

Utilizing Automated Written Communicative Feedback in the Language Learning Context: An Analysis of the Grammarly Results of ESL Researchers' Conference Abstracts

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ABSTRACT

The Grammarly Software is one of the grammar checkers that provide automated written communicative feedback in terms of grammar, vocabulary, mechanics, and language style. The study determined the effectiveness of Grammarly as an automated written communicative feedback in terms of grammar by analyzing the conference abstracts of ESL researchers. Utilizing the qualitative research design involving content analysis, the study analyzed the individual Grammarly reports of 21 conference abstracts submitted in an international conference written by ESL researchers. Results revealed that passive voice misuse, determiner use, word choice, unclear sentences, punctuations in compound sentences, wordy sentences, comma misuse, wrong/missing prepositions, intricate text, incorrect noun number, and misspelled words were the most common types of writing issues identified by the Grammarly software. Most of the writing issues overlooked by the

Grammarly Software were capitalization, incorrect verb form, improper formatting, and closing punctuations. Looking into the inappropriate replacement forms, most of these inappropriate replacement forms were due to the software's limitations in terms of local and specialized terms, as well as an understanding of the context and nature of each of the individual conference abstracts. Despite the software's inherent limitations and issues in accuracy, the Grammarly Software provides effective automated written communicative feedback to ESL researchers.

INTRODUCTION

The research abstract is a concise, summative information of a larger body of information, permitting a quick survey of the work (Lindquist, 1993; American Psychological Association, 2019). The abstract plays an important role in summarizing research as it allows research evaluation prior to oral presentations in research conferences as well as for research fund grant applications (Buckwater & Wright, 1998; McNamara, et al., 2001).

With most of the international journals and international conferences requiring parts of the paper or full article to be written in English, it is a prerogative of English as Second Language (ESL) and English as Foreign Language (EFL) researchers to pay attention to how they write their academic paper. Empirical data shows the critical role that grammar plays in the overall writing development (Bailey, & Lee, 2020; Guo & Barrot, 2019). With technological advancements and software development, several digital tools that provide computer-mediated corrective feedback have emerged in achieving better language proficiency (Barrot, 2020; Nova, 2018). One such technology is Grammarly (<https://www.grammarly.com/>); a grammar checker (GC) tool that identifies errors in grammar, vocabulary, mechanics, language style, and plagiarism issues.

Across disciplines, most studies regarding research and conferences abstracts were focused on genre analysis (Djuwari, 2018; Kosasih, 2018); accuracy (Ward et al., 2003); bias and limitations (Callaham et al., 1998), and structure and guidelines compliance (McManamara et al., 2001), among others. There is a dearth of literature on published studies focusing only on the grammar and use of automated written communicative feedback from online grammar checkers (GC) such as Grammarly in research abstracts.

Based on the said gap in the literature, the researcher considers the feasibility of using automated written communicative feedback from

grammar checkers such as Grammarly to promote English language accuracy and proficiency in terms of scientific writing for ESL researchers. To the extent that GCs generate accurate and comprehensive corrective feedback, particularly on L2 writing, they can relieve editors, reviewers, and referees of part of the feedback burden and, at the same time, promote autonomy on the part of the ESL researchers. Since grammar and language proficiency is one important aspect in the acceptance of research abstracts in research conferences and proceedings, this study will help ESL researchers increase their chances their acceptance for presentations to conferences and proceedings.

OBJECTIVES OF THE STUDY

The study determined the feasibility and effectiveness of Grammarly as an automated written communicative feedback in terms of grammar by analyzing the conference abstracts of ESL researchers.

Specifically, it aimed to:

1. determine the typology of the most common writing issues identified by the Grammarly Software;
2. determine the degree of coverage of issues identified and issues overlooked by Grammarly; and
3. determine the appropriateness of Grammarly's proposed replacement forms;

METHODOLOGY

RESEARCH DESIGN AND METHOD

The study utilized the qualitative research design involving content analysis of individual Grammarly reports of 21 conference abstracts submitted in an international conference organized by a Philippine-based research professional organization. Only Grammarly reports from abstract submissions from ESL (English as Second Language) researchers were considered for the study.

DATA GATHERING AND ANALYSIS

For the typology of the issues identified by Grammarly, the researcher tallied the results of the identified writing issues as reflected by the individual

Grammarly reports. For the determination of the degree of coverage issues versus the issues overlooked and the appropriateness of Grammarly's proposed replacement forms, the researcher compared the 21 individual Grammarly reports with his analysis of the 4083-word corpus built from the 21 conference abstracts. The results of the analysis were validated by a panel of language and qualitative research experts to rid the paper of bias and establish reliability in the analysis.

