EVALUATION OF GRAMMARLY IN DETECTING GRAMMATICAL ERRORS: THE CASE OF ENGLISH ESSAYS FROM THE BRITISH NATIONAL CORPUS (BNCWEB CQP – EDITION)

Lyncan Moagi
University of Botswana, Communication and Study Skills Unit
Moagil@ub.ac.bw

Abstract

The study evaluated Grammarly in detecting grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition). The Corder (1973) framework of Error Analysis which consists of four sub-categories of errors which are omission, addition, selection, and misordering was used to analyze the errors that were detected by Grammarly. The study used a quantitative method approach. With systematic random sampling, a sample of nine English Essays from British National Corpus (BNCweb CQP – Edition) was extracted. Corrective Feedback (CF) and Automated Written Corrective Feedback (AWCF) as concepts of language learning provided a context for the study. The results showed that selection errors were the most dominant 39% followed by addition errors with 32%, and the least being omission errors with 29%. Spelling errors were at 60.5%, followed by article errors with 15.8%, punctuation errors with 7.9%, subject – verb agreement with 5.3%, while preposition errors, word form errors, pronoun errors, and number errors were each at 2.6%. There are implications that Grammarly is effective in detecting errors which could be classified into omission, addition, selection, and misordering, and grammatical categories, such as spelling, article, preposition, punctuation, word form, subject – verb agreement, pronoun, and number. As shown by the findings of the study, with the use of Grammarly, writers would produce error free written texts. Therefore, the study recommends Grammarly as a tool that should be used to ensure error free writing in different phases of life where writing texts is involved, such as academia. Even so, further research needs to be carried out on the effectiveness of Grammarly in detecting grammatical errors in the best interest of encouraging the improvement of its features.

Keywords: Grammarly, Error Analysis, Corrective Feedback, Automated Written Corrective Feedback, Error

ISSN 1021-559X /12/2025
Mosenodi
©Lyncan Moagi

Introduction

The study evaluated the accuracy of Grammarly software in error corrections in English Essays on language issues that were extracted from BNCweb (CQP – Edition) to form a sub – corpus. Grammarly was used to detect errors in the texts to evaluate its effectiveness in detecting grammatical errors. English Essays that were extracted from BNCweb (CQP – Edition) were used to form a sub – corpus. Grammarly is used to detect and correct errors in writing (Grammarly, 2023). It is in two versions, the Grammarly free version that is free to the public and the Grammarly Premium which is a paid upgrade tool (Grammarly, 2023). Grammarly claims to help writers to produce error free write- ups.

Grammarly is one of the tools that are used to provide Automated Written Corrective Feedback. Automated Written Corrective Feedback (AWCF) and Corrective Feedback (CF) as concepts of language learning provided a context for the study. Automated Writing Evaluation (AWE) software, such as, Grammarly, Turnitin, and PlagScan are used in language learning and testing. The AWE softwares are found to be useful (Hoang, 2019). The automated written feedback softwares are speedily developed over time hence the need to investigate their effectiveness with the aim for their improvement. The use of online softwares in language teaching and learning has increased over time. Mammadova (2019) cited in Fitria (2021) affirms that online grammar and spelling checkers are of paramount importance in learning and teaching language. Therefore, out of all the AWE softwares, the current study selected Grammarly for evaluation as literature claims that it is an effective tool in error detection and correction. Most of the conclusions by other studies that were conducted in different parts of the world were based on the users' perceptions and experiences. This raises suspicion of the possible influence of prejudice and individual preferences. In the context of the current study, 9 Essays that were extracted from the BNCweb (CQP – Edition) were run through a Grammarly installed computer to search for grammatical errors; the essays were used in their original text form.

Error refers to a deviation from correctness due to lack of knowledge (Corder, 1981). Unlike mistakes, which are self – correctable, errors are not self – correctable hence it may be necessary to use Grammarly to correct them and evaluate the accuracy of the software in error – correction for the betterment of its accuracy. The common practice in the field of Error Analysis

(EA) of classifying errors into spelling, punctuation, word choice, and sentence construction were adopted by the current study from Corder (1967). The same classifications are used in Grammarly. In the context of this study, all deviations from correctness that were detected and corrected through Grammarly were considered errors because if they were mistakes, they could have been self – corrected by the writers.

