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Investigating EFL students' linguistic problems using *Grammarly* as automated writing evaluation feedback

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ABSTRACT

A plethora of previous studies has shown that corrective feedback can benefit students to progress in their learning. Due to technological advancement, there is a need to investigate the profile of corrective feedback to students' writing via automated writing evaluation (AWE), particularly in the Indonesian higher education context. Therefore, this research aims to employ an AWE platform, Grammarly, to investigate the Indonesian English as a foreign language (EFL) students' writing profiles in spelling, grammar, punctuation, enhancement suggestion, sentence structure, and style check. This ex post facto study explored the assignment written by 54 fourth-semester English department students enrolled in an academic writing course at an Indonesian university. The students' writing profiles were classified, identified, and categorized using the Grammarly platform. Descriptive statistics were used to obtain the average, standard deviation, and significant differences according to the writing profiles between male and female students. The result stated that grammar is the major problem possessed by students. Furthermore, teachers are expected to provide online corrective feedback for students in the Academic Writing course learning process.

Keywords: Automated writing evaluation; corrective feedback; EFL; Grammarly; writing profile

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INTRODUCTION

Acquainting oneself with unfamiliar higher education academic writing processes is crucial to first-year student success (French, 2018). Despite the importance of academic writing to students, Yorke and Longton (2007) emphasized that a sudden shift toward unfamiliar undergraduate subjects is common. For students who struggle to present their subject-specific understanding, academic writing activities might help them connect the dots (French, 2018). In the first year, many students struggle and often fail to finish projects owing to "weak writing skills." It seems to happen to students who are admitted to all fields, including the English department students. Grammar (sentence structure), clarity (of each sentence), and consistency (of each sentence) are all areas where teachers may help children who struggle with writing. Thus, one of the most challenging tasks for English as a Foreign Language (EFL) writers is linguistic accuracy (Xie, 2019).

To evaluate the students' linguistic accuracy in essays, university lecturers frequently provide written corrective feedback (WCF) to both disciplinary knowledge and the linguistic, rhetorical, and conventional aspects of writing (Jabulani,

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2015). Feedback has long been recognized as a powerful tool for promoting and consolidating learning (Luft, 2014; Zhang & Hyland, 2018). Feedback is information an agent provides, such as a teacher, peer, parent, or computer, about one's performance or comprehension (Hattie & Timperley, 2007). In the context of writing instruction, feedback for students typically includes their positions concerning a desired level of writing, writing skills that need to be improved, and information on additional practice requirements for each student's internalization of such feedback (Wilson & Czik, 2016). Feedback is critical for improving students' writing knowledge, skills, strategies, and motivation (Graham et al., 2015). However, students cannot fully benefit from teacher feedback since teachers usually deliver mistake codes without providing context (Muchemwa et al., 2019). As a result, students have few opportunities to receive feedback on their written work.

To provide students with fruitful feedback, the implementation of automated writing evaluation can be an alternative. The lecturers can integrate technology in EFL classrooms to give evaluative feedback in the writing process. Some studies have shown that numerous instruction techniques have been used, including teachers' corrective feedback and automatic feedback from computer devices (Godwin, 2016; Qassemzadeh & Soleimani, 2016). Using the Internet in the teaching and learning process can encourage students to become independent learners and enable teachers to act as facilitators in the learning process. Teachers can find several automatic feedback programs to assist them in teaching and learning in this digital age, such as wiki, Facebook, MS Word computer software, Grammar software, and Feedback Fruits among others (Yunus et al., 2012).

Grammarly, as one of the most popular automated feedback tools in Indonesia (Ambarwati, 2021), can be used to assist students and teachers in proofreading EFL writing. It is one of the automated feedback evaluations used in an EFL writing class to identify grammatical errors in documents, correct spelling, punctuation, choice of words, and detect plagiarism (Schraudner, 2014). It not only detects punctuation and spelling errors but also corrects nouns and offers several alternatives for misspelled words, identifies fragments, and provides verb forms. Tools and platforms for grammar checkers, such as Grammarly, can help teachers and students become better writers and new research sites (Bloch, 2008; Qassemzadeh & Soleimani, 2016; Ware & Warschauer, 2006). Student errors are identified, and alternative suggestions are provided. The term automatic feedback grammar is a term used in various forms of teaching writing (Ware & Warschauer, 2006). In the Indonesian context, teachers have used Grammarly as an automated writing evaluation to provide feedback (Ghufron, 2019). Grammarly is useful for teachers because it can reduce writing errors in vocabulary usage, language use, and writing mechanics (Ghufron, 2019; Ghufron & Roshida, 2018).

