



THE DYNAMICS OF SCAFFOLDING IN COLLABORATIVE WRITING: A QUALITATIVE STUDY IN A LANGUAGE CLASSROOM

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ABSTRACT

This study examines the dynamics of scaffolding in collaborative writing activities in a language classroom, using a descriptive qualitative approach. The theoretical foundation draws on Vygotsky's view that writing is a social process mediated through interaction within the Zone of Proximal Development (ZPD). Many students experience writing anxiety when working individually, while group work without structured scaffolding is often unproductive. The study was conducted in a language classroom involving six small groups of students composing discussion texts. Data were collected through audio-visual recordings, draft documents, and semi-structured interviews, and were analyzed using Miles, Huberman, and Saldaña's interactive model, encompassing data condensation, data display, and conclusion drawing and verification. The findings show that scaffolding manifested in two principal forms: macro-scaffolding, realized through task guidance from the teacher, and micro-scaffolding, realized through spontaneous dialogue among students. Together, these two forms synergistically helped students build textual cohesion and genre appropriateness. The study concludes that planned, gradual collaborative scaffolding effectively facilitates students' transition from an inability to write independently toward writing autonomy.

Keywords: *scaffolding; collaborative writing; Zone of Proximal Development; language classroom; qualitative study*

INTRODUCTION

Writing is one of the most complex and demanding language skills. From a contemporary perspective, writing is no longer viewed solely as an individual cognitive activity, but as a social process shaped by interaction and cultural context. The most influential theoretical foundation for understanding writing as a social activity is Vygotsky's sociocultural theory, particularly the concept of the Zone of Proximal Development (ZPD). Vygotsky (1978) defines the ZPD as the distance between a learner's actual developmental level, as determined by independent problem solving, and the level of potential development achieved through problem solving under adult guidance or in collaboration with more capable peers. Within this framework, the writing process, which initially unfolds interpersonally

(interpsychologically), is ultimately internalized as an intrapersonal (intrapyschological) capability through meaningful collaborative experience.

One of the most significant challenges in writing instruction is the writing anxiety experienced by many students. Prior research indicates that writing anxiety negatively affects students' writing performance, particularly when they are required to complete writing tasks individually without adequate support (Horwitz, Horwitz, & Cope, 1986; Liu & Ni, 2015). This anxiety is often triggered by a perceived inability to organize ideas, select appropriate vocabulary, or meet the conventions of a given text genre. Within language-learning contexts — whether as a first language (L1) or as a foreign language (EFL) — this challenge becomes increasingly complex.

In response to this problem, collaborative learning approaches offer a promising alternative. Collaboration among students allows them to share cognitive resources, correct one another's errors, and construct knowledge jointly (Storch, 2005). Recent studies confirm this potential: Sundari and Febriyanti (2023) found that collective scaffolding in virtual collaborative writing enabled Indonesian EFL students to complete writing tasks more successfully than they could working alone, while Al-Yafei and Mudhsh (2023) similarly reported that online collaborative learning facilitates mutual scaffolding and improves EFL students' writing skills. However, group work without structured scaffolding is often unproductive: one group member may dominate while others remain passive, or discussions may fail to produce meaningful progress in writing. Appropriate scaffolding is therefore a key factor in the success of collaborative writing, particularly given that peer scaffolding behaviors such as clarification, modeling, and feedback have been shown to directly support writing development in EFL classrooms (Chairinkam & Yawiloeng, 2021; Gibbons, 2015; Wood, Bruner, & Ross, 1976).

The concept of scaffolding, first introduced by Wood, Bruner, and Ross (1976) as an operationalization of Vygotsky's ZPD, refers to the temporary support provided by a more competent individual that enables a learner to accomplish a task otherwise beyond their independent capability. The key characteristics of effective scaffolding include its collaborative and contingent nature, as well as its gradual fading as the learner's competence increases (Sarmiento-Campos et al., 2022; Shabani, Khatib, & Ebadi, 2010). In writing contexts, scaffolding can take various forms, ranging from structured task guidance provided by the teacher (macro-scaffolding) to spontaneous dialogue among students that emerges organically during the composition process (micro-scaffolding) (Gibbons, 2002; Syarifah, 2016).

