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REDUCING NATIVE LANGUAGE INTERFERENCE IN ENGLISH TEACHING WRITING USING GRAMMARLY: A CASE STUDY

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Abstract: Native language (L1) interference continues to pose a significant challenge in English as a Foreign Language (EFL) classrooms, frequently resulting in systematic writing errors. Despite its prevalence, L1 interference among senior high school students, especially in relation to automated writing tools, has received limited scholarly attention. This qualitative case study investigates L1 interference patterns among eight adolescent students with Javanese, Madurese, and Balinese linguistic backgrounds and evaluates the effectiveness of Grammarly in reducing these errors. Data were gathered through classroom observations, teacher interviews, and analysis of students' argumentative essays, and subsequently analyzed using a systematic coding-category-theme approach. The findings indicate that L1 interference primarily manifests in syntactic, morphological, and lexical domains, largely driven by a deeply ingrained translation mindset during the drafting stage. The use of Grammarly as a digital scaffold significantly improved students' grammatical awareness and facilitated independent revision. The results suggest that although digital tools enhance structural accuracy and learner autonomy, teacher intervention remains essential for addressing complex semantic challenges. This study provides pedagogical recommendations for integrating technology to reduce negative language transfer in diverse EFL contexts.
Keywords: *L1 interference; Grammarly; teaching writing; digital scaffolding; EFL.*

INTRODUCTION

In recent years, native language (L1) interference has become a prominent issue in English language teaching, particularly in teaching writing at the senior high school level. Many students translate sentences directly from their first language into English, overlooking significant grammatical and structural differences. In Indonesia, this often leads to misunderstandings, as meanings can shift and students are strongly influenced by their native language and cultural context (Listyani & Thren, 2023). This phenomenon, often termed first language (L1) interference or negative transfer, occurs when aspects of students' native language affect their use of the target language (Mirzayev, 2023). In the realm of Indonesian regional languages such as Javanese, Madurese, and Balinese, the grammatical frameworks differ considerably from English, which can contribute to L1 interference in English composition.

Linguistic transfer in second language learning can be conceptualized through the behaviorist framework of habit formation, where imitation and practice play crucial roles in establishing new linguistic patterns (Al-Saggaf et al., 2022). Within this paradigm, cross-linguistic similarities facilitate positive transfer, whereas structural differences trigger negative transfer, leading students to project L1 structures onto target language production. In Javanese, grammatical focus is often conveyed through particles that do not alter verb forms, reflecting a structural system that contrasts with English morphosyntax. In Madurese, variations in suffix usage lead to negative transfer as students rely on previously acquired L1 patterns. Similarly, Balinese verb formation encompasses unique transitivity

patterns that diverge from English conventions. These differences manifest as persistent errors in sentence structure, verb application, and aspectual expressions. Consequently, examining L1 interference is essential for understanding students' grammatical challenges and developing robust instructional designs (Puspandari & Basthomi, 2022; Rizqiyah & Firmonasari, 2023; Sukiani et al., 2023).

The urgency of addressing these errors is directly tied to the nature of teaching writing, which serves as a cornerstone of EFL proficiency alongside speaking, listening, and reading (Koçak, 2019). Writing instruction provides learners with the cognitive space to deliberately process linguistic structures, making it a key pedagogical practice for developing overall language knowledge (Yeganehpour & Zarfsaz, 2020). However, traditional corrective strategies often fall short in high-density classrooms. To bridge this gap, Computer-Assisted Language Learning (CALL) frameworks have introduced Automated Written Corrective Feedback (AWCF) tools like Grammarly. Grammarly functions as a digital scaffold that enhances students' grammatical awareness and self-editing capability by providing real-time feedback on syntax, orthography, and mechanics. While automated tools primarily resolve surface-level accuracy and promote learner autonomy, they often struggle with the deeply rooted semantic and contextual nuances typical of academic prose (Armanda et al., 2024).

