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L1- L2 transfer in EFL reading comprehension

Transferencia de la lengua madre (L1) a la segunda lengua (L2) en la comprensión lectora del inglés como lengua extranjera

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Palabras claves:
Transferencia interlingüística, comprensión lectora, inglés como lengua extranjera, hipótesis de interdependencia lingüística, educación secundaria.

Resumen

Introducción. Fundamentado en la hipótesis de la interdependencia lingüística de Cummins, este estudio examina las habilidades de lectura en la lengua materna (L1) como indicadores observables de transferencia interlingüística en la comprensión lectora en inglés como lengua extranjera (EFL). Objetivo. El propósito principal fue evaluar y comparar el desempeño de estudiantes de educación secundaria en tareas de comprensión lectora literal e inferencial en español (L1) e inglés (L2). **Metodología.** Se empleó un diseño cuantitativo, no experimental, de corte transversal y alcance descriptivo-comparativo. La muestra estuvo conformada por 35 estudiantes de educación secundaria (N=35), de 14 a 17 años, en una institución educativa privada de Ecuador, cuya instrucción en inglés sigue los descriptores B1-B2 del MCER. Los datos se recolectaron mediante una evaluación bilingüe paralela administrada a través de *Google Forms* bajo secuencias de administración contrabalanceadas. Se calcularon estadísticas descriptivas, incluyendo promedios (M), desviación estándar (SD) y porcentajes de precisión (%), para comparar el desempeño entre idiomas y niveles de tarea. **Resultados.** Los hallazgos revelaron una jerarquía constante de desempeño por nivel de tarea en ambos idiomas, donde los puntajes de comprensión literal superaron a los de comprensión inferencial tanto en español (M=4.86/5, SD=0.28; 97.20% frente a M=4.37/5, SD=0.49; 87.40%), como en inglés (M=4.76/5, SD=0.38; 95.20% frente a M=4.06/5, SD=0.69; 81.20%). EL desempeño general mostró competencias sólidas tanto en la alfabetización en la lengua materna (M=9.23/10, SD=0.61; 92.30%) como en la comprensión lectora en lengua extranjera (M=8.82/10, SD= 0.91; 88.24%). **Conclusión.** Los resultados demuestran patrones de desempeño paralelos en el procesamiento de textos entre idiomas, respaldando la postura de que las habilidades lectoras desarrolladas en la L1 funcionan como recursos positivos que favorecen la comprensión en inglés. Se sugiere a los docentes de EFL aprovechar las estrategias de alfabetización en la lengua materna para potenciar el desarrollo lector en el aula de lengua extranjera. **Área de estudio general:** Educación lingüística aplicada. **Área de estudio específica:** Enseñanza del Inglés como lengua extranjera (EFL) / Transferencia interlingüística. **Tipo de estudio:** Artículo original.

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Keywords:
Cross-linguistic transfer, reading comprehension, English as a foreign language, linguistic interdependence hypothesis, secondary education.

Abstract

Introduction. Grounded in Cummins' linguistic interdependence hypothesis, this study examines first-language (L1) literacy skills as observable indicators of cross-linguistic transfer in English as a foreign language (EFL) reading comprehension. Objective. The primary purpose of this study was to assess and compare secondary school students' performance in literal and inferential reading comprehension task across Spanish (L1) and English (L2). **Methodology.** A quantitative, non-experimental, cross-sectional design with a descriptive-comparative scope was employed. The sample consisted of 35 secondary school students (N=35), ages 14 to 17 years, enrolled at a private educational institution in Ecuador, receiving EFL instruction aligned with B1-B2 CEFR proficiency descriptors. Data were collected using a parallel bilingual reading comprehension assessment administered via Google Forms under counterbalanced administration sequences. Descriptive statistics, including mean scores (M), standard deviations (SD), and accuracy percentages (%), were calculated to evaluate performance across languages and task levels. **Results.** The findings revealed a consistent task-level performance hierarchy across both languages, with literal comprehension scores exceeding inferential comprehension score in Spanish (M=4.86/5, SD= 0.28; 97.20% vs. M=4.37/5, SD=0.49; 87.40%) and in English (M=4.76/5, SD=0.38; 95.20% vs. M=4.06/5, SD=0.68; 81.20%). Overall baseline performance was high across relative language literacy (M=9.23/10, SD=0.61; 92.30%) and foreign language reading comprehension (M=8.82/10, SD= 0.91; 88.24%). **Conclusion.** The results demonstrated parallel performance patterns in text processing across language, supporting the view that higher-order reading abilities developed in L1 serve as positive resources that facilitate EFL reading comprehension. EFL educators are encouraged to leverage native literacy strategies to foster parallel reading development in foreign language classrooms. **General Area of Study:** Applied language education. **Specific area of study:** Teaching English as a foreign language (EFL)/interlinguistic transfer. **Type of study:** Original articles.

