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Meaning Negotiation in AI-Supported Collaborative Writing: Student Interaction and Perspectives in an EFL Classroom

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Abstract. This qualitative study examines meaning negotiation in AI-supported collaborative writing in an EFL classroom, using local wisdom from Bangka Belitung as the writing context. The study observed six groups and conducted semi-structured interviews with six students. Classroom observations documented idea sharing, language discussions, and responses to AI suggestions, while interviews explored students' experiences and perspectives. Thematic analysis identified three themes: interaction and meaning negotiation, AI use, and students' perspectives. Students discussed, revised, and sometimes rejected AI suggestions based on group decisions and contextual relevance, demonstrating their active role in shaping the final texts.

Keywords: Meaning Negotiation; Collaborative Writing; Artificial Intelligence; Student Perspectives.

1. Introduction

Collaborative writing allows learners to develop written text by working together. This is accomplished through collaboration, shared responsibility, and cooperative decision-making. Collaborative writing occurs in an EFL classroom environment where learners collaborate to exchange ideas about language options, give each other constructive criticism/feedback on each other's work, and then revise their work. Research shows that collaborative writing supports second language acquisition (SLA) as long as learners engage in the writing process collaboratively (Dobao, 2020; Elabdali, 2020). Evidence also suggests that technology-based collaborative writing can positively affect learners' ability to write effectively. The effectiveness of technology-based collaborative writing depends on how well learners participate and how the activity is structured (Zhang & Zou, 2021). Collaborative writing therefore means more than just having two or more people write together to produce one document. It also creates opportunities for learners to negotiate ideas and construct meaning through peer interaction (Pardede et al., 2024).

Meaning negotiation is an important part of collaborative writing because students need to clarify ideas, respond to different interpretations, and agree on what they intend to communicate. Previous studies have examined negotiation strategies such as clarification requests, confirmation checks, and comprehension checks in second language interaction (Roohani & Esmaeili, 2022; Shibata, 2022). Other research has shown that learners use translanguaging and multimodal resources to facilitate mutual understanding (Canals, 2021). In collaborative writing, negotiation may also involve disagreements about content, organization, and language choices. For example, Veniati et al. (2023) examined conflict in collaborative writing among university EFL students and

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identified cognitive, socio-emotional, and process-related conflicts. Their findings illustrate how differences among group members can become part of the collaborative writing process. From a different perspective, Veniati et al. (2025) investigated code-mixing in interactions between homogeneous pairs during collaborative writing. Their study highlights code-mixing as a linguistic feature of students' interaction while working on a shared text. In addition, Cao et al. (2025) demonstrated that learners negotiate different aspects of a text during collaborative writing. Taken together, these studies show that collaborative writing involves both negotiating ideas and using linguistic resources to support interaction and text development.

The cultural context of a writing activity may also influence what learners negotiate and how they construct meaning. Local wisdom can provide a familiar context that connects English writing with students' lived experiences and cultural knowledge. Rather than serving only as a writing topic, it can become a resource for meaning negotiation. Students will need to explain cultural practices, interpret local values, and determine how to represent culturally specific ideas in English. This is especially critical when no direct translations of local ideas exist in the target language. Students must therefore develop ways to explain and represent local ideas to communicate the intended message. Research on local knowledge in EFL writing has shown that local knowledge can connect writing development with both cultural identity and sustainability (Nur et al., 2026). The Nganggung tradition in Bangka Belitung offers a relevant cultural setting for this process. The Nganggung tradition allows students to draw on shared understandings of collaborative activity, cooperation, and social value as they create their own writing. However, to express these cultural meanings in English, students will need to go beyond direct translation. Students will need to consider how to explain certain activities and values to readers who do not share the same cultural background.

Additionally, students will need to assess whether AI-generated suggestions effectively express the intended cultural meanings. Discussing both linguistic choices and cultural interpretations allows students to negotiate these aspects. Thus, local knowledge serves as a cultural resource that influences how students construct, communicate, and negotiate meaning collectively, rather than solely as writing content.

Generative AI adds a new perspective to collaborative writing. AI-based writing tools, like ChatGPT, offer suggestions for vocabulary, grammar, sentence structure, and organizing written materials. Researchers have examined how English as a Foreign Language (EFL) students view AI-supported writing and what they experience when using it, particularly its ability to help revise written material and provide feedback (Meniado et al., 2024; Polakova & Ivenz, 2024; Teng, 2024). Additionally, Generative AI has been considered as a possible peer feedback partner during collaborative writing exercises (Wang & Zhang, 2024). Although Generative AI may suggest improvements to students' writing, it is important to remember that AI cannot understand what a student intends to say or the cultural background in which the student writes. Therefore, students must assess whether the AI's suggestions are suitable before adding them to their written pieces. Previous research has emphasized the importance of learner agency, self-regulation, and teacher guidance in the use of AI for EFL writing (Han & Li, 2024; Wang, 2024). Similarly, Michel et al. (2025) showed that collaborative writing involving generative AI can involve deliberation and revision as learners consider how to use AI-generated content. These findings indicate that AI-supported writing needs to be examined not only in terms of the resulting text but also through the interactions and decisions involved in using AI suggestions.

