

SHAPING THE FUTURE OF COLLABORATIVE WRITING IN EDUCATIONAL SETTINGS: EMERGING TRENDS AND RESEARCH OPPORTUNITIES

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ABSTRACT

Interest in collaborative writing in educational settings has increased over time, but research on this subject is broad, covering several topics across different learning contexts. To outline potential gaps or emerging trends for future research, a semi-systematic literature review was conducted on the Scopus database between 2023 and May 2024, following the SPAR4-SLR protocol. This process resulted in a corpus of 24 scientific articles, whose findings were analysed according to the categories of interaction, instruction, language learning, technology integration and distance learning, contextual elements and others. While the dynamics of interaction and the use of collaborative writing in language learning were extensively discussed within the sample, explicit instruction, technology integration, the impact on writing quality, and the association with the writing process were identified as topics requiring further research. The need for more studies at the primary, middle and secondary levels was also recognised.

KEY WORDS

collaborative writing; semi-systematic literature review; SPAR4-SLR protocol.



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O FUTURO DA ESCRITA COLABORATIVA EM CONTEXTOS EDUCATIVOS: TENDÊNCIAS EMERGENTES E PERSPETIVAS DE INVESTIGAÇÃO

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RESUMO

O interesse pelo uso da escrita colaborativa em educação tem aumentado ao longo do tempo, mas a investigação sobre o tema é abrangente, incluindo vários aspetos e diferentes contextos de aprendizagem. Para identificar potenciais lacunas ou tendências emergentes para investigações futuras, realizou-se uma revisão semi-sistemática da literatura na base de dados Scopus, entre 2023 e maio de 2024, seguindo o protocolo SPAR4-SLR. Obteve-se um *corpus* constituído por 24 artigos científicos, cujos resultados foram analisados de acordo com as categorias de interação, instrução, aprendizagem de línguas, integração de tecnologias e ensino a distância, elementos contextuais e outros. Enquanto as dinâmicas de interação e o uso da escrita colaborativa na aprendizagem de línguas foram extensivamente abordadas, a sua instrução explícita, a integração de tecnologias, o seu impacto na qualidade e a relação com o processo de escrita foram identificados como tópicos a explorar, especialmente ao nível do ensino básico e secundário.

PALAVRAS - CHAVE

escrita colaborativa; revisão de literatura semi-sistemática; protocolo SPAR4-SLR.



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EL FUTURO DE LA ESCRITURA COLABORATIVA: NUEVAS TENDENCIAS Y OPORTUNIDADES DE INVESTIGACIÓN

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RESUMEN

El interés por la escritura colaborativa en la educación ha aumentado con el tiempo, pero la investigación sobre el tema es heterogénea e incluye diversos aspectos y diferentes contextos de aprendizaje. Para identificar posibles lagunas o tendencias emergentes para futuras investigaciones, se realizó una revisión bibliográfica semisistemática en la base de datos Scopus entre 2023 y mayo de 2024, siguiendo el protocolo SPAR4-SLR. Se obtuvieron 24 artículos científicos, cuyos resultados se analizaron según las categorías de interacción, instrucción, aprendizaje de idiomas, integración de tecnologías y aprendizaje a distancia, elementos contextuales y otros. Mientras la dinámica de la interacción y el uso de la escritura colaborativa en el aprendizaje de lenguas se abordaron ampliamente, su instrucción explícita, la integración de tecnologías, su impacto en la calidad y su relación con el proceso de escritura se identificaron como temas que requieren más investigación, especialmente en los niveles de primaria y secundaria.

PALABRAS CLAVE

escritura colaborativa; revisión bibliográfica semisistemática; protocolo SPAR4-SLR.



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Shaping the Future of Collaborative Writing in Educational Settings: Emerging Trends and Research Opportunities

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INTRODUCTION

There is a growing societal recognition of the importance of collaborative learning, with skills such as “empathy, self-efficacy, responsibility and collaboration” (OECD, 2018, p. 87) now seen as essential for an education that should promote lifelong opportunities for all. In this context, writing – an essential skill for all citizens (Graham, 2019) but often seen as a solitary activity (Martins, 2013) – has evolved alongside digital literacy, sparking a renewed interest in collaborative writing.

According to Lowry et al. (2004), collaborative writing “is an iterative and social process that involves a team focused on a common objective that negotiates, coordinates, and communicates during the creation of a common document” (p. 72). Predictably, interest in this type of task has also grown in educational settings (Svenlin & Sørhaug, 2022).

For clarity, in the following, collaborative writing refers to the production of a joint text by pairs or small groups of students. This only happens when all participants contribute to decisions about content, structure and linguistic choices (Dobao & Blum, 2013; Storch, 2005, 2011). Therefore, collaborative writing is “primarily a process of joint decision-making” (Herder et al., 2018), which ultimately spans the whole writing process (planning, writing and revising) (Flower & Hayes, 1981).

It is widely used in language learning (Lu & Kim, 2021; Svenlin & Sørhaug, 2022) because the interaction between students enables an exchange on several dimensions, such as knowledge about the language, its different levels of organisation, and its use concerning communicative contexts and goals (Barbeiro et al., 2022). Thus, evidence suggests that it contributes to the development of students’ writing competence and awareness of text and language features (Barbeiro et al., 2022; Fonseca & Nunes, 2019; Herder et al., 2018; Storch, 2005; Wigglesworth & Storch, 2009).

In addition, as it is developed in synchronous interaction (Barbeiro et al., 2022), it allows for the development of other skills beyond writing, such as respect for others’ opinions, critical and reflective thinking and collaborative work itself (Faneca, 2020; Fonseca & Nunes, 2019; Wigglesworth & Storch, 2009). It can also have a positive effect on reducing students’ anxiety about the complexity of the writing task (Fonseca & Nunes, 2019), which often hinders students’ motivation to learn to write, especially as children (Boscolo, 2008; Harris & McKeown, 2022).

Thus, it can be argued that the success of a collaborative writing task is largely dependent on the skills, knowledge and motivations of each member that are well embedded in the writing situation, which actually enables the creation of a true writing community (Graham, 2018).

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With cognitive, linguistic and social elements intertwined, research in this area is unsurprisingly broad, encompassing several topics in different learning contexts. This study, therefore, aims to identify recurring topics that have emerged in collaborative writing research between 2023 and 2024 in order to map the current state of the art in collaborative writing and to outline potential gaps or emerging trends for future research.

To this end, it adopts a semi-systematic literature review approach, “designed for topics that have been conceptualised differently and studied by various groups of researchers within diverse disciplines and that hinder a full systematic review process” (Snyder, 2019, p. 335). We believe that this approach allows us to provide a comprehensive overview of the subject in educational settings while allowing flexibility in the inclusion of different types of studies.

In this sense, the semi-systematic literature review approach will be not only a methodology but also the product itself. Additionally, in view of the importance of an accurate and transparent process, the study uses the three-stage SPAR4-SLR protocol (assembling, arranging, assessing), originally outlined for conducting systematic literature reviews (Paul et al., 2021).

METHODOLOGY

CORPUS SELECTION: ASSEMBLING AND ARRANGING

The first stage of the SPAR4-SLR protocol, assembling, involves two phases: identification and acquisition. We began by defining the review domain as “collaborative writing” and focusing exclusively on scientific articles. To ensure source quality, we selected the Scopus database, which offers a comprehensive range of journals, allowing us to target publications most relevant to our field. During the acquisition phase, we searched the Scopus database using predefined criteria to identify relevant articles, as summarized below.

Table 1
Search Criteria

Criteria	Descriptors
Search Period	2023-2024 (May)
Subject area	Social Sciences and Arts and Humanities
Language	Portuguese, English, Spanish
Keyword	Articles that contain the keyword “collaborative writing”
Access	Articles in open-access

The initial search using “collaborative writing” in quotation marks yielded 1,918 documents. To focus on scientific articles published in academic journals, the search was refined to include only “article” as the document type, resulting in a selection of 1,163 documents.