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1. Introduction

Reading comprehension is one of the most important academic skills in English as a Foreign Language (EFL) learning because it enables students to construct meaning from written texts, acquire new knowledge, and participate successfully in educational settings. According to Jeon & Yamashita (2022) reading comprehension in a second language is a complex process influenced by multiple factors, including vocabulary knowledge, grammatical competence, and literacy skills developed in the learner's first language. Consequently, understanding the factors that contribute to EFL reading comprehension has become a central concern in language education research.

1.1. Background and theoretical context

Among these factors, first-language literacy skills have received considerable attention. Research has shown that reading abilities acquired in a learner's native language can facilitate the development of reading skills in a second language. This perspective is supported by the Linguistic Interdependence Hypothesis proposed by Cummins (1979b) which states that literacy-related abilities developed in the first language (L1) can transfer to the second language (L2) through a common underlying proficiency. According to this theory, learners who develop stronger reading skills in their first language may be better prepared to comprehend written texts in a second language.

Empirical evidence supports this theoretical position. August & Shanahan (2010) concluded that literacy skills acquired in the first language contribute significantly to literacy development in a second language. Similarly, Gottardo & Mueller (2009) found that first-language reading abilities were associated with second-language reading comprehension outcomes. In addition, A meta-analysis identified first-language literacy as one of the factors related to successful reading comprehension in a second language (Jeon & Yamashita, 2022). These findings suggest that reading comprehension should not be viewed exclusively as a language-specific skill but also as a literacy process that can extend across languages.

1.2. Empirical evidence on cross-linguistic transfer

More recently, Cueva et al. (2022) investigated reading comprehension in Spanish and English among Spanish-speaking secondary school students and found that Spanish reading comprehension performance significantly contributed to English reading comprehension performance. Their findings provide empirical support for cross-linguistic transfer and reinforce the proposition that literacy skills developed in the first language may facilitate reading comprehension in a foreign language. However, despite the growing body of international evidence, research examining this relationship in Ecuadorian EFL contexts remains limited, particularly within private educational institutions.

In Ecuador, English remains a compulsory subject throughout secondary education, yet many students struggle with reading comprehension despite years of formal instruction. Although previous research has focused primarily on vocabulary acquisition, grammar

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instruction, and language proficiency, less attention has been given to the role of first-language literacy skills as observable indicators of cross-linguistic transfer in EFL reading comprehension. Consequently, there is a need to explore whether students' reading comprehension skills in Spanish contribute to their reading comprehension performance in English.

Therefore, the present study seeks to compare L1 and L2 reading comprehension performance, considering L1 Literacy skill as observable indicators of cross-linguistic transfer among secondary school students in a private educational institution. Grounded in Cummins (1979a) Linguistic Interdependence Hypothesis and supported by previous findings on bilingual literacy development, the study employs a quantitative, non-experimental, cross-sectional descriptive-comparative design. Data will be collected through a bilingual reading comprehension assessment adapted from the methodology employed by Cueva et al. (2022) consisting of expository texts in Spanish and English accompanied by inferential comprehension questions. Through this approach, the study aims to contribute empirical evidence regarding the role of first-language literacy skills in EFL reading comprehension and provide pedagogical implications for English language teaching.