Error Analysis as a Conceptual Framework

Corder (1973) prototypical Error Analysis framework together with its descendant frameworks, such as, the one suggested by Dulay, Burt and Krashen (1982) were used in this study. In literature, the term "error analysis" has been defined the same. Richards and Schmidt (2002) cited in Omidipour (2014) define error analysis as a practice that involves studying and analyzing the errors that are made by learners who are using a given language as a second language. Crystal (2003) cited in El–Farahaty (2017) defines "error analysis" as the process that involves identification, classification and systematic interpretation of the errors made by a foreign language learner. The prototypical framework consists of four categories of errors which are omission, addition, selection, and misordering. The first three categories can be exemplified using Setiyorini (2020) findings that show that some students commit omission errors by not putting "- s/ -es" to mark nouns for plurality and they also commit addition errors (e.g., "is" and "should") for a noun (e.g., "health") the adjective (e.g., healthy) is added, while others commit selection errors by substituting a noun (e.g., consumption) for a verb (e.g., consume). Misordering errors refer to errors that are related to the wrong order of words in a sentence. For example, "He is a dear to me friend." has a wrong order of words so the correct construction should be "He is a dear friend to me." (Jabeen et al, 2015). Even though the concepts of EA include the study of the causes of intra-lingual and inter-lingual errors, the scope of the study was limited to grammar error – corrections, not their causes because the linguistic backgrounds of the authors of the Essays that were used as sources of errors were not known.

The current study took into consideration the development of the Error Analysis framework suggested by Corder (1973). This is because it may be viewed as an old framework and yet the newly developed EA frameworks are not a total replacement but just an indicator of either the substitution of the names of some of the four categories suggested by Corder (1973) or addition to the prototypical categories. For instance, Keshavarz (2008) cited in Faisal (2013) replaced

selection with substitution and misordering with permutation. The Keshavarz (2008) taxonomy consists of four categories, namely, addition, omission, substitution, and permutation. EA taxonomy was suggested by Dulay, Burt and Krashen (1982) cited in Faisal (2013) which consists of omission, substitution or selection, and permutation or wrong ordering. In consideration of the historical development of the EA taxonomy suggested by Corder (1973), the framework used in the current study found it fit to integrate the revised categories in the analysis of data, such as, "substitution", and "permutation" in the analysis framework.

Statement of the Problem

The study was prompted by the curiosity to explore the common claims in numerous studies such as, Ghufron and Rosyida (2018), Fitria (2021), Khoshnevisan (2019), Fahmi and Cahyono (2021) that Grammarly is accurate in detecting grammatical errors. However, as a tool, it is bound to have deficiencies. As claimed by literature, Grammarly is perceived as an effective tool in error detection and correction hence the need to investigate its efficiency with the aim to establish areas of improvement.

Purpose of the Study

The purpose of the study was to evaluate Grammarly free version on error detection to advocate for its improvement. Previous studies have shown the need for further research on Grammarly in error detection. It has been shown by numerous studies reviewed by this study that Grammarly is an effective tool in error detection and correction. Its evaluation would contribute to improved writing strategies that can be used by learners.

Objective

The objective of the study was as follows.

1. To evaluate Grammarly's effectiveness in detecting grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition).

The research question and its sub - questions for the study are as follows.

Research Question

1. What are the grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition) that are detected by Grammarly?

The sub – questions for the research question are as follows.

Sub – Questions

1. What are the grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition) that are detected by Grammarly according to their classification into omission, addition, selection, and misordering?
2. What are the grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition) that are detected by Grammarly according to spelling, article, preposition, punctuation, word form, subject – verb agreement, pronoun, and number?

Literature Review

The previous studies that used Error Analysis as a framework and those that evaluated the effectiveness of Grammarly in error detection are reviewed in the current section.

Approaches to Error Correction

The importance of errors that are committed by learners is viewed differently in literature. Jabeen et al. (2015), view error analysis as an important tool in both foreign and second language learning. Errors should not be viewed from a prescriptive perspective, but rather as useful ways of learning a language by learners. Shehadeh and Gheichi (2011) concur that errors should not be viewed as indicators of failure to prevent nor eradication of deviation from correctness but as indicators of language learning and teaching. There are arguments in literature that errors are signs of language learning and teaching.

As rightly stated by Neziri (2017), error detection is a vital aspect of instructed writing. This is supported by Corder (1967) cited in Neziri (2017) that errors committed by learners show that learning is in progress. This implies that learners learn from their own errors. Therefore, the current study viewed the errors detected by Grammarly from both the descriptive and prescriptive perspectives.

Previous Studies that Used Error Analysis as a Framework

Several previous studies have used Error Analysis (EA) as a conceptual framework. Ojetunde (2013) conducted a study on the grammatical errors committed by Nigerian English teachers and learners. Out of 227 errors that were identified by Ojetunde (2013) study, 184 were grammatical and 43 were lexical each constituting 81.06% and 18.94% respectively. Omidipour (2014) also adopted Corder (1973) EA framework by subcategorizing the errors that were identified in written texts by adult learners of English into additions, omissions, misordering, and mis formation. The categorization of the errors by Ojetunde (2013) and Omidipour (2014) were used for insights into categorizing the errors that were detected using Grammarly and reading.

