

Digital Agency and Authorial Identity in AI-Assisted ESL Writing: A Case Study of Indonesian Diaspora Students in Malaysia

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ABSTRACT

This study explores how multilingual secondary-school ESL students in an Indonesian diaspora context negotiate their digital agency when using generative AI tools. Specifically, the study examines how students engage with and navigate the perceived potential influence of algorithmic homogenization while trying to preserve their emotional authenticity in L2 academic writing. This study employs a qualitative case study design with data gathered from seven purposefully selected participants through document analysis of their AI prompts, machine outputs, and final essays, triangulated with stimulated recall interviews. Through thematic analysis, the findings reveal a heterogeneous landscape of AI adoption, where the multilingual secondary-school ESL students engage in situational compromises—delegating rigid linguistic tasks to the machine while defending their personal narratives and cultural expressions. The students do not act as passive receivers; instead, they strategically position the tools as pedagogical scaffolds for structural blueprints and lexical consultations. These findings suggest that digital agency and identity preservation operate as closely interrelated dimensions within L2 writing. Ultimately, while highlighting the necessity of critical algorithmic literacy, it should be noted that these findings are highly context-specific to this unique diaspora demographic and should not be interpreted as broadly generalizable to other settings.

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1. INTRODUCTION

In the last few years, the rapid advancement of AI has greatly influenced the field of English as a Second Language (ESL) writing [1], [2]. As AI (ChatGPT, Gemini, Claude, etc.) and Automated Writing Evaluation (AWE) technologies have become increasingly integrated, they have emerged as active learning technologies within digital ecosystems and

have become standard aids for global learners of academic ESL writing [3], [4]. With these new technologies, Students must learn to interact with multiple complex digital systems in order to engage at the level of advanced academic writing [5]. The integration of such generative tools has fundamentally transformed pedagogical practices, revealing unprecedented potential and new challenges in English language instruction [6]. This has had profound implications for how we teach ESL writing. The teaching process has shifted from a more individualized process of writing to a collaborative process between Human and AI writing. Even with the rapid growth of digital technologies, AI writing has outpaced traditional teaching methods and frameworks and presents further challenges for technology integration in second language (L2) contexts [7].

Writing skills generally pose the greatest challenge to learners of second languages (L2) due to the requirement to generate ideas, plan the text, and present it with the appropriate level of linguistic and critical precision and with rhetorical logic [8], as well as the high cognitive load required to maintain critical thinking in an L2 context [9]. Given this challenge, it is imperative to analyze how the cognitive demands of writing for L2 learners are affected by new AI-based writing technologies. Rather than functioning merely as sophisticated proofing devices [10], modern generative AI and automated writing evaluation tools substantially impact ESL learners' cognitive and writing processes [11]. To mitigate the cognitive impact of these writing technologies, ESL learners must retain their writer identity; to do this, they must exercise a considerable degree of personal control and digital agency [12], [13], [14]. Appropriate safeguards must be in place to prevent the erosion of academic integrity [15], [16]. Writing carries a strong sense of identity, and this may be further compromised when it occurs within largely contextual cultural and linguistic environments.

Studies on AI integration in language education have focused primarily on AI's operational concerns, including how generative AI determines responses based on students' syntactic preferences in monocultural L2 environments [3], [10], [17]. A critical gap remains in the literature on AI writing tools in the context of large multilingual diaspora communities. This study focuses on Indonesian diasporic multilingual ESL learners who are multilingual in Indonesian, Malay, and English, and who interact and transact in these languages across different social domains (home, school, and community). This context is ideal for understanding how different forms of digital agency are expressed in AI-supported writing.

This kind of sociolinguistic complexity is abundantly evident at an Indonesian educational institution in Malaysia. As a formal educational institution, it complies with the Indonesian National Curriculum. However, because the school is located in Malaysia—where English functions actively as a dominant language in the broader public and social spheres—the students' linguistic ecosystem aligns more closely with an English as a Second Language (ESL) context rather than a Foreign Language (EFL) setting [18]. In this dynamic environment, these diaspora learners face a unique challenge when using Generative AI. They risk losing their unique voices and multicultural identities in a world of homogeneous English discourse as they interact with culturally homogeneous AI.

Moreover, the few studies that have explored AI writing tools do so through a single lens of analysis, focusing on technology acceptance, writing assessment, or ethics. These frameworks provide an inadequate understanding of students' interactions with AI writing in terms of their agency and their evolving identities. To address this secondary gap, this study presents a multi-layered theoretical framework to improve the level of analysis. More specifically, this study combines technical and cognitive digital agency [19], the fluidity of L2 digital identities [20], and the sustaining of authorial identity [21]. This study extends existing research by integrating these theories into a multi-layered, cross-disciplinary framework that assesses how diaspora students negotiate, adapt to, and resist the predominance of algorithmic thinking in AI-embedded ESL writing.