Reading Comprehension is widely recognized as one of the most complex language skills because it requires readers to integrate linguistic knowledge, cognitive processes, and prior knowledge to construct meaning from written texts. Rather than being limited to decoding words, successful reading comprehension involves identifying explicit information, making inferences, monitoring understanding, and integrating ideas across the text (Perfetti & Stafura, 2014). These processes become even more demanding in English as a Foreign Language (EFL) context, where learners must simultaneously process a language that is still under development while constructing meaning from increasingly complex texts.

A comprehensive meta-analysis conducted by Jeon & Yamashita (2022) which synthesized findings from 110 independent studies, demonstrated that second-language reading comprehension is influenced by multiple factors, including vocabulary knowledge, grammatical competence, decoding skills, and first-language literacy abilities. Their findings suggest that reading comprehension in a foreign language should be understood as a multidimensional process rather than as an isolated linguistic skill.

Similarly, Vettori et al. (2024) in a systematic review of secondary school learners, concluded that language-related abilities developed in learners' first language contribute to reading comprehension performance in a second language, reinforcing the importance of considering bilingual literacy development in EFL research.

One of the most influential theoretical frameworks explaining bilingual literacy development is Cummins (1979a) Linguistic Interdependence Hypothesis. According to this theory, literacy-related abilities acquired in the first language (L1) can support literacy development in a second language (L2) because both languages share a common

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underlying proficiency. Consequently, students do not develop reading abilities independently in each language; instead, previously acquired literacy skills may facilitate reading comprehension across languages.

Subsequent research has consistently supported this theoretical perspective. The National Literacy Panel on Language-Minority Children and Youth concluded that literacy skills developed in the first language positively contribute to second-language literacy development (August & Shanahan, 2010). Likewise, a systematic review conducted by Andress et al. (2023) synthesized 90 studies involving Spanish English bilingual learners and reported consistent evidence of cross-linguistic transfer in reading-related skills across different educational stages. These findings reinforce the view that reading comprehension in bilingual learners should be examined within an integrated literacy framework rather than as language-specific processes.

Importantly, in the present study, cross-linguistic transfer is not treated as a directly measurable variable. Instead, following Cummins' theoretical framework, L1 reading comprehension is operationalized as an observable indicator of cross-linguistic transfer, allowing the construct to be examined through students' measurable reading performance.

Empirical Evidence on L1 Reading Comprehension and EFL Reading Comprehension

A growing body of empirical research has examined the relationship between first-language reading comprehension and reading performance in English as a foreign or second language. Among these studies most closely related to the present investigation, Cueva et al. (2022) evaluated Spanish-speaking secondary school students' reading comprehension in both Spanish and English. Using bilingual reading comprehension assessments together with additional literacy measures, the authors found that reading comprehension performance in Spanish significantly contributed to reading comprehension in English, providing empirical support for Cummins' Linguistic Interdependence Hypothesis.

Gottardo & Mueller (2009) observed that first-language literacy skills contributed significantly to second-language reading comprehension among bilingual learners. Likewise, Sparks et al. (2009) found that literacy-related abilities developed in students' first language were associated with later achievement in foreign-language reading. More recently, Pae (2018) reported a consistent relationship between first- and second-language reading comprehension after controlling for language proficiency, suggesting that literacy skills extend across languages beyond vocabulary knowledge alone.

Although these studies differ in participants, educational contexts, and assessment instruments, they consistently indicate that students with stronger reading abilities in their first language demonstrate better reading comprehension in a second language.

Despite the substantial body of international evidence supporting the relationship between first-language literacy and second-language reading comprehension, few studies have examined this phenomenon among Spanish-speaking EFL learners in Latin American

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educational contexts. Most previous investigations have been conducted in bilingual education settings or with immigrant populations, whereas less attention has been given to students learning English as a foreign language in regular school contexts.

Furthermore, although Cueva et al. (2022) provided important evidence regarding reading comprehension in Spanish and English among secondary school students, similar studies remain scarce in Ecuadorian private educational institutions. Consequently, additional research is needed to determine whether L1 reading comprehension skills, considered observable indicators of cross-linguistic transfer, influence EFL reading comprehension in this educational context. Addressing this gap may contribute to a better understanding of bilingual literacy development and provide evidence to inform reading instruction in English language classrooms.

