Grammarly and Grammatical Errors Reduction: A Case for Non-Native English Teachers' Professional Learning

I G A Lokita Purnamika Utami
Universitas Pendidikan Ganesha, Indonesia
Email: lokitapurnamika@undiksha.ac.id

I Gusti Ngurah Agung Wijaya Mahardika
Universitas Hindu Negeri I Gusti Bagus Sugriwa Denpasar, Indonesia
Email: wijayamahardika@gmail.com

Abstract
Grammar has long been a source of aggravation for anyone learning a second language, not just English language learners, but also non-native English teachers. People can now employ Grammarly to correct their grammar mistakes, owing to the sophistication of modern technology. The debate over whether teachers use Grammarly as part of their professional development is ongoing. The purpose of this study was to identify the grammatical errors made by non-native English teachers when writing narrative texts before and after Grammarly checked them. The participants in this qualitative study were 24 English teachers from the English Teacher Association of Buleleng Regency in Bali, Indonesia. This study employed the surface approach taxonomy to analyze the grammatical errors and interviewed the teachers to elicit factors that contribute to grammatical errors. This study found that the most common type of misformation error, specifically the alternating form error, was found in both Grammarly-corrected and Grammarly-uncorrected texts. Furthermore, intralingual factors were responsible for the majority of errors. The integration of Grammarly into teachers' professional learning is discussed.

Keywords: Intralingual errors; interlingual errors; narrative text; grammatical errors

Introduction

Studies about English teacher professional development agree that teachers need to continuously upgrade their knowledge and skills, including pedagogical knowledge and English proficiency. This continuous professional development effort is an individual's ongoing effort to improve their ability in performing their job professionally (Cahyono, 2013; Day, 1999; Mizell, 2010; Utami & Prestridge, 2018). In the discussion of Continuing Professional Development (CPD), scholars have contrasted the term *professional development* with *professional learning*. The first is criticized as something 'done' for the teachers while the latter is considered more reflective and self-directed (Nilsson, 2012; O'Brien & Jones, 2014). Professional learning allows teachers to choose what they want to learn and how they want to learn it, rather than being passive

receivers in a seminar room. For instance, they do professional sharing between colleagues (Hood, 2017; Hur & Brush, 2009) and they do web browsing as their professional learning (Utami, 2019).

In Indonesia, English teachers have a platform to share their teaching materials, media, worksheets, lesson plans, and classroom problems through English Teacher Association meetings (Barella, 2014; Sumardi, 2012). his study focuses on the English Teacher Association (known as MGMP Kabupaten) in Buleleng regency, Bali, Indonesia, which has recently debated whether Non-Native English-Speaking Teachers (NNEST) should use Grammarly. Grammarly is an automated writing evaluation tool used to detect grammatical errors, correct spelling and punctuation, and identify word choice and plagiarism (Schraudner, 2014). The question of whether NNEST should use this application has been discussed among the association members. The use of Grammarly is a form of professional learning in which teachers take action to meet their self-learning needs (Hood, 2017). Web browsing, including the use of internet tools, is considered the most preferred personally-initiated learning method by English teachers in the Indonesian context (Utami, 2019).

English teachers in Indonesia, as noted by Putra et al., (2021), are generally considered Non-Native English Speaking Teachers or NNEST. In their daily communication, they typically do not use English either orally or in writing. It is important to note that NNEST differ from NEST (Native English Speaking Teachers) in that native speaking teachers acquire English as their L1 during childhood, have a wide range of grammar that allows for spontaneous responses, and possess a wide variety of language styles, making them effective models for L2 learners (Davies, 2006).