Despite growing research on collaborative writing, meaning negotiation, and AI-supported language learning, their interaction remains insufficiently understood. Previous studies have

examined meaning negotiation in oral interaction (Canals, 2021; Roohani, A., & Esmaeili, 2022; Shibata, 2022), conflict and linguistic practices in collaborative writing (Cao et al., 2025; Pardede et al., 2024; Veniati et al., 2025; Veniati et al., 2023), and the use of AI for writing feedback and revision (Han & Li, 2024; Michel et al., 2025; Wang & Zhang, 2024). Another issue is that we know very little about how students reach agreement on what they write when they collaborate, using both peer-to-peer interactions and AI-generated ideas as part of the same task. More specifically, we do not know how students work collectively to assess, accept, alter, or reject AI-generated suggestions via group discussions. Additionally, we have limited information about how students' local cultural knowledge influences their agreements and disagreements about using AI-generated suggestions to express culturally relevant concepts in English. What makes this study different from many others is that it investigates how students negotiate meaning when using AI-supported collaborative writing tools and draw on their local cultural knowledge.

Therefore, this research investigates how meaning is negotiated during collaborative writing in an AI-supported environment with a group of English as a Foreign Language (EFL) students at SMAN 1 Sungailiat, Bangka Belitung. A qualitative case study design examined how students shared their thoughts and ideas, clarified cultural and linguistic understandings, debated and discussed AI-generated suggestions, and collectively decided on creating written materials based on local knowledge. In addition to examining the processes involved in creating these written products, the study examined students' perceptions and experiences of negotiating meaning and using AI in collaborative writing. To address these issues, the study answered two primary research questions: How does meaning negotiation occur during collaborative writing in an AI-supported EFL classroom? How do students perceive and experience meaning negotiation and AI use during collaborative writing?

2. Method

This study used a qualitative case study methodology to understand how students negotiated meaning in AI-assisted collaborative writing tasks that incorporated local wisdom. The research took place at SMAN 1 Sungailiat, Bangka Belitung, Indonesia, and included 28 Grade XI students. These students were organized into six groups for the collaborative writing tasks. The research took place over several months, and the classroom activity occurred on two different days. This research site allowed us to observe students' interactions and experiences as they worked collaboratively to produce English written materials using AI-based technology and their local cultural knowledge.

At the start of the learning activities, the English teacher used images of the Nganggung tradition and gave a short description to activate students' prior knowledge. After activating students' prior knowledge, they shared their thoughts and experiences about the tradition. Then, students began creating an outline for their English writing. During the writing process, the students used ChatGPT and Gemini as additional resources to support their writing. The students used these resources to gather information, develop ideas, find the right English words to express their thoughts, understand word meanings, and discover different ways to express their ideas. Additionally, students used artificial intelligence (AI) to address any language issues that arose during the writing process, especially when translating culturally specific terms from Indonesian into English. Although students could use AI-generated suggestions, they were not required to accept them as the definitive answer. Rather, the students were urged to discuss and evaluate the suggestions with their group mates before deciding whether to accept, modify, or reject them. Finally, the teacher supported the learning activities by giving instructions and guidance as needed, while allowing the students to work collaboratively to develop and negotiate their ideas.

Data were collected from two sources: classroom observation and individual semi-structured interviews. Classroom observation took place on both days of the classroom implementation. During the two days of classroom observation, the researcher observed the entire learning process, including student-to-student interaction, the teacher's role in supporting the activity, and students' use of AI tools. The researcher closely observed how students shared ideas, asked questions, clarified terms, discussed vocabulary and language use, assessed AI-generated responses, and made decisions while creating their writing outlines. In addition, the researcher noted how the English teacher introduced the local wisdom topic, provided instructions to the students, and assisted them if they experienced difficulty. The researcher served as a non-participant observer and recorded the interactions and learning processes during each of the two observation periods. At the end of the classroom implementation period, the researcher interviewed six students individually using semi-structured questions. These interviews allowed the researcher to gather information about students' experiences with collaborative writing, their involvement in making sense of things through negotiation, and their use of AI tools in completing the writing tasks. Specifically, the researcher focused on how students described assessing AI-generated responses and incorporating local cultural elements into their English writing. To preserve the identities of the interview participants, each student was assigned a code S1-S6.

