenting colored-coded feedback with explanations and examples, ease of access, a high rate of evaluation, and free service for supporting writing texts. In contrast, the drawbacks included misleading feedback, lack of context, and lack of evaluation of the context. The participants affirmed that they can learn grammar by correcting their L2 writing with Grammarly, doing self-revision, not making the same errors, and giving clear feedback that helps students learn from their errors and become more aware of writing texts. The study's findings align with the current study, especially regarding self-correction while getting correct feedback from Grammarly.

6   Conclusions

The results of the current study indicate that Grammarly can improve students' spelling, vocabulary, limited use of punctuation, locating errors, and synonyms. The students will use Grammarly in the education process based on their perceptions. However, only students with good or intermediate levels can use Grammarly because it is reliable to a great extent.

The current study's findings could contribute to enhancing L2 writing skills by English language students, especially in detecting grammar errors. Besides, the study's findings can help academicians, proofreaders, and learners whose level needs to be improved to learn the errors they do not know. Moreover, these findings can help those who write texts using Grammarly and can be good for future novice researchers who must publish research articles that must be written professionally without any mistakes.

However, the current study is limited to the second-grade students at the University of Duhok, using the qualitative method, namely interviews and analyzing written essays with and without using Grammarly. Besides, the study depended only on the free version of Grammarly because the students needed help to pay for the premium Grammarly application to obtain full feedback. FL learners should be familiar with using Grammarly to get the maximum benefits from such applications. Also, students should only sometimes depend on Grammarly as they may forget to improve their English by themselves. Including more participants in future studies from both genders as well as focusing on teachers' perspectives about Grammarly can enrich future studies in this context.

References:

Abdullah, M, F., Sutarsyah, C., & Hasan, B. (2017). An analysis of grammatical errors in learner's descriptive writing at Sma Al- Kausar Bandar Lampung. *UNILA Journal of English teaching*, *6(9), 1-13.*

AbuSeileek, A. (2006). The Use of Word Processor for Teaching Writing to EFL Learners in King Saud University. *Journal of King Saud University*, 19(2), 1–15.

Adel, C. (2015). *Improving EFL students' writing skills through a directed blog: Case of students at Mohamed Khider University of Biskra*. Master's thesis, Mohamed Khider University of Biskra.

Agustina, v., & Junining, E. (2014). Error analysis in the travel writing texts made by the students of study programme of English. *Jurnal llmiah mahasiswa fakultas llmu Budaya university Brawijaya,6(5), 1-28.*

Ahmadi, R.M. (2018). The use of Technology in English language learning. *International Journal of research in English education, 3 (2), 116–125.*

Al Zahrani, S., & Chaudhary, A. (2020). Error analysis in the written composition of EFL students. *International Journal of English Linguistics*, 10(2), 357-366. https://doi.org/10.5539/ijel.v10n2p357

Alhusban, A.M. (2016). The impact of modern technological tools on students' writing skills in English as a second language. *US-China Education Review A,6(7), 438–443.* https://doi.org/10.17265/2161-623x/2016.07.006

Al-Khasawneh, F. (2014). Error analysis of written English paragraph by Jordanian undergraduate students: case study. *International journal of English language, literature and humanities*, 2(8), 85-100.

Allaith, Z (2009). *Analysis of spelling performance in English among students whose first language is Arabic*. Master's thesis, Texas A&M University.

Amiri, F., & Puteh, M. (2017). Error Analysis in Academic Writing: A Case of International Postgraduate Students in Malaysia. *Advances in Language and Literary Studies*, 8(4), 141-145. https://doi.org/10.7575/aiac.alls.v.8n.4p.141

Arteaga, S., Cortijo., & Javed, U. (2014). Students' perceptions of Facebook for academic purposes. *Computers and Education,* 70 (2014), 138–149. https://doi.org/10.1016/j.compedu.2013.08.012

Banat, M. I., Jomaa, N. J., & Shabdin, A. A. (2019). EFL Postgraduate Students' Perspectives Towards Teachers' Feedback on L2 Writing. *Karabük Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 9(2), 537-555.*

Behzadi, A. (2015). Information and communication technology as the teaching and learning space among Iranian EFL teachers. *Indian Journal of Fundamental and Applied Life Sciences, 5 (S3), pp. 677–684.*

Byrne, D. (1996). *Teaching writing skills*. UK: Longman Group.

Corder, S. P. (1967). The significance of learner's errors. *International Review of Applied Linguistics in Language Teaching*, 5(4), 161–170.

Creswell, J.W. (2012). *Educational research: planning, conducting and evaluating quantitative and qualitative research* (4th ed.). USA, Boston: Pearson Education.

Crystal, D. (1999). *The Penguin Dictionary of Language* (2nd ed.). Penguin.