To operationalize this multi-layered framework, this research establishes clear conceptual relationships among the three constructs. Digital agency encompasses students' technical and cognitive abilities in their critical interactions with and evaluations of AI tools [19]. Digital agency facilitates L2 digital identity negotiation. Here, students exercise their autonomy and make linguistic choices in the digital environment [20]. Ultimately, this active negotiation process aims to preserve authorial identity—students' conscious defense of their authentic voices, opinions, and cultural expressions against algorithmic monopolies [21]. Mastering this progressive relationship enables students to move from being uncritical consumers of automated writing to empowered ethical agents.

In this study, translanguaging is the main sociolinguistic context. It is not a main theoretical construct [22]. Here, it signifies the natural communicative ecology of these diaspora students, who navigate their integrated linguistic resources in order to negotiate their multiple identities [23]. This complex multicultural context serves as the backdrop where the students must exercise their agency. Figure 1 visually summarizes how these diaspora learners deploy agency to protect their multicultural narratives.

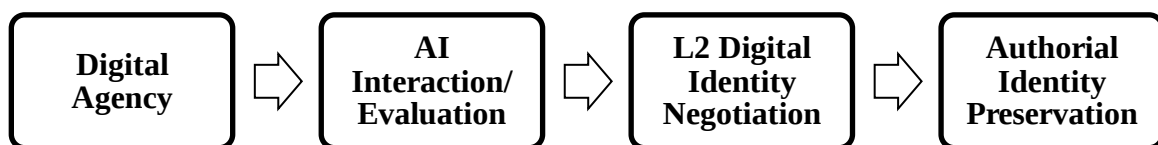


Figure 1. Conceptual Framework of AI-Assisted ESL Writing

Recent studies have made this area more contentious by focusing on AI's impact on authorial voice [2], [17], [24]. Some researchers argue that AI, when used strategically to lighten the load, can serve as a writing partner [25]. However, more and more researchers are considering the potential threats of "algorithmic homogenization" [26]. Given the digital agency's limitations for L2 students, researchers are particularly concerned about unregulated AI outputs. The use of normed, grammatically strict AI tools disrupts the translanguaging ecology, forcing ESL students to adapt to standardized, monolingual algorithmic norms. This results in the loss of the personal character of writing, emotional connection, and identity erosion within students' individual linguistic identities.

To address the aforementioned gaps, the objective of this study is to explore how multilingual learners negotiate digital agency and preserve authorial identity when utilizing

AI tools for academic writing. Specifically, the present study formulates two main research questions: (1) How do Indonesian diaspora learners strategically utilize AI writing devices to support their ESL writing? and (2) How do they exercise their digital agency and authorial identity when integrating these automated tools? By answering these questions, this research aims to provide a significant theoretical contribution to the existing literature on L2 digital identities by mapping the boundaries of algorithmic resistance in multicultural contexts. Practically, the implications of this study are expected to guide ESL educators in designing culturally responsive pedagogical frameworks that foster critical algorithmic literacy rather than passive AI consumption.

2. METHOD

2.1 Research Design

To investigate Indonesian diaspora students' adoption of AI tools and their digital agency, this study employed qualitative case study methods [27]. These methods are most useful when the how and why questions are asked in relation to the phenomenon and its context [28]. The Malaysian Indonesian school in this study represented an exclusive "bounded system" or specific sociolinguistic context where the diaspora translanguaging phenomenon and the use of generative AI occurred.

Importantly, the design of this case study is guided by the tripartite theoretical framework introduced earlier in this work. The research design is intended to focus on: (1) the technical and cognitive dimensions of digital agency [19] in the context of students' prompt engineering and AI output evaluations; (2) the negotiation of their L2 digital identities [20] within their multilingual digital environments; and (3) the preservation of their authorial identity [21] in efforts to protect their cultural narratives from algorithmic homogenization.

Given the small sample size of seven students, these findings should be interpreted as descriptive rather than findings that could be generalized. Overall, these findings are intended to be descriptive. Several methods to document and analyze case studies have been intentionally developed to combine various disciplines and frameworks to provide a detailed and deep description of the participants' lived experiences and the conceptualized responses participants use to counter the prevailing dominant machine outputs.

2.2 Participants and Setting

This qualitative case study focuses on an Indonesian educational institution in Malaysia and was carried out in April 2026. The institution was chosen because, as an Indonesian national curriculum school, its linguistic ecology demonstrates diaspora students with trilingualism.

The original study population consisted of 35 Grade 11 senior high school students at the institution. The participants' English language proficiency aligns with an approximate upper-intermediate level. This is objectively reflected by their academic grade level, their years of formal English instruction, and their demonstrated capacity to fulfill the Indonesian National Curriculum requirements for constructing complex academic texts, such as analytical exposition essays. Participants were then selected using a detailed purposive

sampling method [29] based on three inclusion conditions: (1) active involvement in the school's English academic writing tasks, (2) active users of generative AI-assisted writing tools (e.g., ChatGPT, Gemini, or QuillBot), and (3) identified as Indonesian diaspora who actively engage in complex, everyday translanguageing.