The collected observation records and interview transcripts were analyzed using thematic analysis following the six-phase framework proposed by Braun & Clarke (2006). The analysis began with familiarization, in which the researchers read and reviewed the observation records and interview transcripts to develop an overall understanding of the data. The researchers then generated initial codes by identifying relevant segments related to students' interactions, negotiation of meaning, use of AI tools, and engagement with local wisdom during collaborative writing. In the third phase, the researchers grouped related codes into potential themes based on recurring patterns and meaningful connections across the dataset. The researchers then reviewed these potential themes by checking their consistency with the coded extracts and the dataset as a whole. The researchers then refined and defined the themes by clarifying each theme's central focus in relation to the research questions. Finally, the researchers organized the findings into an analytical narrative supported by relevant extracts from the observation records and student interviews. The analysis was conducted iteratively, allowing the researchers to move back and forth between the data, codes, and developing themes throughout the process.

This study used thematic analysis to analyze the observation records and interview transcripts collected during the study. This type of analysis has six steps as outlined by Braun & Clarke (2006). The first step was familiarisation; the researchers read and reviewed the observation records and interview transcripts to gain an overview of the data. After reading the observation records and interview transcripts, the researchers generated initial codes. The researchers developed the initial codes by identifying relevant segments of the observation records and interview transcripts related to students' interactions, how they negotiated meaning, their use of AI tools, and their engagement with local wisdom during collaborative writing. After identifying initial codes, the researchers grouped similar codes to develop potential themes. The researchers identified potential themes through commonalities among the codes and/or meaningful connections between them. Next, the researchers evaluated whether or not the potential themes were consistent with the coded extracts and the dataset as a whole. After evaluating the consistency of the potential themes, the researchers defined and refined the themes. To define and refine the themes, the researchers looked at how each theme related to the research questions. Finally, the researchers presented the findings in an analytical narrative supported by relevant excerpts from the observation records and student

interviews. The researchers analyzed the data iteratively. This allowed the researchers to move back and forth between the data, codes, and emerging themes throughout the analysis process.

Data triangulation strengthens the trustworthiness of the findings. The researchers accomplished data triangulation by comparing classroom observation records with student interview responses. The observations provide insight into student interactions and behaviors during collaborative writing activities. In contrast, the interviews provide additional insight into students' experiences, perspectives, and reasons for making specific choices. For example, the researcher compares students' discussions of vocabulary options and AI-generated suggestions observed during collaborative writing activities with students' explanations of how they evaluated and decided whether to use these suggestions in their writing. Comparing the student's observed practice with the student's described experience allows the researcher to determine whether a relationship exists between what the student does in the classroom and what the student reports experiencing. It also provides an opportunity to identify commonalities and disparities between the two data sets.

In terms of research ethics, SMAN 1 Sungailiat granted permission to conduct the study. To protect students' identities, the research report used participant codes instead of the students' actual names. All information collected during the research process was used for research purposes and to protect participants' confidentiality.

3. Results

The findings are based on classroom observations and interviews with six students, each representing one of the six groups involved in the collaborative writing activities. The analysis focused on how students exchanged ideas, negotiated meaning, and used AI while producing English texts on local wisdom in Bangka Belitung. Three themes emerged from the analysis: (1) collaborative writing as a space for interaction and meaning negotiation, (2) the use of AI in the writing process, and (3) students' perspectives on AI-assisted collaborative writing.

Collaborative Writing as a Space for Interaction and Meaning Negotiation

The findings indicate that collaborative writing extended beyond simply dividing tasks among group members. Students discussed their texts, their knowledge of local traditions, and ways to present this information in English. Through these discussions, they considered which aspects of local traditions were relevant to the writing task and how to explain them to readers unfamiliar with the cultural context.

The discussion of the Nganggung tradition illustrates this process. During the activity, students drew on their existing knowledge of the tradition and shared their understanding with group members. Rather than simply collecting information, they discussed which details were relevant to the text and how to present them. When different opinions emerged, students considered the suggestions and worked toward an agreement on what to include in their writing.

The interviews further illustrated how students handled differences of opinion during collaborative writing. S2 explained that her group combined discussion with voting to determine which ideas were most appropriate:

> "Kita biasanya tuh kalo berbeda pendapat, kita musyawarah sama voting buat nentuin yang mana yang sesuai." (S2)

A slightly different approach was described by S1, who emphasized reaching a compromise through group discussion:

> "Kita biasanya musyawarah bersama terus ambil jalan tengahnya." (S1)

These responses illustrate that students used different strategies to negotiate meaning and reach shared decisions. While S2 described a process involving discussion followed by voting, S1 emphasized finding a middle ground through mutual discussion. Despite these differences, both accounts highlight the importance of considering different perspectives before deciding on the group text's content.