Daniels, P., & Leslie, D. (2013). Grammar software ready for EFL writers? *OnCue Journal, 9(4), 391–401.*

Dodgson, A. N., Tariq, B., Alauyah, M., & Yusof, M. (2016). The secondary school students' usage of English learning websites to self-correct writing errors. *Asian Tefl, 1(11), 2503–2569.*

Dulay, H., Burt, M., & Krashen, S. (1982). *Language Two*. New York: Oxford University Press.

Erlangga, I., Suarnajaya, I., & Juniarta, P. **(**2019). An analysis of grammatical errors made by the seventh-grade students of SMP Negeri 2 Sukawati in writing descriptive texts. *Language and education journal undiksha*, 2(1), 19-29. https://doi.org/10.23887/leju.v2i1.20276

Eslami, E., & Maleki, A. (2013). The Effects of Written Corrective Feedback Techniques on EFL Students" Control over Grammatical Construction of Their Written English. *Theory and Practice in Language Studies*, 3(7), 1250-1257. https://doi.org/10.4304/tpls.3.7.1250-1257

Fadhilah, U., Lizawati., & Saribu, H. (2019). Effectiveness of Grammarly Application for Writing English Abstract. *International Journal of Science and Research*, 8(12), 163-166.

Gain, A., Rao, M., & Bhat, Sh. (2019). Usage of Grammarly – Online Grammar and Spelling Checker Tool at the Health Sciences Library, Manipal Academy of Higher Education, Manipal: A Study. *Library Philosophy and Practice (e-journal), 1–13.*

Ghahri, F., Hashamdar, M., & Mohamadi, Z. (2015). Technology: A Better Teacher in Writing Skill. *Theory and Practice in Language Studies*, 5(7), 1495-1500. https://doi.org/10.17507/tpls.0507.24

Ghufron, M. A., Saleh, M., Sofwan, A., & Java, E. (2016). A model of research paper writing instructional materials for academic writing course: Needs & documents analysis and model design. *English Language Teaching: Canadian Center of Science and Education, 9(3),* 1–12. https://doi.org/10.5539/elt.v9n3p1

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

Hartley, J. (2008). *Academic writing and publishing: A practical handbook.* School of Psychology, The University of Keele, United Kingdom

Hena, J. L.(2017). The Influence of ICT in the Development of Writing Skills through an Online Platform. *Matices en Lenguas Extranjeras,11*(2011), 1-27.

Hiradhar, P. (2013). Enhancing ESL learners' writing through Technology. *International Proceedings of Economics Development and Research (IPEDR)*, 68 (7), 30–36.

Hung, M., & Zhang, T. (2022). A Study on the Use of Locative Prepositions by Chinese English Majors in English Writing. *Bulletin of Advanced English Studies (BAES),* 7 (1), 16-21. https://doi.org/10.31559/baes2022.7.1.4

Ilter, B.G. (2015). How does Technology affect language learning process at an early age? *Procedia- Social and Behavioural Science, pp. 193, 311–316.* https://doi.org/10.1016/j.sbspro.2015.07.552

Jafarian, K., Soori, A., & Kafipour, R. (2012). Computer Assisted Language Learning (CALL) affects EFL high school students' writing achievement. *European Journal of Social Sciences,* 27(2), 138– 148.

James, C. (1998). *Errors in language learning use: Exploring error analysis.* Harlow, Essex: Addison Wesley Longman Limited.

Jasim Al-Shujairi, Y. B., & Tan, H. (2017). Grammar Errors in the Writing of Iraqi English Language Learners. *International Journal of Education & Literacy Studies*, 5(4), 122-130. https://doi.org/10.7575/aiac.ijels.v.5n.4p.122

Jomaa, N.J., & Bidin, S.J.(2017). Perspectives of EFL doctoral students on challenges of citations in academic writing. *Malaysian Journal of Learning and Instruction (MJLI),* 14(2), 177-209. https://doi.org/10.32890/mjli2017.14.2.7

Jomaa, N. J., & Derşevi, S. (2022). Linguistic Errors Across Languages: A Case Study of Turkish Students. In *Global and Transformative Approaches Toward Linguistic Diversity* (pp. 22-48). IGI Global. https://doi.org/10.4018/978-1-7998-8985-4.ch002

Kabilan, M. K., & Rajab, B. M. (2010). The utilisation of the Internet by Palestinian English language teachers focusing on uses, practices, and barriers, and overall contribution to professional development. *International Journal of Education & Development Using Information & Communication Technology*, 6(3), 56–72.

Karyuatry, L.(2o18). Grammarly as a tool to improve students' writing quality. *Jurnal Sains Sosial dan Humaniora*, 2(1),83-89. https://doi.org/10.30595/jssh.v2i1.2297

Krish, p., & Zandi, P. (2018). Enhancing EFL writing instruction through Technology in Iran. *Research on Humanities and Social Sciences,7(18),* 75–83.