Debate on which is better between NNEST and NEST at teaching English are evident in many studies (Lev-Ari, 2014; Li & Jin, 2020; Putra et al., 2021). Studies mention that both have their strengths and weaknesses even though, "the public opinion on learning English is still leaning toward nativism" in Indonesia (Putra et al., 2021, p.1). Scholars believe that NEST is capable of being a language model to the learner and seen as a reliable source of teaching as they have more natural oral skills and can explain the context of the text (Lev-Ari, 2014; Li & Jin, 2020; Putra et al., 2021). Meanwhile, NNEST is better at teaching language rules than NEST because they are language learners themselves and can explain more complex language grammar and structure than a native teacher (Mahboob, 2003; Walkinshaw & Oanh, 2014). However, non-native speakers are considered to have lower linguistic competence than native speakers, making their language less reliable in conveying their intentions (Lev-Ari, 2014). As a result, the ability to explain grammar rules does not imply that they can produce grammatically correct writing constantly.

English teachers involved in this study have between 5 and 25 years of teaching experience and graduated from a specific teacher training university where they received a four-year education on English instruction. At the time of the study, some of them had graduated from the university between 15 and 20 years ago. In their interviews, they mentioned that they use a combination of English and Indonesian language in their classroom instruction to help their students understand better. In Indonesia, English teachers face a dilemma about whether to use English exclusively or in combination, and the majority of them choose to use a combination of the two languages. As a consequence, their ability to communicate in English, both orally and in writing, has decreased since their time in college. This phenomenon aligns with previous studies that highlight one of the challenges of English teaching in Indonesia: teachers' low proficiency in the English language (see Lengkanawati, 2015; Tutyandari, 2022; Wiyati, 2014). Their English proficiency is jeopardized because they do not participate in many professional development programs that improve their

English proficiency. The need for professional development to improve their English proficiency is evident (Avillanova & Kuswandono, 2019).

Concerning this, Yuwono & Harbon (2010) mention that situational contexts such as low salary, time constraints, and workload inhibit Indonesian teachers' professional development efforts. School principals in Indonesia commonly assign particular teachers to attend professional development programs based on their need to fulfill the criteria for upgrading their career level (Utami & Prestridge, 2018). Thus, not all Indonesian teachers have the same opportunity to participate in professional development (Lie, 2007). Their efforts to participate in professional development are influenced highly by the degree of their professional enthusiasm. Teachers with high professional enthusiasm continuously seek opportunities to learn, meanwhile teachers with low professional enthusiasm do that for attaining non-learning desires such as obligatory awareness, financial advantages, and career promotions (Utami, 2017).

As a result of the decrease in their English proficiency, English teachers involved in this study admitted that they often use Grammarly to assist them in creating error-free text. Besides checking grammar, Grammarly offers a variety of language style settings, including formal, informal, and academic language. Thus, language instructors can also utilize Grammarly as an automated feedback tool on the student's work, which included essays, argumentative texts, and narrative texts (Thi & Nikolov, 2021). The benefits of Grammarly has been confirmed by many studies (see Perdana et al., 2021; Tambunan et al., 2022). These studies found that Grammarly can improve users' writing in terms of both grammar and language use.

Dulay et al. (1982) believe that grammatical errors can be classified by using the linguistic category classification, the surface structure taxonomy, the comparative taxonomy, and the communicative effect taxonomy. The linguistic category classification specifies the error in terms of linguistic categories, specifically where the error is located in the overall system of the target language based on the linguistic item affected by the error. Phonology (pronunciation), syntax and morphology (grammar), semantics and lexicon (meaning and vocabulary), and discourse are all components of language. For instance, Azar (1989) classifies grammatical errors into 7 categories such as singular-plural, verb tense, word choice, word order, capitalization, punctuation, and spelling. Surface structure taxonomy describes how surface structures change. Dulay et al. (1982) classify errors by using surface structure taxonomy into four: omission, addition, misinformation, and misordering. A comparative taxonomy classifies errors based on comparisons between the structure of L2 errors and certain other types of construction. This taxonomy is divided into four categories: developmental errors, interlingual errors, ambiguous errors, and other errors. The taxonomy of communicative effects focuses on distinguishing between errors that appear to cause miscommunication and those that do not. This taxonomy is divided into two categories: global error and local error. Global errors, which affect the overall organization of the sentence, impede successful communication; whereas local errors, which affect a single element of the sentence, usually do not.