In order to focus on the most recent developments in this field of research, the search was restricted to all scientific articles published between 2023 and the beginning of May 2024, resulting in a set of 145 documents. It was also limited to the Arts and



Humanities and Social Sciences subject areas, including education-related research. This filter produced a sample of 132 relevant articles.

The next criteria stipulated that the articles included should be written in one of the following languages – Portuguese, English or Spanish – according to the reading proficiency of the authors of this study. This resulted in a total of 131 documents, of which 124 were written in English, 6 in Spanish and 1 in Portuguese.

For a more focused analysis, the search was further restricted to articles containing the keyword “collaborative writing” within their keywords, leading to 74 articles. Finally, to ensure accessibility for our review, the selection was limited to open-access articles, resulting in a final sample of 36 documents.

As outlined in the arranging stage of the SPAR4-SLR protocol (Paul et al., 2021), the retrieved articles were organised through a coding process, based on the year of publication, document title, research approach, and level of education addressed (see Appendix 1).

In the purification phase, each abstract was screened to determine the relevance of the selected articles to collaborative writing in teaching and learning contexts. This process resulted in the exclusion of seven articles (A4, A14, A15, A17, A18, A19, A27). Additionally, five articles (A7, A11, A32, A33, A34) were excluded for the following reasons: two due to lack of open access (A11 and A34), two for being out of scope (A7, A33), and one (A32) because it followed a scoping review approach, which did not align with our inclusion criteria (see Appendix 2). Following this selection process, the corpus of this study consists of 24 scientific articles.

DATA ANALYSIS PROCEDURE: ASSESSING

The assessing stage involves evaluation and reporting (Paul et al., 2021). For a better assessment, we first chose to analyse keywords from all articles across six levels of education (elementary [2], middle school [2], secondary [3], higher education [14], other [2], unspecified [1]) to identify a few emerging categories related to collaborative writing (see Appendixes 3 and 4). This analysis resulted in the following categories:

Table 2
Analysis categories and articles included

Analysis Categories	Descriptors	Articles Included
Interaction	Findings that focus on the interaction generated between participants in a collaborative writing activity	A5, A8, A10, A16, A21, A22, A23, A25
Instruction	Findings that focus on the impact of collaborative writing instruction and tools	A2, A13, A16, A20, A24, A29, A31, A35
Language Learning	Findings that focus on the use of collaborative writing for language learning, including writing itself	A3, A5, A10, A8, A12, A21, A22, A25, A26, A31, A35
Technology integration and distance learning	Findings that focus on the integration of technology in collaborative writing processes	A1, A3, A5, A20, A22, A28, A29, A30, A31
Contextual Elements	Findings that focus on the impact of contextual elements, such as the COVID-19 pandemic	A9, A26, A28, A29, A30
Others	Findings that focus on aspects not included in any of the previous categories	A6, A36

The main findings for each category were then summarised and reported. This analysis will inform the development of a research agenda proposal for future directions.

RESULTS AND DISCUSSION

The main findings according to the previously established analysis categories are summarised in this section. It should be noted that some of the scientific articles may appear in more than one category and that some topics may overlap between categories. We would also like to point out that the inclusion in the categories was made by the keywords of each abstract, which might have led to the exclusion of a certain document at a certain point in the analysis.

INTERACTION

Focusing on young learners, Studies A16 and A25 observed patterns of interaction during writing activities. The first analysed them according to types of interaction, namely copying, unsolicited advice, subteaching, mutual commenting, and ignored activities. In contrast, the second study, drawing on Storch (2002), as cited in Basterrechea and Gallardo-del-Puerto (2023) identified four types of pair dynamics: collaborative, expert/novice, dominant/passive, and dominant/dominant.

Study A16 concluded that collaborative writing promotes student interaction and development, allowing them to act as inspirers, audiences, and readers for each other. This is facilitated by physical proximity, highlighting the importance of seating arrangements. Interaction also empowers developing writers, particularly those who have not yet mastered the procedural elements of writing (according to Puranik & Lonigan, 2014, as cited in Riis-Johansen & Myran, 2023). They can still participate and become an active part of the writing community.

Study A25 seems to support this notion. Pairs exhibiting collaboration and expert-novice pairings dynamics achieved higher success rates in accurately solving Language Related Episodes (LRE), particularly those focused on meaning (corroborating previous studies by Basterrechea & Gallardo-del-Puerto, 2020; Gallardo-del-Puerto & Basterrechea, 2021; García Mayo & Imaz Aguirre, 2019, as cited in Basterrechea and Gallardo-del-Puerto (2023). However, dominant-dominant pairs were more successful in solving form-focused LREs with grammatically correct solutions. The authors speculate that competitiveness and a desire for control may have driven them to find the 'right' answer, but there is limited data on this type of dynamic. Other dynamics (dominant-passive, expert-novice) were underrepresented in this study.

This study also corroborated earlier research on the benefits of matched proficiency (Basterrechea & Gallardo-del-Puerto, 2020, as cited in Basterrechea and Gallardo-del-Puerto (2023). While students with similar proficiency levels tended to have more focused discussions on language use, self-selected pairs exhibited a less focused interaction. Spelling remained a common focus of discussion, but expert-novice pairs



seemed to discuss more grammatical features. This may occur because the ‘expert’ has more knowledge to share, but further investigation is required. However, this aligns with Study A16’s finding that individual strengths become collective resources through interaction, especially when students explain concepts to each other.

The high frequency of LRE in Study 21 suggests that the back-and-forth nature of collaborative writing is key to these moments of language learning, despite differences in the level of engagement between pairs. The authors emphasise the importance of Activity-Related Episodes (AREs), where students discuss the task and assign roles, as they help to build a sense of mutual understanding (as defined by Toth & Gil-Berrio, 2022, as cited in Kos, 2023). Collaboration is based on factors such as individual goals, understanding of others’ goals, and available resources, so, without this mutual understanding, students are less likely to engage with each other’s ideas. For young learners with less developed attention and problem-solving skills, this can be particularly challenging.

Study A23 found a link between the type of writing task and the roles students took on (content-focused roles, literacy-focused roles, performance-focused roles, process-focused roles, expressive roles and off-task roles). In general, students participated more when working collaboratively on presentations or when writing reports to teach other students than during the traditional task of answering textbook questions. These findings support the idea put forward by Olinghouse et al. (2015), as cited in Salo et al. (2023), that different types of tasks can promote diverse learning practices and diverse use of knowledge. Furthermore, despite the evidence that young learners may initially be attracted to participatory roles (e.g. highlighting text or managing materials), the identification of process-oriented roles (e.g., suggesting ideas or considering others’ perspectives) underlines that they too can develop collaborative writing skills. The underutilisation of emotional expression roles signals the potential of collaborative writing to go beyond factual content.

It’s also worth looking at the findings of Study A16 on the potential disadvantages of lower-level collaborative writing. In crowded classrooms, students’ work is easily visible, leading to instances of unsolicited advice that may be unwanted or unhelpful, especially when focused on form (e.g. spelling) rather than content or purpose, which may not be a priority for the writer at that stage. Students can also choose who they interact with, potentially excluding others. Finally, while subteaching and copying can benefit some students, others may become over-reliant on peer support and neglect to practise their writing skills.

Focusing on the higher education level, Study A5 shows that factors such as language skills, personal goals, assigned roles in the writing process, the platform they, how they prefer to learn, how familiar they are with the topic, and even the influence of the teacher, can influence how students contribute and work together (mirroring Study A21). The study emphasizes the interactive nature of collaborative writing by introducing the concept of ‘Goal-Directed Activity (GD)’, a collaborative space where students work together to complete the writing task.

Study A22, also conducted on a higher education level and an online environment, explored how students interacted during collaborative writing in both synchronous and asynchronous modes, concluding that more learning opportunities were provided regardless. In particular, students benefited from giving and receiving feedback from peers and felt motivated by the encouragement they received during the project. The research found, therefore, evidence of mutuality and equality in student contributions, which are key features of productive collaborative interaction, according to Elabdali and Arnold (2020) and Storch (2013), as cited in Liou and Chiang (2023).