Such exchanges show how students worked together to construct meaning during the writing process. They clarified their ideas, responded to their peers' suggestions, and considered how best to communicate their understanding. Their decisions drew on their knowledge of local traditions and their ability to express that knowledge in English. The shared cultural topic provided a common starting point for discussion, while the writing task encouraged students to make their understanding clear to others.

The collaborative process also involved language decisions. When students struggled to express their ideas in English, they discussed vocabulary choices and considered alternative ways to convey their intended meanings. These interactions brought content development and language learning together. Rather than completing the writing task independently, students worked through uncertainties by sharing suggestions, discussing possible expressions, and deciding collectively how to communicate their ideas.

Another aspect of this process emerged from S6's account of how group discussion was connected to the use of AI. S6 explained that the group discussed their ideas before using AI to summarize information:

"Kita diskusi bersama dulu terus kita gunain AI untuk meringkas." (S6)

This response suggests that group members discussed their ideas before using AI. AI served as an additional resource to summarize information after students discussed their ideas. This illustrates how peer interaction remained part of the writing process, even when technological assistance was introduced.

The interviews with the six students provided further insight into the collaborative process. Their responses highlighted the value of discussion in developing a shared understanding and constructing a group text, although approaches to reaching agreement differed across groups. Classroom observations also showed variation in students' participation. Some students contributed more actively to particular tasks, such as discussing language choices and considering AI-generated suggestions, while others participated less frequently. These observations suggest that group work did not automatically ensure equal participation. The extent to which students engaged in discussions and contributed to shared decisions was an important aspect of the collaborative writing process.

AI Use in the Collaborative Writing Process

AI use emerged as an important part of students' writing activities, particularly when they needed additional information and language support. The interviews revealed several ways in which students incorporated AI into their work, including exploring local cultural information, translating content into English, retrieving information, and generating writing ideas. However, participants' purposes and experiences with AI differed.

For S6, AI was particularly useful for exploring local cultural information and translating it into English. He explained:

"Kita menggunakan AI ini yang pertama tuh buat mendiskusikan budayanya, jadi kita bisa dapat info tentang budaya dari AI. Selain itu, fungsi AI ini juga bisa untuk mentranslate ke Inggris." (S6)

This response indicates that AI served two related purposes: providing information about local culture and helping students express that information in English. Its use was therefore relevant to both understanding the cultural topic and communicating it through the target language.

Similarly, S3 emphasized the usefulness of AI for accessing information more quickly:

"AI ini sangat membantu dalam mencari berbagai informasi jadi informasinya kita dapat lebih cepat." (S3)

Unlike S6, who highlighted cultural information and translation, S3 focused on the speed and convenience of information retrieval. This difference suggests that students used AI based on their specific needs during the writing process.

Nevertheless, students did not always perceive AI-generated suggestions as entirely reliable. S5 expressed a more critical perspective regarding the role of AI in generating writing ideas:

"Idenya dari kita sendiri bukan AI, AI kadang kurang tepat kasih idenya." (S5)

This response highlights S5's preference for developing ideas independently rather than relying on AI-generated suggestions. He also recognized that AI did not always provide appropriate ideas for the writing task. This perspective suggests that, although AI was available as a support tool, students still considered their own ideas important in shaping their writing.

The interviews also revealed differences in how students evaluated AI-generated responses. S1 reported that her group sought supporting evidence before incorporating information into their writing. S2 paid attention to the sources accompanying the information, while S3 focused on selecting relevant points from AI-generated responses. S4 considered AI suggestions in relation to the group's writing needs. S5 explored alternative ideas before deciding which were appropriate, whereas S6 explained that his group adjusted responses considered too lengthy or unsuitable for the writing task.

These accounts suggest that students did not simply accept all AI-generated content. Instead, they considered its relevance, accuracy, and suitability before using it in their texts. However, participants evaluated AI suggestions differently, reflecting different forms of engagement with the technology.

Overall, the findings indicate that AI served several functions in the writing process, ranging from cultural information retrieval and translation to idea development and language support. While some students valued its convenience for accessing information and expressing ideas in English, others emphasized the importance of maintaining ownership of their ideas and critically evaluating AI-generated suggestions. These differences demonstrate that AI functioned as a supporting resource whose usefulness depended on how students interpreted, evaluated, and incorporated its responses into their writing.

Students' Perspectives on AI-Supported Collaborative Writing

The students generally expressed positive views about their experiences with AI-supported collaborative writing. They considered the activities useful because they provided opportunities to work with peers, access information, and develop their understanding of English and local culture. However, their responses also revealed concerns regarding the possible consequences of excessive AI use and the importance of maintaining students' independence in the learning process.