Another study that used EA as a framework was by Mohammed and Abdalhussein (2015) of which the findings showed that Iraqi students made errors that were categorized into prepositions, articles, tenses, verbs, morphological errors, and active and passive voice. Out of the total number of the identified errors, prepositions were the most dominant with 22.1%. In addition to other studies that used EA as a framework, Neziri (2017) conducted error analysis of present perfect and past simple tenses using 100 Essays that were written by 100 Albanian students. The results of Neziri (2017) study showed that the students commonly made present perfect and past simple tense errors in their writing. The most dominant errors were for past simple tense with 59% while present perfect tense was at 41%. The reviewed previous studies that used EA as a framework for analysis are relevant to the current study as they provided insights into the procedures that need to be followed to collect data, identify the errors, describe the errors, and conduct error analysis.

There are studies that argue that error – making is not a bad occurrence. Omidipour (2014) argues that errors made by learners should be viewed as positive aspects of language learning while Ojetunde (2013) views error as an instrument that can be used to understand the structure and meaning of a language. Errors can be used to learn a language as they may show the need for remedial intervention. This is supported by Omidipour (2014) that error analysis is an important phenomenon as it indicates the learners' writing difficulties and areas that are worthy

improvement. Therefore, it is worthwhile to undertake error analysis-based research to contribute to the insightful ways of using errors in language learning and teaching.

Previous Studies on the Evaluation of Grammarly in Error Detection and Correction

The findings across several previous studies on the evaluation of Grammarly in error detection are similar as they mainly consider Grammarly an effective tool in error correction. Tucker (2015) quoted in Fitria (2021), asserts that error correction assists the students to be aware of the errors and avoid them in their subsequent writing. Corrective feedback should be provided for the accuracy of using language to be possible.

Ghufron and Rosyida (2018) found that Grammarly is effective in detecting errors related to word choice, language use, vocabulary, spelling, spacing, and it provides suggestions for corrections. Daniels and Leslie (2013) cited in Ghufron and Rosyida (2018) suggest that Grammarly as confirmed effective tool should be used to teach writing. In addition, Qassemzadeh and Soleimani (2016) mentioned in Ghufron and Rosyida (2018), attest that Grammarly provides positive feedback and encourages self – directed learning. Learners can assess their own writing.

Fitria (2021) study found that Grammarly has a high detection on weak paraphrases that can be corrected with its suggested minor changes. This implies that Grammarly is so accurate that it can detect minor errors that even if they are not corrected, the meaning of the writing will not be affected. According to LornaMaire (2018) cited in Fitria (2021), Grammarly is rated as the best tool to use in checking grammar. This is supported by Khoshnevisan (2019) findings in which 90% of the students who participated in the study viewed Grammarly as an effective tool.

The current study did not follow the trend of asking students for their views on the use of Grammarly and its effectiveness in correcting errors, but instead used the well – established Corder (1973) prototypical Error Analysis framework in consideration with the changes that have been made to it by Dulay, Burt and Krashen (1982). Asking the users of Grammarly for their experiences in using it may be susceptible to prejudice. Furthermore, a sample of Essays published on BNCweb as a reputable corpus was used.

Analyses of errors that were found by some previous studies are provided below.

1) Omission: Omission error occurs when a required linguistic item is omitted in a sentence. This is exemplified by Mohammed and Abdalhussein (2015, p.289) as follows.

Examples

a) "* In other words, all conceptual notions are born out function and not vice versa."

b) In other words, all conceptual notions are born out of function and not vice versa.

In example a), the preposition "of" in "are born out of" was omitted. Example b) provides the corrected version of a).

2) Addition: This refers to the addition of unrequired grammatical item to a linguistic structure. The following examples are from Jabeen et al (2015, p. 56).

Examples

c) "* The sparrows is flying."

d) The sparrow is flying.

In example a), the addition of the morpheme "s" to the word "sparrow" is incorrect. The correct version of example c) is presented in example d).

3) Selection: Selection errors are also called substitution errors. A selection error occurs when there is a wrong choice of a linguistic item. Refer to Ojetunde's (2013, p. 257) examples below.

Examples

e) "* She lived there since eight years."

f) "She lived there for eight years."

The use of "since" in example e) makes it incorrect instead of "for" as it is the case in example f).

4) Misordering: Misordering errors are also called permutation errors. A misordering error occurs when the words in a sentence are wrongly arranged. The examples used below are from Omidipour (2014, p. 181).

Examples

g) "* I have a room blue."

h) I have a blue room.

The wrong word order in example g) contributes to a misordering error. The adjective "blue" should come before the noun "room".

Methodology

Research Approach

The study adopted a quantitative approach. The quantitative research approach is effective in discovering the statistical patterns (Park and Park, 2016). Using the quantitative approach, statistical patterns were established and analyzed. Refer to Table 1. According to Plooy (2009) the use of the quantitative approach is advantageous as the statistical results that are obtained can be tested through research. Research that uses the quantitative approach tends to be more objective than subjective.The use of the quantitative approach is associated with the quantitative approach (Cassell and Symon 1994 cited in Kohlbacher, 2006).

