

Functional use of discourse connectors in efl writing: a systematic review
Uso funcional de los conectores discursivos en la escritura en inglés como
lengua extranjera: una revisión sistemática

Usage fonctionnel des connecteurs discursifs en production écrite en anglais
langue étrangère : une revue systématique

Uso funcional dos conectores discursivos na produção escrita em inglês como
língua estrangeira: uma revisão sistemática

Pastor Pablo Pérez Ramos

Universidad de Panamá, Facultad de Humanidades, Departamento de Inglés, Panamá

pastor.perezr@up.ac.pa

 <https://orcid.org/0000-0002-3405-2955>

DOI: <https://doi.org/10.48204/contacto.v6n1.9525>

Recibido: 21/12/2025

Aceptado: 27/03/2026

ABSTRACT

This article examines the role of discourse connectors (DCs) in English as a Foreign Language (EFL) learners' writing, understood as linguistic devices that signal logical relationships between ideas and support textual coherence and cohesion. Beyond simple frequency counts, the review focuses on DC diversity, rhetorical appropriateness, and functional distribution, which together shape the clarity and persuasiveness of academic texts. A qualitative systematic review was conducted under PRISMA guidelines. An initial search across Scopus, Web of Science, ERIC, and Google Scholar yielded 335 records; after applying predefined inclusion and criteria, 11 empirical studies published between 2016 and 2025 were retained. The data was analyzed thematically, producing five core themes: (a) frequency versus functional quality of DCs, (b) effects of explicit instruction, (c) error patterns and L1 transfer, (d) measurement practices and operationalization of coherence, and (e) sensitivity to genre and sociocultural context. Findings show that the raw frequency of DCs has weak or inconsistent links to writing quality, while varied and rhetorically appropriate use enhances cohesion and coherence. Explicit, sustained instruction fosters more strategic deployment, though its long-term impact remains underexplored. In conclusion, embedding DC pedagogy within broader writing instruction holds strong potential to improve L2 learners' academic writing.

Keywords: Academic writing, corpus-based analysis, textual organization, pragmatic markers, rhetorical relations.

RESUMEN

Este artículo examina el papel de los conectores discursivos (CD) en la escritura de los estudiantes de inglés como lengua extranjera (EFL), entendidos como dispositivos lingüísticos que señalan las relaciones lógicas entre ideas y favorecen la coherencia y la cohesión textual. Más allá del simple recuento de frecuencias, la revisión se centra en la diversidad de los CD, su adecuación retórica y su distribución funcional, que en conjunto determinan la claridad y la persuasión de los textos académicos. Se llevó a cabo una revisión sistemática cualitativa siguiendo las directrices PRISMA. Una búsqueda inicial en Scopus, Web of Science, ERIC y Google Scholar arrojó 335 registros; tras aplicar criterios de inclusión predefinidos, se seleccionaron 11 estudios empíricos publicados entre 2016 y 2025. Los datos se analizaron temáticamente, lo que dio lugar a cinco temas centrales: (a) frecuencia frente a calidad funcional de los DC, (b) efectos de la instrucción explícita, (c) patrones de error y transferencia de la L1, (d) prácticas de medición y operacionalización de la coherencia, y (e) sensibilidad al género y al contexto sociocultural. Los resultados muestran que la frecuencia bruta de las DC tiene una relación débil o inconsistente con la calidad de la escritura, mientras que un uso variado y retóricamente apropiado mejora la cohesión y la coherencia. La instrucción explícita y sostenida fomenta un despliegue más estratégico, aunque su impacto a largo plazo sigue sin estar suficientemente explorado. En conclusión, la integración de la pedagogía de las DC en una enseñanza más amplia de la escritura tiene un gran potencial para mejorar la escritura académica de los estudiantes de L2.

Palabras claves: Escritura académica, análisis basado en corpus, organización textual, marcadores pragmáticos, relaciones retóricas.

RÉSUMÉ

Cet article examine le rôle des connecteurs discursifs (CD) dans l'écriture des apprenants de l'anglais langue étrangère (ALE), compris comme des dispositifs linguistiques qui signalent les relations logiques entre les idées et favorisent la cohérence et la cohésion textuelles. Au-delà du simple comptage de fréquence, l'étude se concentre sur la diversité des CD, leur pertinence rhétorique et leur distribution fonctionnelle, qui, ensemble, déterminent la clarté et la force de persuasion des textes académiques. Une revue systématique qualitative a été menée selon les directives PRISMA. Une recherche initiale dans Scopus, Web of Science, ERIC et Google Scholar a donné 335 résultats ; après application des critères d'inclusion prédéfinis, 11 études empiriques publiées entre 2016 et 2025 ont été retenues. Les données ont été analysées par thème, ce qui a permis de dégager cinq thèmes principaux : (a) fréquence par rapport à la qualité fonctionnelle des DC, (b) effets d'une instruction explicite, (c) types d'erreurs et transfert de la L1, (d) pratiques de mesure et opérationnalisation de la cohérence, et (e) sensibilité au genre et au contexte socioculturel. Les résultats montrent que la fréquence brute des DC a des liens faibles ou incohérents avec la qualité de l'écriture, tandis qu'une utilisation variée et rhétoriquement appropriée améliore la cohésion et la cohérence. Un enseignement explicite et soutenu favorise un déploiement plus stratégique, bien que son impact à long terme reste sous-exploré. En conclusion, l'intégration de la pédagogie des DC dans un enseignement plus large de l'écriture présente un fort potentiel d'amélioration de l'écriture académique des apprenants de L2.

Mots-clés: Écriture académique, analyse basée sur un corpus, organisation textuelle, marqueurs pragmatiques, relations rhétoriques.