One concern students raised was the possibility of becoming overly dependent on AI. S1 expressed concern that relying on AI for every aspect of learning could become problematic and emphasized the need to limit its use:

"sebenarnya kita khawatir kalo ketergantungan AI, maksudnya kalo apa-apa dari AI semua jadi harus dibatasi juga dengan aman." (S1)

A similar concern was expressed by S6, who focused more specifically on students' critical thinking abilities:

"khawatirnya AI ini bisa bikin kita kurang berpikir kritis." (S6)

These responses indicate that students recognized the potential risks of relying too heavily on AI. While they appreciated the technology's assistance, they also understood the importance of maintaining their own thinking processes. The difference between the two responses is that S1 emphasized limiting AI use, whereas S6 highlighted its possible influence on critical thinking. Together, these perspectives suggest that students viewed AI as a useful learning resource but recognized that its use required appropriate limitations.

Apart from their views on AI, students also reflected on the value of incorporating local wisdom into English writing activities. They saw the cultural topic as an opportunity to become more familiar with local traditions and learn about aspects of Bangka Belitung culture. S5, for example, highlighted the opportunity to learn about lempah kuning through the use of AI:

"dari AI kita bisa mendapatkan pengetahuan dan informasi tentang lempah kuning." (S5)

This response shows how integrating local cultural content gave students opportunities to explore aspects of their regional heritage while engaging in English writing activities. Using lempah kuning as a writing topic also shows how familiar cultural references can become a source of information and learning in the classroom.

Other students also expressed positive views about incorporating local wisdom into English learning. S1 considered including local culture important because some traditions were becoming less familiar to younger generations. S2 viewed the cultural topic as an opportunity to improve her understanding of English. These responses suggest that local wisdom was seen not only as a writing topic but also as a way to connect language learning with students' cultural knowledge.

The students' suggestions for future learning activities further reflected their experiences. S1 and S6 recommended limiting AI use to prevent excessive dependence and maintain students' critical thinking abilities. S2 expressed interest in participating in similar activities more frequently, while S3 suggested incorporating outdoor activities and games. S4 highlighted the need for more time to complete the activities. These suggestions indicate that, although students generally responded positively to the learning experience, they also identified areas for improvement.

Overall, the findings suggest that students perceived AI-supported collaborative writing as a useful learning experience, particularly when technological assistance was combined with culturally relevant content. Nevertheless, their responses also highlight the importance of using AI responsibly, maintaining independent thinking, and giving students opportunities to engage their local cultural knowledge through English writing.

To provide an overview of the findings, Table 1 summarizes the three main themes identified in this study, their corresponding subthemes, and examples of supporting data from classroom observations and individual student interviews.

Table 1. Summary of Themes, Subthemes, and Data Examples

Main Themes	Subthemes	Data Examples
Collaborative Writing as a Space for Interaction and Meaning Negotiation	Exchange of ideas and group decision-making	Students discussed ideas about Nganggung and decided which information to include in their writing. S2 explained: "Kita biasanya tuh kalau berbeda pendapat, kita musyawarah dan voting buat nentuin yang mana yang paling sesuai."

	Negotiating different opinions	Students used discussion and compromise to reach group decisions. S1 stated: "Kita biasanya musyawarah bersama, lalu ambil jalan tengah."
	Collaborative discussion before using AI	S6 described the group's process: "kita diskusi bersama dulu, terus kita pakai AI untuk meringkas."
AI Use in the Collaborative Writing Process	Accessing information and cultural knowledge	S6 explained that AI was used to obtain information about local culture and translate it into English.
	Supporting information retrieval and translation	S3 stated: "AI ini sangat membantu dalam mencari berbagai informasi, jadi informasinya didapatkan lebih cepat."
	Evaluating AI-generated suggestions	S5 emphasized the importance of students generating their own ideas: "Idenya dari kita sendiri, bukan AI. AI kadang kurang tepat dalam memberikan idenya."
Students' Perspectives on AI-Supported Collaborative Writing	Perceived benefits of AI	Students viewed AI as helpful for learning about local culture. S5 stated: "Dari AI, kita bisa mendapatkan pengetahuan dan informasi tentang lempah kuning."
	Concerns about AI dependency and critical thinking	S1 expressed concern about excessive dependence on AI, while S6 raised concerns about its potential effect on critical thinking.
	Appreciation of local cultural knowledge	Students recognized the opportunity to learn more about local traditions and cultural practices through the writing activities.

Note. Data examples are drawn from classroom observations and interviews with six student representatives (S1–S6). Interview excerpts are presented in their original Indonesian language to preserve the participants' authentic expressions.