Numerous studies have been conducted concerning the students' writing profiles dealing with the linguistic problems the students face (Bostanci, 2019; Terzioğlu & Bostanci, 2020). For example, using a quasi-experimental design, Terzioğlu and Bostanci (2020) discovered that both classes at a public vocational high school in North Cyprus committed 11 types of common errors: (a) inappropriate use of articles, (b) incorrect use of prepositions, (c) word order, (d) verb tense, (e) omission of plural –s, (f) misuse of the possessive 's, (g) incorrect use of comparative adjectives, (h) incorrect spelling, (i) punctuation, (j) capitalization, and (k) wrong words. This study shows that students experience some significant weaknesses in writing, especially in linguistic accuracy. This deficiency has a severe effect on the quality of their writing. Sometimes, students think that they are excellent; they cannot understand that their writing changes the true meaning of information.

Additionally, a recent study by Chon et al. (2021) discovered writing errors even when the text was translated using machine translation by 66 EFL students from Korean universities who completed writing assignments in three modes (i.e., Direct Writing, Self-Translation Writing, and Machine Translation Writing). The texts were examined to determine the type of error. The findings show that Machine Translation (MT) reduces the gap in writing ability between skilled and less skilled learners, makes it easier for students to use low-frequency words, and generates more complex sentence syntax. When MT is used to help write L2, the number of grammatical errors is reduced, according to error analysis. However, the MT translation composition contains more incorrect translations and poor word choices. This implies that even when students use machine translation to produce English writings, errors in writing still exist.

Corrective feedback

Corrective feedback can be defined as the teacher's comment on linguistic problems in students' sentences (Ellis, 2009; Lee, 2013). It is to provide students with information on complex sentences and corrections to students' writing problems. Feedback is also an information gap between the level of knowledge performance written by students and the performance that should be in line with expectations (Black & William, 1998; Sadler, 1989). This condition shows that feedback from the teacher is useful to improve student writing performance.

Typically, to improve students' writing quality, teachers are expected to provide corrective feedback, namely written corrective feedback. Feedback is provided to increase pupils' self-esteem

and encourage them to succeed. It is a vocal response to pupil grammar faults (Prvinchandar & Ayub, 2014). Corrective feedback and self-correction may hinder EFL student writing growth. Indirect feedback boosted writing fluency but not complexity, according to Fukuta et al. (2019). While passively waiting for feedback was equally effective. In other words, indirect feedback did not outperform language alone. Indirect corrective feedback enhanced Jabulani students' grammar accuracy (2015). Defensive feedback increases writing accuracy more than direct input, according to Storch and Wigglesworth (2010). Indirect corrective feedback also improves grammar accuracy because it allows pupils to process language more deeply. In addition, Fukuta and Yamashita (2015) found that indirect feedback outperformed direct remedial feedback.

A substantial amount of research on feedback in EFL writing focuses on error correction and its utility in the development of students' writing skills. Hyland and Hyland (2006) highlighted that the research aims to investigate effective error correction, the strategies and treatments used by teachers for error correction, and the effects of correction on students' immediate revision and long-term development as writers. Error correction deals with the language problems which often perceived in the students' assignments. However, the seriousness of the number of problems is found in students' written results in their paragraphs, letters, and essays (Al-Ghabra, 2019; Derakhshan & Shirejini, 2020; Singh et al., 2017; Phuket & Othman, 2015; and Sermsook et al., 2017). These studies indicated that making a written mistake against the barriers between the target language and the source language is because of a lack of training and feedback from the early years of learning and a lack of motivation and carefulness of students in following the teacher's instructions.

Now, technological advances provide opportunities for providing online corrective feedback in writing. This thing enables teachers to give feedback immediately through the use of an online platform. Some researchers have conducted studies about providing feedback using computers (Abuseileek, 2013; AbuSeileek & Abualsha'r, 2014; Shintani & Aubrey, 2016). However, with the progress of the era at present, namely the digital age, the use of technology in providing feedback is felt to be more productive. Several studies have been conducted on technology's effectiveness in providing feedback on student writing (Bitchener et al., 2010; Sia & Cheung, 2017). Providing feedback on writing using technology is beneficial for teachers and students, and it is essential to facilitate collaborative learning between teachers and students in the 21st century (Sia & Cheung, 2017). Since feedback is a time-consuming process, teachers can use technology, in this case, online corrective feedback, and another benefit is that the teacher can also clearly see the problem of students' language in writing.