RESUMO

Este artigo examina o papel dos conectores discursivos (DCs) na escrita de alunos de inglês como língua estrangeira (EFL), entendidos como dispositivos linguísticos que sinalizam relações lógicas entre ideias e apoiam a coerência e a coesão textual. Além da simples contagem de frequência, a revisão se concentra na diversidade dos DCs, na adequação retórica e na distribuição funcional, que juntos moldam a clareza e a persuasão dos textos acadêmicos. Uma revisão sistemática qualitativa foi realizada de acordo com as diretrizes PRISMA. Uma pesquisa inicial no Scopus, Web of Science, ERIC e Google Scholar resultou em 335 registros; após a aplicação de critérios de inclusão predefinidos, 11 estudos empíricos publicados entre 2016 e 2025 foram retidos. Os dados foram analisados tematicamente, produzindo cinco temas centrais: (a) frequência versus qualidade funcional dos DCs, (b) efeitos da instrução explícita, (c) padrões de erro e transferência L1, (d) práticas de medição e operacionalização da coerência e (e) sensibilidade ao gênero e ao contexto sociocultural. Os resultados mostram que a frequência bruta das DCs tem ligações fracas ou inconsistentes com a qualidade da escrita, enquanto o uso variado e retoricamente apropriado aumenta a coesão e a coerência. A instrução explícita e sustentada promove uma aplicação mais estratégica, embora seu impacto a longo prazo permaneça pouco explorado. Em conclusão, incorporar a pedagogia das DCs em uma instrução de escrita mais ampla tem um forte potencial para melhorar a escrita acadêmica dos alunos de L2.

Palavras-chave: Redação acadêmica, análise baseada em corpus, organização textual, marcadores pragmáticos, relações retóricas.

Introduction

In today's interconnected world, English proficiency is more than just a language skill; it is a gateway to academic success, professional opportunities, and global communication (Crystal, 2003; Graddol, 2006). Among the four language skills, writing often proves to be one of the most challenging for second language (L2) learners. Beyond grammatical accuracy, effective academic writing demands the ability to structure ideas logically and convey them with clarity to a specific audience. In this context, two elements stand out as essential: coherence, or the logical sequencing of ideas, and cohesion, the linguistic means by which those ideas are linked (Crossley & Kim, 2022; Hinkel, 2020). It means that when either is missing, arguments can appear fragmented, reader understanding declines, and the overall quality of the text suffers.

Despite years of formal instruction, many English as a Foreign Language (EFL) learners still struggle to produce writing that meets academic standards for coherence and cohesion. Limited exposure to authentic academic discourse, differences in rhetorical traditions, and unsatisfactory training in text organization contribute to these difficulties (Hinkel, 2020; Uçar, 2023). As a result, even students with strong vocabulary and grammar often fail to develop well-structured, persuasive arguments—an issue that is particularly problematic in higher education, where written assignments remain a key measure of academic achievement.

One effective way to address this challenge is by teaching learners to use discourse connectors, henceforth (DCs), also known as linking words or transitional phrases—strategically. DCs signal

relationships between ideas, guide the reader through the logical development of an argument, and contribute to both the clarity and flow of a text (Halliday & Hasan, 1976; Fraser, 2009). Learners can express contrast, cause–effect relationships, addition, and sequence, enabling writers to present their ideas more persuasively (Kuswoyo et al., 2020; Karaula, 2024). However, studies show that EFL learners frequently underuse, overuse, or misuse these connectors, which can lead to awkward transitions, disrupted argumentation, and lower writing quality (Crossley et al., 2017; Chen & Cui, 2022).

The longitudinal work of several scholars over the past five decades has shaped current theories on how texts achieve cohesion and function rhetorically. Foundational contributions from Halliday and Hasan (1976) conceptualized discourse connectors as cohesive devices—alongside reference, substitution, ellipsis, conjunction, and lexical cohesion—that unify the different components of a text. Building on this, Schifffrin (1987) identified connectors such as however, therefore, and moreover as explicit signals of contrast, cause–effect relationships, and addition, respectively, helping to organize ideas and ensure a smooth flow of information. More recent perspectives including Fraser (2009) and empirical studies from the last decade (Di Ferrante, 2021; Andayani, 2024) have refined these definitions, emphasizing the role of discourse connectors in marking logical relationships, guiding shifts in discourse, and enhancing coherence across spoken and written registers. This continuity of inquiry demonstrates that the strategic use of discourse connectors is not a new concern but a well-established area of study that continues to evolve, with recent research underscoring their impact on discourse organization, reader comprehension, and pragmatic interaction.

Although several recent studies have examined DC use in different educational settings (Kuswoyo et al., 2020; Karaula, 2024; Choemue & Bram, 2021; Uçar, 2023), their findings remain fragmented. Several investigations concentrate on isolated categories of connectors or rely primarily on frequency counts, without considering how DC use shapes readers’ perceptions of coherence and argument development (Al-Khazraji, 2019; Freaha & Mohammad, 2023; Andayani, 2024). By contrast, other research has addressed DCs only partially, overlooking the broader interplay of different types in structuring a text’s overall organization (Huneety et al., 2023; Xu et al., 2022). Furthermore, the field has yet to fully integrate emerging perspectives from corpus-based analyses, digital writing platforms, and pedagogical innovations that could offer a more comprehensive understanding of DC use (Venegas et al., 2024; Alqurashi, 2025; AbuSa’aleek, 2022; Hyland, 2005).

To address these gaps, the present study conducts a systematic review of empirical research published between 2016 and 2025 on the relationship between discourse connector use and the coherence and cohesion of EFL learners’ written texts. The review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological rigor and transparency in the identification, screening, and inclusion of studies. It is guided by the following research question: To what extent do the presence, frequency, diversity, and functional distribution of discourse connectors in EFL students’ writing relate to the coherence and cohesion of their texts, according to empirical studies published between 2016 and 2025?

Literature Review

Background and evolution of the study of discourse connectors in text linguistics

Any review of discourse connectors (DC) must be grounded in theories that explain how cohesion and coherence are constructed in texts. The classic starting point remains Halliday and Hasan (1976), who identify five cohesive devices, such as reference, substitution, ellipsis, conjunction, and lexical cohesion, which enable the reader to relate one sentence to the next. However, the field has evolved significantly in recent decades and now incorporates more recent functional, computational, and pedagogical approaches.

From the perspective of text linguistics and discourse analysis, coherence is recognized as an inferential and global phenomenon: it depends on the rhetorical organization of content and the pragmatic expectations of the reader, rather than on the mere presence of superficial markers (Crossley & McNamara, 2010; Hyland, 2005). Consequently, DCs should be understood as pragmatic and rhetorical signals that guide interpreting relationships such as cause and effect, contrast, or sequence (Schiffrin, 1987; Fraser, 2009). Schiffrin (1987) showed that elements such as but, so, and well are sequential "clues" that frame segments of discourse; Fraser (2009) updated and refined this view by classifying them as pragmatic markers whose function is to indicate the relationship of the current utterance to the immediate discursive context.