According to the literature, grammar errors in English writing are caused by a variety of factors, including a lack of understanding of appropriate tenses (Agustam et al., 2022) as the first language interfering with the target language, particularly when they transfer their first language directly or indirectly, which is known as interlingual interference (Al-Khresheh, 2010; Darus & Ching, 2009) Moreover, previous research has mentioned some factors such as intralingual and interlingual that cause grammatical errors in English writing (Agustam et al., 2022; Agustina, Y. & Nazri, 2022; Kaweera, 2013)

Previous research has focused on what grammatical errors English learners make; however, little attention has been paid to what errors NNEST make, how Grammarly helps them reduce these errors, and what factors cause grammatical errors. As a result, this research contributes to a better understanding of the Grammarly application value for NNEST. The study's findings may serve as a guide for NNEST in using Grammarly wisely to be aware of what type of errors that may go undetected by Grammarly and what factors influence the making of errors. Furthermore, it is critical to consider this aspect to supplement existing research on the use of Grammarly as a professional learning tool.

Literature review

Surface approach taxonomy

In surface strategy taxonomy, errors are grouped into four kinds: omission, addition, misformation, and mis ordering.

Omission occurs when required grammatical morphemes or content morphemes are absent in a phrase, resulting in seven subtypes: prepositional omission, article omission, to be omission, conjunction omission, marker omission, verb omission, and pronoun omission. For example, omitting prepositions, articles, to be, conjunction markers, or pronouns can lead to errors.

To illustrate, a non-native English speaker may make omission errors by omitting prepositions, articles, to be, conjunction markers, or pronouns. For example: "They study 3 pm". They omit preposition "at" which is required before adverb of time. English prepositions are difficult for non-native English writers because they usually relate them to his/her own mother tongue prepositional system. Another *error* is omission of article. Some articles, such as a, an, and the, are required in English. Non-native English writers frequently omit an article that is required in a sentence. For instance, "Jane has idea". They omit article "an" for singular noun "idea". The next omission error is omission of to be. There are several types of to be in English, depending about the phrase and the tense employed, such as is, am, are, was, and were. Non-native writers sometimes forget to put to be. They could simply write: "My mother a teacher", as they forget that English required "to be" for showing relationship between the subject and the complement (adjective, noun, etc.). Conjunction omission happens when writers fail to put necessary conjunction as in "I like tart, not ice cream". Contrasting conjunction "but" is required to link these two phares, but a writer may fail to use it and make an error. The omission of marker such as markers'-es/-s' for plural nouns or present verbs for the third-person singular and '-ed/-d' for past verbs is a common error. Non-native English writers may write "He *wash* the dishes, before *watch* a movie last night". This error happens as these markers are not required in their mother tongue. The next omission error is verb omission as in "He back to the jungle last week", a writer may fail to add necessary verb "went". The last omission error is omission of pronoun as in "He eats in the restaurant every day. Seems to always has money". The second sentence has no subject. At the very least, a proper sentence has a subject and a predicate. Thus, the second sentence is wrong.

Besides omission, there is also error of addition. *Addition* occurs when an element that should not be present is added to a sentence, such as double marking, regularization, or simple addition. Double marking is a failure to eliminate some essential items in some linguistic constructs but not in others. For example: I *did* not *had* a shower this morning. The auxiliary did + not + bare infinitive characterizes past negative sentences; the writer should use bare infinitive "have" as "did" already represent past event. Next is regularization error. This is when a marker that is usually added to a linguistic item is added to exceptional objects that do not take the marker. For instance, "*many mouses* are running in the kitchen". The plural form of mouse's is mice.