Automated Writing Evaluation (AWE)

AWE is increasingly used by teachers to provide feedback on students' writing, and as a result, many technology-based feedback tools for writers have emerged (Zhai & Ma, 2021). AWE is comprised of two primary components: a scoring engine that creates automatic scores and a feedback engine that generates automatic written feedback (Bai & Hu, 2017), also referred to as automatic written corrective feedback (Ranalli, 2018). Initially utilized in high-stakes testing, automated essay scoring (AES) generates numerical scores for summative assessment (learning evaluation) using artificial intelligence, natural language processing, and latent semantic analysis (Stevenson & Phakiti, 2019). The majority of the research on AWE has been on the validity and reliability of its scoring system in a testing environment (Attali & Burstein, 2006; Enright & Quinlan, 2010). These classroom-based studies examined students' opinions of the utility of AWE quantitative and qualitative feedback (Dikli & Bleyle, 2014; Lai, 2010) and the effect of automatic feedback on writing (Attali, 2004; Dikli & Bleyle, 2014; Chapelle et al., 2015; Lai, 2010; Li et al., 2015; Li et al., 2017; Liao, 2015).

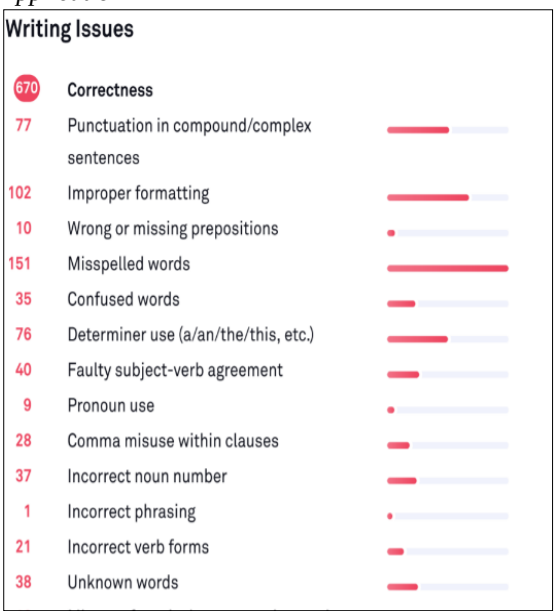
The present study intends to explore the students' writing profile in linguistic problems, including spelling correction, grammar, punctuation, suggestions for enhancement, sentence structure, and style checks by using online applications as teacher feedback on student scientific papers.

***Grammarly* Platform**

The program used to gauge the students' corrective feedback was Grammarly. It is one of the well-known programs to assist learners in writing. Grammarly is a free online grammar and spell checker that can detect and correct writing errors in the English language (see Figrure 1 for Grammarly example checking result). Grammarly recommends the word which is appropriate if the English language is constructed incorrectly. Grammarly has been integrated into the Microsoft Word application, making it easier for users to check for errors in English structure with computer records connected to the Internet. The user must first create an account with Grammarly and then download the Grammarly plugin for Microsoft Word to install and use Grammarly. Grammarly gives notifications when there are word usage errors. Grammarly also provides explanations or examples of correctly formed words or sentence structures.

The researchers have noticed that despite adopting different learning strategies and teaching over long years of education, the students still conduct the frequency of simple problems. Thus, the aim of this study attempted to explore the writing

Figure 1
Examples of Linguistic Problems in Grammarly Application



profiles by identifying the type and frequency of linguistic problems made by first-year students when writing their assignments, Critical Book Review (CBR), Critical Review (CAR), and Mini Research (MR). However, the current study examined the students' writing by utilizing an AWE tool on the web known as Grammarly, which has not been investigated extensively. Therefore, this present study aims to investigate the students' writing profiles by utilizing an automated writing evaluation tool. In view of the purpose of the present study, the following questions were posed:

1. What are the most and the least linguistic problems found in the students' CBR, CAR, and MR assignments?
2. Are there any significant differences in linguistic problems in students' CBR, CAR, and MR assignments?

METHOD

Research design and context

This study applied the ex-post facto design (Salkind, 2010; Simon & Goes, 2018). The reason for choosing this design was that there was no control over manipulating independent variables, and no treatment was carried out on the participants. Researchers in this study were interested in finding levels of relationships between variables rather than causal relationships from the obtained data. The data in this study was used to explore the students' writing profiles by identifying language problems in the target language. The language problems identified were the elements provided by the Grammarly application, which covered grammar, punctuation, contextual. Data were analyzed using descriptive statistics in this study.

According to the learning model stipulated by the Presidential Decree, No. 8/2012 (Indonesian National Qualification Framework) and the Rector Decree No. 0149/UN.33/LL/2016, each student must complete six assignments per course per semester, namely routine tasks, critical book review(CBR), critical article review (CAR), idea engineering, mini-research (MR), and projects. In this current study, the authors considered CBR, CAR, and MR as the research focus since they were in the written text format. The routine tasks and projects are sometimes not in written text format.