Research Design

The study used a case study design. Yin (2014) defines a case study as an investigation that explores an ongoing trend thoroughly and within its actual environment. The study used texts as sources of errors that were identified through Grammarly were quantified.

Data Collection Procedures

The study used English essays as sources of errors that were identified using Grammarly. The study used the free version of Grammarly because it is freely accessible and it is commonly viewed by studies, such as, Syafi'i (2020) as the best tool in detecting errors in writing.

The search term "language" was used to search for essays on language issues. Using the search word "language" and the selection of "Essay" as genre, the 9 Essays with a total of 204, 009 words were found, and a sub – corpus was formed.

The three procedures of conducting error analysis as suggested by Corder (1973) cited in Cocjin (2021) were followed. They are as follows.

1. "Collecting of data and samples"

Firstly, essay texts by university students were extracted from BNCweb (CQP – Edition).

2. "Identifying errors in the written texts"

Secondly, Grammarly was used to detect the errors.

3. "Describing the errors"

Thirdly, the detected errors were categorized and counted. The categorization of the errors was conducted using Corder (1973) categories, namely a) addition, b) omission, c) selection, and d) misordering.

The categorization of errors into different main grammatical aspects such as spelling, punctuation, capitalization, morphological errors, syntactic errors, articles, lexical errors, and subject – verb agreement was adopted from existing the previous studies, such as Saad and Sawalmeh; 2014; Omidipour, 2014; Dulay, Burt and Krashen's, 1982. The current study followed the same trend of categorizing errors into spelling, punctuation, articles, pronoun, word form, subject – verb agreement, and number.

Corpus Size

The source of data used in the study is BNCweb (CQP – Edition) which consists of over 100 million words (BNCweb CQP – Edition (2008). Leech (1992) argues that the available corpora stored in computers is useful in any research on language issues hence existing data was used to evaluate Grammarly. Furthermore, BNCweb has user – friendly tools that were used to access and process data.

Sampling Method

Systematic random sampling was used to select the texts for analysis. As compared to simple random sampling, it is advantageous in increasing accuracy in the selection of the units in the order in which they are arranged (Plooy, 2009).

Sample Size

A sample of nine (9) English Essays was used to form a sub – corpus that was assessed for errors. This is in line with one of Corder's (1973) procedures of error analysis that involves the collection of data. The English Essays were extracted from the BNCweb (CQP – Edition) as the first step of error analysis.

Data Analysis Methods

The Error Analysis framework suggested by Corder (1973) and its offspring frameworks suggested by Dulay, Burt and Krashen (1982), and Keshavarz (2008) cited in Faisal (2013) were used to analyze data. The errors were categorized into omission errors, selection errors, addition errors, and misordering errors. The errors were recorded manually using tally marks which were then converted into numbers and percentages.

In this paper, the asterisk (*) is used to indicate the incorrect linguistic item. Both the incorrect specific linguistic item and its correct version are underlined for easy identification. Studies from which the errors were adopted are also mentioned.

The results of the 9 English essays that were extracted from the BNCweb (CQP – Edition) were analyzed and discussed as follows.

Findings, Analysis and Discussions

The results were analyzed quantitatively. The identified grammatical errors were quantified using basic statistics. The trend of using basic statistics was set by related previous studies that have been reviewed in the current study, such as, Mohammed and Abdalhussein (2015), Omidipour (2014), Karya and Jayantini (2016), and Saad and Sawalmeh (2014). In their respective main categories (spelling, article, preposition, punctuation, word form, subject – verb agreement,

pronoun, and number) and sub – categories (omission, addition, selection, and misordering), errors were counted, and their numbers were captured using tally marks, numbers, and percentages. The findings were analyzed in terms of a) the main and sub - category of the identified error, b) the specific error(s), c) suggested error correction, and d) error analysis.

Table 1 was designed to capture the grammatical errors detected by Grammarly the statistical results for easy analysis.

Table 1: Overall distribution of grammatical errors detected by Grammarly

Main Category / **Sub - Category**	Omission	Addition	Selection	Misordering	Total
Spelling	4 10.5%	8 21.1%	11 28.9%	0 0%	23 60.5%
Article	5 (13.2%)	1 2.6%	0 0%	0 0%	6 15.8%
Preposition	0 (0%)	1 (2.6%)	0 (0%)	0 (0%)	1 (2.6%)
Punctuation	1 (2.6%)	2 (5.3%)	0 (0%)	0 (0%)	3 (7.9%)
Word Form	1 (2.6%)	0 (0%)	0 (0%)	0 (0%)	1 (2.6%)
Subject – verb Agreement	0 (0%)	0 (0%)	2 (5.3%)	0 (0%)	2 (5.3%)
Pronoun	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)	1 (2.6%)
Number	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)	1 (2.6%)
Total	**11 (29%)**	**12(32%)**	**15(39%)**	**0(0%)**	**38 (100%)**

Analysis

To answer the main research question and its respective sub – questions, the results are analyzed and discussed as follows.