Mouse is an exception of the ending -s/es regularity for plural nouns. The last addition error is simple addition. This is when an undesirable element is added to a sentence. For instance, in "You should *to* see a doctor" the addition "to" is not necessary to be placed following modal verb "should"

Misformation errors occur when incorrect forms of morphemes or structures are used, such as when a regular marker is used for an irregular verb. There are three types of misformation: regularization, archi form, or alternating form. Regularization errors happens when a regular marker is substituted for an irregular one, such as when the suffix '-ed' in past verbs is added to irregular verbs like "run", "do", "swim" become "runed", "doed", or "swimed". The archi form is the use of incorrect forms of demonstrative temporal adjectives in English, such as this, that, these, and those. For instance, archi form error can be found in the sentence: "I select *that* flowers myself". The plural noun flowers should be preceded by "those" instead of "that". The last type of misformation errors is alternating form of error. This is an error when writer fail to construct proper forms. For instance, I *swum* after he had *went* home. The verb forms are incorrect; it should be "I swam after he had gone home"

Misordering errors occur when morphemes or sets of morphemes are misplaced, such as when a question is mistakenly written as a statement. For example, the sentence "I want to know where is his school" is wrong as the sentence is not a question rather a statement. The auxiliary "is" following the question word "where" should be added after the noun "school" to turn it into a statement. Thus, "I want to know where his school is" is the correct form.

Factors of errors

Richard (1974) divides errors into two groups based on their causes: interlingual and intralingual errors. *The interlingual factor* is classified into three types, namely transfer error, mother tongue interference, and literal translation. Meanwhile, the *intralingual factor* is classified into four types, namely overgeneralization, ignorance of rule restriction, incomplete application of rules, and hypothesized false concepts.

Interlingual transfer errors occur when the learner's first language interferes with the target language, particularly when the learner transfers their first language directly or indirectly (Kaweera, 2013). Because they are unfamiliar with the target language's rules, structures, or even tenses, the learners translate directly from their native language into the target language.

The intralingual factor refers to the errors made by students when trying to understand and apply the rules of the target language based on their limited experience. These errors may be caused by interference or transfer from other language learning methods. These errors are common among foreign language learners due to their limited exposure to the target language. The intralingual factor arises when the students have not fully understood or learned the rules of the target language, resulting in incomplete application or failure to apply the rules correctly. (Darus & Ching, 2009).

Research method

Design of the study

The qualitative approach is used in this study, specifically a case study, which combines information gathered through a variety of methods, including interviews, observations, and document analysis, to produce descriptive narratives aimed at explaining a phenomenon that occurs within a specific context. (Gay et al., 2011).

Participants

The study took place in the Buleleng regency and involved 24 English teachers who were members of the Buleleng English Teacher Association. The study focused on grammatical errors in the narrative texts produced by the teachers before and after Grammarly checked them. The narrative writing assignment was completed by the participants within 60 minutes, and document analysis techniques were used by the researcher to identify grammatical errors in both the Grammarly-uncorrected text and the Grammarly-corrected text versions of the teachers' narrative texts.

Research instruments

The teachers were interviewed to identify the factors that contributed to their grammatical errors, and their responses were recorded on a factors of errors analysis sheet. To define the types of errors in this study, the researcher uses an error analysis sheet developed based on the surface approach taxonomy by Dulay et al. (1982) in which errors are grouped into four kinds: omission, addition, misinformation, and misordering. Furthermore, a factor of error analysis sheet is developed based on Richard's (1974) interlingual and intralingual factors. The next step was to analyze the data that had been collected. After identifying the grammatical errors, the researcher classified them as omission, addition, misformation, or misordering errors, according to Dulay et al (1982). The number of errors in the grammatically uncorrected text and the Grammarly-corrected text were then calculated and compared. The data was reviewed by three grammar experts, and agreement on the types of errors was reached to ensure the study's credibility. Interviews were used to collect information about the factors that influence teachers to make errors.
Data analysis

The researcher used thematic analysis to examine the factors that influence the errors. Thematic analysis is analyzing data with the aim of identifying patterns or finding themes through data collected by researchers (Braun, V. and Clarke, 2006). To perform thematic analysis, the following procedure was used: First, the researcher read and listened to the interview transcripts repeatedly to gain a deep understanding of the data. During this process, the researcher took notes to aid in identifying important themes. The next step involved compiling codes to represent the data, which could be direct words from the data or words that revealed the implicit meaning of the data (Gay et al., 2011). In this study, the codes used were "intralingual" and "interlingual" factors. The transcripts were coded by the researcher and then reviewed. The next step was to identify themes, which represent the underlying causes of these errors. Data that shared similar characteristics were grouped together under one theme.