At the same time, Mann and Thompson's (1988) Rhetorical Structure Theory (RST) has been expanded and operationalized in computational environments (Taboada & Mann, 2006), providing inventories of rhetorical relations (e.g., elaboration, justification, cause, concession) that DCs often encode. More recent research in computational linguistics and corpus analysis has delved deeper into the annotation and automatic modeling of these relations (Degand, Cornillie, & Pietrandrea, 2013; Zufferey & Degand, 2017), as well as into software-extractable indices of cohesion and coherence (McNamara et al., 2010).

As Hinkel (2020) and Crossley & Kim (2022) argue, the empirical and technological shift in applied linguistics has reshaped the teaching of L2 writing, placing greater emphasis on the functional quality and strategic distribution of DCs rather than on frequency alone. Current pedagogical frameworks emphasize explicit instruction grounded in discourse functions and supported by rubrics that capture the rhetorical relevance of connectors (Hyland, 2005; Hinkel, 2020). In other words, while Halliday and Hasan's (1976) conceptual scaffolding remains indispensable, contemporary literature incorporates refined taxonomies, computational tools, and didactic approaches that enable the strategic use of DCs in EFL contexts to be described, measured, and taught.

Notion of Cohesion and Coherence

Cohesion comprises the overt linguistic links (reference, substitution, ellipsis, lexical reiteration, and connective markers) that bind clauses and sentences on the surface of a text (Halliday & Hasan, 1976)

whereas, coherence, in contrast, is the global sense of meaning and logical continuity that readers construct from how ideas are organized and rhetorically staged. Even though a text may exhibit many cohesive ties, it still lacks coherence if its conceptual flow is weak, and vice versa. Recent empirical work in L2 writing shows that surface cohesion indices and deeper, concept-driven relations contribute to judged writing quality, underscoring that cohesion is necessary but insufficient for coherence (Crossley & Kim, 2022).

Impact on Text Organization

Discourse connectors (DCs) function as textual signposts, guiding readers through causal, adversative, sequential, and additive relationships, thus anchoring coherence and cohesion in academic writing (Amanov, 2024). By signaling how one proposition follows from or contrasts with another, they reduce processing effort and help readers anticipate what comes next, strengthening the logical thread that ties a paragraph and a whole paper together.

When deployed strategically, DCs enhance local coherence at the sentence and paragraph level and support global coherence across sections, allowing ideas to unfold smoothly (Omisakin et al., 2024). Skilled writers vary their markers in line with genre and purpose, mixing common forms with less frequent ones to achieve specific rhetorical effects (Leńko-Szymańska, 2008). In contrast, many EFL learners rely on a narrow set, for instance, but because of insert connectors where no logical link exists, creating monotony or confusion.

Such overuse, misuse, or limited diversity can obscure meaning even when every sentence is grammatically sound. Effective instruction, therefore, couples' segmentation skills (reference, substitution, ellipsis, lexical ties) with deliberate connector choice, helping learners balance sufficiency and variety so cohesion genuinely serves the text's wider coherence (Rochma & Triyono, 2019; Waller, 2015).

Discourse Connector Challenges for EFL Learners

The literature discusses various challenges EFL learners face while incorporating the DCs in their writing work. For instance, according to Wang and Xie (2022), EFL learners find it challenging to logically organize the ideas and maintain the smooth transitions across paragraphs (Hu & Li, 2015). A key typical issue on this matter could be the limited exposure of EFL learners to English writing, along with a lack of targeted instructions on the appropriate use of DCs, which further may intensify this challenge (Wang & Xie, 2022; Prommas & Sinwongsuwat, 2014). Another significant challenge commonly discussed in literature is the limited emphasis on the writing skills of EFL learners compared to speaking skills and their linkage to the oral language (Rausch, 2015). The inadequate instructions on appropriate DC use make it more difficult for students to develop an effective link between ideas, which leads to unclear and fragmented writing, affecting the academic performance (Prommas & Sinwongsuwat, 2014; Xu et al., 2022).

Considering the importance of well-coherent writing for improving academic performance and professional competence, studies like Wang and Xie (2022) and Malki (2016) explored the link between the use of DCs and writing proficiency, and it was found that both are connected. For instance, Malki (2016) contended that the stylistic use of logical connectors shares a significant positive correlation with the writing quality of third-year Algerian EFL learners at English Language University. Another related study by Wang and Xie (2022) highlighted the multifaceted nature of discourse competence and explored its role in academic writing. Although the diagnostic rubric used by the study revealed strengths in the logical connectives, students struggled with global coherence.

Materials and Methods

Study design and approach

The present study corresponds to a systematic review framed as a documentary, observational, and retrospective study. A qualitative descriptive-analytical approach was adopted, applying thematic analysis to synthesize findings from the included studies. This focus allowed for the identification of conceptual patterns, similarities, and differences across diverse research designs, emphasizing interpretation and integration rather than statistical aggregation.

Sources of information and search strategy

A systematic search was conducted between January 2016 and June 2025 in four central databases: Scopus, Web of Science, ERIC, and Google Scholar. In addition, backward and forward citation tracking was performed, and ResearchGate was used as a complementary tool to locate full texts when necessary. The base chain combined terms and boolean operators tailored to the topic: ("discourse connector*" OR "discourse marker*") AND (coherence OR cohesion) AND ("writing quality") AND (EFL).

The review process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021), ensuring a transparent and reproducible selection process. References retrieved from database searches were first exported into **Zotero**, which was used to store, organize, and remove duplicate records. Screening of titles, abstracts, and full texts was conducted manually following the predefined inclusion criteria. For the qualitative synthesis, full-text articles that met the eligibility criteria were imported into **NVivo** (version 13) to assist in coding and thematic analysis. This software supported the identification, clustering, and refinement of conceptual themes across the included studies. An AI-assisted tool (ChatGPT) was used as a complementary aid to summarize coded segments and explore potential thematic overlaps, with all outputs verified by the researcher to ensure accuracy. The final synthesis is presented narratively to provide a comprehensive overview of patterns in the literature.