Although research on scaffolding in writing contexts has expanded considerably, studies specifically examining the dynamics of scaffolding interaction in collaborative writing within language classrooms remain relatively limited, particularly studies employing qualitative approaches capable of capturing the richness of student interaction in depth. This study therefore aims to: (1) identify and describe the forms of scaffolding that emerge during the collaborative writing process; (2) analyze how the collaboration process among students unfolds and contributes to the development of their writing; and (3) discuss the impact of scaffolding on the quality of students' writing, particularly in terms of cohesion and genre appropriateness. Through this study, it is hoped that both theoretical and practical contributions can be offered to language teachers in designing effective and meaningful collaborative writing activities.



METHOD

1 Research Design

The study was conducted in a Grade X senior secondary class, involving 30 students divided into six small groups of five members each. The instructional context centered on writing discussion texts as part of the Indonesian language subject. Discussion texts were chosen for this task because of their complexity, which requires students to organize arguments, weigh multiple perspectives, and meet the conventions of a specific genre — an assignment that naturally encourages interaction and the negotiation of meaning among students. Participants were selected through purposive sampling based on the following criteria: (1) active engagement in group activities; (2) willingness to be recorded; and (3) varied writing ability, as determined by a preliminary assessment.

2. Data Collection Techniques

Data were collected through three complementary techniques. First, audio-visual recordings were made throughout the collaborative writing process to authentically capture verbal and nonverbal interaction among students; these recordings were subsequently transcribed for analysis. Second, written drafts were collected from each group, from the first draft through the final draft. Comparing successive drafts allowed the researcher to trace the trajectory of writing development and identify moments at which scaffolding produced a tangible effect. Third, semi-structured interviews were conducted after the writing sessions with two representatives from each group to obtain an emic perspective on their collaborative experience.

3 Data Analysis

Data analysis followed Miles, Huberman, and Saldaña's (2014) interactive model, comprising three interrelated components applied cyclically and iteratively: data condensation, data display, and conclusion drawing and verification. During data condensation, the researcher selected, focused, simplified, and transformed the raw data through a coding process; the resulting codes were grouped into categories according to the type of scaffolding observed. During data display, findings were presented as matrices, networks, and transcript excerpts that allowed patterns of interaction to be visualized. Conclusion drawing proceeded iteratively from the early stages of data collection and was continually verified until a comprehensive and trustworthy account of the scaffolding dynamics was obtained.

To ensure the trustworthiness of the study, data triangulation was applied across recording transcripts, draft documents, and interviews, together with member checking to confirm the analytical findings with the research participants.

RESULTS AND DISCUSSION

Before presenting the findings in detail, Figure 1 summarizes the conceptual framework that emerged from the data analysis, illustrating how teacher-designed macro-scaffolding and peer-emergent micro-scaffolding operate within the ZPD as complementary, mutually reinforcing sources of support that jointly shape students' collaborative writing outcomes.

Each element of this framework is elaborated with supporting evidence in the sections that follow.