1.3. Justification and research objectives

This study is theoretically justified by the Linguistic Interdependence Hypothesis (Cummins, 1979a), which proposes that literacy skills developed in the first language can support literacy development in a second language. Previous research has reported positive relationships between Spanish and English reading comprehension, suggesting that literacy should be understood as an interconnected process across languages rather than as independent language-specific abilities (Cueva et al., 2022; Leon et al., 2021).

From an empirical perspective, although previous studies have examined cross-linguistic relationships in reading, evidence remains limited in Spanish English EFL secondary-school contexts, particularly in Ecuador. Therefore, this study seeks to contribute context-specific evidence to the extent to which L1 reading comprehension, as an observable indicator of cross-linguistic transfer, influences EFL reading.

Empirically, the study is relevant because evidence shows that cross-linguistic relationships are not uniform. Some studies have found that reading performance, strategies, morphological awareness, and motivational factors may be related across languages, whereas other components remain more language-specific (Liu et al., 2023; Haddad-Najjar & Abu-Rabia, 2024).

Methodologically, the study contributes by using a bilingual reading comprehension assessment that evaluates students' performance in Spanish and English through comparable literal and inferential reading questions. This approach enables the comparison of reading comprehension across both languages and the examination of the statistical contribution of L1 reading comprehension to EFL reading comprehension.

Reading comprehension is a fundamental skill in English as a Foreign Language (EFL) learning, as it enables students to construct meaning from written texts and supports their academic achievement. Research has shown that EFL reading comprehension is influenced not only by learners' English language proficiency but also by literacy skills developed in their first language (Jeon & Yamashita, 2022). According to the Linguistic Interdependence Hypothesis (Cummins, 1979a), reading-related abilities acquired in the first language may contribute to reading comprehension in an additional language.

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Previous studies have reported positive relationships between Spanish and English reading comprehension, providing evidence of cross-linguistic transfer (Cueva et al., 2022; Leon et al., 2021). From a cross-linguistic perspective, students may draw on comprehension abilities and reading strategies previously developed in their first language when reading in English. Empirical studies have found relationships between L1 and L2 reading performance, strategies, motivation, and text-processing abilities, supporting the view that literacy development across languages is interconnected rather than completely independent (Khaghaninejad, 2020; Liu et al., 2023). Nevertheless, this contribution should not be assumed to occur automatically, because English-language vocabulary, grammar, listening comprehension, and proficiency remain important determinants of reading comprehension in English (Proctor et al., 2005; Jeon & Yamashita, 2022). However, most of this research has been conducted in bilingual settings or outside the Ecuadorian EFL contexts. Consequently, there is limited evidence on the extent to which Spanish reading comprehension contributes to English reading comprehension among Ecuadorian secondary-school students learning English as a foreign language.

Therefore, this study addresses the research question: Do L1 reading comprehension skills, as observable indicators of cross-linguistic transfer, influence EFL reading comprehension among secondary school students in a private educational institution?

General objective. To compare L1- L2 reading comprehension performance in literal and inferential tasks among Ecuadorian EFL learners.

Specific objectives:

- To assess students' literal and inferential reading comprehension performance in Spanish (L1) and English (L2).
- To compare students' performance in literal and inferential reading comprehension across both languages.
- To describe the performance differences between L1 and L2 reading comprehension tasks.

2. Methodology

The present study adopts a positivist research paradigm and a quantitative approach. According to Creswell (2017) quantitative research is appropriate when the objective is to examine relationships among variables and test theoretically grounded assumptions. This study seeks to assess, compare, and describe L1 and L2 reading comprehension performance using numerical data.

The study follows a cross-sectional descriptive-comparative design. The cross-sectional nature of the study is based on the simultaneous collection of empirical data at a single point in time, excluding any longitudinal follow-up. The descriptive-comparative scope lies in assessing, comparing, and summarizing students' performance in literal and inferential reading comprehension tasks across Spanish (L1) and English (L2). As this

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study is framed within a non-experimental paradigm, variables were not deliberately manipulated, allowing observation and analysis of cross-linguistic transfer under natural operational conditions within the educational ecosystem (Hernández-Sampieri & Mendoza, 2018).