The present study has two limitations. The first limitation is the small number of subjects involved in this study; however, the researchers have performed repeated interview sessions to ensure the achievement of data saturation. The second limitation is that this study focuses on the type of errors and the reduction of said errors in relation with the use of Grammarly to identify and rectify the errors. The present study did not attempt and did not use any instrument to measure the overall quality of the writings of the subjects, only focusing on the types and number of errors.

Results

To determine the types of errors made by the subjects when composing narrative texts, a series of processes were followed. Firstly, each narrative text was read multiple times by three experts to identify errors before being checked by Grammarly. The experts then discussed and agreed on the classification of errors using surface strategy taxonomy. The number of errors in

each classification was then calculated. The same procedures were repeated to analyze errors in the text after being checked by Grammarly.

Types of error produced by non-native English teachers

To compare the differences between the types of errors before and after being checked by Grammarly, the researcher shows the comparison table of each type of error in table 1.

Table 1. The comparison of types of errors in grammarly uncorrected and corrected texts

Types of errors	Errors found in Grammarly-uncorrected text		Errors found in Grammarly-corrected text	
	Frequency	Total each category of errors	Frequency	Total each category of errors
Omission of preposition	9	45	1	6
Omission of article	12		2	
Omission to be	8		1	
Omission of conjunction	10		2	
Omission of marker	1		0	
Omission of verb	3		0	
Omission of pronoun	2		0	
Double marking	0	23	0	5
Addition regularization	0		0	
Simple addition	23		5	
Misfomation regularization	2	147	0	78
Archi form	0		0	
Alternating form	145		78	
Misordering	5	5	2	2
Overall total	220		91	

Table 1 shows that Grammarly-corrected writing has a lower error rate than the uncorrected one in all types of errors. This finding shows that Grammarly can reduce all errors categorized into omission, addition, misformation, and misordering. The data obtained showed that the total number of errors (220 errors) found in Grammarly-uncorrected texts was more than three times as much compared to the total number of errors (91 errors) found in Grammarly-corrected texts. The Grammarly-corrected texts were found to have significantly less errors across category of errors; with 60%-87% less errors compared to the Grammarly-uncorrected texts. The omission errors category showed the highest decrease of errors (87%) and the misinformation errors category showed the least decrease of errors (47%).

Factors causing errors made by non-native English teacher

Based on the interviews made with each subject of study on their identified errors, it was found that the most frequent factor of errors was the intralingual factor (84,33%), followed by the interlingual factor (15,67%).

Table 2. Factors of errors

Factor of errors	Description	Frequency
Interlingual factors		
a. Interference	a subject who has not known the rules of the target language use the same rules as he obtained in his native language	-
b. Transfer error	A subject translates a statement or idiomatic expression from his first language into the target word for word	-
c. Literal Translation	Subjects attempt to discover the structure of the target language rather than transferring models of their first language.	15.67%
Intralingual factors		
a. Overgeneralization	A subject constructs an erroneous structure based on his prior knowledge of other structures in the target language by overgeneralizing the norm, believing it to be universal.	12.23%
b. Ignorance of rule constraints	A subject applies rules incorrectly in situations where they don't apply. The subject does not follow the target language's structure	43.20%
c. Incomplete application of the rules	A subject's limitations in grasping grammatical rules by frequently writing unfinished sentences. In other words, the subjects do not correctly master the entire pattern.	25.11%
d. False concept hypothesized	A subject shows an incorrect understanding of distinctions in the target language.	3.79%

Despite being English teachers, the participants which were categorized as NNEST, made errors in their writing. The researcher discovered that intralingual factors such as overgeneralization, ignorance of rule restriction, incomplete application of the rules, and false concept hypothesized caused the majority of errors (84,33%). These teachers committed far fewer errors (15,67%) due to interlingual factors resulting from literal translation.