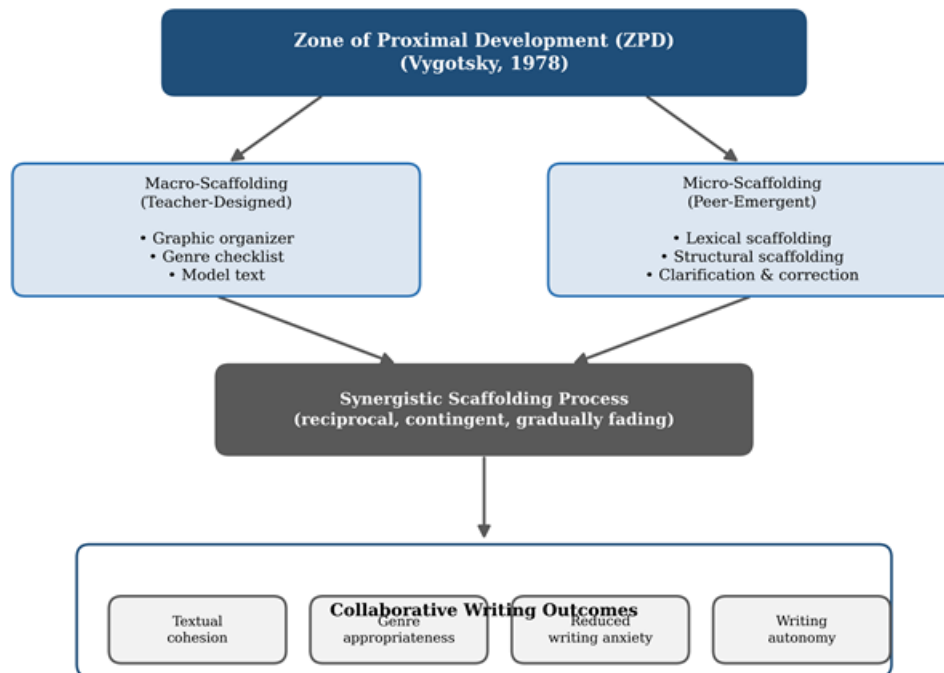


Figure 1. Conceptual framework of collaborative scaffolding dynamics identified in this study

1 Forms of Scaffolding Emerging in Collaborative Writing

The data analysis showed that scaffolding in this collaborative writing context manifested in two complementary forms: macro-scaffolding and micro-scaffolding. This finding is consistent with the theoretical framework proposed by Gibbons (2002), who distinguishes between structured scaffolding planned in advance and spontaneous scaffolding that emerges incidentally in response to learners' needs.

Macro-scaffolding was most evident in the structured task guidance the teacher provided before the writing session began. The teacher supplied a fishbone-diagram graphic organizer to help students map out arguments for and against the topic of their discussion text, together with a genre checklist listing the linguistic features typical of discussion texts. This form of scaffolding corresponds to what Walqui (2006) terms "scaffolding by design" — support that a teacher consciously plans before instruction to help students move through their ZPD. In addition, the teacher provided a completed discussion text as a model text for genre reference. Nguyen, Bui, and Ha (2025) confirm that genre-based scaffolding strategies of this kind, including the provision of model texts and checklists, are among the most frequently used and most effective strategies for improving EFL students' writing skills. This pattern has also been documented in Indonesian senior secondary classrooms: in a study of tenth-grade students learning to write news item texts, Dewi et al. (2023) found that teacher-provided



model texts and genre checklists were among the most frequently used and most beneficial forms of macro-scaffolding. More broadly, Nagao (2023) argues that grounding writing instruction in systemic functional linguistics helps build classroom-wide communities of practice around shared genre knowledge, reinforcing macro-scaffolding as a foundation for subsequent peer interaction.

Micro-scaffolding, by contrast, was more dynamic and emerged spontaneously as the writing process unfolded. Analysis of the conversation transcripts showed that micro-scaffolding among students occurred through various modes, including clarification questions, the provision of synonyms, negotiation of sentence structure, and reciprocal grammar correction. This finding reinforces Storch's (2005) argument that collaborating student pairs or groups are able to scaffold one another by sharing cognitive resources. The most prominent forms of micro-scaffolding were "lexical scaffolding," in which a student offered a more precise word choice to a peer who was struggling, and "structural scaffolding," in which students jointly discussed how to construct sentences or paragraphs to make them more cohesive. Comparable patterns of lexical and structural negotiation have been documented among Asian EFL learners collaborating on writing tasks through digital platforms, where students were found to alternate between scaffolding and non-scaffolding dialogue while jointly constructing a text (Kitjaroonchai & Phutikettrikit, 2022).

Table 1 summarizes the specific forms of macro- and micro-scaffolding identified through the coding process described in Section 2.4, together with a brief description of each.