RESULTS AND DISCUSSION

Table 1. Typology of most common writing issues in the conference research abstracts as identified by the Grammarly software

Grammar Issues as Identified by Grammarly	Frequency (f)	Percentage (%)
Passive Voice Misuse	43	14.38
Determiner use	37	12.37
Word choice	34	11.37
Unclear sentences	29	9.70
Punctuations in compound/complex sentences	25	8.36
Wordy sentences	21	7.02
Comma misuse	15	5.02
Wrong/missing prepositions	15	5.02
Intricate Text	13	4.35
Incorrect noun number	9	3.01
Mispelled words	8	2.68
Other writing issues*	50	16.72
TOTAL	299	100.00

*Other issues include: faulty subject-verb agreement, misuse of punctuation, improper formatting, confused words, text inconsistencies, improper formatting, closing punctuation, misplaced words/phrases, incorrect verb forms, pronoun use, incomplete sentences, unknown words, hard to read text, inappropriate colloquialisms, and potentially sensitive language.

The most common writing issues of the Conference abstracts of ESL researchers identified by the Grammarly software were passive voice misuse, determiner use, word choice, unclear sentences, punctuations in compound sentences, wordy sentences, comma misuse, wrong/missing prepositions,

intricate text, incorrect noun number, and misspelled words which makes up more than 80% of all the writing issues flagged by the Grammarly Software.

The results of the , which saw the passive voice misuse as the most common writing issue of the conference abstracts of ESL researchers is supported by the statement of Stratton (1984) in which he claimed that the most common and most serious weakness in the writing of technical and scientific papers is the excessive and unwarranted use of passive clauses. This is also supported by empirical data that show that the passive voice is a regular feature in scientific articles, even in high-impact journals (Amdur et al., 2010; Millar et al., 2013; Ping, 2014).

The prevalent writing issues as identified by the Grammarly Software are also supported by the studies on the determiner use in EST research articles (Master, 1993); word choice in scientific writing (O'Connor et al., 2017); clarity in scientific presentation (Marušić et al., 2002); punctuation mark errors in scientific writing (Salman et al., 2017) which look into these issues writing issues and how these issues are pervasive in academic and scientific writing.

Table 2. Degree of issues identified and issues overlooked by the Grammarly Software in the conference research abstracts (Researcher coded)

Coded Abstract	Number of Issues Identified by Grammarly	Number of Issues Overlooked by Grammarly	Typology of Writing Issues overlooked by Grammarly Software
ABSTR-01	15	3	Capitalization (1); punctuations in compound/complex sentences (1); incorrect verb forms (1)
ABSTR-02	27	1	Faulty-subject verb agreement
ABSTR-03	12	0	
ABSTR-04	14	4	Capitalization (3); Determiner Use (1)
ABSTR-05	6	0	
ABSTR-06	20	3	Capitalization (3)
ABSTR-07	22	0	
ABSTR-08	12	0	
ABSTR-09	29	4	Incorrect verb form (1); improper formatting (3)
ABSTR-10	17	1	Incorrect verb form (1)

Coded Abstract	Number of Issues Identified by Grammarly	Number of Issues Overlooked by Grammarly	Typology of Writing Issues overlooked by Grammarly Software
ABSTR-11	13	1	Capitalization (1)
ABSTR-12	16	2	Word choice (1); misspelled words (1)
ABSTR-13	14	1	Incorrect verb form (1)
ABSTR-14	17	0	
ABSTR-15	5	2	Word choice (1); parallelism (1)
ABSTR-16	3	1	Incomplete sentence (1)
ABSTR-17	5	2	Wrong preposition (1); determiner use (1)
ABSTR-18	18	0	
ABSTR-19	18	3	Incorrect noun numbers (1); capitalization (1); closing punctuation (1)
ABSTR-20	16	0	
ABSTR-21	6	2	Closing punctuation (2)

As coded by the researcher, 14 of the 21 conference abstracts of the ESL researchers subjected to the Grammarly Software has writing issues that were overlooked by the software in the actual testing of the specimen. Upon closer examination across all the coded abstracts, most of these issues overlooked by the Grammarly Software were: capitalization (9); incorrect verb form (4); improper formatting (3); and closing punctuations (3), among others.

Issues on capitalization that were overlooked by the Grammarly Software centered on capitalization of some initial letters in phrases evidenced by coded abstracts ABSTR-01 (*The **Acceptability of the Developed Science Podcast** for Grade 10 learners...*) as well as the capitalization of improper nouns as seen in ABSTR-06 (*...for every service offered by the different **Higher Education Institution.***).

Most of the issues that involved incorrect verb forms, as identified by the researcher, involved verb tenses, as in the case of ABSTR-10 (*...which **has lead** to sustainability issues in transportation and infrastructure*) and ABSTR-13 (*The learning modalities **shift** from traditional to flexible and online learning...*).

Moreover, all the three issues in improper formatting were found in ABSTR-09 in terms of the writing of the ordinal forms (... classroom tested on the 2nd floor were way below the minimum...; The 2nd and 3rd floor ranges from 31.2 to 32.3 °C).

On the other hand, issues identified by the researcher in closing punctuations were reflected in ABSTR-19 (...and, majority of the memoranda are clear and precise and enlightening to the recipients, regardless of its forms and structures, the message showed clarity.) and ABSTR-21 (Qualitative-phenomenological method was used to investigate the significant experience of the aforementioned participants, With the insights...) both of the sentences reflected a comma instead of a period punctuation to indicate the end of a sentence.