This method of selection resulted in 7 participants. The sample size is justified through the concept of “information power” [30]. This concept focuses on the relevance and density of the participants, rather than the sample size. After initial screening (based on preliminary classroom observations and informal conversations) to examine participants' active AI engagement and translanguageing, the researchers selected these 7 participants. They displayed the most sophisticated and important AI negotiation experiences. As the researchers focused on this informative group, multiple and deep analyses could be undertaken on the initial prompts, AI outputs, and final essays, along with a series of prolonged interviews. Data collection and analysis continued until the analysts reached thematic saturation—defined as the point at which no additional codes or distinct patterns regarding algorithmic resistance and identity negotiation could be identified in the interview transcripts and textual artifacts.

The sample consisted of five females and two males, aged 16 to 18. Long-term stays of 3 to 10 years in Malaysia have enabled them to formulate a strong and flexible multilingual language system. They are known to participate in translanguageing and move between Indonesian, Malay, and English contextually, depending on the audience being addressed. This flexible adaptation of the language system strengthens the multilingual cognitive system they use when interacting with monolingual AI systems. Moreover, they possess considerable experience with generative AI. They are beyond the level of novice users and often integrate AI into their writing on a weekly, or even daily, basis. Their demographic and behavioral data have been summarized in Table 1.

Table 1. Participant Demographic Profiles and AI Utilization

Participant	Gender	Age	Years in Malaysia	Linguistic Repertoire	Primary AI Tools Used	AI Usage Frequency
P1	Male	17	5	Trilingual	Gemini, Grammarly	Daily / Every task
P2	Female	16	3	Trilingual	ChatGPT	5-6 times/week
P3	Female	18	8	Trilingual	ChatGPT	Daily / Every task
P4	Female	17	4	Trilingual	ChatGPT, Quillbot	4-5 times/week
P5	Male	16	6	Trilingual	ChatGPT, Grammarly	Daily / Every task
P6	Female	17	10	Trilingual	ChatGPT	5-6 times/week
P7	Female	18	7	Trilingual	ChatGPT, Grammarly	Daily / Every task

In qualitative research, case studies of this nature and information density are considered methodologically adequate to provide profound insights into the participants' digital agency.

2.3 Data Collection

To ensure rigor in our analysis and capture the synthesized multidimensional concept of digital agency within the context of the target diaspora, data collection relied on a

triangulated approach. Accordingly, the primary data collection instruments in this research were the Document Analysis Protocol and the Semi-Structured Interview Guide. The construction of these instruments relied heavily on the research's three-dimensional theoretical framework. The Document Analysis Protocol was designed to operationalize the technical dimension of digital agency [19] through the participant's adoption, adaptation, and manual manipulation of a given text. The Semi-Structured Interview Guide was designed to address the cognitive dimension of agency [19], L2 digital Identities [20], and the sustaining of an author's identity [21]. The researcher, by intentionally applying these particular dimensions to the instruments, ensured that the primary concern of the data collection was the negotiation of digital agency and identity, as opposed to the assessment of the linguistic quality or the final product of the participants' written work.

To ensure content validity, the researchers conducted an exhaustive expert validation of both instruments before data collection. A specialist from the English Language Education Department of the Faculty of Education and Teacher Training (FITK) conducted the validation. The specialist evaluated the clarity and pertinence of the instructions and questions within both the diaspora sociolinguistic context and the research questions. Based on the specialist's recommendations, the researcher made multiple changes to the interview questions to prompt participants to reflect on their relationship with algorithms.

Data collection was done in two phases after obtaining ethical approval and the required informed consent. The researcher was the primary human research instrument, as suggested by Creswell and Poth [27], for both phases of the research. The first phase was the document analysis of the technical components of digital agency. The researcher used an ESL (English as a Second Language) task and asked participants to write an analysis of an expository essay on "Navigating Identities: The Challenges and Benefits of Being an Indonesian Diaspora Student in Malaysia." This writing task helped participants articulate their individual writing style in resisting the AI writing paradigm.

The completed tasks included three specific text versions from each participant: (1) the original prompt they provided to the AI, (2) any AI output along with AI-provided comments, and (3) the participant's final essay. The analysis focused on AI adoption, the participant's manual edits, and the norm of writing in multiple languages.

Stimulated recall interviews were used in Phase II to investigate cognitive dimensions of agency. The semi-structured interview the researchers developed included eight questions focusing on participants' cognitive reasoning, algorithmic resistance, and emotional conflicts in editing AI outputs. Each face-to-face interview lasted approximately 45 minutes. To support translanguaging, the researchers used a bilingual interview style (Indonesian and Malay, with English as needed). All interviews were recorded in audio format, and the researchers created verbatim transcripts. To enhance the trustworthiness and credibility of the data, the researcher performed source triangulation (cross-verification of document artifacts with interview transcripts) and member checking, in which participants reviewed the transcribed interviews to confirm the accuracy of what they had communicated.