Scaffolding Type	Form	Description
Macro-scaffolding (teacher-designed)	Graphic organizer	Fishbone-diagram tool used to map arguments for and against the discussion topic before writing began
	Genre checklist	List of the linguistic features characteristic of discussion texts, used by students to self-monitor their drafts
	Model text	A completed discussion text provided by the teacher as a reference for genre conventions
Micro-scaffolding (peer-emergent)	Lexical scaffolding	A student offers a more precise or academically appropriate word choice to a peer who is struggling
	Structural scaffolding	Students jointly negotiate how to construct a sentence or paragraph to improve cohesion

Clarification questions	A student asks a peer to clarify an idea or instruction before proceeding with the draft
Reciprocal correction	Group members alternately correct one another's grammar or content, shifting between the roles of scaffolder and scaffolded

Table 1. Forms of scaffolding identified in the collaborative writing process

2. The Collaborative Writing Process: Interaction Excerpts

To provide a more concrete picture of how micro-scaffolding unfolded naturally, the following transcript excerpt presents an interaction from one group (Group 3) as they discussed how to complete an argument paragraph in their discussion text on online learning. The excerpt has been translated from the original Indonesian; the English-language code-switching produced by the students themselves is retained in italics, as in the original recording:

[Rekaman, menit 14:32]

Rafa : "Kita tulis apa dulu untuk poin kedua? Aku bingung mau mulai dari mana."

Sinta : "Kalau menurut *graphic organizer* yang Bu Guru kasih, harusnya kita bahas tentang keterbatasan akses internet."

Rafa : "Oh iya. Tapi gimana cara nulis kalimat pembukanya? *'The limitation of internet access...'* terus apa?"

Dinda : "Mungkin bisa pakai kata *'hinders'* atau... apa ya, yang artinya menghambat?"

Sinta : "*'Hinders'* kayaknya tepat. Jadi, *'The limitation of internet access hinders students in rural areas from...'*"

Rafa : "...*from participating in online learning equally.*" Gimana?"

Dinda : "Bagus! Tapi kita tambahkan data atau contoh dulu biar lebih kuat, kayak yang ada di model text tadi."

Reza : "Betul. Di model text kan ada *'According to...'* Kita bisa pakai struktur yang sama."

The excerpt above illustrates several important dimensions of micro-scaffolding occurring simultaneously within a single brief interaction. First, Sinta acted as a "lexical scaffolder" by referring back to the macro-scaffolding — the teacher's graphic organizer — to redirect Rafa's evident confusion, illustrating how the teacher's macro-scaffolding is "reactivated" through peer mediation. Second, Dinda provided lexical scaffolding by suggesting the more academically precise word choice "hinders." Third, Reza offered structural scaffolding by pointing to the model text as an example of genre convention. The scaffolding roles in this excerpt were reciprocal: each group member alternated between giving and receiving support, which is consistent with earlier peer-scaffolding research showing that scaffolding among learners can be reciprocal rather than unidirectional (Ahmadi Safa et al., 2017).

Similar dynamics were observed in the other groups, with variation in the extent to which particular members dominated the provision of scaffolding. In Group 1, a student with stronger writing ability consistently assumed the role of "critical reader," offering feedback on peers' writing, whereas in Group 5 scaffolding was more evenly distributed. This variation



in collaborative patterns is consistent with Storch's (2005) identification of distinct patterns of paired writing collaboration, ranging from collaborative and dominant/passive to dominant/dominant and expert/novice patterns.

3 The Impact of Scaffolding on Students' Writing Quality

A comparative analysis of first and final drafts revealed significant improvement in the quality of students' writing, particularly in textual cohesion, argument coherence, and adherence to the conventions of the discussion text genre. The first drafts produced by most groups tended to be narrative-descriptive in character and did not yet meet the conventions of the discussion text genre. Many paragraphs stood in isolation without adequate cohesive devices, and the arguments presented were often underdeveloped and insufficiently supported.

Following the collaborative process facilitated by layered scaffolding, the final drafts showed marked improvement. The use of signposting language such as "On the other hand," "Furthermore," and "In contrast" increased significantly, indicating that students had begun to internalize the rhetorical conventions of the discussion text genre. This finding is consistent with Syarifah (2016), who found that genre-based scaffolding can improve students' writing performance in terms of social function, schematic structure, and the linguistic features of the targeted genre. It is also consistent with Brisk, Tian, and Ballard (2021), who found that teachers' sustained engagement with systemic functional linguistics genre pedagogy translated into more explicit classroom scaffolding of genre structure and, in turn, into stronger student control over the target genre's conventions.