Inclusion criteria

Table 1

Inclusion Criteria Studies that simultaneously met the following criteria were included

Category	Criterion
Population	ESL/EFL learners (English as a second/foreign language)
Phenomenon	Explicit analysis of discourse connectors/markers in written production
Outcome	At least one measure of coherence, cohesion, or overall writing quality
Study type	Empirical (quantitative, qualitative, or mixed methods)
Publication	Peer-reviewed, indexed journal article; full text available
Language	English
Time frame	Published between 2016 and 2025

Source: Own elaboration

Eligibility criteria were established *a priori* to ensure that the included studies were relevant to the research question, comparable in scope, and methodologically robust. Only empirical research, whether quantitative, qualitative, or mixed-method—was considered, as such studies provide primary data that allow for the analysis of actual learner performance. Limiting the population to ESL/EFL writers ensured the findings would directly reflect contexts where English is acquired as an additional language, aligning with the pedagogical focus of this review.

The decision to include only studies with an explicit analysis of discourse connectors (DCs) in written production was grounded in the need to examine cohesive devices as they function in academic or formal writing, rather than in spoken discourse, which follows different organizational principles. Furthermore, requiring at least one reported outcome related to coherence, cohesion, or overall writing quality allowed for meaningful comparisons across studies and direct links to the review's central aim of exploring the relationship between DC use and text organization.

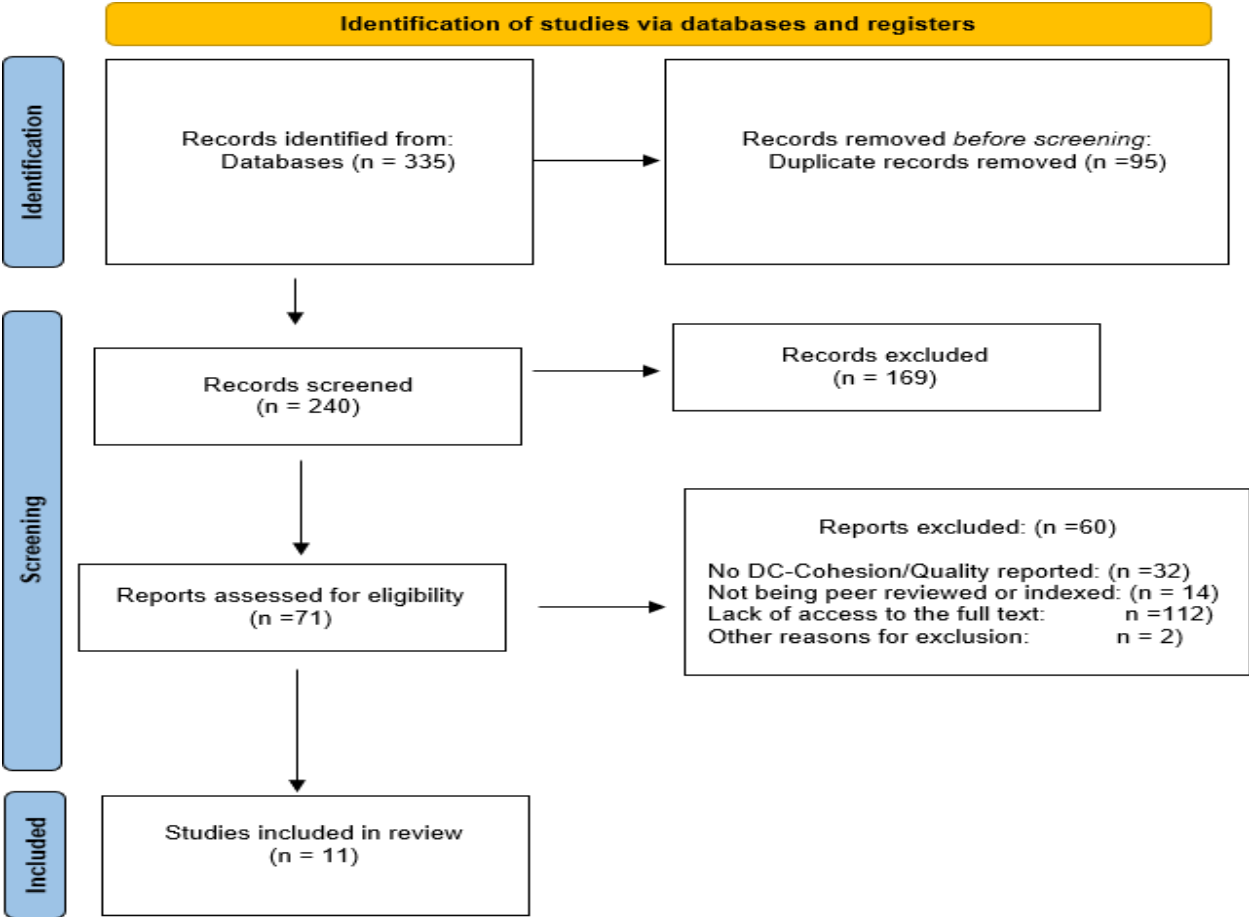
Restricting the selection to peer-reviewed, indexed journal articles in English ensured that the evidence base was of high scholarly quality, accessible for verification, and aligned with international research standards. The 2016–2025 publication window was chosen to capture recent developments in corpus-based methods, digital writing environments, and updated pedagogical frameworks for teaching writing.

Data Collection and Analysis process

The initial search yielded 335 records. By matching titles, DOIs, and ISBNs, 95 duplicates were removed, resulting in 240 unique documents for the title and abstract screening phase. The eligibility criteria were applied to 240 titles and abstracts; those that potentially met the criteria were subjected to full-text reading (71 articles). After this evaluation, 58 were excluded: 32 for not reporting DC-coherence/quality, 14 for not being peer reviewed or indexed, and 12 for lack of access to the full text. Thirteen studies initially met the eligibility criteria, but two were excluded in the final phase (one conceptual paper and one prior systematic review) because they did not provide primary data, leaving

11 empirical studies for synthesis. The PRISMA diagram (Figure 1) presents the stages through which studies were included.

Figure 1
PRISMA flowchart



Results

After applying the identification, screening, and eligibility process described in the PRISMA diagram, 11 empirical studies that met all the established criteria were included. These studies cover different designs (quasi-experimental, descriptive corpus, and mixed approaches), diverse geographical contexts, and educational levels of learners of English as a Foreign language (EFL). Together, they provide data on using discourse connectors in writing and their relationship to textual coherence and cohesion.

Following the PRISMA process, a total of eleven empirical studies were retained for analysis. These works, summarized in Table 2, represent a diverse range of research designs including qualitative, quantitative, corpus-based, and quasi-experimental approaches, and examine discourse connector use

across various EFL contexts. Presenting the studies in this way allows for a clearer view of their methodological orientations, focal points, and key findings, thereby providing the foundation for the subsequent thematic analysis.