Routine tasks dealing with the topic were given and completed each meeting. At the same time, the CBR was completed based on concepts or theories learned in a course to determine the researcher's critical position. Throughout the process, the lecturer chose the complementary and supporting books, and the students were required to work in groups to understand the material while independently reporting their findings. A critical article review is defined as a critical review of all components of a research report or journal with the primary goal of identifying the research or journal's strengths and weaknesses and presenting relevant suggestions to maintain the research's or journal's strengths and overcome the research's or journal's weaknesses. The lecturer selected articles from journals or research reports for review at this stage. If students choose to do so independently, they must obtain permission from their teachers. Students can use other articles to supplement their arguments. Then, during the comprehension process, students do the tasks in a group but report independently on their findings. The lecturer collaborates with students on the idea engineering task to discuss and determine the scope of ideas that can be engineered. Students must come up with similar ideas to be engineered but must report their findings individually. The concept is a new idea or concept derived from an existing idea, and the new idea is expected to be applicable in a social context.

Students and lecturers conducted mini-research by debating and deciding on relevant research topics. Students must obtain permission from the lecturer before selecting their topics. In addition, students must work in groups to develop a mini-research design but report their findings independently. The mini-research must include hypotheses, theories, instruments, data collection, data analysis, and conclusions. Finally, students must complete projects that result in models or products with ethical, aesthetic, social, cultural, and economic values. To complete this task, students must apply knowledge transfer to problem-solving and then communicate the results.

Research Site and Participants

The participants of this study were 54 students (19 male and 35 female students) in the age range of 18 to 19 years at the first-year undergraduate level in

the Academic Writing course. In all settings, participants were given information about the research purpose, their rights, and how to access the surveys. No incentives were offered and participants were made aware that participation was voluntary. The data presented in this study came from the students who agreed to participate. The data were made anonymous by excluding information that showed the participants' identities. All students from two classes were recruited since they joined the Academic Writing Course with two authors in this study. Before taking the Academic Writing Course, the students hag General Writing Course. This study alternately used the terms 'problem' and 'error' to quantify all students' tasks using an electronic enhancement platform called Grammarly. The six weeks meeting is delegated to teach and study Academic Writing. In the seventh week, CBR assignments were collected. This assignment asked the students to review two books, one main book and one comparison book. Then, in meeting 8, CAR assignment was collected. This assignment instructed the students to review two articles on the same topic. Lastly, the students were asked to complete their MR. All students' writing assignments (CBR, CAR, and MR) were investigated for language problems by uploading soft files into the Grammarly platform.

Data Collection

At the beginning of the course, the lecturers explained the process of writing the assignment. Data collection from all participants took place on the day they collected the assignment. First, written samples of the students' assignments were collected. Second, the written samples were uploaded to an electronic enhancement writing platform known as Grammarly. Third, errors were found according to the features provided in Grammarly, namely grammar, punctuation, contextual spelling, sentence structure, style, and vocabulary enhancement. After the data were collected, sample-based classification was employed to assign the errors into appropriate taxonomies.

Missing prepositions, determiner use, faulty subject-verb agreement, incorrect verb forms, incorrect phrasing, modal verbs, misplaced words, misuse of quantifiers, misuse of modifiers, incorrect noun number, faulty tense sequence, and conjunction were listed under the grammar as linguistic problems. Comma misuse within clauses, wrong closing punctuations, wrong punctuation in compound sentences, and misuse of semicolons were collected under the punctuation problem. Misspelled words, confused words (Words that sound similar but have different spellings, other words with similar (but not identical) meanings that are prone to overuse), and mixed dialects of English were listed under the contextual spelling problems. The sentence structure problems consisted of misplaced words and phrases, incomplete sentences, and faulty parallelism. Passive voice misuse, improper formatting, unclear reference, and wordy sentences were collected as the style problems. The last problem is vocabulary enhancement involving word choice as the linguistic problem. After the written linguistic problems were uploaded, identified, categorized, and analyzed, a table of checklists for linguistic problems was formed for each group of participants.