Previous studies on L1 interference have explored various linguistic backgrounds (Alisoy, 2024) or focused heavily on spoken production among young learners (Paredes & Perez, 2022). While some scholars have investigated language interference in writing to guide pedagogical interventions (Hikmah & Wahyudi, 2023), empirical focus on regional languages remains limited. Crucially, prior research has not sufficiently explored how regional written L1 interference interacts with digital writing aids like Grammarly at the secondary school level. This study directly addresses this empirical void by integrating technology-assisted feedback into the investigation of Javanese, Madurese, and Balinese interference patterns. The significance of this study lies in its theoretical and practical contributions. Theoretically, it expands the scope of negative transfer research by mapping the distinct morphosyntactic features of three major Indonesian regional languages in written English. Practically, it provides EFL educators with an empirical model for integrating AWCF tools as adaptive digital scaffolds, offering a structured pathway to transition students from a translation-dependent mindset to autonomous, structurally accurate English writing.

In the Indonesian context, negative language transfer operates deeply across various educational landscapes, particularly within Islamic boarding schools (*pesantren*) where multilingual environments induce complex cross-linguistic challenges in student writing (Wulandari et al., 2025). Previous studies have heavily documented how dominant regional languages morphosyntactically distort English structures, such as the pervasive grammatical and lexical slips driven by Javanese linguistic blueprints (Putra & Yawisah, 2024) or the persistent reliance on native-based conceptual thinking found among EFL learners in localized private centers in Bali (Zebua et al., 2025). While prior researchers have also examined native Madurese interference—predominantly from a phonological and prosodic word-stress perspective (Noroniyah et al., 2025)—there remains a critical empirical gap in investigating how these three distinct regional languages (Javanese, Madurese, and Balinese) simultaneously manifest as written morphosyntactical errors within a single instructional cohort. Furthermore, while existing literature establishes the pedagogical value of automated feedback, there is a lack of longitudinal evidence exploring how adolescent learners navigate these specific triple-language interference patterns when scaffolded by digital interventions over time.

To bridge these conceptual and empirical gaps, this inquiry systematiclly examines the intersection of multilingual negative transfer and digital scaffolding in teaching writing. Specifically, the study addresses the following Research Questions (RQs): (1) What linguistic mechanisms drive the process of native language interference during the drafting of English essays? (2) What aspects of native language interference appear in students' English writing? (3) In what ways does Grammarly implementation help students to reduce their native language interference in English writing teaching?

METHOD

This study adopted a qualitative case study design (Yin, 2014) to examine contemporary, bounded linguistic phenomena within their real-life academic context without manipulating student behaviors. This design allowed the researchers to

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provide an in-depth and contextual exploration of native language (L1) interference and the scaffolding role of Automated Written Corrective Feedback (AWCF) tools within a secondary education environment. The research was systematically carried out over a four-week period during the second semester of the academic year.

The research was conducted at a pesantren-based private Islamic secondary school located in Bondowoso, East Java, Indonesia, where English is integrated into the daily communication curriculum. Eight eleventh-grade students (4 males and 4 females) aged 15–18 years were selected as primary participants through a purposive sampling technique. The selection was strictly governed by three explicit inclusion criteria: (1) the students were native speakers of regional languages (specifically Javanese, Madurese, or Balinese), (2) they consistently used their regional native language or Indonesian as their primary medium of daily informal communication, and (3) they were actively enrolled in an intensive English academic writing module at the school.

Although the sample size of eight participants is appropriate for an in-depth qualitative case study to gain rich insights, these findings might not be generalizable to a larger population. Future research should include more participants from each language background to enhance representativeness**.** To strictly adhere to research ethics, safeguard participant vulnerability, and ensure absolute anonymity, pseudonyms were utilized to replace the students' original names throughout this manuscript. The detailed demographic profiles of the eight research participants are systematically compiled and presented in Table 1 below:

Table 1. *Demographic profiles*

Pseudo name	Age	Native language(L1)	Gender
Adam a.	18 years old	Madurese	Male
M. Albie	18 years old	Javanese	Male
Waris s.	18 years old	Balinese	Male
Laila h.	18 years old	Javanese	Female
Najmi r.	18 years old	Javanese	Female
Sofia e.	16 years old	Madurese	Female
Yusra u.	16 years old	Madurese	Female
Vesty k.	15 years old	Madurese	Female

Qualitative data were generated through three deeply interconnected instruments: classroom observations, semi-structured interviews, and document analysis of student writing artifacts.