Study A8 found that students with positive attitudes generated more discussions about language use, found more solutions to language problems, and collaborated more effectively. This study also supports previous evidence that the student's initial attitudes towards collaborative writing can influence how they interact during the task (Chen & Yu, 2019; Li, Hiver, & Papi, 2022; Storch, 2013; Storch & Wigglesworth, 2010; Wigfield et al., 2011, as cited in Mozaffari, 2023). Therefore, if students have negative attitudes towards collaborative tasks, it may be wiser to consider using alternative approaches with them, such as individual writing with peer feedback, so as not to inhibit their interaction and learning.

Finally, a link between familiarity and social engagement during the writing activity was established in Study A10, which investigated how giving learners more control over the content they write about (task features) affects their engagement in collaborative writing by comparing a full-control scenario and a partial control scenario.

INSTRUCTION

A quick overview of the studies in this category allows us to observe the increasing prominence of online teaching (A2, A20, A29, A31); the latter two (A29 and A31) linked to the COVID-19 pandemic. These two topics will be examined in more detail later.

Study A2 presents a model-based approach to collaborative writing tasks called CLP (Collaborative Learning Platform), which can be used to design specific activities for large online courses. Implemented in courses with over 4500 students, this research focused mainly on the benefits for teachers, aiming to support them throughout the whole process and to this end including functionalities like group creation, automated assignment, communication tools and progress monitoring. The authors concluded that CPL is a scalable and robust solution that enables teachers to reduce the workload associated with the creation, execution and assessment of collaborative writing tasks, as well as the analysis of collaborative writing behaviour.

Study A20, on the contrary, takes a more student-centred approach. Concentrating on a flipped online learning environment in higher education, the findings showed that students in both the online forum group and the collaborative note-taking group performed better on individual writing assignments than the control group. These results are helpful for teachers because they suggest that if the goal is to improve individual writing performance, it's beneficial to include collaborative writing activities. They should also encourage students to go beyond the simple recording of information and to reflect and share deeper insights about the course material.

In more general terms, Study A29 adapted the approach previously proposed by Fredrickson (2015), as cited in Myatt (2023), who designed a study to measure student engagement and learning satisfaction in two online courses, one of which integrated a required collaborative writing assignment and the other of which did not, highlighting the benefits of implementing collaborative writing assignments, but signalling some unexpected differences. Whereas students who wrote only individually reported feeling more engaged and confident in learning the subject matter itself, students in the collaborative writing group felt more engaged in the course overall and reported feeling better prepared for future leadership roles and careers. However, this group felt less supported by their instructor, leading the author to suggest that teachers should look for more ways to be more available and engaged with their students at a distance.



In the same spirit, Study A31, which investigated the extent to which the collective scaffolding provided in virtual collaborative writing helped learners to complete writing tasks and examined EFL university students' responses to this activity during the COVID-19 pandemic, concluded that teachers have an important role to play in all stages of a collaborative writing task. The authors even argue that the teacher must avoid unexpectedly handing over all control and responsibility to the group members during the activity.

After observing interaction dynamics during a primary writing activity (as explored above), Study A16 stressed that all students' interactions are valuable in learning to write and that students benefit from a sense of community that promotes writing as a meaningful activity. But it's not enough to allow them to work together: students need to be taught how to have discussions that lead to a climate that fosters 'shared thinking' (defined by Kissel et al., 2011, as cited in Riis-Johansen & Myran, 2023). Potential difficulties include students relying too much on others or focusing too much on correctness, which can stifle creativity. Finally, the finding that students imitate the teachers' behaviour underlines their role in setting a positive tone for classroom interaction.

Study A35, in particular, provided useful insights for educators who specifically want to improve L2 learners' writing skills by concluding that incorporating metacognitive prompts into collaborative writing activities can help improve writing accuracy. Along the same line, Studies A13 and A24 found that explicit instruction (on writing knowledge and strategies) combined with collaborative writing was positively related to argumentative writing performance and writing self-efficacy among secondary school students in the first study, and to teaching students how to integrate arguments from conflicting sources in the second study, respectively.

LANGUAGE LEARNING

Both Studies A21 and A25 point to some issues that should be considered when employing collaborative writing strategies with young learners. Study A21 acknowledges that they focus on lexis regardless of proficiency, but as proficiency increases, they are more likely to consider language form and solve language problems. This is consistent with the findings of Study A25, which indicate that these learners focus more on spelling errors than on grammatical errors, suggesting that language learning is influenced by their developmental stage.

Relevant views on the role of the teacher can be found in these studies. On the one hand, Study A21 emphasises that with younger learners with lower levels of proficiency, it's not enough to rely solely on their resources, as many language errors go uncorrected. However, it is suggested that it is preferable to encourage students to work closely together (with occasional teacher prompting) because collaborative writing activities still offer significant benefits to all students, including the opportunity to practise the language in a communicative context and to build confidence. Study A25, on the other hand, shows that pairing young EFL learners with matched proficiency led to more effective language learning than self-selected pairs (as seen above), implying that the teacher needs to play an active role in group formation.

Overall, Studies A3, A5, A22, A26 and A31 support the use of collaborative online writing activities in language teaching. In particular, studies A3, A26 and A31 found that these activities can help students improve their writing skills.



Study A3 argues that the improvement in writing skills was due to the interaction established during the activity as well as the online approach. In this context, Study 31 found that the online collaborative process allowed students to become more aware of the cognitive processes involved in L2 writing, which includes elements such as learning a new topic, understanding text types, combining various ideas, and thinking critically, amongst others. More broadly, Study A26 suggests that the online environment allows students more time to work flexibly on their assignments, encourages more reticent students to become more involved in learning and that the multimodal nature of the model even enables them to imitate how native English speakers communicate. It's worth mentioning that Study A22 showed that positive emotions can trigger students' persistence of effort and interest in learning English in both synchronous and asynchronous modes.

According to Study A5, language proficiency is an important mediating factor for active participation in small-group collaborative writing settings, even those online (in line with Bahar, 2003; Dobao, 2012; Kitjaroonchai & Suppasetsee, 2021a; Storch, 2013, as cited in Kitjaroonchai & Loo, 2023), with more proficient members taking active responsibility compared to other members. While acknowledging that students whose language skills are still developing may benefit from their more proficient peers, the authors stress that there is a risk of unequal distribution of work and possible social friction between team members. Therefore, to create an equitable situation where all members can benefit, the group's interaction needs to be monitored.

Looking now at writing quality itself. As mentioned earlier, Study A35 concluded that incorporating metacognitive prompts into collaborative writing activities can be a helpful strategy for improving the accuracy of L2 learners' writing because they promote more effective interaction between learners. Study A10 suggests that learners' engagement with language aspects determines the accuracy of the subsequent text, supporting the importance of learners' attention to form during the process. It was also found that the higher level of engagement did not seem to be related to the complexity and length of the text.

Study A3 found improvements in lexical complexity, but concluded that these tasks did not contribute to improvements in syntactic complexity, in line with earlier research by Chen (2019), Villarreal and Gil-Sarratea (2019), McDonough et al. (2018), Shehadeh (2011), and Wigglesworth and Storch (2009), as cited in Kılınç and Yüksel (2023). Similarly, Study A35 didn't find a significant effect on writing fluency and complexity, which contradicts the findings of Wischgoll (2016), as cited in Teng and Huang (2023).

On the contrary, Study A12 concluded that university students' writing fluency improved significantly in both group and individual writing tasks after engaging in collaborative writing. In addition, Study 8 found an association between a positive attitude and an improvement in writing quality at the level of content, organisation, grammar and vocabulary.

Overall, these contradictions support the need for more studies targeting these writing attributes.