Misbah, N., Mohamad, M., Yunus, M., & Ya'acob, A. (2017). Identifying the Factors Contributing to Students' Difficulties in the English Language Learning. *Creative Education,* 8, 1999- 2008. https://doi.org/10.4236/ce.2017.813136

Moses, R. & Mohamad, M. (2019). Challenges Faced by Students and Teachers on Writing Skills in ESL Contexts: A Literature Review. *Creative Education*, 10 (13), 3385–3391. https://doi.org/10.4236/ce.2019.1013260

Murray, R., & Moore, S. (2006). *EBOOK: The Handbook of Academic Writing: A Fresh Approach*. *McGraw*-Hill Education (UK).

Norrish, J. (1987). *Language Learners and Their Errors*. London: Macmillan.

Nova, M. (2018). Utilizing Grammarly in evaluating academic writing. *Journal of English Education and Applied Linguistics,7(1), 80–96.*

Nunan, D. (2003). Practical English Language Teaching. *International Edition, McGraw-Hill Education, Singapore*, p. 88.

Nyang'au, B, N. (2016). Challenges students face in learning essay writing skills in English language in secondary school in Manga sub-county, Kenya. *International journal of education and research*, *4(9), 19-28.*

Ozkayran, A., & Yilmaz, E. (2020). Analysis of Higher Education Students' Errors in English Writing Tasks. *Advances in Language and Literary Studies,* 11(2), 48-58. https://doi.org/10.7575/aiac.alls.v.11n.2p.48

Park, J. (2019). An AI-based English grammar checker vs. human raters in evaluating EFL learners' writing. *Multimedia- Assisted Language Learning*, 22(1), 112–131.

Parra, L., & Calero, 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

Prensky, M. (2001). Digital natives, digital in migrants: Part I. *On the Horizon*, 9(5), 1–6. https://doi.org/10.1108/10748120110424816

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. https://doi.org/10.17507/tpls.0609.23

Ridha, N. (2012). The Effect of EFL Learners' Mother Tongue on their Writings in English: An Error Analysis Study. *Journal of the College of Arts. University of Basrah*, (60), 22-45.

Saadi, Z. K., & Saadat, M. (2015). EFL learners' writing accuracy: Effects of direct and metalinguistic electronic feedback. *Theory and Practice in Language Studies*, 5(10), 2053–2063. https://doi.org/10.17507/tpls.0510.11

Saepuloh, A. (2018). *Students' response on the use of Grammarly application in an EFL writing class*. The 1st international conference on ELT(CONELT), 1-5.

Sawalmeh, M. (2013). Error analysis of written English essays: the case study of students of the preparatory year programme in Saudi Arabia. *English for specific purposes world*, 14(40), 1–17.

Schraudner, M. (2014). The online teacher's assistant: Using automated correction *programs* to supplement learning and lesson planning. *CELE Journal*, 22(1), 128-140.

Talebinezhad, M. R., & Abarghoui, M. A. (2013). The Iranian high school students' attitude toward CALL and the use of CALL for EFL receptive skills. *Theory and Practice in Language Studies*, 3(2), 329–337. https://doi.org/10.4304/tpls.3.2.329-337

Tapscott, D., & Williams, A. D. (2010). Innovating the 21st-century university: *It's time. EDUCAUSE Review*, 45(1), 17–29.

Thompson, P. (2013). The digital natives as learners: Technology use patterns and approaches to learning. *Computers & Education*, 65(1), 12–33. https://doi.org/10.1016/j.compedu.2012.12.022

Van Beuningen, C. G., De Jong, N. H., & Kuken, 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

Vidhiasi, D. M., & Haryani. (2020). The implication of Grammarly in error analysis. *Jurnal Sains Dan Teknologi Maritim*, 21(1), 16-22. https://doi.org/10.33556/jstm.v21i1.248

Warschauer, M., & Grimes, D. (2008). Automated Writing Assessment in the classroom. *Pedagogies. An International Journal*, 3(1), 22–36.

Wilson, J., & Czik, A. (2016). Automated essay evaluation software in English Language Arts classrooms: Effects on teacher feedback, student motivation, and writing quality. *Computers and Education*, 100, 94–109. https://doi.org/10.1016/j.compedu.2016.05.004

Yang, H. (2018). Efficiency of online grammar checker in English writing performance and students' perceptions. *Korean Journal of English Language and Linguistics*, 18(3), 328–348.

You, X. (2004). New directions in EFL writing: A report from China. *Journal of Second Language Writing*, 13, 253-256. https://doi.org/10.1016/j.jslw.2004.09.002