2.4 Data Analysis

For analyzing both ESL writing artifacts and interview transcripts, the study used triangulation data analysis collaboratively and iteratively. As for the data analysis, the study synthesized a three-part framework, which offers structure for Passey et al.'s [19] technical and cognitive dimensions, the L2 digital identities of Han and Reinhardt [20], and Hyland's [21] Authorial identity, and was employed to guide the analysis of the collected data.

The first step was to conduct a comparative document analysis of each of the three textual iterations for each participant. The researcher focused the analysis on the digital agency framework (rather than on the participants' language proficiency or the end product of the writing). Therefore, the researcher was not concerned with the essays' grammaticality. The analysis, in turn, focused on the technical dimension of digital agency and involved identifying and coding instances of adopting, adapting, and resisting the involved algorithms.

The next step involved the verbatim transcription of the audio-recorded stimulated recall interviews. Given the volume of qualitative data resulting from the interviews, the six-phase Thematic Analysis devised by Braun and Clarke [31] was used to analyze the data. This particular approach was chosen for its flexibility and was used to combine both deductive and inductive analyses. The framework provided structure for the analysis, while its flexibility helped identify and capture emerging nuances of translanguaging. Table 2 explains the operationalization of the phases of Thematic Analysis in this study.

Table 2. Operationalization of Thematic Analysis (Adapted from Braun & Clarke, 2006)

Phase	Analytical Process in the Present Study
1. Familiarizing with the data	Reading the bilingual interview transcripts multiple times and cross-referencing them with the students' three text iterations to gain a comprehensive understanding of the data context.
2. Generating initial codes	Highlighting and tagging meaningful statements related to how students instructed the AI, evaluated the output, and manually edited the text (e.g., <i>rejecting formal vocabulary, preserving local terms</i>).
3. Searching for themes	Grouping the initial codes into broader potential patterns aligned with the research questions (e.g., utilizing AI as a structural scaffold, rejecting algorithmic homogenization).
4. Reviewing themes	Cross-checking the mapped themes against the theoretical framework [19], [21] to ensure they accurately represent digital agency and authorial identity.
5. Defining and naming themes	Refining the essence of each theme to construct clear, analytical narratives (e.g., defining "Algorithmic Resistance" as an active defense mechanism).
6. Producing the report	Synthesizing the finalized themes into a cohesive academic narrative, supported by compelling interview quotes and textual evidence from the participants.

During the coding phase, the analysis specifically targeted latent meanings to uncover how the students cognitively evaluated AI feedback and how they actively defended their diaspora narratives and authorial voices against algorithmic homogenization.

2.5 Trustworthiness and Ethical Considerations

This study establishes trustworthiness in the qualitative approach through the fundamental criteria of credibility, transferability, and dependability. For credibility, the study placed strong emphasis on triangulation of sources, using stimulated recall interviews to compare and contrast prompts and text documents (AI-generated and final). In addition,

participant validation was methodically applied, meaning participants were given the transcribed interviews to confirm whether what they said was accurate and whether it fully represented what they intended to say. To support transferability, we provided a thorough “thick description” of each participant’s multilingual diaspora context. To ensure dependability, we provided a detailed six-phase outline of the thematic analysis.

Regarding ethics, the procedures described in this study followed established guidelines for conducting research ethically. After ethics approval, informed consent was obtained before the study began. Because participants were high school students, we took additional care to ensure fully informed consent. Complete anonymity of participants was ensured by removing any identifying information and assigning alphanumeric pseudonyms (P1 to P7) to participants. Participation was voluntary, and participants were informed that they could withdraw at any time without consequence. All collected data were used for study-related purposes and stored to maintain participants’ privacy.

3. RESULTS AND DISCUSSION

3.1 Results

This section outlines the qualitative findings from the thematic analysis of the document artifacts and stimulated recall interviews on seven Indonesian diaspora participants. The findings are organized around three themes directly related to the research questions: students’ strategic use of AI during the writing process; the use of algorithmic resistance to safeguard their identity as authors; and the perceived tensions that occur during the writing process. Some of the participants’ expressed opinions are presented to support the findings.

3.1.1 Positioning AI as a Scaffolding Tool, not a Replacement Writer

The research findings show that diaspora students deliberately limited AI’s generative authority while writing their first drafts. Most students did not consider AI as a replacement for their writing. Instead, they viewed AI as a scaffolding tool that supports understanding of the structure of analytical exposition texts, grammar checks, or lexical consultation. The students’ control over the machine evidenced their digital agency and ability to formulate working boundaries.