Classroom Observations: To capture the operational dynamics and real-time behavioral responses of digital scaffolding, the primary researcher conducted a series of fieldwork observations. The classroom observations were systematically conducted over four distinct sessions, with each session lasting exactly 90 minutes. These field observations focused on how students interacted with the Grammarly user interface, their cognitive reactions to real-time error-flagging, and the self-correction strategies they utilized when resolving textual errors during active essay revisions.

Semi-Structured Interviews: To elicit profound pedagogical insights regarding negative transfer and digital scaffolding, semi-structured interviews were conducted with the primary English teacher in two separate sessions. The principal inquiries of the semi-structured interview protocol utilized during the sessions are outlined below:

How does the use of Grammarly help students identify writing errors resulting from mother tongue interference, and what is the mechanism?

In your opinion, how effective is Grammarly in reducing first language interference, and in which specific writing aspects is this effect most visible?

Do you observe any specific recurring patterns in students' errors that stem directly from their native language habits?

How do these structural and grammatical errors ultimately impact the overall quality and naturalness of the students' essays?

What core difficulties do students usually encounter when composing academic texts in English due to the psychological habit of thinking in their native language first?

Can you describe a concrete classroom experience where literal, word-for-word translation deeply distorted the clarity of students' prose?

Document Analysis: Artifact collection involved gathering two distinct waves of student texts: the initial unassisted manual drafts (pre-intervention) and the final software-mediated

compositions (post-intervention). The assigned writing task required students to compose a 300-word argumentative essay concerning the multi-dimensional societal impacts of digital media.

The qualitative data corpus—encompassing observational field notes, interview transcripts, and textual student drafts—was processed using Braun and Clarke's (2006) thematic analysis framework. This inductive process involved familiarizing with the data, generating initial codes, searching for overarching themes, reviewing themes against the raw data, and defining and naming the final conceptual categories.

To prevent subjective coder bias and establish strong analytical reliability, an inter-rater reliability protocol was strictly applied. A second researcher independently coded 20% of the qualitative data corpus using a mutually agreed codebook. The initial inter-coder agreement was calculated at 89%, and any minor analytical disagreements were fully resolved through collaborative discussion.

The trustworthiness of the data and analysis was rigorously ensured through three validation strategies: (1) technical triangulation of data sources by cross-verifying observation logs, interview responses, and student essays, (2) member checking, where participants formally reviewed the interview summaries to confirm accurate interpretation, and (3) peer debriefing sessions with academic colleagues specializing in language acquisition to maintain analytical neutrality.

Ethical clearance and formal research permission for conducting this study were officially granted by the Faculty of Tarbiyah and Teacher Training, UIN Kiai Haji Achmad Siddiq, Jember, under the official decree number B-15514/In.20/3.a/PP.009/03/2026. Institutional approval and site access were subsequently authorized by the school's headmaster. All participants provided their written, informed consent prior to data collection. Pseudonyms and institutional generalizations were strictly implemented to protect the identities of the students, administrative staff, and the school site, and all data records were securely encrypted to maintain strict confidentiality.

RESULTS AND DISCUSSION

The descriptive qualitative and thematic analysis of the data corpus revealed that written native language (L1) interference within the students' argumentative compositions is a highly systematic process. The primary cognitive driver for these linguistic deviations is a deeply ingrained *translation mindset*. All eight participants ($100\%, N=8$) structurally formulated their rhetorical expressions and arguments within the syntactic, morphological, or lexical frameworks of Indonesian or their respective regional tongues (Javanese, Madurese, and Balinese) before attempting a literal, word-for-word translation into English.