In terms of Grammarly's overall accuracy in identifying writing issues, studies and reviews have suggested that user knowledge and confidence are still required for applying feedback through the software (Pace, 2010; Dembsey, 2017). The study of O'Neill and Russell (2019) also highlighted this concern as the respondents noted that the software missed errors and that some suggestions were at times difficult to understand. Thus, though the use of the Grammarly Software as an automated written communicative feedback to minimize writing errors and issues and improve the writing ability by providing direct and indirect assessment to ESL researchers, the said software should not be the sole quality indicator in terms of grammar and writing issues. The Grammarly software should only act as a complimentary quality assurance measure and should not be utilized to completely replace manual proofreading.

Table 3. Frequency and percentage of appropriate and inappropriate replacement forms made by the Grammarly Software (Researcher coded)

	Frequency (f)	Percentage (%)
Appropriate Replacement Forms	169	81.64
Inappropriate Replacement Forms	38	18.36
TOTAL	207	100.00

Of the 299 issues identified by the Grammarly Software and reflected in the individual Grammarly reports in the 21 conference abstracts of ESL researchers (Table 1), only 207 of which have replacement forms as identified

by the researcher. Replacement forms, in the context of this study, can be defined as the suggestion/s made by the Grammarly Software as a more suitable replacement to the writing issue/s flagged by the Grammarly Software. Figure 1 depicts a sample of the replacement form as it appears in the Grammarly report.

denote → indicate	Word choice	Engagement
proof useful → valuable proof, helpful proof	Word choice	Engagement
denotee → means, indicates, implies, suggests	Word choice	Engagement

Figure 1. Sample of Replacement Forms in a Grammarly Report

As coded by the researcher, 169 of the 207 (81.64%) identified writing issues with replacement forms that were provided by appropriate replacements, as reflected in the Grammarly Report. On the other hand, 38 of the 207 (18.36%) were considered to be inappropriate replacement forms.

To give an idea of the nature of inappropriate replacement forms, the Grammarly proposed the words “right,” “correct,” “accurate,” and “proper” as possible corrections for the word “true” in the phrase “true experimental design (The descriptive-correlational method and **true experimental** method using pre-test post test control group design were employed) in ABSTR-01.” In research, the term true experiment is used to describe all studies with at least one independent variable that is experimentally manipulated and with at least one dependent or outcome variable (Salkind, 2010).

Another inappropriate replacement form is found in ABSTR-20 where the word “spaces” in safe spaces was flagged as a writing issue with suggestions to replace “spaces” with the word “areas.” In the context of the study, safe spaces mean places created for marginalized individuals to come together and communicate regarding their experiences with marginalization (Amenabar, 2016), as the conference abstract is about the exploration of safe spaces created by Filipino LGBTQ+ employees. Though the word “spaces” and “areas” have a degree of similarities in terms of its lexical meaning, in the socio-cultural context, the terms “safe areas” and “safe spaces” do not derive from the same interpretation.

The software also flagged the use of local terminologies not in English as a writing issue and suggested replacement forms. In the case of ABSTR-18, some local terminologies referring to fishing practices were identified as misspelled words. The software suggested replacement forms “ladled, ladle” and “Ragnarok” for the localized terms “*ladlad*” and “*pagsarok*,” respectively.

Looking into the inappropriate replacements forms as determined by the researcher, most of these inappropriate replacement forms were due to the software’s limitations in terms of local and specialized terms as well as understanding the context and nature of each of the individual conference abstracts. While the suggested replacement forms were grammatically correct, they are inappropriate considering the context. The findings of the study is supported by the study of Nova (2017) which revealed that one inherent weakness of the Grammarly Software was the program’s lack of context as well weakness in content evaluation in evaluating the academic writing of EFL students.

CONCLUSIONS

The findings of the study revealed that despite its inherent limitations and issues in accuracy, the Grammarly Software provides an effective automated written communicative feedback to ESL researchers. The software can be utilized to target particular writing issues in academic and scientific writing of ESL researchers, focusing on the grammatical categories in which the system provides the strongest, most accurate feedback.

As the Grammarly Software can be limited in coverage with limitations in accuracy as well as appropriacy of replacements forms as shown in the study, the said automated written communicative feedback should not entirely replace human feedback but should only be a complimentary quality indicator to manual proofreading. Nonetheless, the Grammarly Software constitute as an efficient reference and tool for ESL researchers in their academic and scientific writing.

As this study is limited to the Grammarly Software as automated written communicative feedback, there is a need for more research about the effectiveness and accuracy of other grammar checkers in identifying writing issues as well as comparative studies between and among these grammar checkers. Moreover, since this study only analyzed a limited corpus and the

restrictions imposed on the data, a larger corpus and/or bigger sample is recommended for further study.

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Gunning Fog Index:	12.49
Flesch Reading Ease:	39.36
Grammar Checking:	91/100
Plagiarism:	0%