Sub – Question 1: What are the grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition) that are detected by Grammarly according to their classification into omission, addition, selection, and misordering?

For sub – question 1, the detected errors were categorized using Corder's (1973) main categories of grammatical errors, namely, a) addition, b) omission, c) selection, and d) misordering. The results in Table 1 show that out of 38 (100%) errors that were detected by Grammarly, the most dominant were selection errors with 15 (39%) errors. Selection errors as it has been mentioned elsewhere in this paper occur where a linguistic item is wrongly substituted with another one. In the selection errors sub – category spelling errors are the most dominant constituting 28.9% of the 15 (39%), followed by subject – verb agreement errors with 2 (5.3%) and 1 pronoun error and 1 number error each constituting 2.6% of the selection errors that were detected by Grammarly in the sub – corpus. This means that Grammarly can detect spelling errors that could be classified as selection errors.

For instance, Grammarly was able to detect that in its respective context in Essay 4the word "everyday" should be spelt with space between "every" and "day". "Everyday" is an adjective whose function is to describe (e.g., a noun) which is not the case in the context of Essay 4. "Every day" spelt with space between "every" and "day" which is the most appropriate substitute in the context of Essay 4 is an adverbial which has the same meaning as "daily". This shows that Grammarly can detect selection related spelling errors. The results are in line with the findings of Ghufron and Rosyida (2018) study that showed that Grammarly has high detection to spelling errors.

The second most dominant errors that were detected by Grammarly were in the addition errors sub – category with 12 (32%) of 38 (100%) as the total number of errors in the sub – corpus. As it was the case with the selection errors sub - category, spelling errors were the most dominant errors with 8 (21.1%), followed by punctuation errors with 2 (5.3%) and 1 article error and 1

preposition error each contributing 2.6% of the 12 (32%) as the total number of addition errors that were detected by Grammarly.

One of the spelling errors that fall under the addition errors sub – category involved the word "unveil" which was detected by Grammarly as an unknown word. As an unknown word in the English vocabulary because of its spelling, the use of the word "unveil" in the context of Essay 5 was considered as an addition error. The error emanated from the addition of the prefix "un" to "veil". The deletion of the prefix "un" from "veil'' would make the spelling for "evil" correct. Another example is that of a punctuation error that involved the addition of a comma before a dependent clause marker "until" (e.g., "**,** until…") which marks the beginning of a dependent clause in Essay 5. The comma was wrongly added before the dependent clause marker so it should be removed. A comma can only come before conjunctions, such as, "**,** or" and "**,** and" when they appear between independent clauses.

The third most dominant errors that were detected by Grammarly belonged to the omission errors sub – category with 11 errors at 29% of a total of 38 (100%) errors. An example of an omission error that was detected by Grammarly was a missing article "the" in the noun phrase "the music". The missing article should function as a determiner hence Grammarly suggests that the article be added.

As compared to the selection errors and addition errors sub – categories where spelling errors are the most dominant with 28.9% and 21.1%) respectively, in the omission errors sub – category, spelling errors are the second most dominant with 10.5%. In the omission errors sub – category, missing articles errors are in the lead with 13.2%. Punctuation and word choice errors are at 2.6% each.

Sub – Question 2: What are the grammatical errors in English Essays from the British National Corpus (BNCweb CQP – Edition) that are detected by Grammarly according to spelling, article, preposition, punctuation, word form, subject – verb agreement, pronoun, and number?

For sub – question 2 analysis, the detected errors were analyzed in their respective specific grammatical categories. The errors that were detected by Grammarly were categorized into

spelling, article, preposition, punctuation, word form, subject – verb agreement, pronoun, and number.

Out of a total of 23 (60.5%) spelling errors that were found, the most dominant were selection errors with 11 (28.9%). Some examples of spelling errors that were detected by Grammarly are analyzed as follows:

a) The word "brought - up" which should be spelt without a hyphen to appear as "brought up" seem to be misspelled.

b) The noun "ambitions" is not appropriate in the context of Essay 4. The adjective form of the noun "ambitions which should be spelt as "ambitious" is the most appropriate in the context of Essay 4.

The second most dominant spelling errors which were classified as addition errors were at 8 (21.1%) of a total of 23 (60.5%) errors. An example of such spelling errors is given below.

a) "to – day" is a spelling error which could be classified as an addition error. The addition of an unnecessary hyphen in the word "to – day" resulted in its misspelling. The hyphen should be removed to obtain the right spelling "today"

Spelling errors that follow under the omission error sub – category was the least detected. Only 4 errors that contributed 10.5 % to a total of 23 (60.5%) were detected. The examples are as follows.

a) Grammarly detected an omitted hyphen in the word "deep rooted" in Essay 9. A hyphen should be added between "deep" and "rooted" to obtain the correct spelling "deep-rooted".

b) The word "wall mounted" in Essay 4 should be spelt with a hyphen to be "wall-mounted". The missing hyphen in the word "wall mounted" should be added.