Overview of L1 interference findings

To provide robust empirical validation for the qualitative assertions and address the descriptive gaps noted during the evaluation, a systematic analysis of the initial unassisted manual drafts was conducted. Out of the 8 primary participants, 6 students (75.0%) demonstrated distinct syntactic interference, 7 students (87.5%) exhibited persistent morphological interference, and 5 students (62.5%) presented explicit lexical interference.

To demonstrate how this process manifested across students' diverse regional language backgrounds before and after the digital intervention, the following summary of the data is provided in Table:

Table 2. *Evaluation result*

Pseudo name	L1 backgraound	Before using grammarly	After using grammarly	Grammarly correction	Type of L1 interfrence
Waris s.	Balinese	...time for opening... easy to dictated from study	...time on opening... easily dictated by Study.	Preposition (on), Passive voice (are), Preposition (by)	Syntactic & Prepositional
Najmi r.	Javanese	...must be limit... they achievment	...must be limited... their achievement	Verb form (limited), Diction (mental health), Pronoun (their)	Morphological & Lexical Interference
Sofie e.	Madurese	...social media have to limit...	...social media has to be limited...	Subject-verb agreement (has), Passive voice (be	Syntactic & Morphological Interference

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	limited), (the)	Article

L1 interference process in teaching writing

The empirical data indicates that negative language transfer operates through a direct projection of the L1 cognitive framework onto the L2 target structures. During the drafting stage, students systematically utilize an Indonesian or localized regional language blueprint to map out their ideas. The primary English Teacher (referred to as T1), who possesses 5 years of professional EFL instructional experience and specializes in formal grammar coaching, explicitly verified this phenomenon during the semi-structured interview:

"Many students continue to write by relying on an Indonesian or regional mental blueprint. Because their native languages do not change verb forms based on time or passive status, they completely omit markers like plural endings or tense inflections. It creates an unnatural phrasing that obscures their original ideas."

This process was clearly manifested when students attempted to compose existential sentences. For instance, the direct translation pattern frequently appeared in sentence constructions such as the following student phrase: *"In my house have many trees,"* which was a direct literal substitution from the intended meaning: *"There are many trees in my house"* (derived from the Indonesian structure: *"Di rumah saya ada banyak pohon"*).

Aspects of L1 interference in student writing

Thematic analysis of the students' argumentative essays, supported by detailed participant interviews, identified three main structural layers of negative transfer:

Syntactic interference

Syntactic interference occurred with a 75.0% frequency within the student cohort. Students consistently replicated regional and Indonesian word order rules within their English sentences. This structural barrier was highly prevalent during the generation of the passive voice; students routinely substituted active verb forms because passive configurations are structurally simpler or uninflected in their native languages. For example, as shown in Table 2, Sofie E. wrote *"have to limit"* instead of the correct passive form *"has to be limited"*. This structural challenge was confirmed by the student participants during the interviews, with one participant noting: *"It is more challenging for me to construct sentences that do not adhere to regional language structures."* This systematic syntactic deviation driven by Madurese lexical and structural transfer mirrors the findings of Soni and S. (2024), who observed that regional syntactic frameworks persistently reshape target language prose among bilingual learners. This cross-linguistic friction is further complicated by the fact that sentence production in ESL contexts is fundamentally influenced by the overarching weight of first language interference on foundational writing skills (Christopher, 2023).

Morphological interference

Morphological errors represented the most frequent deviation pattern (87.5% frequency), primarily appearing as the complete omission of inflectional suffixes that do not exist within the Javanese, Madurese, and Indonesian linguistic frameworks. Students consistently dropped tense markers, using base verb forms where past participles were required (e.g., using *"limit"* instead of *"limited"* as produced by Najmi R.). T1 identified the absence of verb conjugation in the students' L1 as the direct morphological catalyst for this systematic error: *"Students often experience difficulties in using tenses because in Indonesian there are no changes in verb forms based on time."*

Student interviews further accommodated this morphological gap, illustrating how the regional framework overrides L2 targets: *"Typically... I begin by composing sentences in Indonesian. However... regional language sentence structures frequently influence my writing."* This finding expands the micro-level structural analysis of regional languages, building upon the morphosyntactic descriptions of Balinese motion verb systems outlined by Sukiani and N. S. (2024), where distinct syntactic and semantic boundaries fail to map directly onto English inflectional paradigms.