The phenomenon of using AI as an academic structural scaffold is evident in the writing process of Participant 1 (P1). P1’s writing task document shows that the first instruction given to the machine was not a command to generate an essay instantly, but rather a conceptual question: “Whats is an Analytical Exposition Essay”. P1 chose to understand the text genre first before expressing personal ideas. In the interview session, P1 affirmed the decision not to rely on AI as an automatic text generator:

“I asked first what this [analytical exposition] is... it provides structure and is easy to understand... I don’t really use the AI to generate directly, rather the AI is for suggestions... I try to minimize the use of AI. Because I... don’t really like relying on AI.” (Interview Transcript, P1)

Besides acting as a structural scaffold, students also used AI purely for editorial needs, as demonstrated by Participant 2 (P2). In her task document, P2 drafted a very long initial text containing her personal reality as a diaspora. Instead of asking for new ideas, she only restricted the AI to adjust the word count with the instruction: “I want to write an analytical exposition in the format of an essay that consists of 4 paragraphs and approximately 350-500 words...”. P2’s technical agency was driven by a high degree of skepticism toward the reliability of the algorithm’s information, which she expressed during the interview:

“I do have a bit of a trust issue with AI, because there are many statistics showing that AI is wrong like 50% of the time... [ChatGPT was used] not for grammar, but because the paragraph was too long, so I asked ChatGPT to shorten it.” (Interview Transcript, P2)

A different strategy that still exhibits a measured pattern of delegation was found in Participant 3 (P3). Feeling inexperienced in writing academic essays at the high school level, P3 deliberately provided a short, zero-context prompt: “Make an analytical exposition essay expressing personal argument and perspective. Approximately 400 words. Write on the following theme...”. This step was taken purely to obtain a blueprint or initial foundation for the text. Although she relied on AI to provide the formal structure (estimating a 55% AI contribution), she retained control over the substance of the main ideas. P3 explained her motivation:

“I don’t have the ability to write an essay. Yeah, to the point that I have no experience and really have to rely [on AI for structure]... But mostly I rely on AI to see which parts I can delete, and which parts I can add... well, that is truly from my own ideas.” (Interview Transcript, P3)

Finally, the use of AI as a limited conceptual consultation tool is reflected in the data of Participant 4 (P4). P4’s prompt document reveals the use of ChatGPT to explore appropriate socio-cultural terms to describe her background of growing up abroad, asking: “what do you call it when you’re trying to say you come from a global background...”. P4 assertively limited the machine’s role so it would not dictate her entire essay:

“Uh, I only used ChatGPT. And also, that was only for like basic questions. When I write, I usually don’t really use AI heavily. At most, it’s just Googling how do you spell this word or what’s another term for this word...” (Interview Transcript, P4)

Taken together, the data from this initial writing phase confirm that these students possess adequate digital agency to strategically place AI in a supporting role—as a structural guide, text length editor, or lexical dictionary—while maintaining their authorial ownership over the manuscript.

3.1.2 Resisting the “Machine Voice” to Protect Authorial Identity

The next phase of data analysis indicates students opposed the system’s more nuanced AI suggestions (algorithmic resistance). When the AI attempted to simplify, generalize, or sanitize students’ personal narratives and to repurpose them in an overly formal and impersonal style, students chose to intervene with digital agency. Students showed resistance by opposing suggested text revisions, preserving local sociolinguistic elements, and removing illogical distortions of the AI that contradicted the empirical lived experiences of the students who are part of the diaspora.

A form of open resistance against the machine’s structural censorship is highly evident in the final manuscript of Participant 1 (P1). The process document indicates that Gemini explicitly identified P1’s personal narrative as a non-academic element and issued a warning to shift the text’s focus: “focus more on the topic and less on your dad’s specific job”. Despite receiving such a directive from the machine, P1 consciously ignored the restriction and retained the sentence: “Thanks to my father’s career as an I.T. professional...” in the first paragraph of his final essay. During the interview session, P1 explained the reasoning behind his decision to resist the machine’s corrective authority:

“I feel like it’s very important to include my father’s career as an IT professional. Why? Because that’s the reason why I’m here in the first place.” (Interview Transcript, P1)

Participant 2 (P2) exhibited resistance against perspective homogenization. When P2 asked ChatGPT for a summary of her initial draft, the system rendered a first-person account in a generalized third-person account by rephrasing her experience as “Indonesian students may find it difficult...”. P2 was not satisfied with the response and believed that the version presented by the machine was a loss of her personal voice. P2 then revised the text and gave an account of her experience and wrote about her dependence on her parents and her social adjustment in Malaysia. P2 explained that this manual step was taken due to the ontological limitations of the AI itself:

“I changed it to be more personal... Yes, manually. Because AI, again, has no feelings, so it is indeed difficult to make them not sound rigid.” (Interview Transcript, P2)