Data Analysis

The data were first analyzed using the Statistical Package of Social Sciences (SPSS) version 21. Descriptive statistical analysis was employed to reveal the frequency, percentage, and rank of linguistic problems found in the students' sample assignment. In addition, to show whether there was a significant difference between the problems committed between groups and within groups (CBR, CAR, and MR assignments), ANOVA was employed. Data were presented using mean scores and standard deviations. Six main categories were formed according to the participants' frequency of linguistic problems: grammar, punctuation, contextual spelling, sentence structure, style, and vocabulary enhancement. The frequency and the percentage distribution of errors were calculated, and the most frequently committed errors were determined. The ranking of the linguistic problems determined the frequency of the problems in each category. Data were analyzed according to the following procedures:

1. Participants' written sentences were collected and analyzed according to 6 categories of linguistic problems.
2. Then, their sentences were categorized by their linguistic problems based on the Grammarly platform.
3. The errors were found in PDF format.
4. Each occurrence of the error was marked with an asterisk and coded to indicate the place of an error.

The percentage of errors was calculated by employing descriptive. The average number of words for each type of paper was 3000. The language problems within each assignment were extracted, and at the end, after categorizing them, the linguistic problem pattern was discerned.

FINDINGS AND DISCUSSIONS

The most and least students' linguistic problems

To reveal the most and the least linguistic problems found in the assignment, the descriptive statistic was employed to find out the means score of each category. Table 1 presents the detailed distribution of the most frequent linguistic problems found in the students' CAR, CBR, and MR assignments, and

Table 2 depicts the example of the students' linguistics problems found in the writing assignments.

Table 1

The Means Reported Linguistic Problems Per Specific Issues in Writing CAR, CBR, and MR

No.	Linguistic Problems	Means (CAR)	Means (CBR)	Means (MR)	Average
1.	**Spelling Correction**				
	a. Misspelled Words	9.67	10.15	14.02	11.28
	b. Confused Words	3.76	4.02	4.60	4.13
	c. Mixed Dialects of English	0.22	0.70	1.76	0.89
	Total	4.55	14.85	6.79	8.73
2.	**Grammar**				
	a. Missing Prepositions	3.30	3.76	4.74	3.93
	b. Determiner Use	11.41	11.70	18.52	13.88
	c. Faulty Subject Verb Agreement	5.33	5.56	6.72	5.87
	d. Incorrect Verb Forms	3.85	4.46	4.69	4.33
	e. Incorrect Phrasing	0.19	0.15	0.60	0.31
	f. Modal Verbs	0.11	0.48	0.66	0.42
	g. Misplaced Words	0.72	0.96	0.34	0.67
	h. Misuse of Quantifiers	0.30	0.31	0.52	0.38
	i. Misuse of Modifiers	1.17	0.28	1.50	0.98
	j. Incorrect Noun Number	0.50	1.17	1.29	0.98
	k. Faulty Tense Sequence	0.09	0.15	0.16	0.13
	l. Conjunction	0.46	0.39	0.43	0.43
	Total	27.43	29.37	40.17	32.32
3.	**Punctuation**				
	a. Comma Misuse within Clause	3.17	3. 98	5.59	4.38
	b. Closing Punctuations	0.07	0.24	0.64	0.32
	c. Punctuations in Compound	3.39	3.85	11.64	6.29
	d. Misuse of Semicolons	0.61	0.78	1.62	1.00
	Total	7.24	8.85	19.85	11.98
4.	**Enhancement Suggestion**				
	Word Choice	18.22	25.50	25.67	23.13
5.	**Sentence Structure**				
	a. Misplaced Words and Phrases	0.37	0.43	1.50	0.77
	b. Incomplete Sentence	1.04	1.70	1.55	1.43
	c. Faulty Parallelism	0.06	0.00	0.59	0.22
	Total	1.47	2.13	3.64	2.41
6.	**Style Check**				
	a. Passive Voice Misuse	3.87	4.22	9.50	5.86
	b. Improper Formatting	6.76	12.72	11.34	10.27
	c. Unclear References	0.41	1.02	0.83	0.75
	d. Wordy Sentences	2.65	4.22	9.60	5.49
	Total	13.69	22.18	31.27	22.38

As illustrated in Table 1, linguistic problems grammar related to grammar is the most frequent issues found in the students' writing in CAR, CBR, and MR. On the contrary, the least frequent problem found in students writing is sentence structure. In CAR, grammar problems (M=27.43) surpassed the vocabulary enhancement (M=18.22), style check (M=13.69), punctuation (M=7.24), spelling correction (M=4.55), and sentence structure (M=1.47). Then, it can be seen that the particular distribution of the most frequent linguistic problems found in the students' CBR assignments. As can be seen, grammar problems (M=29.37) are the most linguistic problems, transcended the vocabulary enhancement (M=25.50), style check (M=22.18), spelling correction (14.85), punctuation (M=8.85), and sentence structure (M=2.13). Finally, the table describes the detailed information on the most frequent linguistic problems found in the students' MR assignments. The students produced more problems on grammar (M=40.17), exceeded the style check (31.27), vocabulary enhancement (M=25.67), punctuation (M=19.85), and spelling correction (M=6.79), and sentence structure (M=3.64). Thus, it seems that the EFL students who participated in the research found that complying with English grammar was more challenging than other types of linguistics problems.