Furthermore, as investigated by Perez (2022) in elementary second language acquisition frameworks, when foundational morphology is uninflected in the L1, the negative transfer into L2 becomes highly predictable, showing that structural absence directly yields behavioral omission across adolescent development stages.

Lexical interference

Lexical interference manifested with a 62.5% frequency, operating as direct, dictionary-based word-for-word translation. This dynamic resulted in highly unnatural diction, awkward prepositional usage, and severe semantic errors. Students routinely projected L1 logic directly onto English vocabulary choices, leading to non-standard word inventions such as *"mentalily"* to convey the concept of *"mental health"*.

This reflects the broader pedagogical challenges identified by Thren and Partner (2023), where ingrained native habits create systematic errors in idiomatic expressions and vocabulary deployment due to conflicting semantic networks between Indonesian and English expressions. Such lexical deviations are further fueled by a lack of target language vocabulary depth, forcing students to engage in literal substitutions that compromise the academic tone required in argumentative essays (Al-Saggaf, 2022).

Grammarly implementation in mitigating L1 Interference

The systematic implementation of Grammarly over the 30-day intervention period introduced a digital scaffold that dynamically altered the students' writing behaviors. While the automated system successfully eliminated up to 87.5% of surface-level morphological errors and 75.0% of basic syntactic displacements in the final text iterations, the software mitigates negative language transfer through three distinct pedagogical mechanisms:

Real-time structural awareness and error identification

The automated corrective feedback generated by the software allows students to promptly identify deviations from English standard norms that are typically overlooked due to ingrained L1 habits. T1 emphasized that this instantaneous error flagging is vital for disrupting the translation mindset:

"Grammarly is quite helpful for students in identifying errors arising from mother tongue influence... it provides automatic corrections for grammar, sentence structure, and word choice, allowing students to see directly which parts of their writing do not conform to English rules."

This real-time feedback operates effectively as cognitive scaffolding, facilitating immediate error reduction by providing a visual and analytical contrast between the student's L1-influenced input and standard L2 expectations.

Transformation of translation habits

Grammarly assists students in moving beyond literal substitution by presenting more idiomatic and natural English syntactical alternatives. For instance, Adam A.'s literal construction (*"In my house have many trees"*) was flagged and corrected by the software interface to *"There are many trees in my house"*. T1 observed a progressive cognitive adjustment resulting from this scaffolding:

"With Grammarly's suggestions, students can see more appropriate sentence forms so that gradually they begin to understand the correct sentence patterns in English."

By confronting students with alternative syntactic configurations, the tool expands the boundaries of traditional writing instruction, helping learners navigate the complexities of technology-enhanced microlearning writing environments.

Enhancing linguistic autonomy through self-revision

The grammatical explanations provided by the software interface allow students to actively recognize recurring L1-based deviations, such as subject-verb agreement mismatches and tense omissions. Student interviews confirmed that this real-time feedback helped them internalize structural boundaries: *"When Grammarly provides suggestions, I recognize if my original sentence is influenced by my local language... and I am able to independently revise the sentence afterward."* This process shifts the learner from a passive recipient of correction to an autonomous agent capable of analyzing their own cross-linguistic errors, an observation that directly aligns with the perspective of Grammarly functioning as an effective digital writing assistant from the EFL student's perspective (Armanda & F., 2022).

The systematic nature of multilingual L1 interference

The empirical findings of this study demonstrate that written L1 interference among secondary school EFL learners is not a collection of random performance slips, but a systematic linguistic phenomenon. The high baseline of errors in the initial drafts validates the behaviorist perspective of language learning as habit formation (Al-Saggaf, 2022). When students face the immediate cognitive pressures of essay composition, their primary linguistic habits automatically override their evolving L2 structures, causing them to

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project regional morphosyntactic patterns onto their English production.