The interview data reinforced the findings from the draft documents. Most participants reported that the collaborative process made them feel more confident and less anxious about writing tasks. One participant (Group 4) stated: "When I write alone, I often get confused and worry about making mistakes. But when I work with friends, we can check each other and discuss things, so I feel more confident." This statement reflects how collaborative scaffolding successfully reduced writing anxiety, consistent with Fathi and Rahimi's (2022) finding that collaborative writing can significantly reduce writing anxiety while enhancing writers' self-efficacy. This is further corroborated by Rahimi and Fathi (2022), who found that wiki-mediated collaborative writing significantly enhanced EFL students' writing self-regulation and self-efficacy, and by Ajmal, Aziz, and Anwar (2023), who reported that a genre-based writing approach was an effective strategy for reducing writing anxiety among secondary-level students.

However, the study also found that the quality of scaffolding among students depended heavily on their level of understanding of the task and its genre conventions. Groups that received more explicit macro-scaffolding from the teacher tended to produce more focused and productive micro-scaffolding. This underscores the importance of a synergistic relationship between macro- and micro-scaffolding: the teacher's macro-scaffolding creates a "conceptual framework" that subsequently serves as a shared reference point in students' micro-scaffolding interactions (Nguyen, Bui, & Ha, 2025; Gibbons, 2015).

One important observation from this study is that the effectiveness of scaffolding is determined not merely by the availability of support but also by its quality. Several groups exhibited a pattern that can be termed “pseudo-scaffolding” — interaction that resembles scaffolding on the surface but does not actually advance students’ cognitive development, such as when a student supplies a direct answer without prompting a peer to think more deeply. This condition echoes Puntambekar and Hubscher’s (2005) caution that contemporary scaffolding practice often neglects diagnosis, calibrated support, and planned fading. This concern aligns with Allagui’s (2024) finding that scaffolding interventions meaningfully improved students’ self-efficacy in source-based argumentative writing only when the support was carefully calibrated to learners’ needs, rather than simply made available.

CONCLUSION

This study has described the layered, synergistic dynamics of scaffolding that occurred during collaborative writing activities in a language classroom. The key findings confirm that scaffolding in this context did not occur through a single mode, but as a complementary system of support combining teacher-designed macro-scaffolding with micro-scaffolding that emerged organically in interaction among students.

Theoretically, this study reinforces the relevance of Vygotsky’s ZPD in understanding writing as a socially mediated, dialogic activity. Effective scaffolding is not merely “assistance” but functions as a “bridge” that enables students to move from a zone of inability toward a zone of increasingly independent competence. This transition occurs through gradual internalization facilitated by meaningful social interaction, both with the teacher and among peers.

From a practical standpoint, this study offers several recommendations for language teachers. First, teachers should design macro-scaffolding explicitly and systematically before collaborative writing sessions, including providing graphic organizers, genre model texts, and clear writing checklists; robust macro-scaffolding provides the foundation for productive micro-scaffolding among students. Second, teachers should design a planned scaffolding-fading strategy — gradually reducing the intensity of support as students’ competence increases, so that students can progressively become independent writers. Third, teachers should teach students how to give one another effective feedback (peer scaffolding training) so that interaction among students becomes more productive and does not lapse into “pseudo-scaffolding.” Fourth, group composition should be designed carefully, taking ability heterogeneity into account to foster richer interaction within the collective ZPD.

This study has several limitations that should be acknowledged. Its specific context — a single class, a single text type, a single institution — limits the generalizability of the findings. Future research is encouraged to explore the dynamics of scaffolding across different text genres, educational levels, and language contexts. In addition, longitudinal studies that track students’ writing development over an extended period would offer a more comprehensive picture of the cumulative impact of collaborative scaffolding on writing autonomy.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to Prof. Dr. Fathiaty Murtadho, M.Pd., as the principal supervisor, and Prof. Dr. Zuriyati, M.Pd., as the co-supervisor, for their invaluable guidance, constructive feedback, and continuous support throughout this research. The authors also extend their appreciation to the principal, Indonesian language teachers, and students of SMK Negeri Cariu for their cooperation and participation during the data collection process.

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