TECHNOLOGY INTEGRATION AND DISTANCE LEARNING

Focusing on a higher education level, Study 1 concluded that the techno-pedagogical design based on flipped learning and collaborative writing it tested could indeed improve the level of academic essays produced by students because it allowed them to enter the



classroom with content knowledge previously acquired through the course material (video, slides or text) and at their own pace. Peer feedback was found to be significantly better than self-feedback in learning content, organisation and conventions of writing and intergroup corrections favoured the improvement of grammatical, syntactic and orthographic issues and greater awareness of coherence and cohesion. The role of the teacher throughout the intervention was also highlighted.

Following the COVID-19 pandemic, Study A28 argued for using digital writing technologies in higher education learning environments. Particular emphasis was placed on the use of artificial intelligence (AI) tools, with a reminder that technological disruptions often appear as threats to digital writing instruction, but in fact, turn out to be modifications and even supports. In this context, some guidance was offered for digital writing teaching in the presence of AI-based writing generators, including distinguishing between writing to learn and writing to report learning; scaffolding engagement with AI writing generators; requiring students to check facts; engaging students in reflection on the use of these tools; and preparing students to cite AI writing, reminding them that the balance between sources and their thinking has not changed. It should be noted, however, that in the end, the emphasis of the paper wasn't on collaborative writing as such.

Studies A3, A5, A20, A22, A29, and A30 are also notable for their focus on an online learning environment. This inherently involves the integration of technology in collaborative writing processes and the findings support its use. Finally, despite the lack of a keyword regarding technology integration or an online environment, we observe that study A31 concluded that technological tools allow EFL students more flexibility and broader access to the writing course and that they can act as both scaffolding and scaffolding mediators.

CONTEXTUAL ELEMENTS

Reflecting the global experience of the COVID-19 pandemic, some articles addressed the issue in the context of collaborative writing.

Along this line, Study A9 explored the views, challenges, coping strategies and outcomes of senior high school students in collaborative research writing at distance learning by analysing thirty reflective essays of their authorship on the subject. Participants acknowledged that they faced several challenges, such as those related to the technicalities of research (consistent with Belgica et al., 2020; and Barrot et al., 2021, as cited in Roxas, 2023), communication and collaboration (consistent with Rotas & Cahapay, 2020; and Sarvestani et al., 2020, as cited in Roxas, 2023). To cope with the difficulties, the students tried to adopt a positive attitude by being patient, considerate and determined and sought help from peers and teachers. The authors also argued that the students also acquired important values.

Study A26, which took place in Indonesia, found that students' perceived barriers to collaborative online writing learning were, on the one hand, Internet connectivity, especially for synchronous learning (a reminder that connectivity can still be a challenge in many parts of the world). On the other hand, the uneven collaboration between the group members was seen as a challenge, again highlighting the role of the teacher throughout the whole process to ensure that each group member takes their shared responsibility from the beginning to the end.

In more general terms, Study A29 highlighted the benefits of implementing collaborative writing assignments, particularly in the aftermath of the COVID-19 pandemic (see subsection 'instruction'). Study A30 sought to uncover to what extent changes in writing development through the pandemic refocused the engagement of students in community-focused digital writing practices, in a learning development and academic literacies context. While addressing the process of adapting to a fully online environment and considering how to support the social and psychological aspects of learning in these environments to overcome isolation, the authors reflected on what they had learned to improve their future teaching practice.

Firstly, regarding the inability to measure student engagement by observing body language when webcams were not used, this study supports evidence that has shown that participation and interaction, rather than 'being seen', are more useful markers of student engagement in online learning environments (in line with Bashovksi, 2021; Gilmour, 2021b; Nadeem & Blumenstein, 2021, as cited in Morley & Aston, 2023). The authors also favour silence as a way of handing responsibility back to students. More importantly, they argue that moving fully to online learning doesn't mean rushing to transfer existing support to this environment: time needs to be taken to reflect on the best methods to meet the different needs of the students.

Finally, in the aftermath of the pandemic, Study A28 highlights that a new wave of digital writing technologies, such as AI-powered writing generators, is emerging with the potential to reshape the role of digital literacy (see subsection 'technology integration and distance learning'). However, these technologies can be leveraged to reflect values as long as educators have access to and truly understand them.

OTHERS

Studies A6 and A36 focus on activities that can take place during the writing process (planning, textualisation and revision), but not on the process as a whole.

Based on the premise that the early stages of the writing process have received little attention in previous research, Study A6 addresses the activity of brainstorming at the secondary level of education. The results show that brainstorming isn't a linear process (corroborating Fullagar & Kuby, 2021; Hein, 2019, as cited in Svenlin & Jusslin, 2023) and that it's almost impossible to pinpoint when students are brainstorming, drafting or editing. The authors propose then a rethinking of brainstorming as something different, asking whether the notions of idea-ing and idea-becoming might be more generative, recognising that collaborative writing is not a straightforward process but moves in several and unpredictable directions.

Study A36 focused on collaborative note-taking in higher education, where this strategy has been pushed to increase student engagement and achieve more meaningful learning, and attempted to fill a gap in its impact on student performance. The results suggest that while the collaborative processes of group notetaking led students to retain more information, these processes did not lead to better performance in academic writing. As a result, the authors argue that teachers need to consider carefully the type of content that students are learning and whether the relative value of collaboration is outweighed by the reduced amount of practice that students will engage in.



CONCLUSIONS

The dynamics of interaction and the use of collaborative writing in language learning were discussed in detail, with important pedagogical implications, both at the level of why and how to use it. The positive social outcomes of this activity for learners (regardless of their age) and the benefits of collaborative writing for learning English as a foreign or second language were confirmed by several of the studies included in the analysed corpus. Moreover, some of them provided important tips to contemplate when using collaborative writing in educational settings, namely, to consider the developmental level of the learners, the relevance of group formation (according to the profile of the learners) and that different types of tasks can promote diverse learning practices and diverse use of knowledge.

Unsurprisingly, the use of online collaborative writing tasks seems to be on the increase in the aftermath of the COVID-19 pandemic. In this corpus, the advantages of the digital learning environment outweigh the disadvantages, allowing more flexibility for learners to engage in their own learning. Still, it should be highlighted that access to the Internet is still a barrier to the widespread use of online tools in many geographical locations.

However, if the pandemic has taught us anything, it's that it's not enough to simply transfer strategies used in physical learning environments to online environments. As educators, we need to rethink strategies in light of these tools' capabilities to better harness their value. This is particularly important if we look at the emergence of AI tools. Although identified as an emerging trend in some of the studies, the use of AI tools in collaborative writing was mentioned above all from an ethical perspective, i.e. the need to inform students of the importance of thinking of AI as a support that does not dismiss the relevance of tasks such as fact-checking or citation. The sample doesn't include any studies that have used AI to teach collaborative writing per se. It's definitely a gap that needs to be addressed from a pedagogical perspective in the future, especially with more tools coming to light every day.

Within the analysed corpus, it is also clear that there is a strong focus on collaborative writing at the higher education level compared to other levels - 14 articles out of 24. Since writing is an activity used throughout all our lives – more today than in the past –, we wonder whether teaching collaborative writing from an early age won't help open the door to keeping students more engaged, helping to relieve the cognitive load associated with writing. This also calls for further research in the first levels of education, and even in other teaching and learning contexts, to gather more useful evidence on its use in practice.

Indeed, the need for explicit instruction was also evident in this corpus when it comes to teaching both collaborative skills themselves (students need to be taught how to work better together) and writing skills. While some studies have focused on the effects on the quality of writing (aspects such as accuracy, fluency, and complexity), there's still room for further exploration as some contradictory results come up. This raises the question of how collaborative writing should be implemented to improve these aspects of writing, and what role context and the use of AI might play in this equation. For instance, emerging evidence suggests that AI can increase students' motivation to write when used in conjunction with other learning practices, but this is something that requires further investigation.

In the same vein, we were surprised to find that the different stages of the writing process were not explicitly addressed in the corpus. It is an interesting fact given that process writing is one of the most usual writing teaching methods, but our corpus lacked studies that focused on each of them individually or as a whole. This gap in the research

seemingly suggests that the transition from the individual writing process to the collaborative writing process hasn't yet been made to even assess its feasibility.