The findings show that detailed information about the students' linguistic problems (CAR, CBR, & MR), grammar, and more specific problems with the determiner/article use was the most dominant problem, and the sentence structure was the least problem students faced. Wrong use with the determiner as the most linguistic problem corresponds with Terzioğlu and Bostanci (2020) study that investigated the types and the frequency of the written sentence errors committed by 58 tenth-grade Turkish Cypriot English as a foreign language (EFL) students in two classrooms in North

Cyprus. Employing a quasi-experimental design, the results of the study showed that both classes of students committed 11 types of common errors: (a) wrong use of articles, (b) wrong use of prepositions, (c) word order, (d) verb tense, (e) omission of plural –s, (f) misuse of the possessive –s, (g) incorrect use of comparative adjectives, (h) incorrect spelling, (i) punctuation, (j) capitalization, and (k) wrong words.

Table 2

Students' Linguistic Problems Example

No.	Linguistic Problems	Examples
1.	**Spelling Correction**	
a.	Misspelled Words	was an application called "*edmodo*" that…
b.	Confused Words	How will the subjects be selected to *insure* they present the populations to be described…(insure→ensure)
c.	Mixed Dialects of English	to be learnt by the medical professional of Mitra Sejati General Hospital. (learned → learnt)
2.	**Grammar**	
a.	Missing Prepositions	*(with)* the achievement of 3 suggestions from the researcher
b.	Determiner Use	Indonesia is in *second* position at high risk of transmission of COVID-19 … (second → the second)
c.	Faulty Subject Verb Agreement	But in its procurement, online learning *have* many notes, especially from students as one of the online learning part. (have → has)
d.	Incorrect Verb Forms	no matter how you taken his picture. (taken →took or take)
e.	Incorrect Phrasing	After reading this research can motivate the reader to *nd or to identify or even to *make* their own research about ESP.
f.	Modal Verbs	We *have to* wait for our boss to arrive before we open.
g.	Misplaced Words	By the use of language we can create a wonderful communication with many expectations that *can we* create also.
h.	Misuse of Quantifiers	*In other (another)* definition Ian Dey (1995:30) explained in (Kasiram, 2010:353-354)
i.	Misuse of Modifiers	This is *important (importantly)* related to the success of teaching students
j.	Incorrect Noun Number	Due to different *area*, the internet connection will be different… (area→ areas
k.	Faulty Tense Sequence	The cat was bathing because his feet *are (were)* dirty.
l.	Conjunction	I work quickly *and careful (carefully).*
3.	**Punctuation**	
a.	Comma Misuse within Clause	Google Classroom helps students and teachers arrange tasks, improve teamwork and encourage improved communication - Google Classroom helps students, and teachers arrange tasks, improve teamwork and encourage improved communication
b.	Closing Punctuations	Participants in the study are students from 9 schools in Medan who have been selected randomly
c.	Punctuations in Compound	That way you can find the right video content. -- That way, you can find the right video content
d.	Misuse of Semicolons	The teachers were asked (:) "What are teachers' perceptions regarding barriers experienced while teaching?"
4.	**Enhancement Suggestion**	
	Word Choice	Properly - correctly
5.	**Sentence Structure**	
a.	Misplaced Words and Phrases	By the use of language we can create a wonderful communication with many expectations that can we create also.
b.	Incomplete Sentence	The existence of cooperation between schools and parents of students in solving student problems at school
c.	Faulty Parallelism	Data analysis is the process of systematically searching and arranging the interview your own understanding of them and to enable (enabling) you to present
6.	**Style Check**	
a.	Passive Voice Misuse	this mini research was well completed
b.	Improper Formatting	Smart, K. L. & Cappel, J.J.(2006). Students' Perceptions of Online Learning: A Comparative Study. Journal of Information Technology Education. 5 (2) 202–219.
c.	Unclear References	The mother called the daughter back to clean up her mess. (When the daughter made a mess, the mother called her back to clean it up.)
d.	Wordy Sentences	by using whatsapp and zoom is not fun because (by using → using)

This was also consistent with Abushihab's (2014) study, which looked at 179 grammatical errors in 20 second-year Turkish writing course compositions. The study's findings revealed five types of errors: use of articles (29 %), prepositions (28 %), morphological (18.4%, tenses (15 %), and active and passive voice (9.5 %). Furthermore, the negative impact of the native language was revealed through quantitative data analysis. It can be argued that such an article system does not exist in Turkish, including in Indonesia. Therefore, the omission of the definite article in two sentences could be attributed to L1 interference. Turkish Cypriot learners struggle to use the article/determiner because their L1 lacks an article system.