Overall, the findings indicate that AI-supported collaborative writing involved more than simply using technology to produce English texts. Students exchanged ideas, negotiated different opinions, and considered the relevance of AI-generated suggestions as they developed their writing. The findings also show that students saw AI as a useful learning resource, although they expressed concerns about overdependence and a possible reduction in critical thinking. Furthermore, local wisdom provided a familiar cultural context through which students could develop ideas and explore ways to express cultural knowledge in English. These findings serve as the basis for the discussion of collaborative meaning negotiation, AI support, and the role of local wisdom in the writing process.

4. Discussion

This section discusses the findings in relation to previous studies and relevant literature on collaborative writing, meaning negotiation, and integrating artificial intelligence (AI) into EFL writing. It focuses on how students negotiate meaning when working collaboratively and evaluate AI-generated suggestions, and how local wisdom provides a meaningful cultural context for English writing. The discussion also considers differences in student participation and the challenges of implementing AI-supported collaborative writing in the classroom. Finally, the study presents its practical implications and limitations.

Collaborative Writing and Meaning Negotiation

Collaborative writing can be understood as a process of shared knowledge construction rather than simply a strategy for dividing writing tasks among group members. Its educational value lies in the opportunities it provides for learners to articulate ideas, consider alternative perspectives, and develop a shared understanding before expressing them in writing. This perspective is consistent with Dobao (2020), who highlights the importance of peer interaction in L2 collaborative writing. From this perspective, the quality of collaboration depends not only on the final written product but also on how learners engage with one another's contributions throughout the writing process.

Meaning negotiation becomes particularly important when learners bring different interpretations, preferences, or levels of understanding to a writing task. Disagreement can encourage students to explain their reasoning, reconsider their initial ideas, and evaluate alternative possibilities. Cao et al. (2025) Demonstrate that the manner and quality of negotiation during L2 collaborative writing are associated with students' subsequent writing and revision behaviors. Their findings emphasize that meaningful negotiation involves more than exchanging opinions; it requires learners to elaborate on suggestions, respond to others' contributions, and establish a shared understanding of their texts' content and organization. This perspective helps interpret the decision-making processes observed in the present study.

The findings also suggest that agreement within a group should not automatically be interpreted as evidence of meaningful collaboration. A decision reached through discussion and consideration of different viewpoints may reflect shared understanding, whereas agreement without sufficient explanation may indicate limited engagement. This distinction is important because students can reach a final decision without all members having equal opportunities to influence it. Kumalasari (2023)for example, identified differences of opinion and unequal contributions are challenges in EFL collaborative writing. Therefore, collaborative writing requires opportunities for learners not only to participate in a shared task but also to explain, question, and respond to their peers' ideas.

The present study extends this discussion to a secondary-school EFL context in which AI-supported collaborative writing occurs on a culturally familiar topic. The interaction among peer discussion, students' existing knowledge, and AI-generated information adds another dimension to shared meaning construction. Thus, meaning negotiation in this context involves both interpersonal interaction among students and evaluating information from an external technological resource.

AI-Mediated Meaning Negotiation in Collaborative Writing

Integrating AI into collaborative writing adds a source of information and language suggestions to the writing process. However, the availability of AI-generated responses does not automatically result in meaningful learning. Its contribution depends on how learners interpret, evaluate, and respond to the information provided. In this study, AI served as a supporting resource for accessing information, understanding vocabulary, translating cultural expressions, and exploring alternative ways to communicate ideas. Nevertheless, students' own understanding and decisions remained important in determining whether the suggestions were appropriate for their writing.

This relationship can be interpreted as AI-mediated meaning negotiation. When students encounter an AI-generated suggestion, they need to consider whether it corresponds with their intended meaning, their existing knowledge, and the context of their writing. Students may accept a suggestion when it supports the group's intended message, modify it when its wording or explanation does not fully represent that message, or reject it when the information appears inaccurate or unsuitable. Therefore, negotiation does not occur only through interaction among

students; it also involves evaluating the relationship between AI-generated information and the meaning that students intend to construct.

This interpretation is consistent with Yang et al. (2023), who examined how EFL learners interacted with and responded to AI-programmed automated writing evaluation feedback. Their study highlights the importance of learners' engagement with AI feedback rather than treating it as information that should automatically be followed. Similarly, Mahapatra (2024) examined ChatGPT as a formative feedback tool in ESL academic writing and reported its potential contribution to students' writing development. These studies provide a basis for understanding AI as a resource that can support writing activities, while the educational value of its suggestions still depends on learners' engagement and judgment.

The importance of maintaining learner agency is also emphasized by Werdiningsih et al. (2024). Their study of EFL students' experiences with ChatGPT identified benefits in vocabulary clarification and content development, while also highlighting concerns about authenticity, overreliance, and AI's limited ability to understand cultural nuances. These concerns are particularly relevant to the present study because the writing activities involved local cultural knowledge. Although AI could provide linguistic alternatives or general information, students still needed to consider whether the generated responses represented the cultural meanings they intended to communicate.