The study is theoretically supported by Cummins' (1979a) Linguistic Interdependence Hypothesis, which proposes that literacy skills developed in the first language may contribute to literacy development in a second language. Accordingly, L1 reading comprehension is examined as an observable indicator of cross-linguistic transfer, allowing the assessment and comparison of students' reading performance across Spanish and English.

The participants were 35 secondary school students enrolled in 10th grade and 3rd bachelor's at a private educational institution in Ecuador. The sample included 30 female and 5 male students, aged 14 to 17 years.

Participants were selected through a non-probability convenience sampling technique in which participants were chosen based on criteria of institutional feasibility, operational accessibility, and population availability (Etikan et al., 2016). Because of the non-probability sampling method and the small sample size, the findings are intended to provide context-specific evidence rather than statistical generalization to a broader population.

To ensure baseline comparability in English proficiency, participants were receiving EFL instruction aligned with B1 and B2 (CEFR) proficiency descriptors according to the educational institutions' curriculum.

2.1. Instrument

Data was collected through a bilingual reading comprehension assessment administered using *Google Forms*. Online administration provides standardized data collection while reducing data-entry errors and facilitating response management.

The assessment consisted of two parallel reading-comprehension tests, one in Spanish and one in English, following the structure proposed by Cueva et al. (2022). Both instruments maintained the same text type, comparable length, similar readability level, and equivalent question format to facilitate comparison between languages; the topics addressed were diverse to neutralize confounding variables associated with intertextual semantic memory.

The English reading text was taken from an open-access Cambridge educational resource appropriate for B1-B2 learners. The text was not modified, preserving its authenticity and ensuring its alignment with the participants certified English proficiency.

The Spanish reading text was developed following the reading-literacy framework proposed by the Organisation for Economic Co-operation and Development (OECD, 2019) PISA 2018 Assessment and Analytical Framework, defines reading literacy as the ability to understand, use, evaluate, reflect on, and engage with texts to achieve goals and develop knowledge (OECD, 2019, p.28), provides internationally recognized guidelines

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for constructing reading-comprehension tasks that assess students' ability to understand, interpret, and evaluate written texts; it also classifies exposition as a major text type whose principal purpose is to explain concepts, relationships, or processes (OECD, 2019, pp. 46-47).

Each assessment included 10 multiple-choice items with four response options (A, B, C, D), 5 items assessed literal comprehension, and 5 items assessed inferential comprehension. Each correct answer was assigned a unit value of 1 point, yielding quantitative scores scaled from 0 to 5 points per task construct and 0 to 10 points per language test. Before administration, the instrument was reviewed through expert judgment to establish content validity.

2.2. Procedure

Following institutional authorization, parental informed consent, and students' assent, the assessment was administered using Google Forms.

To minimize potential order effect, participants were assigned to two administration sequences: Sequence 1 (n1=17, English followed by Spanish) and Sequence 2 (n2= 18, Spanish followed by English). One group completed the Spanish assessment before the English assessment, whereas the second group completed the assessment in the opposite order. This counterbalancing procedure reduced potential fatigue and practice effects associated with completing two similar reading tasks consecutively.

Students complete the assessment individually within a maximum time of 40 minutes under standardized administration conditions. Google Forms was configured to allow a single submission per participant and to randomize the order of the response options.

2.3. Data analysis

Data collected through Google Forms were exported and processed using descriptive statistical procedures. Frequencies, accuracy percentages (%), mean scores (M), Standard Deviations (SD), and score ranges were calculated to evaluate and compare students' reading comprehension performance across Language (L1 Spanish vs. L2 English) and task levels (Literal vs. Inferential).

To address the main research objective, a mean and standard deviation analysis was conducted with L1 reading comprehension as the independent variable and EFL reading comprehension as the dependent variable.

2.4. Ethical considerations

Participation was voluntary; informed consent and student assent were obtained before data collection; confidentiality and anonymity were guaranteed; and all data were used exclusively for academic research purposes.