In addition, the study conducted by Bostanci (2019) in the same context (North Cyprus), revealed that EFL university students had problems concerning the incorrect use of tenses. She also discovered that the sub-categories of Past Perfect instead of Simple Past and Past Perfect Continuous instead of Simple Past had the fewest problems with incorrect tenses, with both having only one error. Likewise, the sub-category of Omission of Capula produced the most occasional committed issues. This may happen since the study described and classified errors produced by Turkish Cypriot EFL learners whose past tense of the language structure is used for all past actions regardless of the structure or sequence of tenses involved.

Significant Difference in Linguistic Problems in CBR, CAR, and MR

Using ANOVA (See Table. 3, significant differences are found between groups (CBR, CAR, & MR assignment) and within groups (CBR, CAR, & MR). The researchers found that used punctuations in CBR, CAR, and MR have significant differences between groups (Means square=2143,932) and within groups (Means square=62,470) surpassed the style check between groups (Means squares=3452,673) and within groups (Means squares=184,628), the sentence structure between groups (means squares=86,222) and within groups (Means squares=7,095), the grammar as linguistic problems in CBR, CAR, and MR was significantly different between (Means of Square=3149,636) and within groups (Means of square=441,065), the vocabulary enhancement between groups (Means squares=1272,451) and within groups (Means squares=211,950), and the spelling between groups (Means squares=802,488) and within groups (Means squares=191,957).

Table 3

The ANOVA Results of CBR, CAR, & MR Linguistic Problems

		Sum of Squares	df	Mean Square	F	Sig.
GRAMMAR	Between Groups	6299.272	2	3149.636	7.141	.001
	Within Groups	70129.278	159	441.065		
	Total	76428.549	161			
PUNCTUATION	Between Groups	4287.864	2	2143.932	34.319	.000
	Within Groups	9932.778	159	62.470		
	Total	14220.642	161			
CONTEXTUAL_SPELLING	Between Groups	1604.975	2	802.488	4.181	.017
	Within Groups	30521.222	159	191.957		
	Total	32126.198	161			
SENTENCE_STRUCTURE	Between Groups	172.444	2	86.222	12.153	.000
	Within Groups	1128.056	159	7.095		
	Total	1300.500	161			
STYLE CHECK	Between Groups	6905.346	2	3452.673	18.701	.000
	Within Groups	29355.796	159	184.628		
	Total	36261.142	161			
VOCABULARY_ENHANCEMENT	Between Groups	2544.901	2	1272.451	6.004	.003
	Within Groups	33700.037	159	211.950		
	Total	36244.938	161			

From the data analysis, punctuation was found as the most significant difference between groups and within groups in CBR, CAR, and MR. The results also discovered that grammar is the highest portion of the linguistic issues in writing CAR, CBR, and MR. The data finding in this study is surprising. In the Grammar category, Determiner Use is the dominant language problem faced by students in writing CAR, CBR, and MR, while in the previous study, the dominant grammar problem is the wrong use of articles/determiners (Terzioğlu & Bostanci, 2020). Additionally, Chon et al. (2021) discovered that articles are one of the Korean learners' most common types of mistakes. However,

this finding is dissimilar to Hasan and Marzuki's (2017) study, which discovered that fifteen students who took English courses had frequent problems with the grammar dealing with plural forms, articles, verbs, clauses, passive voice, and prepositions. They also emphasized that the students often treated adjectives and nouns as verbs or the reverse. The data also indicated that the use of *to infinitive* was often misleading particularly after adjectives, auxiliaries, and the first verbs.

In the Grammarly application, grammar is categorized into twelve categories. They are wrong or missing prepositions, determiner use (a/an/the/this), faulty Subject -Verb Agreement, incorrect verb forms, incorrect phrasing, modal verbs, misplaced words or phrases, misuse of quantifiers, misuse of modifiers, wrong noun number, faulty tense sequence, and conjunction/pronoun use. On the other hand, Celce-Murcia and Larsen-Freeman (1999) mentioned that the determiner limits the noun that follows it. These words could be in the form of articles (the, a(n)), demonstratives (that, these, those), possessive determinants (my, your, his, her, his, our, their), and quantifiers (one, two, ten million). Structurally, the determinant precedes the adjective if there are adjectives in the noun phrase. In cases where no adjectives are present, they are placed directly in front of a noun. As far as the phrase "I put my books on a huge table" is concerned, two determinants can be detected. The first is 'my,' a possessive determinant that precedes the noun 'books' while the second is 'the,' a definite article that precedes the adjective' huge.' In both cases, both 'my books' and 'the big table' are noun phrases. Determinants of the English language are often limited in terms of the number and countability of the head nouns they may co-occur. These agreements' features are essential information about determinants and nouns that are unique to a language such as English (Celce-Murcia & Larsen-Freeman, 1999).