Finally, in all categories, at all levels of education and in all learning contexts, the role of the teacher is present, explicitly or not. The results confirm that the teacher is not only essential but irreplaceable for the success of collaborative writing activities; however, their role needs to be adjusted to the contexts in which they take place. This supports the need for further experimental research to build a body of work that will enable educators to unlock the true potential of collaborative writing, whatever the context. This issue is of paramount importance in relation to the AI gap mentioned above, which has added a layer of complexity to the teaching of writing itself. What skills teachers will need to master in order to adequately teach collaborative writing in today's rapidly changing reality is a crucial matter, and one that raises the question of what changes in training will need to take place.

Finally, it ought to be noted that in terms of the limitations of this study, other databases could have been included in our search criteria to provide an even more comprehensive overview of the issue. As a result, we might have missed other gaps and emerging trends.

AUTHORS CONTRIBUTION

Conceptualization: M. M.; Methodology: M. M.; Validation: M. M.; Formal analysis: M. M.; Investigation: M. M.; Resources: M. M.; Data curation: M. M.; Writing—original draft preparation: M. M.; Writing—review and editing: M. T. and R. M. F.; Visualization: M. M.; Supervision: M. T. and R. M. F.

All authors have read and agreed to the published version of the manuscript.

REFERENCES

- Barbeiro, L. F., Pereira, L. A., Calil, E., & Cardoso, I. (2022). Termos metalinguísticos e operações de natureza gramatical na escrita colaborativa dos alunos do ensino básico. *Tejuelo*, 35(2), 45-76. <https://doi.org/10.17398/1988-8430.35.2.45>
- Basterrechea, M., & Gallardo-del-Puerto, F. (2003). Collaborative writing and patterns of interaction in young learners: The interplay between pair dynamics and pairing method in LRE production. *Vigo International Journal of Applied Linguistics*, 20, 49-76. <https://doi.org/10.35869/vial.v0i20.4354>
- Boscolo, P. (2008). Writing in Primary School. In C. Bazerman (Ed.), *Handbook of Research on Writing* (pp. 293-309). Lawrence Erlbaum Associates.
- Dobao, A. F., & Blum, A. (2013). Collaborative writing in pairs and small groups: Learners' attitudes and perceptions. *System*, 41(2), 365-378. <https://doi.org/10.1016/j.system.2013.02.002>



- Faneca, R. (2020). O contributo do kamishibai plurilingue na promoção da escrita colaborativa de textos narrativos. *Indagatio Didactica*, 12(2), 219-238. <https://doi.org/10.34624/id.v12i2.17484>
- Flower, L., & Hayes, R. (1981). A Cognitive Process Theory of Writing. *College Composition and Communication*, 32(4), 365-387. <https://doi.org/10.2307/356600>
- Fonseca, G. R., & Nunes, F. A. (2019). Escrever em conjunto para aprender a escrever – uma experiência de escrita colaborativa no 1.º ciclo do ensino básico no Agrupamento de Escolas da Lourinhã. *Da Investigação às Práticas: Estudos De Natureza Educacional*, 9(2), 132-151. <https://doi.org/10.25757/invep.v9i2.183>
- Graham, S. (2018). A Revised Writer(s)-Within-Community Model of Writing. *Educational Psychologist*, 53(4), 258-279. <https://doi.org/10.1080/00461520.2018.1481406>
- Graham, S. (2019). Changing how writing is taught. *Review of Research in Education*, 43(1), 277-313. <https://doi.org/10.3102/0091732X18821125>
- Harris, K. R., & McKeown, D. (2022). Overcoming barriers and paradigm wars: Powerful evidence-based writing instruction. *Theory Into Practice*, 61(4), 429-442. <https://doi.org/10.1080/00405841.2022.2107334>
- Herder, A., Berenst, J., Glopper, K. de, & Koole, T. (2018). Nature and function of proposals in collaborative writing of primary school students. *Linguistics and Education*, 46, 1-11. <https://doi.org/10.1016/j.linged.2018.04.005>
- Kılınç, B.O., & Yüksel, H.G. (2024). Online collaborative writing in an online EFL writing class. *Research and Practice in Technology Enhanced Learning*, 19(22), 2-16. <https://doi.org/10.58459/rptel.2024.19022>
- Kitjaroonchai, N., & Loo, D.B. (2023). Who Are Active and Inactive Participants in Online Collaborative Writing? Considerations From an EFL Setting. *Theory and Practice in Language Studies*, 13(10), 2565-2576. <https://doi.org/10.17507/tpsls.1310.15>
- Kos, T. (2023). Young EFL Learners Collaboratively Writing a Dialogue During a Regular Classroom Lesson. *International Journal of English Studies*, 23(1), 49-79. <https://doi.org/10.6018/ijes.511241>
- Liou, H.-C., & Chiang, P.-E. (2024). Online interaction, emotions, and EFL learners' grit in collaborative writing. *The JALT CALL Journal*, 19(1), 71-91. <https://doi.org/10.29140/jaltcall.v19n1.1016>
- Lowry, P. B., Curtis, P., & Lowry, M. R. (2004). Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice. *Journal of Business Communication*, 41(1), 66-99. <https://doi.org/10.1177/0021943603259363>
- Lu, X., & Kim, S., (2021). A systematic review of collaborative writing implementation in K-12 second language classroom. *TEFLIN Journal*, 32(1), 51-71. <https://doi.org/10.15639/teflinjournal.v32i1/50-71>
- Martins, J. C. F. F. M. (2013). Os efeitos de diferentes práticas pedagógicas nas narrativas de alunos de 7.º e 8.º anos de escolaridade. In L. A. Pereira & I. Cardoso (Coords.), *Reflexão sobre a escrita. O ensino de diferentes géneros de textos* (pp. 123-144). UA Editora.

- Morley, C., & Aston, S. (2023). Overcoming isolation with community-based digital writing initiatives. *Journal of University Teaching & Learning Practice*, 20(2). <https://doi.org/10.53761/1.20.02.03>
- Mozaffari, S. H. (2023). The Effects of EFL Learners' Attitudes on Participation and Learning During Collaborative Writing. *The Electronic Journal for English as a Second Language*, 27(2), 1-24. <https://eric.ed.gov/?id=EJ1401863>
- Myatt, A. J. (2023). Teaching team writing online during and after COVID-19. *Journal of University Teaching & Learning Practice*, 20(2). <https://doi.org/10.53761/1.20.02.09>
- OECD. (2018). OECD future of education and skills 2030: OECD learning compass 2030. [https://www.oecd.org/content/dam/oecd/en/about/projects/edu/education-2040/1-1-learning-compass/OECD Learning Compass 2030 Concept Note Series.pdf](https://www.oecd.org/content/dam/oecd/en/about/projects/edu/education-2040/1-1-learning-compass/OECD_Learning_Compass_2030_Concept_Note_Series.pdf)
- Paul, J., Lim, W. M., O' Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *International Journal of Consumer Studies*, 45(4), 1-16. <https://doi.org/10.1111/ijcs.12695>
- Riis-Johansen, M. O., & Myran, I. H. (2023). Patterns in naturally occurring interactions in early writing instruction. *Journal of Early Childhood Literacy*, 0(0), 1-22. <https://doi.org/10.1177/14687984231213475>
- Roxas, M. J. (2023). Collaborative Research Writing in the New Normal: Students' Views, Challenges, Coping Strategies, and Takeaways. *Journal of Learning for Development*, 10(2), 297-311. <https://doi.org/10.56059/jl4d.v10i2.829>
- Salo, A.-E., Routarinne, S., Juvonen, R., & Kaasinen, A. (2023). Participatory roles adopted by elementary students when writing collaboratively in environmental and social studies classrooms. *Journal of Writing Research*, 15(1), 73-103. <https://doi.org/10.17239/jowr-2023.15.01.04>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333-339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. *Journal of Second Language Writing*, 14(3), 153-173. <https://doi.org/10.1016/j.jslw.2005.05.002>
- Storch, N. (2011). Collaborative Writing in L2 Contexts: Processes, Outcomes, and Future Directions. *Annual Review of Applied Linguistics*, 31, 275-288. <https://doi.org/10.1017/S0267190511000079>
- Svenlin, M., & Jusslin, S. (2023). Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis. *Linguistics and Education*, 77, 1-13. <https://doi.org/10.1016/j.linged.2023.101218>
- Svenlin, M., & Sørhaug, J. O. (2022). Collaborative Writing in L1 School Contexts: A Scoping Review. *Scandinavian Journal of Educational Research*, 67(6), 980-996. <https://doi.org/10.1080/00313831.2022.2115128>