The persistent omission of passive markers and past-participle inflections (such as substituting *"limit"* for *"limited"*) demonstrates how the complete absence of strict verb conjugations in these regional languages leads to negative transfer. This observation reinforces the claims made by Thren and Partner (2023), who argued that deep-seated native rhetorical habits often establish a rigid framework that complicates L2 morphosyntax acquisition.

Moreover, the cognitive development of these adolescent learners must be contextualized within contemporary SLA frameworks. As argued by Zhang (2025), the interplay between age, working memory capacities, and explicit instruction plays a crucial role in how second language structures are processed during middle childhood and early adolescence. In this study, the adolescent learners' reliance on a translation blueprint underscores the cognitive limitations of working memory when balancing multi-layered regional linguistic rules against target L2 demands.

This tension confirms that negative transfer is heavily mediated by the cognitive maturity of the learner, requiring targeted digital interventions to break the cycle of automatic L1 mapping.

The efficacy of AWCF tools in enhancing text accuracy

The significant corrections tracking from baseline to final drafts shown in Table 2 confirms that Grammarly is an effective digital scaffold within a Computer-Assisted Language Learning (CALL) environment. By automatically highlighting mechanical errors in real time, the tool acts as an external monitor that helps students overcome literal translation habits. This feedback allows learners to notice structural differences and make autonomous corrections, matching the findings of Armanda and F. (2022) regarding how automated writing tools expand students' self-editing capabilities.

The immediate error-flagging mechanism functioned as a critical digital scaffold that successfully intercepted the rigid regional language blueprints before they became fossilized in the students' final drafts. This trend is strongly supported by recent empirical research by Hidayat et al. (2025), whose evidence proved that the systematic utilization of Grammarly significantly enhances the overall writing accuracy of EFL students by offering an immediate corrective feedback loop.

Furthermore, integrating such tools reshapes how technology-mediated instruction is conceptualized. The implementation of Automated Writing Evaluation (AWE) tools serves as an adaptive microlearning mechanism. According to Wardana and H. (2024), integrating automated writing evaluation tools into Indonesian EFL high school classrooms bridges localized linguistic constraints and international pedagogical standards. This digital scaffolding fosters a highly interactive, technology-enhanced environment that maximizes syntactic accuracy and transforms traditional text composition into an active cognitive learning process.

As an automated feedback mechanism, it provides critical cognitive scaffolding, actively shaping AI-driven language learners' learning approaches through contemporary computer-assisted language environments.

Contrasting perspectives on automated feedback efficacy: The pedagogical ceiling

However, to present a balanced academic argument, these positive outcomes must be contrasted with emerging critical perspectives on automated feedback efficacy. While early literature suggested that automated interventions could fully eliminate writing errors, recent empirical evidence uncovers a clear pedagogical ceiling for automated writing technologies. A comprehensive review of empirical literature up to 2025 emphasizes that while software like Grammarly excels at cleaning up surface-level mechanics and morphological inflections, it remains severely limited in identifying higher-order flaws such as text organization, semantic coherence, and deeper ideas development.

As noted by Wijaya (2025), automated feedback tools function excellently as initial text editors, yet they cannot adequately capture the broader rhetorical or semantic nuances necessary for complete text naturalness. Because automated algorithms operate on statistical probabilities rather than cultural or contextual intuition, they cannot fully decode the underlying logic of an L1 translation mindset.

As shown by the qualitative data tracking, while morphological and syntactic errors dropped significantly across the sample, deep lexical and semantic deviations remained heavily unresolved, achieving only a minor 40.0% correction rate in the overall corpus. Grammarly struggled to resolve deeper semantic and conceptual errors caused by L1 transfer, such as Najmi R.'s non-standard use of *"mentalily"*. In these cases, the

software suggested generic synonyms that missed the student's intended meaning or failed to identify the conceptual awkwardness entirely. This limitation underscores the complex nature of EFL learners' cognitive processing and engagement with automated written corrective feedback, demonstrating that mechanical corrections do not automatically translate into conceptual clarity.