The contribution of AI in collaborative writing, therefore, should not be evaluated only by how often students use the technology or how much text it generates. Greater attention should focus on the decisions students make when responding to AI-generated suggestions. The interaction between students' prior knowledge, peer discussion, and AI-generated information creates opportunities to examine language choices and reconsider meanings. In this sense, AI can become part of the meaning-making process when students remain responsible for evaluating the information and deciding how to incorporate it into their writing.

The present study contributes to this discussion by illustrating how AI use can be understood as part of a collaborative decision-making process rather than as an independent text-generation activity. Nevertheless, the study does not establish that AI use directly improves students' writing proficiency because it did not quantitatively measure writing outcomes. Its contribution lies in examining how students used and evaluated AI-generated information while developing shared written content.

Local Wisdom as a Context for Meaning Negotiation

Integrating local wisdom into EFL writing provides more than a culturally relevant topic for classroom activities. It gives learners a shared reference point from which they can develop ideas, exchange knowledge, and construct explanations in English. When students write about a tradition familiar to them, they can draw on existing cultural knowledge rather than begin with an entirely unfamiliar subject. This familiarity can support content development while creating opportunities to consider how to represent cultural meanings in another language.

In the present study, Nganggung served as a meaningful context for this process. Its contribution was not limited to providing a writing subject. The tradition gave students cultural knowledge they could discuss, interpret, and develop into written content. However, expressing this knowledge in English required students to consider how to communicate particular activities, values, and social meanings to readers who might not share the same cultural background. Consequently, the writing task involved not only linguistic choices but also decisions about how to represent local cultural knowledge accurately.

This process highlights an important relationship between cultural familiarity and language production. Students may already understand the significance of a local tradition in their everyday lives, but explaining it in English requires them to reorganize their knowledge into a form others can understand. The challenge is therefore not simply finding equivalent English vocabulary. It also involves deciding which aspects of the cultural practice need explanation and how to communicate meanings that may not have direct linguistic equivalents.

Research on culturally sustaining approaches to EFL writing supports this interpretation. Manuhutu & Sakhiyya (2026)For example, discuss the role of Maluku local wisdom in culturally sustaining writing instruction. Their work offers a relevant comparison for understanding how local cultural knowledge can connect with English writing activities. Although the cultural context differs from the present study, both contexts highlight the importance of allowing learners to draw on knowledge from their own communities when developing written expression in English.

Local wisdom also provides an important reference point when students evaluate AI-generated information. AI may offer translations or explanations of cultural practices, but these responses do not necessarily capture the meanings that members of a particular community associate with those practices. Students' familiarity with Nganggung can therefore help them consider whether AI-generated explanations are relevant and appropriate. In this context, local knowledge is not merely material supplied to an AI tool; it is also a resource students can use to assess the information that tool generates.

The present study contributes to discussions of culturally contextualized EFL writing by showing how a local tradition can function as a shared context for collaborative meaning negotiation. Integrating Nganggung connects students' existing cultural knowledge with the linguistic demands of English writing. It also gives students opportunities to consider how to communicate local meanings while maintaining their cultural significance.

Participation Differences and Implementation Challenges

Collaborative writing assumes that group members have opportunities to contribute to developing a shared text. However, participation does not necessarily occur equally among learners. Differences in English proficiency, confidence, familiarity with digital tools, and willingness to express opinions may influence how students participate in group activities. Classroom observations in the present study showed variation in students' participation, including differences in how actively they contributed to discussions and engaged with AI tools. These observations suggest that group work does not automatically ensure equal involvement in writing and decision-making.

Unequal participation matters because the distribution of contributions may influence whose ideas the group considers and how it makes decisions. Students who speak more frequently or feel more confident may have more opportunities to shape the discussion. Meanwhile, less confident students may struggle to express disagreement or offer alternative ideas. This possibility aligns with Kumalasari (2023), who identified unequal contributions among group members as one challenge EFL students face in collaborative writing. These findings suggest that collaboration requires attention not only to completing a shared task but also to distributing opportunities to contribute to group decisions.

The introduction of AI may add another dimension to these participation differences. Students who are more familiar with AI tools may take greater responsibility for entering prompts, interpreting responses, and selecting information for the group text. If other members are not equally involved in evaluating the generated responses, decision-making may become concentrated among a few students. Consequently, access to AI does not necessarily guarantee collaborative

engagement. Students also need opportunities to understand, question, and evaluate the information the technology generates.

Several implementation conditions should also be considered when applying AI-supported collaborative writing in school settings. Teacher readiness matters because teachers need to understand how AI tools work and how to guide students in evaluating the accuracy, relevance, and appropriateness of AI-generated information. Moorhouse (2024) highlights differences in language teachers' readiness for the generative AI age, suggesting that familiarity with AI and professional preparation are important considerations for integrating it into language teaching. This suggests that teachers may need professional development opportunities before they can effectively guide AI-supported writing activities.