Discussion

Types of error produced by Non-native English teachers

The high rate of errors decrease in the Grammarly-corrected text seems to imply that Grammarly is quite robust fulfilling its intended role, i.e., to reduce the number of grammatical errors in a writing. This finding is consonant with the finding of previous study conducted by Fahmi & Cahyono (2021). Their study stated that Grammarly was highly regarded by both students and teachers as a tool to improve writing skills. In this study, Grammarly was successful in reducing the error rate made by non-native English-speaking teachers (NNESTs) when producing narrative texts. The reduction of errors was noticeable in both corrected and uncorrected texts, but the order of the most frequent errors remained the same. Furthermore, Ambarwati (2021) reports that Grammarly receives favorable comments from students and teachers to assist pupils in improving their writing skills. In this study, Grammarly was successful in lowering the rate of errors made by the NNEST when producing narrative texts. Though the reduction of errors was evident in both texts that had not been corrected and those that had been corrected by Grammarly, the order of errors frequency from the highest to the lowest did not alter.

The type of misformation error, specifically the alternating form error, remained at the highest frequency of error. English teachers failed to use past verbs for something that happened in the past. However, some of these failures made by English teachers are not errors but mistakes as the two terms distinguished by Brown (2007). He argues that mistakes can occur due to

temporary poor performance, a momentary lapse, or a failure to use a known system correctly, which can be self-corrected. However, in the study, errors were made repeatedly and were caused by the subjects' lack of proficiency and poor command of the target language, making them uncorrectable. Some mistakes, such as incorrect use of past verbs, were self-corrected by the subjects, while others were not recognized as errors as they believed their sentences were correct. The researcher was able to differentiate between data of errors and mistakes through interviews and only analyzed the data of errors. During the interview, the researcher pointed out several sentences and the subjects were able to identify and isolate the incorrect parts of the sentences. They were also able to correct the mistake, this imply that they made the mistake accidentally, which is a very natural occurrence for any language user including native speakers.

The study found that Grammarly made an overgeneralization suggestion based on a pattern of initial writing structure used by the subjects. For instance, if a subject wrote a past action using a bare infinitive verb instead of a past verb, Grammarly would suggest using the bare infinitive for the rest of the sentences, implying that it should be present tense. As a result, the most frequent errors in Grammarly-corrected texts were alternating form errors caused by this pattern of repetition. Alternating form errors are also found as the most common errors made by students in their writing in some studies (Ariantini & Budasi, & Swandana, 2018; Maharani, Ramendra, & Swandana, 2018). These findings suggest that even English teachers found alternating form challenging in writing.

Factors causing errors made by non-native English teacher

The study's subjects translated their writings from their native tongue. No errors were caused by interference or transfer errors. This means that the subjects of study can recognize the distinction between mother tongue structure and idiomatic expression and those of the target language. As a result, their native language habits do not significantly interfere with or hinder their target language learning. An intralingual issue was the main contributor to the subjects' errors in this study. It is important to compare this study's findings with the findings of studies about grammatical errors made by students. Wicaksono (2014) in his study involving 24 university students found that the highest percentage of the cause of errors made by students is in interlingual transfer, with 85% of students responding that the sources of the errors are from their mother tongue transfer. Other studies (Al-Khresheh, 2010; Cabrera Solano et al., 2014; Kaweera, 2013) also found that most frequent errors made by EFL students are caused by L1 interference which is a linguistic transfer from the native language to the target language. In line with this, according to (Brown, 2007), the early stages of language learning are characterized by the predominance of interlingual transfer errors. As NNEST appears to have progressed past this early stage of language learning, their errors are manifesting themselves in more transfer generalization within the target language. This explains why intralingual factors cause more errors in the subjects' writing.