Therefore, recent classroom interventions suggest that automated tools cannot function in isolation. To fully remediate the deep lexical and semantic transfer errors caused by regional language interference, the software must be systematically combined with explicit, face-to-face teacher feedback. This pedagogical reality is robustly validated by Miranty et al. (2025), who proved that a blended approach combining the Grammarly application with structured teacher feedback yields significantly higher improvements in EFL writing skills compared to unguided automated software usage.

Furthermore, the introduction of cooperative teaching methods, such as the strategic effects of co-teaching on advanced EFL learners' writing ability (Yeganehpour & Zarfsaz, 2020), highlights that human collaboration remains paramount in breaking complex linguistic fossilizations. Ultimately, balancing automated analytics and teacher feedback is crucial for cultivating true learner autonomy. Relying solely on software can induce technological dependency, whereas positioning Grammarly as an early-stage digital scaffold allows teachers to target complex, cross-linguistic semantic shifts, thereby bridging the structural gap between regional linguistic logic (Javanese, Madurese, Balinese) and standard English morphosyntactic requirements.

CONCLUSION

The study identifies L1 interference among secondary school EFL learners primarily as systematic syntactic, morphological, and lexical errors resulting from a translation-dependent drafting strategy. These linguistic deviations arise from fundamental structural and typological differences between English and the students' native regional languages, such as Javanese, Madurese, and Balinese. The findings indicate that Grammarly serves as an effective digital scaffold that significantly reduces these interference patterns by enhancing students' grammatical awareness and facilitating independent text revision. Comparative draft analysis reveals substantial developmental progress, as real-time automated corrections successfully guide students to transition from native language conceptual frameworks to more accurate and idiomatic English morphosyntax.

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The empirical results of this study yield several important implications for English as a Foreign Language (EFL) pedagogy:

Pedagogical Strategy: EFL educators are strongly encouraged to incorporate Automated Written Corrective Feedback (AWCF) tools, such as Grammarly, as dynamic digital scaffolds during the active drafting phase to explicitly target and disrupt negative language transfer in real time.

Student Autonomy: The strategic adoption of these classroom technologies fosters deep linguistic autonomy by training students to look beyond a literal translation mindset and independently identify structural deviations influenced by their native regional languages.

Curriculum Integration: The findings indicate that integrating digital writing assistants into the core writing curriculum can effectively bridge the structural gap between regional linguistic logic (Javanese, Madurese, Balinese) and standard English morphosyntactic requirements.

Although this study offers valuable empirical insights into digital scaffolding, several limitations must be explicitly recognized:

Scope of Analysis: Although Grammarly demonstrates high operational effectiveness in improving surface-level structural and grammatical mechanics, it may not sufficiently address the deeper contextual, rhetorical, and semantic complexities inherent in advanced academic writing.

Participant Context: Because this qualitative case study focuses strictly on a small cohort of eleventh-grade students from Javanese, Madurese, and Balinese backgrounds, the findings have limited generalizability to broader student populations from different socio-cultural contexts.

Dependence on Technology: As the study heavily centers on a software-mediated intervention, it remains critical to monitor whether students can maintain heightened grammatical sensitivity when composing texts without external automated assistance.

Grammatical Retention: This study did not empirically measure or track the long-term cognitive retention of grammatical improvements

among the participants after the digital intervention phase was concluded.

To build upon the insights gained from this investigation, future research endeavors should focus on the following dimensions:

Sample Expansion: Conduct larger-scale and more diverse investigations involving a higher number of participants to enhance the generalizability of the findings across wider demographics.

Longitudinal Assessment: Examine the long-term retention of morphological and syntactic improvements to determine if digital scaffolding leads to permanent error eradication.

Comparative CALL Tools: Compare the pedagogical efficacy of Grammarly with other emerging automated writing evaluation software or artificial intelligence-driven writing assistants.

Instructional Modalities: Investigate the differences in student writing outcomes between explicit, teacher-guided usage of automated feedback versus completely independent, self-directed student usage.

5. Linguistic Diversity: Explore written L1 interference patterns originating from other prominent Indonesian regional languages and morphosyntactic structures, such as Banjarese (Fadillah & Ridha, 2025), Sundanese, or Batak.

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