- Teng, M. F., & Huang, J. (2023). The effects of incorporating metacognitive strategies instruction into collaborative writing on writing complexity, accuracy, and fluency. *Asia Pacific Journal of Education*, 43(4) 1071-1090. <https://doi.org/10.1080/02188791.2021.1982675>
- Wigglesworth, G., & Storch, N. (2009). Pair versus individual writing: Effects on fluency, complexity and accuracy. *Language Testing*, 26(3), 445-466. <https://doi.org/10.1177/0265532209104670>

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ARTICLES IN THE CORPUS

- Basterrechea, M., & Gallardo-del-Puerto, F. (2003). Collaborative writing and patterns of interaction in young learners: The interplay between pair dynamics and pairing method in LRE production. *Vigo International Journal of Applied Linguistics*, 20, 49-76. <https://doi.org/10.35869/vial.v0i20.4354>
- Burchart, M., & Haake, J. M. (2024). Supporting Collaborative Writing Tasks in Large-Scale Distance Education. *IEEE Transactions on Learning Technologies*, 17, 1051-1068. <https://doi.org/10.1109/TLT.2024.3355791>
- Chura-Quispe, G., & Castro, R. A. G. (2024). A techno-pedagogical design for the production of academic essays in university students. *Contemporary Educational Technology*, 16(1), 1-17. <https://doi.org/10.30935/cedtech/14022>
- Fanguy, M., Baldwin, M., Shmeleva, E., Lee, K., & Costley, J. (2023). How collaboration influences the effect of note-taking on writing performance and recall of contents. *Interactive Learning Environments*, 31(7), 4057-4071. <https://doi.org/10.1080/10494820.2021.1950772>
- Fanguy, M., Costley, J., Almusharraf, N., & Almusharraf, A. (2023). Online collaborative note-taking and discussion forums in flipped learning environments. *Australasian Journal of Educational Technology*, 39(2), 142-158. <https://doi.org/10.14742/ajet.8580>
- Granado-Peinado, M., Cuevas, I., Olmos, R., Martín, E., Casado-Ledesma, L., & Mateos, M. (2023). Collaborative writing of argumentative syntheses by low-performing undergraduate writers: explicit instruction and practice. *Reading and Writing*, 36, 909-936. <https://doi.org/10.1007/s11145-022-10318-x>
- Johinke, R., Cummings, R., & Di Lauro, F. (2023). Reclaiming the technology of higher education for teaching digital writing in a post-pandemic world. *Journal of University Teaching & Learning Practice*, 20(2). <https://doi.org/10.53761/1.20.02.01>
- Kılınc, B.O., & Yüksel, H.G. (2024). Online collaborative writing in an online EFL writing class. *Research and Practice in Technology Enhanced Learning*, 19(22), 2-16. <https://doi.org/10.58459/rptel.2024.19022>
- Kitjaroonchai, N., & Loo, D.B. (2023). Who Are Active and Inactive Participants in Online Collaborative Writing? Considerations From an EFL Setting. *Theory and Practice in Language Studies*, 13(10), 2565-2576. <https://doi.org/10.17507/tpsls.1310.15>
- Kos, T. (2023). Young EFL Learners Collaboratively Writing a Dialogue During a Regular Classroom Lesson. *International Journal of English Studies*, 23(1), 49-79. <https://doi.org/10.6018/ijes.511241>
- Landrieu, Y., De Smedt, F., Van Keer, H., & Wever, B. D. (2024). Argumentation in collaboration: the impact of explicit instruction and collaborative writing on secondary school students' argumentative writing. *Reading and Writing*, 37, 1407-1434. <https://doi.org/10.1007/s11145-023-10439-x>
- Liou, H.-C., & Chiang, P.-E. (2024). Online interaction, emotions, and EFL learners' grit in collaborative writing. *The JALT CALL Journal*, 19(1), 71-91.



<https://doi.org/10.29140/jaltcall.v19n1.1016>

- Lopres, J. R., Lactam, J. Y., Sia, J. B., Placencia Jr, M., Alili Jr, A. A., Labaria, J. J. C., Boloron, R. A., Ching, R. C., Alsaireh, M. Y., Capulso, L. B., & Reyes-Chua, E. (2023). A Model of Collaborative Writing Technique to Enhance Students' Writing Fluency. *World Journal of English Language*, 13(3), 227-238. <https://doi.org/10.5430/wjel.v13n3p227>
- Morley, C., & Aston, S. (2023). Overcoming isolation with community-based digital writing initiatives. *Journal of University Teaching & Learning Practice*, 20(2). <https://doi.org/10.53761/1.20.02.03>
- Mozaffari, S. H. (2023). The Effects of EFL Learners' Attitudes on Participation and Learning During Collaborative Writing. *The Electronic Journal for English as a Second Language*, 27(2), 1-24. <https://eric.ed.gov/?id=EJ1401863>
- Myatt, A. J. (2023). Teaching team writing online during and after COVID-19. *Journal of University Teaching & Learning Practice*, 20(2). <https://doi.org/10.53761/1.20.02.09>
- Phan, H. L. T., & Dao, P. (2023). Engagement in collaborative writing: Exploring learners' control of task content and text quality. *International Journal of Applied Linguistics*, 33(3), 242-259. <https://doi.org/10.1111/ijal.12462>
- Riis-Johansen, M. O., & Myran, I. H. (2023). Patterns in naturally occurring interactions in early writing instruction. *Journal of Early Childhood Literacy*, 0(0), 1-22. <https://doi.org/10.1177/14687984231213475>
- Roxas, M. J. (2023). Collaborative Research Writing in the New Normal: Students' Views, Challenges, Coping Strategies, and Takeaways. *Journal of Learning for Development*, 10(2), 297-311. <https://doi.org/10.56059/jl4d.v10i2.829>
- Salo, A.-E., Routarinne, S., Juvonen, R., & Kaasinen, A. (2023). Participatory roles adopted by elementary students when writing collaboratively in environmental and social studies classrooms. *Journal of Writing Research*, 15(1), 73-103. <https://doi.org/10.17239/jowr-2023.15.01.04>
- Sundari, H., & Febriyanti, R. H. (2023). Collective scaffolding in virtual collaborative writing: A study during emergency remote teaching in Indonesia. *Studies in English Language and Education*, 10(1), 16-40. <https://doi.org/10.24815/siele.v10i1.25039>
- Svenlin, M., & Juslin, S. (2023). Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis. *Linguistics and Education*, 77, 1-13. <https://doi.org/10.1016/j.linged.2023.101218>
- Syarifudin, S. (2023). Online Collaborative Flipped Writing Classroom for EFL Writing Instruction in the New Normal Era: Students' Perceptions. *International Journal of Arabic-English Studies (IJAES)*, 23(1), 257-280. <https://doi.org/10.33806/ijaes2000.23.1.14>
- Teng, M. F., & Huang, J. (2023). The effects of incorporating metacognitive strategies instruction into collaborative writing on writing complexity, accuracy, and fluency. *Asia Pacific Journal of Education*, 43(4), 1071-1090. <https://doi.org/10.1080/02188791.2021.1982675>