3. Results

The empirical data collected from the bilingual reading comprehension assessment administered to secondary school students (N=35) were processed and analyzed using descriptive statistics. The assessment evaluated both literal and inferential comprehension

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across two parallel expository texts: "Play to win" in English(L2) and "*las abejas": pequeñas aliadas del planeta*" in Spanish (L1). To prevent potential task-order fatigue effects, participants completed the instruments under two counterbalanced sequences: Sequence 1 (n1=17, English followed by Spanish) and Sequence 2 (n2=18, Spanish followed by English). All participants held B1-B2 CEFR English proficiency certifications. Each language test contained 5 literal and 5 inferential items scored on a 0-to-5 continuous scale.

3.1. Descriptive analysis of English (L2) reading comprehension (play to win)

To examine students' reading comprehension in EFL, item-level accuracy rates and mean tasks scores were computed. Participants demonstrated strong overall performance in English, achieving higher overall accuracy in literal tasks (M=4.76 out of 5; 95.28%) than in inferential tasks (M=4.06 (SD=0.68). As presented in **Table 1**, accuracy rates varied depending on item complexity. Specifically:

- In Item 1 (Inferring character motivation), 82.4% (n=14/17) of students correctly identified that Harry aimed to get attention.
- In Item 2 (emotional state post-defeat), 76.5% (n=13/17) correctly selected confusion regarding his defeat.
- In Item 3 (court mindset), 82.4% (n=14/17) correctly identified the strategy of not dwelling on past mistakes.
- In Item 4 (tournament behavior), 70.6% (n=12/17) correctly recognized his effort to maintain composure during games.
- In Item 5 (journalistic synthesis), 94.1% (n=16/17) identified the overarching conclusion that tenses is a psychological battle.

Literal comprehension (Items 6-10): The overall mean score for L2 literal comprehension reached M=4.76 (SD= 0.38).

- Perfect accuracy (100%, n=17/17) was recorded in Item 7 (identifying his older brother as a tennis player) and Item 9 (identifying his coach as his support system).
- In Item 10 (purpose of gym training), 88.2% (n=15/17) correctly identified remaining strong until the end of a tournament.

3.2. Descriptive analysis of Spanish (L1) reading comprehension (Las abejas)

To assess native language literacy skill across the full sample (N=35, combining sequence 1 (n1=17) and sequence 2 (n2=18), descriptive statistics were calculated for the Spanish reading assessment. Students exhibited high competence in L1 reading, with literal items (M=4.86 out of 5; 97.14%) yielding higher accuracy than inferential items (M=4.37 out of 5, 87.43%).

- In item 1 (inferring impact on food production), 82.86% (n=29/35) answered correctly (70.6% in sequence 1; 94.4% in sequence 2).
- In item 2 (evaluating combined environmental risk), 91.43% (n=32/35) answered correctly (82.4% in sequence 1; 100% in sequence 2).
- In item 3 (author's purpose in the closing paragraph), 85.71% (n= 30/35) correctly

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identified individual contributions to environmental protection (76.5% in sequence 1; 94.4% in sequence 2).

- In item 4 (identifying context supporting the central idea), 88.57% (n= 31/35) selected native gardens for pollinators (82.4% in sequence 1; 94.4% in sequence 2).
- In Item 5 (general environmental synthesis), 88.57% (n= 31/35) recognized that bee protection requires collective societal effort (88.2% in sequence 1; 88.9% in sequence 2).

Literal comprehension (Items 6-10): The overall mean score for L1 literal reading comprehension was M= 4.86 (SD=0.28).

- Item 6 (defining the term polinization) yielded 100% accuracy (n=35/35) across both administration sequence.
- Item 7 (main threats to bee populations), Item 9 (recommended conservation strategy), and Item 10 (beneficiaries of pollination) each recorded 97.14% accuracy (n=34/35).
- Item 8 (identifying agricultural products dependent on pollination) achieved 94.29% accuracy (n=33/35).

3.3. Cross-Linguistic and task-level comparative analysis

To compare reading performance across languages and comprehension levels, data were aggregated by tasks type (Literal vs. Inferential) and language (L1 Spanish vs. L2 English). **Table 1** summarizes the overall performance parameters across languages and task levels.