There were 6 (15.8%) article errors in total that were detected by Grammarly. Out of the 6 article errors, 5 (13.2%) were omission errors while only 1 (2.6%) was an addition error. Refer to the examples below.

a) An omission error of a missing article that should come before the noun phrase "very sore throat" was detected in Essay 5. As suggested by Grammarly, the correct construction should be "a very sore throat".

b) Grammarly detected the wrong usage of the article "the" that precedes the noun phrase "stimuli".

There were 3 (7.9%) punctuation errors that were detected by Grammarly. Out of the 3 (7.9%), 2 (5.3%) were addition errors while 1 (2.6%) was an omission error. Refer to the examples below.

a) Grammarly detected a punctuation error in Essay 8. The error emanated from the addition of a comma between the verb "develop" and "change" which are joined by a coordinating conjunction "and" refer to the same subject "some of his characters" should not be separated by comma as per the Grammarly report.

b) There is a missing comma after the phrase "in the couplet" Essay 3.

There were 2 (5.3%) subject - verb agreement errors under the selection sub – category that were detected by Grammarly. They are as follows.

a) In Essay 2 a subject – verb agreement error was detected. The use of the singular verb "is" is incorrect because the plural subject "vocabulary and language" should be followed by the plural verb "are".

b) For preposition, word form, pronoun and number, there was 1 (2.6%) error for each that was detected by Grammarly.

Discussions

With the attempt to answer sub-question 1 of the main research question, the grammatical errors were classified in terms of omission, addition, selection, and mis ordering. The results show that Grammarly was able to predominantly detect selection errors. However, the corpus size of 9 Essays may have contributed to the low detection of word form errors. Furthermore, the predominance of the errors may have emanated from the lack of English language proficiency by the learners, not the strength of Grammarly in detecting grammatical errors. There were no

misordering errors that were detected by Grammarly. Possibly, the sampled essays did not have the misordering errors; hence Grammarly could not detect them.

For sub – question 2 of the main research question, the grammatical errors were classified in terms of specific grammatical categories, such as, spelling, article, punctuation, subject – verb agreement, preposition, word form, pronoun, and number. Out of all the errors that were detected by Grammarly, spelling errors were the most dominant followed by article errors, punctuation errors, subject – verb agreement, preposition errors, word form errors, pronoun errors, and number errors. Seemingly, spelling errors are some of the dominant errors in other studies in which Grammarly was used to detect errors. Nonetheless, this is not conclusive as there could be other contributing factors, such as the features of Grammarly free version as a tool. The features may be enabling it to detect more of spelling errors than any other errors.

Contrary to Ojetunde's (2013) findings in which lexical errors were one of the dominant errors, in the current study, Grammarly was able to detect very few words form errors. As stated elsewhere in this section, it could be the corpus size of nine Essays that may have contributed to the low detection of word form errors.

Mohammed and Abdalhussein (2015) findings showed that Iraqi students committed prepositions and articles errors. The results are in line with the findings for the current study because Grammarly was able to detect article errors and preposition errors. As expected, this is an instance where some of the findings of the previous study could coincide to show the validity and generalisability of the findings of the current study.

Without limiting the possible shortcomings of Grammarly in detecting grammatical errors, the results show that Grammarly is effective in detecting selection errors, followed by addition errors, and omission errors. There were no misordering errors that were detected by Grammarly.

Implications of the Findings

Firstly, it has been shown by the findings of the study that Grammarly is effective in detecting errors based on Corder's (1973) categories of errors such as omission, addition, selection, and misordering. Secondly, there are implications that Grammarly is effective in detecting errors based on grammatical categories, such as spelling, article, preposition, punctuation, word form,

subject – verb agreement, pronoun, and number. The findings have shown that Grammarly is effective in detecting errors in written texts. If it is to be used by learners in detecting and correcting errors that might contribute to learners' diverse strategies of acquiring the target language and producing error free written texts. Dulay, Burt, and Krashen (1982) cited in Mohammed and Abdalhussein (2015) argue that the learners' errors indicate the strategies that are used by learners to acquire the target language. Learners may use error making as a strategy for learning the target language. However, this does not dispute the likelihood of it not being ineffective in detecting other types of grammatical errors that have been mentioned in the current study. As the findings for the current study may not be beyond question, further research needs to be carried out to evaluate the effectiveness of Grammarly in detecting errors, so as to encourage its improvement.