Access to devices and a stable internet connection may also affect students' ability to participate consistently in AI-supported activities. In addition, differences in English proficiency and digital literacy may require teachers to provide different levels of assistance. These conditions are important considerations for implementing the proposed learning approach. However, the present study did not systematically investigate teacher readiness and device accessibility. They should therefore be understood as potential implementation challenges rather than direct empirical findings.

Practical Implications

The findings have several implications for English teachers who intend to integrate AI into collaborative writing activities. First, teachers can use familiar cultural topics as starting points for writing tasks. Topics related to local traditions, community practices, and cultural values may help students draw on their existing knowledge as they develop ideas in English. Such topics can also encourage students to explain cultural meanings that may not have direct equivalents in English.

Second, collaborative writing activities should be structured to encourage meaningful participation from all group members. Teachers may assign rotating responsibilities, such as idea contributor, information checker, language reviewer, and discussion facilitator. These responsibilities should not become fixed divisions of the writing task. Instead, they should encourage students to contribute to different stages of the collaborative process. Teachers can also give each member opportunities to explain or justify a proposed idea before the group decides.

Third, AI should be introduced as a supporting resource rather than a substitute for students' own thinking. Teachers can ask students to compare AI-generated suggestions with their initial ideas, identify potentially inaccurate information, and explain why they accept, modify, or reject particular suggestions. These activities may help students better understand AI's limitations while remaining responsible for their writing's content and language.

Finally, teachers need to consider differences in students' English proficiency and digital literacy. Clear instructions, examples of effective prompts, and guided evaluation activities may help students who have limited experience using AI. Where device or internet access is limited, teachers can organize shared-device activities or prepare alternative resources so that participation does not depend entirely on individual access to technology.

These recommendations are pedagogical implications proposed by the authors based on the study findings and relevant literature. They are intended to inform classroom practice and were not experimentally tested as interventions in the present study.

Research Limitations

This study has several limitations to consider when interpreting its findings. First, although the classroom implementation involved 28 students, the interview data were obtained from only six students, with one representative selected from each group. Therefore, the interview findings reflect

these participants' experiences and may not fully represent the perspectives of all students involved in the activities.

Second, the research was conducted in a single class at one senior high school in Bangka Belitung. The findings are therefore context-specific and should not be generalized to other schools, student populations, or educational settings without further investigation. Using Nganggung as a local cultural context may also have influenced students' familiarity with the writing topic and their engagement in the activities.

Third, this study focused on classroom interactions, students' experiences, and their reported use of AI during collaborative writing. It did not include pre-test and post-test measurements or other quantitative assessments of writing proficiency. Consequently, the findings cannot establish whether AI-supported collaborative writing resulted in measurable improvements in students' writing performance. The study also did not systematically measure individual contributions or compare students' engagement levels across groups.

Future research could involve multiple classes and schools with a wider range of student backgrounds. Further studies could combine classroom observations and interviews with writing performance assessments to examine the relationship between meaning negotiation, AI use, and language development. In addition, a more detailed analysis of individual participation and group decision-making could deepen understanding of how students contribute to AI-supported collaborative writing activities.

5. Conclusion

This study examined how students engaged in meaning negotiation as part of an AI-supported collaborative writing experience grounded in local wisdom. The results identified three main areas. The first area relates to how students negotiated meaning by exchanging ideas, clarifying conflicting views, exploring possible forms of expression, and collectively making decisions during the writing process. In the second area, AI provided language support resources that helped students find information, understand new vocabulary, translate cultural expressions, and consider alternative ways to express ideas. Students did not accept AI-generated suggestions unquestioningly; instead, they evaluated them for consistency with what they wanted to say and what the group decided. The third area is that students viewed AI as beneficial in facilitating the writing process; however, they also expressed concerns about over-reliance on AI and potential negative consequences for critical thinking. This study adds value to the body of research in this field by demonstrating how local wisdom, specifically the Nganggung tradition, can provide a relevant cultural context for AI-supported collaborative writing and connect students' prior cultural understanding to the process of negotiating and conveying meaning in English.

This study has limitations that readers should consider when interpreting the results. This qualitative case study was conducted in one classroom at a single senior high school; therefore, the findings are context-dependent and may not reflect what happens in other educational settings. In addition, the interviews included only six student representatives (one per group), so they do not represent the views of all students participating in the activities (28). Additional studies should include more participants from various classroom and school types to see whether meaning negotiation and the application of artificial intelligence vary across educational environments. Additional studies could also evaluate writing ability to determine whether student development differs and how students' participation in and assessment of AI-generated suggestions affect their writing development.

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