Table 2

Empirical studies included after the PRISMA process and considered for analysis

Author(s) / Year	Title	Research Design	Summary
Al-Khazraji (2019) https://doi.org/10.29333/iji.2019.12235a	Analysis of Discourse Markers in Essays Written in an ESL Classroom	Qualitative discourse-analysis	This study investigates the use of discourse markers in essays written by Grade 9 ESL students in Dubai. It identifies instances of misuse, overuse, and advanced use, aiming to assess students' understanding of cohesion and coherence and suggest further research and directions.
Choemue & Bram (2021). https://doi.org/10.24815/siele.v8i3.20122	Discourse Markers in Academic and Non-Academic Writings of Thai EFL Learners	Corpus quantitative (comparative)	This study examined the use of discourse markers in academic and non-academic essays by Thai EFL learners, revealing elaborative markers as the most frequent. Findings highlight the importance of raising awareness of DMs to help students improve coherence and effectiveness in several types of writing.
AbuSa'aleek (2022) https://doi.org/10.5430/wjel.v12n2p124	Exploring the Use of Discourse Markers in EFL Students' Writing through Google Docs	Qualitative corpus (mixed)	This study analyzed EFL undergraduates' use of discourse markers in essays via Google Docs, finding frequent use of parallel markers and issues such as overuse and misuse. It highlights the need for pedagogical strategies to raise awareness of the types, functions, and appropriate use of DMs in academic writing.
Huneety. Et al. (2023) https://doi.org/10.1057/s41599-023-01525-0	Use of Discourse Markers in Argumentative Compositions by Jordanian EFL Learners	Mixed (quant-qual)	This study examined discourse markers used by Jordanian EFL sophomores and seniors in argumentative essays. Findings showed overuse of basic DMs like "and," "because" and "but," limited variety, and a weak positive correlation with writing quality, highlighting the need for targeted instruction.
Freaha & Mohammad (2023) https://doi.org/10.30845/ijll.v10n2p2	Investigating Discourse Markers in Paragraph Writing of EFL Female Students	Quantitative descriptive	This study analyzed discourse marker use in paragraphs written by 26 Saudi EFL female students. Using Fraser's taxonomy, it found elaborative markers most frequently, especially "and," "but," and "because." Results support the need for targeted instruction to enhance writing through appropriate discourse markers.
Andayani (2024) https://doi.org/10.31851/esteem.v7i2.16245	Discourse Connectors in the ESP Students' Writings: A Preliminary Study	Quantitative corpus	This study examined the use of discourse connectors in 36 argumentative essays by ESP students. Findings revealed limited variety, frequent inaccuracies, and overuse of basic connectors like "and," "or," "because," and "so." The study proposed instructional strategies and highlighted the need for further research on connector usage.
Dang (2024) https://doi.org/10.38124/ijisrt/IJISRT24SEP545	The Effects of Teaching Conjunctions on the Cohesion of EFL Students' Compositions	Quasi-experimental	It studies the impact of teaching conjunctions on EFL students' writing cohesion. Based on surveys and pre-post- tests, results showed improved use of conjunctions and writing scores. Findings highlight the value of conjunction instruction and suggest further research on cohesion in

Al Issa, et al. (2024) https://doi.org/10.32038/itrq.2024.45.07	The Effect of Teaching Discourse Markers through Flipped Model on Iraqi EFL Learners' Writing	Mixed (quasi-experimental)	This study examined the impact of teaching discourse markers through the flipped classroom model on Iraqi EFL learners' writing. While instruction improved learners' knowledge of discourse markers, it did not significantly affect overall writing performance. However, students reported increased confidence and positive attitudes toward the flipped learning approach.
Suryadi & Erlangga (2025) https://doi.org/10.35445/alishlah.v17i2.6231	Enhancing Students' Writing Skills through Writing Techniques & Mastery of Different Discourse Markers	Quasi-experimental factorial	This study investigated the combined effects of Reflective Learning Portfolios and Dialogue Journal Writing alongside discourse marker proficiency on EFL students' writing skills in Indonesia. Results showed significant differences in writing technique, discourse marker proficiency, and interaction, emphasizing the importance of reflective methods and explicit DM instruction for improving writing.
Alqurashi(2025) https://doi.org/10.5539/ijel.v15n2p110	A Corpus-Based Analysis of Discourse Markers in ESL Writing Proficiency	Corpus mixed	This study examined differences in discourse marker use between first- and fourth-year Egyptian university ESL students. Findings showed that advanced students used a wider range of markers more effectively, enhancing cohesion and coherence. The study highlights the need for targeted instruction to support discourse marker development across proficiency levels.
Venegas et al. (2024) https://doi.org/10.1753/udea.ikala.355065	Discourse Markers and Writing Quality: Empirical Computational Study of the Essay About University Students	Mixed corpus (computational)	This study analyzed the use of discourse markers in argumentative essays by engineering students at two points during a semester. Despite stable usage patterns, specific markers correlated with writing quality. No link was found between improved writing and increased DM variety. Findings support explicit DM instruction in academic literacy.

Based on this corpus, the thematic analyses presented below were developed, which allow for the integration of convergent and nuanced findings to answer the research question.

Discussion

A narrative synthesis was adopted given the methodological diversity of the included studies. The final sample comprised 11 empirical works employing heterogeneous designs, such as descriptive corpus analyses, quasi-experiments, and mixed methods approaches, conducted mainly in university EFL contexts across the Middle East, Asia, and Latin America (e.g., Al Khazraji, 2019; Dang, 2024; Venegas, Pérez, & Rodríguez, 2024; Suryadi & Erlangga, 2025). While four studies explicitly measured coherence or cohesion outcomes alongside discourse connector use (Dang, 2024; Al Issa, Amirian, & Ketabi, 2024; Venegas et al., 2024; Suryadi & Erlangga, 2025), others focused primarily on DC frequency or variety without directly operationalizing coherence (Al Khazraji, 2019; Freaha & Mohammad, 2023; Andayani, 2024; Choemue & Bram, 2021). To integrate these diverse findings,

thematic analysis was applied: results were systematically coded, clustered into categories, and compared to identify recurring patterns and conceptual overlaps in how DCs were examined and their reported effects on textual coherence and cohesion.