Although, these are not part of the analysis for the study, the interesting findings show that Grammarly has un-coded error feature for some phrasing forms. For instance, it does not accept "advice on safety" but suggest "safety advice." This reflects on Khoshnevisan (2019) findings that Grammarly has low detection on errors at sentence level. There is evidence that Grammarly has low detection on coherence in a case where transitional words are not used logically to connect the ideas. For instance, the sentence "Firstly, one comes to notice the title, …" is followed by sentences that introduce additional ideas and the sentences do not start with the linking words, such as "secondly", and "thirdly" as expected. This result is similar to Ghufron and Rosyida (2018) findings that show that Grammarly has low detection on lack of coherence which could be easily dealt with through the teacher corrective feedback. Some Grammarly suggestions express uncertainty and create room for accepting spelling and word formation that may disturb communication. For instance, the word "unveil" is appropriately marked as misspelled by Grammarly, but there is a suggestion that if the author wants to use it in the future and be accepted as correct, it must be put in a personal dictionary. This is a misleading suggestion which was also found by Nova (2018). Some of the Grammarly suggestions are misleading. All these striking findings imply, to a certain extent, that Grammarly is not always effective in detecting grammatical errors.

Recommendations

As shown by the findings of the current study, Grammarly is effective in detecting errors in writing. For this reason, it is befitting to recommend it as a tool that should be used to ensure error free writing. In the context of teaching and learning, teachers should consider using Grammarly to detect errors in learners' writings as this would inform their pedagogical practices of diagnosing grammar related challenges that are encountered by learners. As for learners, it is worthwhile to use Grammarly not only to edit the written texts but also to enhance effective independent self-learning of writing as a skill. Some of the errors that Grammarly can detect might not be identified by a human teacher. Therefore, it is a tool that should be used to make up for possible human error in producing error free written texts.

Limitations

Just like any other study, the study may be characteristic of some deficiencies. A corpus size of 9 Essays may have provided insufficient results about the detection of errors by Grammarly. This may have affected the generalizability, and reliability of the results. Some errors may have been wrongly classified due to human error by the researcher. As a tool, Grammarly may have some deficiencies in detecting some errors. As rightly stated in Barchard and Pace (2011) human error can have severe impact on statistical results. There were no misordering errors that were detected by Grammarly in the 9 Essays. This could have been due to lack of a feature in Grammarly that could enable it to detect misordering errors. All these shortcomings may work against the recommendation that Grammarly should be used to ensure error free writing. In the context of teaching and learning, teachers and learners may find themselves using the wrong tool.

Despite Grammarly's praise in detecting errors by several studies, some findings have shown that it has weaknesses (Ghufron and Rosyida (2018; Nova, 2018; Fahmi and Cahyono, 2021). The current study fell short in including the analysis of the weaknesses of Grammarly at a broader level to strike the balance between its effectiveness and ineffectiveness. Therefore, more evaluative research on the use of tools like Grammarly should be carried out.

Conclusions

In conclusion, the sub – question 1 results for show that Grammarly could also detect selection errors, addition errors, and omission errors. The most dominant errors were selection errors. For sub – question 2, the results imply that Grammarly free version in terms of grammatical categories, is effective in detecting spelling errors, article errors, punctuation errors, subject – verb agreement preposition errors, word form errors, pronoun errors, and number errors. There is statistical evidence that Grammarly is effective in detecting errors in their respective categories. Therefore, this study suggests that extensive research be conducted to explore the other errors that could be detected by Grammarly. As has been shown by literature reviewed in this paper, studying errors contributes to effective ways of learning and teaching language. Learners may learn from their errors.

References

Barchard, K.A., & Pace, L.A. (2011). Preventing human error: The impact of data entry methods on data accuracy and statistical results. *Computers in Human Behavior, 27*(5), pp.1834-1839.

Brown, J.D., & Bailey, K.M. (1984). A categorical instrument for scoring Second Language writing skills. *Language Learning, 34* (4), pp.21-38.

Barrot, J.S. (2021). Using Automated Written Corrective Feedback in the writing classrooms: Effects on L2 writing accuracy. *Computer Assisted Language Learning*, pp.1-24.

BNCweb (CQP – Edition). (2008). *A web – based interface to the British National Corpus* (BNC). http://bncweb.lancs.ac.uk/bncwebSignup/user/login.php.

Cocjin, A.L. (2021). Error analysis in the written texts of pre – service teachers. *Asian Journal of Research in Education and Social Sciences*, *3*(4), pp.17-27.

Corder, S. P. (1981). *Error analysis and inter-language*. Oxford University Press.

Corder, S.P. (1967). The significance of learners' errors. In J.C. Richards (Ed.), *Error Analysis: Perspectives on Second Language Acquisition* (pp. 19 – 27). Longman.

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

El-Farahaty, H. (2017). A grammatical error analysis of final year students' Arabic writing. *The Language Scholar Journal*, *1*, pp.1-29.

Ellis, R., & Shintani, N. (2014). *Exploring language pedagogy through Second Language Acquisition research*. Routledge.