Based on this finding, specific professional development aimed at improving NNEST's grammatical knowledge should be arranged. English is taught to non-native English teachers during their formal education. However, many of them stop learning after receiving their bachelor's degree (Cahyono, 2014). Teachers think the focus of workshops and seminars is sometimes irrelevant with their needs, hence many of them attending structured professional development programs to get a certificate for their career advancement instead of for their professionalism (Utami, 2015; Utami & Prestridge, 2018). Some scholars (see (Easton, 2008; Nilsson, 2012; O'Brien & Jones, 2014) have criticized the traditional model of structured professional development, such as inviting experts to schools, because it places teachers as passive recipients

of training. As a result, teachers are encouraged to engage in professional learning that is unstructured but more self-directed. As the study suggests that Grammarly is effective to reduce all types of errors classified by Dulay et al.(1982), NNEST may use Grammarly as a professional learning tool. They may learn from and review the suggestion provided by Grammarly.

Previous research has shown that online feedback is an effective tool for encouraging and integrating learning. In the Indonesian context, Grammarly is considered the most well-known automated feedback tool among English teachers to proofread their writing (Ambarwati, 2021) which helps teachers to become a better writer (M. Ghufron, 2019). It is especially beneficial for NNEST English teachers because it reduces writing errors, and improves word choice, language expression, and writing mechanics (Ghufron, 2019; Ghufron & Rosyida, 2018). In fact, in this digital age, automated writing evaluation tools such as Grammarly are seen as effective tool in writing as it saves time and increases users' confidence when writing in English because it helps a writer to have fewer accuracy mistakes. However, Grammarly alone cannot transform a low-quality composition into a high-quality piece of writing. Bailey & Lee (2020) found that Grammarly was more appropriate for local surface-level errors (e.g. articles, prepositions, and verb-noun agreement, spelling, punctuation, wordiness). In other words, it only improves writing quality incrementally. As a result, NNEST cannot depend entirely on Grammarly to improve their writing skills, as technology should not replace existing L1 or L2 writing strategies, but rather supplement them.

Conclusion

The study found that non-native English teachers made errors in their writing, with the most common being alternating form errors in both Grammarly-corrected and uncorrected text. However, the use of Grammarly reduced errors in all categories, suggesting that it can be a helpful tool for NNESTs looking to improve their writing. The study also found that most errors were caused by intralingual factors, which occur when NNESTs attempt to construct concepts and hypotheses about the target language based on their limited experience. This is not caused by the transfer of the first language but rather by the target language itself.

The findings of this study highlight the fact that NNEST would truly benefit from in-service English retraining. Such retraining should be aimed to improve their language proficiency. This particular retraining program have been implemented by a number of Asian countries to push their NNEST to achieve the required English proficiency based on universally acceptable standard such as CEFR albeit with varying degrees of success (Coniam et al., 2017; Nakata et al., 2018; Pham, 2018). The finding also seems to steer towards the retraining of NNEST to improve their General English Proficiency, instead of their Classroom English Proficiency. NNEST errors in writing showed that they still have problems with their general English and not just isolated to the English used in classroom interaction or the English used in teaching English (Freeman, 2017; Nakata et al., 2018; Pham, 2018; Renandya et al., 2018; Richards, 2017). By providing retraining in General English Proficiency, NNEST will be able to improve their overall English proficiency and became better English user themselves and fulfill their role as proper language models for their students.

The study further suggests that NNESTs can use Grammarly as a professional learning tool to improve their writing without becoming overly reliant on it. While using Grammarly, it is important for teachers to continue practicing their writing strategies. The integration of Grammarly into Microsoft Word makes it easy for users to check for errors in English structure. However, it is worth noting that the findings of this study may not generalize outside of Indonesian language

speakers and may be different depending on which Automatic Writing Evaluation (AWE) program is being used. Bailey & Lee (2020) believe that Criterion and Virtual Writing Tutor for example, are more focused on giving feedback to students in an academic setting, while Grammarly targets users are both L1 and L2 students or working professionals. Finally, error types and error frequency would be different depending on the writers' proficiency levels.

Future research may explore how NNESTs can integrate AWE tools like Grammarly into their professional learning, and what procedures need to be put in place to ensure that these tools are used effectively. This would enable NNESTs to have a model of professional learning that utilizes AWE while also exercising their writing strategies. Overall, the study suggests that Grammarly can be a helpful tool for NNESTs looking to improve their writing skills, but it is important to use it in conjunction with other writing strategies and to consider the limitations of the study's findings.

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