The results were structured around five thematic areas: (a) frequency vs. functional quality of CDs; (b) effects of explicit instruction; (c) error patterns and L1 transfer; (d) measurement of coherence and operationalization of CDs; and (e) sensitivity to textual genre and sociocultural context. The previously defined categories are analyzed in detail, outlining their underlying rationale, the supporting evidence, and the nuances that shape their interpretation. This analysis demonstrates how each set of findings contributes, in an integrated and contextualized way, to addressing the research question.

a. Frequency vs. Quality of CDs:

Across descriptive studies, the raw frequency of DCs is rarely correlated with higher coherence. Al-Khazraji (2019) reported overuse of a narrow set of additive markers, noting that repetition blurred logical relations rather than clarifying them. Similar patterns emerged in Freaha and Mohammad (2023) and Andayani (2024), where students' paragraphs or essays showed abundant but often inappropriate or redundant devices. Choemue and Bram (2021) observed limited functional diversity among Thai learners, implying organizational weaknesses.

By contrast, studies that assessed variety, appropriacy, and functional distribution rather than mere counts found stronger links to cohesion. That is the case of Venegas et al. (2024), who combined computational metrics with human ratings and showed that diverse, well-placed linking words predicted better writing quality, while overuse penalized scores. However, Dang (2024) demonstrated that targeted instruction increased the number and the fit of conjunctions, yielding significant gains in cohesion. These converging results suggest that the quality dimension of DC use (i.e., selecting the correct connector for the rhetorical job) is the critical predictor of coherence, directly answering the stated research question, which focuses on diversity and functional distribution.

This finding suggests that teachers should emphasize not merely the presence of connectors, but their rhetorical appropriateness, helping students understand *when* and *why* to use a connector. For students, this shift moves them away from formulaic writing and toward meaningful choices that enhance clarity. For researchers, this points to the need to operationalize connector *quality* as a construct in writing assessment, beyond simple frequency counts.

b. The Effects of Explicit Instruction

In terms of the second thematic area, it is observed that instructional studies consistently indicate that explicit, function-focused teaching improves students' use of DCs and, by extension, textual cohesion. To illustrate this, Al Issa et al. (2024) used a flipped-classroom model in which learners engaged with DC concepts before class and practiced them during class, resulting in higher coherence ratings and more

strategic connector placement. On the other hand, Suryadi and Erlangga (2025) employed a factorial quasi-experimental design and reported medium effect sizes for gains in both mastery of multiple DC categories and cohesion scores. In this sense, it is noticed that Dang (2024) corroborated these patterns with a quasi-experimental intervention on conjunctions, finding significant post-test improvements.

Despite these positive outcomes, a notable gap persists: few studies included delayed post-tests. However, without longitudinal follow-up, it is difficult to determine whether DC use and cohesion improvements are sustained over time. This finding may suggest that future research should incorporate retention measures to gauge the durability of instructional effects.

This emphasizes the importance for educators of integrating discourse connector instruction into writing curricula, not as isolated grammar points but as part of coherence-building strategies. For policy makers in EFL programs, these findings justify allocating curriculum time and training resources toward explicit teaching of cohesion devices. For researchers, the lack of delayed post-tests signals the need to explore whether instructional gains are durable over time.

c. Error Patterns and L1 Transfer

Concerning the third thematic area, common errors, and influence of the first language dealing, several descriptive studies highlighted misuse and redundancy as recurrent issues. For instance, Freaha and Mohammad (2023) found stacking multiple markers for the same relation (e.g., *however*, *but*) confused raters and reduced perceived cohesion. Similarly, Al-Khazraji (2019) noted misuse of adversative markers and over-reliance on additive ones. These errors often reflect transfer from learners' L1 rhetorical conventions or a lack of awareness of subtle semantic distinctions among connectors.

Pedagogically, these findings suggest that feedback should extend beyond counting connectors to target semantic appropriateness and rhetorical fit. Rubrics and peer-review protocols could include specific criteria for DC function and redundancy, redirecting students from “insert a connector here” toward “is this the most logical connector for this relation?”

This highlights the pedagogical importance of contrastive awareness. Teachers could design tasks that draw attention to how connectors function differently in English compared to students' L1. For students, such feedback fosters critical reflection on their writing habits. For curriculum designers, these findings support integrating comparative rhetoric modules into EFL writing courses.

d. Measurement of Coherence and Operationalization of CDs

Regarding the fourth thematic area, coherence evaluation and the operational framework for

DCs, the methodological diversity complicated cross-study comparisons. Coherence and cohesion were evaluated via holistic rubrics, as in (Dang, 2024), analytic scales in (Suryadi & Erlangga, 2025), or automated indices in (Venegas et al., 2024). Some studies did not measure coherence, inferring it qualitatively (e.g., Al-Khazraji, 2019). Likewise, DCs were operationalized differently: some were categorized by rhetorical function (additive, adversative, causal), and others counted tokens. Inter-rater reliability for coding and rating was inconsistently reported (Huneety, Al-Saidat, & Al-Tarawneh, 2023; Alqurashi, 2025).

These inconsistencies underscore the need for standardized instruments that capture the quantitative and qualitative dimensions of DCs and coherence. This observation may indicate that future studies should triangulate corpus-based indices with validated human-rating scales, report effect sizes, and document coder/rater reliability to enhance comparability and cumulative knowledge building.

This underscores the challenge for researchers and assessment bodies in making results comparable across studies. For teacher trainers, promoting awareness of reliable rubrics can improve classroom assessment practices. At the research-policy interface, adopting standardized frameworks would strengthen evidence for curricular reforms and international benchmarks.

e. Sensitivity to Textual Genre and Sociocultural Context

The last thematic area under discussion suggests that most studies examine argumentative essays, fewer explored narratives, reports, or multimodal genres. However, DC distribution is genre-sensitive: argumentative writing often demands adversative and causal markers, whereas narratives rely more on temporal sequencing. The dominance of Middle Eastern and Asian contexts (e.g., Jordan, Saudi Arabia, Indonesia) contrasts with emerging Latin-American evidence (Venegas et al., 2024). Broader geographical and genre coverage would clarify how sociocultural and rhetorical norms shape DC use and its impact on cohesion.

This suggests for teachers that genre-specific instruction is essential: argumentative writing requires causal and adversative connectors, whereas narratives rely on temporal sequencing. For researchers, expanding inquiry into underexplored genres and regions would enrich understanding of how discourse connectors use varies across cultures and academic traditions. For educational policy, this highlights the need to recognize sociocultural diversity in writing standards.