APPENDIX 1 – ORGANISATION

Code	Year	Title	Research approach	Education level
A1	2024	A techno-pedagogical design for the production of academic essays in university students	Quantitative, explanatory, experimental, and quasi-experimental design	Higher education
A2	2024	Supporting Collaborative Writing Tasks in Large-Scale Distance Education	Experimental Research	Not specified
A3	2024	Online collaborative writing in an online EFL writing class	Quasi-experimental research	Higher education EFL
A4	2023	Writing touch, writing (epistemic) vulnerability	It's not directly related to a teaching and learning context	
A5	2023	Who Are Active and Inactive Participants in Online Collaborative Writing? Considerations From an EFL Setting	Experimental research	Higher education EFL
A6	2023	Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis	Rhizoanalysis	Secondary education
A7	2023	Understanding Digital Inequality: A Theoretical Kaleidoscope	It's not directly related to a teaching and learning context	Not applicable
A8	2023	The Effects of EFL Learners' Attitudes on Participation and Learning During Collaborative Writing	Experimental research	EFL (Language Institute)
A9	2023	Collaborative Research Writing in the New Normal: Students' Views, Challenges, Coping Strategies, and Takeaways	Qualitative research	Secondary School
A10	2023	Engagement in collaborative writing: Exploring learners' control of task content and text quality	Experimental research	ESL (language learning programme 20-29)
A11	2021	Model texts in collaborative and individual writing among EFL children: noticing, incorporations, and draft quality	Cannot be accessed	
A12	2023	A Model of Collaborative Writing Technique to Enhance Students' Writing Fluency	Experimental research	Higher education
A13	2023	Collaborative writing of argumentative syntheses by low-performing undergraduate writers: explicit instruction and practice	Experimental research	Higher education
A14	2023	Un nuevo caso de refundición: de La prueba de los ingenios a Hacer remedio el dolor	Literary study	
A15	2023	La escritura de lo breve en la obra de los hermanos Margueritte	Literary study	
A16	2023	Patterns in naturally occurring interactions in early writing instruction	Experimental study	Elementary education
A17	2023	Tami Spry: The Force of (Co-)Performing Cultural study		



A18	2023	Between-ing: Collaborative Writing and the Unfoldings of Relational Space	Cultural study	
A19	2023	The Academic Assessment Machine: Posthuman Possibilities of/for Doing Assignments and Assessments Differently	Cultural Study	
A20	2023	Online collaborative note-taking and discussion forums in flipped learning environments	Experimental study	Higher Education
A21	2023	Young EFL Learners Collaboratively Writing a Dialogue During a Regular Classroom Lesson	Experimental study	Middle school (10-11) EFL
A22	2023	Online interaction, emotions, and EFL learners' grit in collaborative writing	Experimental study	Higher education EFL
A23	2023	Participatory roles adopted by elementary students when writing collaboratively in environmental and social studies classrooms	Experimental study	Elementary education
A24	2024	Argumentation in collaboration: the impact of explicit instruction and collaborative writing on secondary school students' argumentative writing	Experimental study	Secondary education
A25	2023	Collaborative writing and patterns of interaction in young learners: The interplay between pair dynamics and pairing method in LRE production	Experimental study	Middle education ELF (10-12)
A26	2023	Online Collaborative Flipped Writing Classroom for EFL Writing Instruction in the New Normal Era: Students' Perceptions	Experimental study	Higher education EFL
A27	2023	Remembering learning to play: reworking gendered memories of sport, physical activity, and movement	It's not directly related to a teaching and learning context	
A28	2023	Reclaiming the technology of higher education for teaching digital writing in a post-pandemic world	Editorial	Higher education
A29	2023	Teaching team writing online during and after COVID-19	Archival case study approach	Higher education
A30	2023	Overcoming isolation with community-based digital writing initiatives	Case Study Approach	Higher education
A31	2023	Collective Scaffolding in Virtual Collaborative Writing: A Study during Emergency Remote Teaching in Indonesia	Qualitative case study design	Higher education EFL
A32	2023	Collaborative Writing in L1 School Contexts: A Scoping Review	Scoping review	
A33	2023	Writing as liberatory practice: unlocking knowledge to locate an academic field	It's not directly related to a teaching and learning context	
A34	2023	Lifting the pen and the gaze: embodied recruitment in collaborative writing	Cannot be accessed	
A35	2023	The effects of incorporating metacognitive strategies instruction into collaborative writing on writing complexity, accuracy, and fluency	Experimental research	Higher Education EFL
A36	2023	How collaboration influences the effect of note-taking on writing performance and recall of contents	Qualitative research	Higher education



APPENDIX 2 – PURIFICATION

	Code	Year	Title	Research approach	Education level
1	A1	2024	A techno-pedagogical design for the production of academic essays in university students	Quantitative, explanatory experimental, and quasi-experimental design	Higher education
2	A2	2024	Supporting Collaborative Writing Tasks in Large-Scale Distance Education	Experimental Research	Not specified
3	A3	2024	Online collaborative writing in an online EFL writing class	Quasi-experimental research	Higher education EFL
4	A5	2023	Who Are Active and Inactive Participants in Online Collaborative Writing? Considerations From an EFL Setting	Experimental research	Higher education EFL
5	A6	2023	Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis	Rhizoanalysis	Secondary education
6	A8	2023	The Effects of EFL Learners' Attitudes on Participation and Learning During Collaborative Writing	Experimental research	EFL (Language Institute)
7	A9	2023	Collaborative Research Writing in the New Normal: Students' Views, Challenges, Coping Strategies, and Takeaways	Qualitative research	Secondary School
8	A10	2023	Engagement in collaborative writing: Exploring learners' control of task content and text quality	Experimental research	ESL (language learning programme 20-29)
9	A12	2023	A Model of Collaborative Writing Technique to Enhance Students' Writing Fluency	Experimental research	Higher education
10	A13	2023	Collaborative writing of argumentative syntheses by low-performing undergraduate writers: explicit instruction and practice	Experimental research	Higher education
11	A16	2023	Patterns in naturally occurring interactions in early writing instruction	Experimental study	Elementary education
12	A20	2023	Online collaborative note-taking and discussion forums in flipped learning environments	Experimental study	Higher Education
13	A21	2023	Young EFL Learners Collaboratively Writing a Dialogue During a Regular Classroom Lesson	Experimental study	Middle school (10-11) EFL
14	A22	2023	Online interaction, emotions, and EFL learners' grit in collaborative writing	Experimental study	Higher education EFL
15	A23	2023	Participatory roles adopted by elementary students when writing collaboratively in environmental and social studies classrooms	Experimental study	Elementary education



16	A24	2023	Argumentation in collaboration: the impact of explicit instruction and collaborative writing on secondary school students' argumentative writing	Experimental study	Secondary education
17	A25	2023	Collaborative writing and patterns of interaction in young learners: The interplay between pair dynamics and pairing method in LRE production	Experimental study	Middle education ELF (10-12)
18	A26	2023	Online Collaborative Flipped Writing Classroom for EFL Writing Instruction in the New Normal Era: Students' Perceptions	Experimental study	Higher education EFL
19	A28	2023	Reclaiming the technology of higher education for teaching digital writing in a post-pandemic world	Editorial	Higher education
20	A29	2023	Teaching team writing online during and after COVID-19	Archival case study approach	Higher education
21	A30	2023	Overcoming isolation with community-based digital writing initiatives	Case Study Approach	Higher education
22	A31	2023	Collective Scaffolding in Virtual Collaborative Writing: A Study during Emergency Remote Teaching in Indonesia	Qualitative case study	Higher education EFL
23	A35	2023	The effects of incorporating metacognitive strategies instruction into collaborative writing on writing complexity, accuracy, and fluency	Experimental research	Higher Education EFL
24	A36	2023	How collaboration influences the effect of note-taking on writing performance and recall of contents	Qualitative research	Higher education

APPENDIX 3 – KEYWORDS VS. EDUCATIONAL LEVELS

Elementary Education: emerging categories

	Title	Keywords
A16	Patterns in naturally occurring interactions in early writing instruction	Early literacy, writing, beginning writing, children's writing, peer interaction, collaborative writing, early literacy instruction
A23	Participatory roles adopted by elementary students when writing collaboratively in environmental and social studies classrooms	Collaborative writing, environmental and social studies, participatory roles, elementary students

Emerging categories: interaction; instruction

Middle Education: emerging categories

	Title	Keywords
A21	Young EFL Learners Collaboratively Writing a Dialogue During a Regular Classroom Lesson	Collaborative Writing; Young Learners; Peer Interaction; Classroom-based Study; English as a Foreign Language
A25	Collaborative writing and patterns of interaction in young learners: The interplay between pair dynamics and pairing method in LRE production	Language-related episodes (LRE), patterns of interaction, pair formation method, collaborative writing, form-focused LREs.