Participant 5 (P5) displayed an exceptionally distinctive type of resistance. At the local level, P5 opposed the AI’s process of language assimilation by maintaining a sociolinguistic term (i.e., translanguaging practice). He described a cultural phenomenon in his rough draft whereby Indonesian students’ over-friendliness is often misperceived in Malaysia as “sokab” (sok akrab). In this instance, the AI recognized that the word is not in the English lexicon and removed it by substituting a lengthy definition. In his final essay, P5 reinserted the term in quotation marks (“sokab”). P5 asserted that he was unwilling to sacrifice the depth of cultural meaning merely to conform to the machine’s universal vocabulary standards:

“I didn’t let the AI change ‘sokab’... Because in my opinion, there is no English word that has such a deep meaning like ‘sokab’.” (Interview Transcript, P5)

Participant 6’s (P6) writing strategy also suggested lessening the mechanical impression. In this case, P6 used AI to help him look for more advanced vocabulary. P6 recognized that the text structure ChatGPT produced was basic and lacked creativity. To solve this issue, P6 added references to popular culture and some informal language to his essay draft, thus restoring human emotion to his writing:

“So that when it is read, it doesn’t look very rigid and it’s not too obvious whether this is like AI or not... AI writing mostly eliminates feeling and emotion.” (Interview Transcript, P6).

Participant 3 (P3) exhibited radical substantive resistance through her surgical editing technique. P3’s prompt lacked context. Consequently, the AI provided a response that associated the school in Malaysia with the “quality of education and access to diverse academic resources.” P3 scrutinized that response, explained that it completely missed the point of her experience, and deleted the AI-generated response in its entirety. Furthermore, P3 added her own text to the response to build the argument of sociological adaptation in a multicultural society:

“Mostly I rely on AI to see which parts I can delete, and which parts I can add... well, that is truly from my own ideas. I didn’t look at Google; I didn’t look at any cheat sheets.” (Interview Transcript, P3)

Data in this sub-section illustrates that, after AI, the post-processing phase is marked by a struggle for agency. In particular, Diaspora students don’t sit back and take the output. Instead, they are editors and engage in filtering, deleting, and restructuring the AI output to make sure that their output is consistent with lived experiences and to maintain their identity within the framework of algorithmic homogenization.

3.1.3 Balancing Academic Formalism and Emotional Authenticity

This study focuses on student reports of the tensions between expected academic formalism and the need for emotional sincerity. The data show the perceived tension of second language (L2) learners. While in need of scaffolded AI output to achieve good school assessments, they do not want to compromise emotional sincerity and ‘soul’ as diaspora children. This trade-off has led them to modify the output to meet both demands selectively.

Participant 7 (P7) has developed a creative process that balances formal and informal increments. P7 said she used the AI tool to organize ideas and draft spelling, but she edited heavily after realizing the AI drafts were far too impersonal and objective. In the interview, she said that emotional honesty comprises her writing:

“Some of them were rigid. So, I revise by myself to make it like more honest and personal... yes, edited, so it becomes more emotional and honest... The rest is through my ideas.” (Interview Transcript, P7)

Participant 4 (P4) employed a somewhat similar selective strategy when reconciling the machine’s syntactic sophistication with the breadth of her personal history. P4 carefully selected AI-generated text, keeping it only when the AI offered a sentence with better academic scaffolding. In contrast, when the machine’s output was overly formal and stripped her experience of the personal dimension—especially her account of the Cultural Adaptation when she first encountered Pancasila, the National Flag, and the National Anthem at the targeted institution—she rejected the output without hesitation. P4 described this compromise of text in the interview:

“I would probably just keep like the, for example, the sentences that are very well-phrased, like the sentence is better than what I wrote. I would usually keep that in the final essay. But if it’s rigid and I want it to be personal, I’ll just not use it... it’s because I wanted it to be more personal and more about my background.” (Interview Transcript, P4)

Participant 3 (P3) exhibits a notable example of blending AI’s rigid structures with the expression of emotional vulnerability. P3 (a diaspora student who has resided in Malaysia for eight years) was fully aware of her AI dependency (it was 55% of her final document), and therefore, she considered herself ‘under construction’ with respect to her emotional expression. P3 did not excuse the AI from the task of expressing her emotional struggles as a diaspora child. P3’s final document captured her emotional struggles with alienation as she described, “Being away from familiar surroundings often led to moments of loneliness and an emotional struggle that sometimes affected my focus and motivation...” Inter and intra-text data P3 collected during the interview confirmed that the emotionally loaded section of the final document was beyond machine interference:

“Mostly I rely on AI to see which parts I can delete, and which parts I can add. Now, the 45 [percent] is purely from... truly from my own ideas. I didn’t look at Google; I didn’t look at any cheat sheets.” (Interview Transcript, P3)