At a broader level, these findings collectively highlight the pedagogical importance of teaching discourse connectors as tools for meaning making rather than mechanical add-ons. For EFL learners, improved connector use translates into clearer and more persuasive writing. For teachers and curriculum designers, evidence-based practices such as explicit instruction, contrastive feedback, and genre-sensitive approaches can raise academic literacy outcomes. For researchers, methodological refinement and broader contextual coverage remain critical to advancing cumulative knowledge in this area.”

Conclusion

This systematic review of eleven empirical studies published between 2016 and 2025 provides an integrated understanding of how discourse connectors (DCs) shape coherence and cohesion in EFL writing. The findings confirm that all student texts displayed the presence of connectors, yet presence alone does not ensure coherence. Likewise, the raw frequency of DCs was shown to be an unreliable predictor of textual quality, with overuse of a narrow set of additive or causal markers often diluting clarity. By contrast, diversity and functional distribution consistently emerged as the strongest indicators of cohesion, with higher-proficiency writers demonstrating more strategic and rhetorically appropriate use. Taken together, these results provide a clear answer to the research question: coherence in L2 writing depends not on the number of connectors but on their quality and contextual fit.

At the same time, the review identifies important limitations and gaps in the literature. The evidence base is still small, and studies vary widely in how they measure cohesion, often using inconsistent rubrics, scales, or computational indices, with limited reporting of inter-rater reliability. These methodological issues restrict comparability and hinder the possibility of meta-analysis. Addressing such gaps will require standardized assessment tools, pre-registered protocols, and triangulated methods that combine human ratings with corpus-based measures. Expanding research across genres, proficiency levels, and geographical contexts would also contribute to a more cumulative and generalizable understanding of how DCs function in L2 writing.

Despite these challenges, the review points to clear pedagogical and research implications. For teaching, it underscores the need to move beyond formulaic instruction and to integrate DC pedagogy into broader rhetorical and genre-based writing curricula, helping learners make purposeful rather than mechanical choices. For research, it calls for longitudinal and corpus-driven studies that capture developmental trajectories and examine the durability of instructional interventions. By consolidating scattered evidence into a coherent framework, this review highlights both the pedagogical pathways already supported by research and the methodological improvements needed to advance theory and practice in EFL writing.

Bibliographic

- Al Issa, H., Amirian, Z., & Ketabi, S. (2024). Effects of a flipped model on EFL learners' use of discourse markers in argumentative writing. *Language Teaching Research Quarterly*, 45(2), 123–139. <https://doi.org/10.32038/ltrq.2024.45.07>
- Al-Khazraji, A. (2019). Overuse and misuse of discourse markers by EFL learners: A corpus- based study. *International Journal of English Linguistics*, 9(5), 277–289. <https://doi.org/10.5539/ijel.v9n5p277>
- Alqurashi, S. (2025). Discourse markers and writing proficiency in Saudi EFL learners' essays. *International Journal of English Linguistics*, 15(2), 110–125. <https://doi.org/10.5539/ijel.v15n2p110>
- Amanov, A. (2024). Exploring Textual Connectors Within Complex Syntactic Constructs. *Epra*

- International Journal of Socio-Economic and Environmental Outlook (SEEO)*, 11(5), 16–19.
<https://doi.org/10.36713/epra0314>
- Andayani, S. (2024). Cohesive devices in Indonesian EFL students' academic essays: A preliminary study. *ESTEEM Journal*, 7(2), 45–60. <https://doi.org/10.31851/esteem.v7i2.16245>
- Chen, M., & Cui, Y. (2022). The effects of AWE and peer feedback on cohesion and coherence in continuation writing. *Journal of Second Language Writing*, 57, 100915.
<https://doi.org/10.1016/j.jslw.2022.100915>
- Choemue, S., & Bram, B. (2021). Discourse markers in Thai EFL learners' argumentative essays. *Studies in English Language and Education*, 8(3), 112–130. <https://doi.org/10.24815/siele.v8i3.20122>
- Crossley, S., & Kim, Y. (2022). Linguistic features of writing quality and development: A longitudinal approach. *The Journal of Writing Analytics*, 6, 59–93.
- Crossley, S., & McNamara, D. (2010). Cohesion, coherence, and deep cohesion in writing assessment. *Assessing Writing*, 15(2), 84–104. <https://doi.org/10.1016/j.asw.2010.02.002>
- Crossley, S., Kyle, K., & McNamara, D. (2017). The development of cohesive devices in L2 writing: An analysis of syntactic complexity and lexical cohesion. *Journal of Second Language Writing*, 38, 1–13.
- Crystal, D. (2003). *English as a global language* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Dang, T. (2024). Teaching conjunctions to improve cohesion in EFL writing: A quasi- experimental study. *International Journal of Innovative Science and Research Technology*, 9(9), 1–10.
<https://doi.org/10.38124/ijisrt/IJISRT24SEP545>
- Degand, L., Cornillie, B., & Pietrandrea, P. (Eds.). (2013). *Discourse markers and modal particles: Categorization and description*. John Benjamins.
- Di Ferrante, L. (2021). Transitioning between small talk and work talk through discourse markers: Evidence from a workplace spoken corpus. *Brno Studies in English*, 47(2).
<https://dx.doi.org/10.5817/BSE2021-2-2>
- Fraser, B. (2009). An account of discourse markers. *International Review of Pragmatics*, 1(2), 293–320.
<https://doi.org/10.1163/187731009X455834>
- Freaha, A., & Mohammad, A. (2023). Cohesive devices and writing quality in Saudi EFL undergraduates' paragraphs. *International Journal of Language and Literature*, 10(2), 15–28.
<https://doi.org/10.30845/ijll.v10n2p2>
- Graddol, D. (2006). *English next: Why global English may mean the end of "English as a Foreign Language"*. London, UK: British Council.
- Halliday, M. & Hassan, R. (1976). *Cohesion in English*. New York: Longman.
- Hinkel, E. (2020). *Teaching academic L2 writing: Practical techniques in vocabulary and grammar*. Routledge.
- Hu, C., & Li, Y. (2015). Discourse connectives in L1 and L2 argumentative writing. *Higher Education Studies*, 5(4), 30–41.
- Huneety, A., Al-Saidat, E., & Al-Tarawneh, M. (2023). Discourse markers and argumentation in Jordanian EFL students' writing. *Humanities and Social Sciences Communications*, 10, 1–12.
<https://doi.org/10.1057/s41599-023-01525-0>
- Huneety, A., Mashaqba, B., Al-Shboul, S., & Alshdaifat, A. (2017). A contrastive study of cohesion in Arabic and English religious discourse. *International Journal of Applied Linguistics and English Literature*, 6(3), 116–122.
- Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. Continuum.