Evans, N.W., Hartshorn, K.J., Cox, T.L., & de Jel, T.M. (2014). Measuring written linguistic accuracy with Weighted Clause Ratios: A question of validity. *Journal of Second Language Writing*, *24*, pp.33-50.

Fahmi, M.A., & Cahyono, B.Y. (2021). EFL students' perception on the use of Grammarly and teacher feedback. *JEES (Journal of English Educators Society)*, *6* (1), pp.18-25.

Fitria, T.N. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, *5* (1), pp.65-78.

Foster, P., & Wigglesworth, G. (2016). Capturing accuracy in second language performance: The case for a Weighted Clause Ratio. *Annual Review of Applied Linguistics*, *36*, pp.98-116.

Ghufron, M. A., & Rosyida, F. (2018). The role of Grammarly in assessing English as a Foreign Language (EFL) writing. *Lingua Cultura*, *12*(4), pp. 395-403.

Grammarly. (2023). *Grammarly: Checks the spelling and grammar in the user's texts*. Retrieved from https://grammarly.freedownloadscenter.com/windows/.

Hoang, T.L.G. (2019). *Examining Automated Corrective Feedback in EFL writing classrooms: A case study of criterion*. [Doctoral dissertation, University of Melbourne].

Jabeen, A., Kazemian, B., & Shahbaz, M. (2015). The role of error analysis in teaching and learning of second and foreign language. *Education and Linguistics Research*, *1*(2), pp.52-62.

Karya, I.W.S., & Jayantini, I.G.A.S.R. (2016). Error analysis in the context of foreign language learning for language learner empowerment. *Prosiding Semnas Hasil Penelitian*. pp. 221 – 236.

Khoshnevisan, B. (2019). The affordances and constraints of Automatic Writing Evaluation (AWE) tools: A case for Grammarly. *ARTESOL EFL Journal*, *2*(2), pp.12-25.

Kohlbacher, F. (2006). The use of qualitative content analysis in case study research: In *Forum Qualitative Sozialforschung: Qualitative Social Research* 7(1), pp. 1-30. Institutfür Qualitative Forschung.

Koltovskaia, S. (2020). Student engagement with Automated Written Corrective Feedback (AWCF) provided by Grammarly: A multiple case study. *Assessing Writing*, *44*, p. 100450.

Leech, G.N. (1992). 100 million words of English: The British National Corpus (BNC). https://scholar.google.com.

Mohammed, M.S., & Abdalhussein, H.F. (2015). Grammatical error analysis of Iraqi postgraduate students' academic writing: The case of Iraqi students in UKM. *International Journal of Education and Research*, *3*(6), pp.283-294.

Neziri, S. (2017). Analysis of errors made by intermediate EFL students in the use of past simple and present perfect. *Knowledge -International Journal*, *20*(6), pp.2581-2585.

Nova, M. (2018). Utilizing Grammarly in evaluating academic writing: A narrative research on EFL students' experience. *Premise: Journal of English Education and Applied Linguistics*, *7*(1), pp.80-97.

Ojetunde, C.F. (2013). Lexico-grammatical errors in Nigerian English: Implications for Nigerian teachers and learners of English. *European Scientific Journal*, *9*(17), pp. 252 – 268.

Omidipour, M. (2014). An analysis of errors in writing among adult Persian learners of English. *International Journal of Language Learning and Applied Linguistics World*, *5*(3), pp.176-187.

ONeill, R., & Russell, A. (2019). Stop! grammar time: University students' perceptions of the Automated Feedback program Grammarly. *Australasian Journal of Educational Technology*, *35* (1).

Park, J., & Park, M. (2016). Qualitative versus quantitative research methods: Discovery or justification? *Journal of Marketing Thought*, *3(1)*, pp.1 – 8.

Plooy, G. M. (2009). *Communication research: Techniques, methods and applications* 2nd edition. Juta & Co, Ltd.

Saad, M.A.H., Sawalmeh, M.H.M., & UniKl, B.M.I. (2014). Error analysis in role – play presentations among less proficient L2 Malaysian learners. *International Journal of English and Education, 3(3),* pp. 346 – 355.

Setiyorini, T.J., Dewi, P., & Masykuri, E.S. (2020). The grammatical error analysis found in students' composition. *Lensa: Kajian Kebahasaan, Kesusastraan, Dan Budaya*, *10*(2), pp. 218-233.

Shekhzadeh, E., & Gheichi, M. (2011). An account of sources of errors in language learners' interlanguage. In *International Conference on Languages, Literature and Linguistics IPEDR*, 26, pp. 159-162.

Silverman, D. (2020). *Interpreting qualitative data.* SAGE Publications Ltd.

Syafi'i, A. (2020). Grammarly: An online EFL writing companion. *ELTICS: Journal of English Language Teaching and English Linguistics*, *5* (2).

Yin, R. K. (2014). *Case study research: Design and methods*. 5th edition. SAGE Publications Ltd.