In contrast to peers who maintained equilibrium, the data from Participant 5 (P5) provides a profound understanding of the “formal trap” and reveals a critical theoretical nuance: the variable and situational nature of digital agency. As explained in Section 3.1.2, P5 demonstrated strong resistance against algorithmic bias by preserving “*sokab*” within their answer. On the other hand, P5 understood the limits of their formal English proficiency and used AI to impose an academic voice. He accepted that his final essay’s overall tone would be largely controlled by the machine’s style to satisfy institutional grading standards. This is not a contradiction, but rather compelling evidence that digital agency is not uniformly strong. A learner may exercise fierce agency in one linguistic dimension

(preserving isolated cultural markers) while consciously surrendering control in another (academic formalism). P5 provided a very honest confession regarding this situational compromise:

“Umm, to be honest, in my opinion, yes, my essay represents the language of AI more than my own way of speaking. Umm, it’s just that sometimes I feel I am still lacking in formal language... So I feel dependent on AI... But maybe that makes it too rigid.”
(Interview Transcript, P5)

The findings presented in section 3.1.3 illustrate that the digital space of AI-based essay writing creates a complex situation for negotiating one’s digital identity. Some participants managed to cultivate their digital agency and adapted the machine’s formal academic structure to their emotional truth. Others had to silence their individual voices and fell in line with the organizational convention expectation.

The main findings illustrate the negotiation between the adoption of the available L2 writing technology and the maintenance of one’s identity. These participants from the L2 writing diaspora did not adopt the technology in a passive manner. They restricted the use of AI to a supportive scaffolding position and defended their cultural narratives from AI-generated norms by manual text editing. They also engaged in a complex negotiation to balance the requirements of institutional academic structure and personal truth. These core findings serve as the empirical foundation for the theoretical and practical interpretations elaborated in the following section.

3.2 Discussion

When studying Indonesian diaspora students’ use of AI writing tools, it appears they see themselves as active agents. In this context, they used AI tools for outlines and lexical feedback, but these learners regarded the AI writing tools as teaching aids with which they were free to collaborate. Additionally, using AI tools to control their digital and authorial identity shows that the students engage in conscious algorithmic resistance to ensure that their cultural identity and personal narratives are protected from the AI’s tendency to erase identity and experiences. The students face a profound perceived tension due to the competing expectations of their institutions, which require a higher level of academic writing, and the emotional and personal experiences that they wish to express. Consequently, diaspora multilingual secondary-school ESL students are obligated to challenge the limits of digital identity to safeguard their voices within a culturally homogeneous setting. The findings point to the fact that AI-assisted writing should not be understood merely as a technological process of improving linguistic accuracy. More importantly, it is necessary to integrate critical algorithmic literacy into the teaching of writing using AI tools, transforming the AI writing tool from a unit authoring and voice-homogenizing instrument into a tool that supports and collaborates with students to retain agency over their voices, identities, and authorial decisions.

3.2.1 Reconceptualizing AI as a Collaborative Scaffold in L2 Contexts

Students interacting with AI within a well-defined writing process demonstrate a regulated use of AI. Our data show that students explicitly dismissed AI as a writing tool, instead using it as an idea generator, a structural planner, and a lexical resource. This reflects the cognitive and technical dimensions of digital agency as described by Passey et al. [19]. The students' ability to create boundary-setting prompts also shows an evaluation of the machine's capabilities and its limitations.

To align these findings with current educational technologies, the Su and Yang [32] "Human-in-the-Loop" (HITL) framework for generative AI integration is well supported by our findings. According to Su and Yang, true AI-supported learning is achieved only when human learners control higher-order thinking, ensuring that learners perform the primary cognitive tasks. Also, the positioning of ESL learners as active managers of AI technologies resonates with Kohnke et al. [33], who argue that the primary goal of AI integration in language learning is to promote students' transition from passive recipients of text to active evaluators. The diaspora students' use of zero-context prompts to request a structural plan in order to leave the framing of ideas to them is an example of what Yan [34] describes, where L2 writers utilize AI in the context of pedagogical scaffolding and writing in order to maintain control of their ideas.

3.2.2 Algorithmic Resistance and the Defense of Diaspora Authorial Identity

A pivotal discovery in this study is the students' active resistance against the AI's tendency to sanitize their personal narratives and cultural nuances. When the algorithm attempted to erase specific sociolinguistic markers—such as the diaspora translanguaging practice of using the term "sokab"—the students intervened through surgical editing and manual overhauls. This active defense mechanism strongly validates Hyland's [21] foundational construct of authorial identity, which posits that academic writing is not merely an objective transfer of information, but a deeply personal act of identity representation and projection.

The resistance to sterile and standardized English by AI exhibited by diaspora students provides evidence to support claims made in recent critical studies on AI. Tate et al. [35] describe the homogenization of student voices through the "algorithmic flattening" of culturally rich expressions by generative AI, which leads to the use of a bland, universally acceptable dialect. We argue that these students' multilingual repertoire, along with their everyday practice of translanguaging, contributed to the development of advanced sociolinguistic awareness. The students used this awareness to identify and appropriately challenge the algorithm's monolingual bias easily. The students' reinstatement of pop-culture references through local sociolinguistic expressions and vernacular illustrates their active resistance to flattening. This resistance also embodies the critical control and ethical responsibility that Kasneci et al. [36] discuss. The students demonstrated an understanding that over-reliance on AI dismisses the rich and nuanced experiences of their lives, which provided them with the motivation to challenge the AI's hyper-correcting tendency to silence their authorial voice.