This study also discovered that contextual spelling is the least significant difference between and within groups. It is similar to the study conducted by Terzioğlu and Bostanci (2020) which found spelling as the least linguistic problem the students committed in writing. The students lack attention in forming sentences. From the elaborated findings, it appears that using online corrective feedback such as Grammarly helps the teachers investigate the EFL learners' linguistic problems (Liao, 2015; Parra & Calero, 2019; Wilson & Czik, 2016), including spelling correction, grammar, punctuation, enhancement suggestion, sentence structure, and style check. The feedback from Grammarly gives a positive contribution that makes the teachers easily recognize the students' mistakes. Corrective feedback from Grammarly can be used to monitor the content of the EFL Learners' Writing. Li et al. (2015) also emphasized that automated writing feedback is seen as easing teachers' feedback burdens – for example, by allowing them to focus less on sentence-level grammar and more on higher-level concerns such as content and discourse – while also empowering students to revise better and proofread their work.

It seems that automated writing evaluation (AWE) complements the students' writing improvement and accuracy (Li et al. 2015; Li et al. 2017; Liao, 2015, Parra & Calero, 2019). This study was to shed light on the effects of using free AWE tools on the writing performance of students enrolled in an English Teacher Training Program. As part of the experimentation for this study, Ecuadorian undergraduate students were encouraged to use Grammark and Grammarly as free AWE tools to improve their writing skills. In addition, these AWE tools were used to supplement teacher feedback on 28 students' writing performance during a semester of study. This online writing feedback, however, has shown to have limitations, such as content development. Nevertheless, with proper teacher monitoring and guidance, this tool may benefit both teachers and students.

CONCLUSION

This current study sought to investigate students' linguistic issues through the use of Grammarly as an automated writing evaluation tool. The findings of this study shed light on the types of linguistic problems; Grammarly detects in students' critical book reviews, critical article reviews, and mini-research assignments. Instructors of English as a second or foreign language can use the findings of this study to help their students develop their writing skills. In addition, teachers can use AWE to save time and boost their confidence when writing in a foreign language because there are fewer linguistic problems.

For the students' assignment, several themes were identified among linguistic problem types and frequency. Grammarly was effective in detecting local-level errors in EFL writing, but distinct differences have been identified. Variation linguistic problems errors are caused by the frequent use of the article/determiner. Such issues were common in the students' writing, indicating the importance of using AWE programs like Grammarly for revision. Grammarly was most effective at detecting and correcting determiner errors, which is helpful for EFL students because such linguistic problems are common among EFL learners (Bailey & Lee, 2020). Spelling, punctuation, wordiness, and sentence structure were also identified as errors.

There are a few limitations to this study that should be mentioned. First, the findings may not be applicable outside of the Indonesian context. Second, students with EFL higher education proficiency provided writing samples. As a result,

the study's limitations include the small sample size, which raises concerns about generalizability, and the fact that the feedback provided addressed linguistic problems on determiners/articles, that is, rule-governed forms that are more amenable to correction (Lee, 2013). Third, linguistic problems and their frequency would vary depending on the level of proficiency of the EFL writers (Liardét, 2015). Finally, results may vary depending on which AWE programs are used. Criterion (www.criterion.ets.org) and Virtual Writing Tutor (www.virtualwritingtutor.com), for example, are more focused on providing feedback to students in an academic setting, whereas Grammarly targets users who speak both English as their first language and English as a foreign language.

Future AWE research should investigate the impact of incorporating tools such as Grammarly into the EFL writing process. AWE technology should not be used to replace existing EFL writing strategies but rather to supplement them. Future research may want to look into how AWE platforms can collaborate. Moving forward, EFL/ESL teachers should think about how best to incorporate AWE technology into their writing and communication programs. When it comes to the nuances of global-level writing linguistic problems related to meaning-making and cohesion, there is no substitute for human feedback, but such errors cannot be addressed when instructors are overburdened with the local level, treatable, linguistic problems. AWE tools like Grammarly improve writing fluency by saving time composing ideas, resulting in more language output. The ultimate goal should be to assist the writer in becoming self-sufficient. There is an urgent need to understand better how reliance on writing aid technology affects self-reliance.

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