- Kalajahi, S. (2014). *A Corpus-based Study of Malaysia ESL Students' Use of Discourse Connectors in Upper and Post-secondary Argumentative Writing* (Doctoral dissertation, Universiti Putra Malaysia).
- Karaula, K. (2024). *The Use of the Connector'and'in EFL Learners' Texts* (Doctoral dissertation, Josip Juraj Strossmayer University of Osijek, Faculty of Humanities and Social Sciences, Department of English Language and Literature). <https://urn.nsk.hr/urn:nbn:hr:142:421561>
- Kuswoyo, H., & Susardi. (2016). Thematic progression in EFL students' academic writing: A systemic functional grammar study. *Teknosastik: Jurnal Bahasa dan Sastra*, 14(2), 39–45. [10.33365/ts.v14i2.60](https://doi.org/10.33365/ts.v14i2.60)
- Kuswoyo, H., Sujatna, E., Indrayani, L., & Rido, A. (2020). Cohesive conjunctions and so as discourse strategies in English native and non-native engineering lecturers: A corpus- based study. *International Journal of Advanced Science and Technology*, 29(7), 2322–2335.
- Leńko-Szymańska, A. (2008). Non-native or non-expert? The use of connectors in native and foreign language learners' texts. *Acquisition et interaction en langue étrangère*, 27, 91–108. <https://doi.org/10.4000/aile.4213>
- Malki, F. (2016). Logical Connectors' Use and Writing Quality in EFL Learners and Native Speakers' Essay Writing. *Journal of Human Sciences*, 27–40.
- Mann, W. & Thompson, S. (1988). Rhetorical Structure Theory: Toward a functional theory of text organization. *Text*, 8(3), 243–281.
- McNamara, D., Louwerse, M, McCarthy, P., & Graesser, A. (2010). Coh-Metrix: Capturing linguistic features of cohesion. *Discourse Processes*, 47(4), 292–330. <https://doi.org/10.1080/01638530902959943>
- Omisakin, A., Olofin, O., Abobarin, A., & Adesiyan, O. (2024). Discourse markers, coherence, and its impact on cognitive interpretation of texts. *International Journal of Literature, Language and Linguistics*, 7(2), 28-37. <https://doi.org/10.52589/IJLL-PUGJFQWZ>
- Prommas, P., & Sinwongsuwat, K. (2014). A comparative study of discourse connectors used in argumentative compositions produced by Thai EFL learners and English-native speakers.
- Rausch, P. (2015). The relationship between English speaking and writing proficiency and its implications for instruction,34. https://repository.stcloudstate.edu/cgi/viewcontent.cgi?article=1033&context=engl_etds
- Rochma, A., & Triyono, S. (2019). A discourse analysis: Cohesion of the introduction section of research article. *JELTL (Journal of English Language Teaching and Linguistics)*,4(1),1–19. <https://pdfs.semanticscholar.org/d5b1/07295164801c43240e0b0b5b3d6479ca99ee.pdf>
- Schiffrin, D. (1987). *Discourse markers*. Cambridge University Press.
- Suryadi, D., & Erlangga, N. (2025). Teaching discourse markers to improve cohesion in EFL argumentative writing: A factorial design. *Al-Ishlah: Jurnal Pendidikan*, 17(2), 212–234. <https://doi.org/10.35445/alishlah.v17i2.6231>
- Taboada, M., & Mann, W. (2006). Rhetorical Structure Theory: Looking back and moving ahead. *Discourse Studies*, 8(3), 423–459. <https://doi.org/10.1177/1461445606061881>
- Uçar, S. (2023). A systematic review: An investigation of studies on the use of discourse connectors in Turkish EFL learners' academic writing. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, (36), 1291-1307.
- Venegas, M., Pérez, P., & Rodríguez, L. (2024). Linking words and writing quality in Chilean EFL students' essays: A computational and human-rating approach. *Íkala, Revista de Lenguaje y Cultura*, 29(2), 45–68. <https://doi.org/10.17533/udea.ikala.355065>
- Waller, S. (2015). Cohesion is still not coherence, so what is? *English Teaching in China*, 6, 31–

35. https://www.xjtlu.edu.cn/assets/files/publications/etic/issue-6/6_10_waller_2105.pdf

Wang, Y., & Xie, Q. (2022). Diagnosing EFL undergraduates' discourse competence in academic writing. *Assessing Writing*, 53, 100641.

Xu, T., Cui, F., & Zhang, B. (2022). Challenges in the Use of Logical Connectors for EFL Learners: Frequency, Variety, Suitability, and Improper Use with Pedagogical Implications. *International Journal of Applied Linguistics and English Literature*, 11(3), 41–49.

Zufferey, S., & Degand, L. (2017). Annotating the meaning of discourse connectives in multilingual corpora. *Corpus Linguistics and Linguistic Theory*, 13(1), 71–98. <https://doi.org/10.1515/cllt-2015-0031>

Declaración de Autoría

Conceptualización: Pastor Pablo Pérez Ramos; **Investigación:** Pastor Pablo Pérez Ramos; **Metodología:** Pastor Pablo Pérez Ramos; **Redacción – Borrador original:** Pastor Pablo Pérez Ramos; **Redacción – revisión y edición:** Pastor Pablo Pérez Ramos; **Autor de correspondencia:** Pastor Pablo Pérez Ramos.

Conflicto de interés

El autor de este manuscrito certifica que no existen conflictos de interés de ningún tipo, ni financieros ni personales, académicos o políticos, que pudieran haber influido de manera inapropiada en la realización, análisis o interpretación de los resultados de esta investigación. Toda la financiación recibida para el desarrollo de este trabajo está explícitamente declarada en la sección de Agradecimientos. [Modifique los subrayado según sea el caso].

Información adicional

La correspondencia y las solicitudes de materiales sobre este escrito deben dirigirse al autor de correspondencia al correo electrónico proporcionado.

Las impresiones y la información sobre permisos están disponibles en el siguiente enlace: https://www.revistas.up.ac.pa/index.php/contacto/acceso_reuso