3.2.3 The Paradox of L2 Digital Identities: Academic Formalism vs. Emotional Authenticity

Our results show significant internal conflict among students writing to meet requirement-specific components of their institutions' Advanced Academic English and writing to represent their emotional truths in sharing the experiences of their diasporas. To understand the conflict, one must understand the intersecting forces. The institution demands linguistic and stylistic correctness in writing and rigid objectivity in structure. The AI can fulfill the institution's requirements by developing a strong, unified standard of academic voice. In contrast to the institution's writing requirements, student writing must provide emotional authenticity and reflect the voice and truth of the lived diaspora. This is their authorial voice, or their ownership of cultural truths and narratives with their personal ideas. Han and Reinhardt [20] provide the L2 digital identities model, which posits that while digital identity construction and expression in the context of L2 digital language learning may provide some autonomy, this construction is largely constrained by external academic demands.

The findings indicate this conflict in students' textual outcomes. This leads to a substantial theoretical contribution. Specifically, students' digital agency with respect to AI-assisted L2 writing is more fluid compared to whether this agency is fixed. Beyond the pedagogical concern of merely "resisting AI," the data gives an accurate representation of a much more involved situation. Students may allow the writing assistant to suggest texts with a certain level of linguistic and stylistic form while substantively retaining control of their personal narratives, cultural references, and ideas. Citing Barrot [37], the use of ChatGPT in second language writing offers a greater degree of syntactic complexity, but it risks diminishing the writer's voice if not actively managed. Those who navigated this negotiated agency successfully merged the AI's academic structures with their emotional authenticity. However, others fell into the "formal trap," experiencing an emotional trade-off where they sacrificed their individual voices to meet institutional grading expectations [38]. Ultimately, L2 writers continually negotiate how much they compromise their emotional honesty for algorithmic approval.

This study contributes to the literature by integrating theories of digital agency, L2 digital identity, and the preservation of authorial identity in the context of AI-assisted ESL writing. These findings suggest that ESL teachers in diaspora and multicultural areas should go beyond grammar and syntax instruction and teach students what academics call "critical algorithmic literacy." Essentially, this technique encourages students to learn how to manipulate systems in coordination with human-AI collaborations. Instead of letting machines produce texts for them, students must be able to critically assess suggestions made by AI and revise culturally insensitive versions made by AI that distort and sanitize their narratives or histories. This approach should also help diaspora learners defend and sustain their multilingual and translanguage perspectives and practices against the machine's monolingual bias. Finally, fostering this literacy requires teaching students to transparently disclose their AI-assisted practices while retaining absolute responsibility for their final textual decisions. By implementing these strategies, teachers can empower L2 writers to

utilize AI as a collaborative scaffold without relinquishing their socio-cultural identity to standardized machine norms.

Despite the contributions of this study, some limitations are also acknowledged. Because generative AI develops so quickly, this study's findings may become less relevant as learners develop new ways of interacting with AI. In addition, this study focused only on the Indonesian diaspora; therefore, the findings may not be valid for learners from other linguistic, cultural, or educational backgrounds. For this reason, future researchers could examine how L2 learners from different cultural backgrounds engage digital agency with newly developed AI, or how algorithmic resistance takes shape over time using a longitudinal framework.

4. CONCLUSION

This study addresses how Indonesian diaspora students engage with and navigate digital agency and preserve authorial identity when using generative AI for ESL writing. Empirically, the findings reveal a heterogeneous landscape of AI adoption: the students generally resisted positioning AI as the sole or dominant author, although the degree of reliance varied across individuals. While navigating the tension between institutional formalism and emotional authenticity, they show varied forms of engagement with AI; some students actively leveraged their multilingual backgrounds to resist algorithmic homogenization, whereas others exhibited situational compromises. Theoretically, this study suggests that digital agency in AI-assisted L2 writing operates as a negotiated, context-dependent process in which learners selectively delegate linguistic tasks while retaining, modifying, or occasionally surrendering aspects of authorial control.

Practically, these findings underscore the need for ESL educators to integrate critical algorithmic literacy into writing instruction, equipping students to evaluate machine outputs and collaborate safely without losing their unique voices. Despite its contributions, this study's scope is primarily limited to a specific diaspora community within a single educational context. To build upon this foundation, future research recommendations include conducting longitudinal studies to observe how algorithmic resistance evolves over time, performing cross-cultural comparisons among diverse multilingual populations, and designing studies that compare the cognitive impacts of different generative AI systems.

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