Emerging categories: EFL; Interaction; instruction

Secondary Education: emerging categories

A6	Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis	Collaborative writing; Brainstorming; Postprocess; Rhizome; Writing process
A9	Collaborative Research Writing in the New Normal: Students' Views, Challenges, Coping Strategies, and Takeaways	Collaborative writing, academic writing, senior high school, new normal.
A24	Argumentation in collaboration: the impact of explicit instruction and collaborative writing on secondary school students' argumentative writing	Argumentative writing, collaborative writing, explicit writing instruction, self-efficacy for writing, secondary education

Emerging categories: Writing Process; Contextual factors

Higher Education: emerging categories

	Title Keywords	Keywords
A1	A techno-pedagogical design for the production of academic essays in university students	Techno-pedagogical design, flipped learning, collaborative writing, academic essays
A3	Online collaborative writing in an online EFL writing class	English as a Foreign Language, Collaborative writing, Fluency, Lexical complexity, Online collaborative writing, Syntactic complexity, Writing



A5	Who Are Active and Inactive Participants in Online Collaborative Writing? Considerations From an EFL Setting	Collaborative writing, EFL learners, online collaborative writing, student interaction, writing contributions
A12	A Model of Collaborative Writing Technique to Enhance Students' Writing Fluency	Collaborative writing, students, post-test, pre-test, language learning
A13	Collaborative writing of argumentative syntheses by low-performing undergraduate writers: explicit instruction and practice	Argumentative synthesis, collaborative writing, higher education, low-performing, explicit instruction
A20	Online collaborative note-taking and discussion forums in flipped learning environments	Flipped instruction, online discussion forums, collaborative note-taking, collaborative writing, online learning
A22	Online interaction, emotions, and EFL learners' grit in collaborative writing	L2 grit, emotions, collaborative writing, online interaction
A26	Online Collaborative Flipped Writing Classroom for EFL Writing Instruction in the New Normal Era: Students' Perceptions	Collaborative writing, EFL, Flipped classroom, COVID-19, New Normal Era
A28	Reclaiming the technology of higher education for teaching digital writing in a post-pandemic world	Digital writing, pandemic, collaborative writing, peer review, surveillance, Zoom, ChatGPT
A29	Teaching team writing online during and after COVID-19	Team Writing, COVID-19, Collaborative Writing, Online Writing, Online Writing Instruction (OWI)
A30	Overcoming isolation with community-based digital writing initiatives	Collaborative Writing, Digital Writing, Overcoming Isolation
A31	Collective Scaffolding in Virtual Collaborative Writing: A Study during Emergency Remote Teaching in Indonesia	Collaborative writing, collective scaffolding, EFL university students, EFL writing, scaffolding.
A35	The effects of incorporating metacognitive strategies instruction into collaborative writing on writing complexity, accuracy, and fluency	Metacognitive instruction; collaborative writing; fluency; complexity; accuracy
A36	How collaboration influences the effect of note-taking on writing performance and recall of contents	Collaborative note-taking; collaborative writing; higher education; retention

Emerging categories: Technology; EFL; Distance learning; Interaction; Instruction; Contextual Factors

Other contexts: emerging categories

	Title	Keywords
A8	The Effects of EFL Learners' Attitudes on Participation and Learning During Collaborative Writing	EFL Learners' attitude, collaborative writing, language-related episodes (LREs), patterns of dyadic interaction, outcome of pair work
A10	Engagement in collaborative writing: Exploring learners' control of task content and text quality	Collaborative writing, learner engagement, learners' control of task content, text quality

Emerging categories: EFL; Interaction; effect on writing quality

Not Specified: emerging categories

	Title	Keywords
A2	Supporting Collaborative Writing Tasks in Large-Scale Distance Education	Collaborative learning tools, collaborative writing, learning environments, peer reviewing



APPENDIX 4 – INCLUSION IN CATEGORIES

Category Interaction

Category	Description	Papers	Keywords	Educational level
Interaction	Findings that focus on the interaction generated between participants in a collaborative writing activity	A5	'student interaction'	Higher education EFL
		A8	'patterns of dyadic interaction', 'outcome of pair work'	EFL (Language Institute)
		A10	'learner engagement'	ESL (language learning programme 20-29)
		A16	'peer interaction'	Elementary education
		A21	'peer interaction'	Middle school (10-11) EFL
		A22	'online interaction'	Higher Education EFL
		A23	'participatory roles'	Elementary education
		A25	'patterns of interaction'	Middle Education

Category Instruction

Category	Description	Papers	Keywords	Educational level
Instruction	Findings that focus on the impact of collaborative writing instruction and learning tools	A2	'collaborative learning tools'	Not specified
		A13	'explicit instruction'	Higher Education
		A16	'early literacy instruction'	Elementary Education
		A20	'flipped instruction', 'online learning'	Higher Education
		A24	'Explicit writing instruction'	Secondary Education
		A29	'Online Writing Instruction (OWI)'	Higher education
		A31	'collective scaffolding', 'scaffolding'	Higher education EFL
		A35	'metacognitive instruction'	Higher Education EFL



Category Language Learning

Category	Description	Papers	Keywords	Educational level
Language Learning	Findings that focus on the use of collaborative writing for language learning, including writing itself	A3	'english as a foreign language', 'fluency', 'lexical complexity', 'syntactic complexity'	Higher education EFL
		A5	'EFL learners', 'writing contributions'	Higher Education EFL
		A8	'EFL Learners' attitude', 'language-related episodes (LREs)'	EFL (Language Institute)
		A10	'learners' control of task content, text quality'	ESL (language learning programme 20-29)
		A12	'language learning'	Higher Education
		A21	'English as a Foreign Language'	Middle Education
		A22	'L2 grit'	Higher education EFL
		A25	'Language-related episodes (LRE)', 'form-focused LREs'	Middle education ELF (10-12)
		A26	'EFL'	Higher education EFL
		A31	'EFL university', 'EFL writing'	Higher education EFL
A35	'fluency', 'complexity', 'accuracy'	Higher Education EFL		

Category Technology integration and distance learning

Category	Description	Papers	Keywords	Educational level
Technology integration and distance learning	Findings that focus on the integration of technology in collaborative writing processes, as well as those realised through distance learning	A1	'techno-pedagogical design'	Higher Education
		A3	'online collaborative writing'	Higher Education EFL
		A5	'online collaborative writing'	Higher Education EFL
		A20	'online discussion forums', 'online learning'	Higher Education
		A22	'online interaction'	Higher education EFL
		A28	'digital writing', 'Zoom', 'ChatGPT'	Higher Education
		A29	'online writing', 'online writing instruction (OWI)'	Higher education
		A30	'digital writing'	Higher Education
		A31	Keywords don't focus the virtual environment, but the title yes	Higher Education EFL



Category Contextual Elements

Category	Description	Papers	Keywords	Educational level
Contextual Elements	Findings that focus on the impact of contextual elements, such as the COVID-19 pandemic.	A9	'new normal'	Secondary School
		A26	'COVID-19', 'new normal era'	Higher education EFL
		A28	'pandemic'	Higher Education
		A29	'COVID-19'	Higher Education
		A30	'overcoming Isolation'	Higher education EFL

Category Others

Category	Description	Papers	Keywords	Educational level
Others	Findings that focus on aspects not included in any of the previous categories	A6	'brainstorming', 'writing process'	Secondary Education
		A36	'collaborative note-taking'	High Education