Table 1

Descriptive summary of reading comprehension performance across languages and task levels

language	Comprehension task level	N° of Items	Mean score (M/5)	Standard deviation (SD)
Spanish (L1)	Literal comprehension	5	4.86	0.28
	Inferential comprehension	5	4.37	0.49
English (L2)	Literal comprehension	5	4.76	0.38
	Inferential comprehension	5	4.06	0.68
	Overall L2 Total	10	8.82	0.91

Note. N= 35 for Spanish (L1) task; n= 17 for English (L2) tasks. Maximum score per task level= 5.00 points.

In addition, **Table 2** presents the detailed item-by-item accuracy breakdown across both assessment instruments.

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Table 2

Item-level correct response rates for English (L2) and Spanish (L1) assessments

Item N°	*Task Construct*	*English Item Focus (Play to win)*	*L2 Accuracy (%)*	*Spanish Item focus (Las abejas)*	*L1 Accuracy (%)*
Q1	Inferential	Character motivation (attention)	82.40%	Impact on food production	82.86%
Q2	Inferential	Emotional reaction to defeat	76.50%	Combined environmental risks	91.43%
Q3	Inferential	Court mindset & recovery	82.40%	Author's purpose in closing paragraph	85.71%
Q4	Inferential	Behavior during matches	70.60%	Context supporting central idea	88.57%
Q5	Inferential	Journalistic synthesis/conclusion	94.10%	Overall environmental conclusion	88.57%
Q6	Literal	Age when announcing ambition	94.10%	Definition of polinization	100.00%
Q7	Literal	Successful tennis family member	100.00%	Main threats to bee populations	97.14%
Q8	Literal	Team competition outcome	94.10%	Dependent agricultural products	94.29%
Q9	Literal	Source of emotional support	100.00%	Specific conservation strategy	97.14
Q10	Literal	Purpose of physical gym training	88.20%	Beneficiaries of pollination	97.14%

Note. N= 17 (Sequence 1 subgroup). Score are based on total correct items out of 10.

Collectively, the descriptive findings reveal two consistent patterns across the data:

- Task level hierarchy: In both languages, students achieved higher mean accuracy in literal items (Spanish: 97.14%; English: 95.28%) than in inferential items (Spanish: 87.43%; English: 81.20%).
- Cross-linguistic parallels: Students maintained high overall accuracy in both native language literacy (92.29%) and foreign language reading comprehension (88.24%), indicating strong baseline reading competence across both languages.

4. Discussion

The primary purpose of this study was to investigate the influence of L1 reading comprehension skills (conceptualized as observable indicators of cross-linguistic transfer) on EFL reading performance among Ecuadorian secondary school students.

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Grounded in Cummins' (1979b) linguistic interdependence hypothesis, the empirical findings provide robust support for cross-linguistic literacy transfer in expository text processing.

First, the descriptive data reveal a consistent performance hierarchy across both languages, wherein literal comprehension score exceeded inferential comprehension scores in Spanish (97.14% vs. 87.43%) and English (95.28% vs. 81.20%). This pattern directly aligns with cognitive processing models of reading (Perfetti & Stafura, 2014), which establish that literal tasks involve direct surface-level text extraction, whereas inferential tasks require deeper semantic integration and cognitive schema activation. The near ceiling performance observed in Spanish literal items (100% accuracy on explicit definitions) confirms that participants possessed well-established baseline L1 literacy competencies.

Second, the high overall performance in English reading tasks demonstrates that students effectively applied text-processing strategies in their foreign language. Notably, 94.10% of participants correctly answered L2 inferential item 5, while 100% achieved correct answers in L2 literal Items 7 and 9. These findings corroborate empirical results reported by Cueva et al. (2022) and Gottardo & Mueller (2009), who observed that native language reading proficiency significantly supports reading comprehension outcomes in secondary school EFL contexts.

Third, the parallel achievement observed between L1 and L2 inferential comprehension supports Cummins' (1979b) Common Underlying Proficiency (CUP) model and the broader framework of cross-linguistic transfer (Jeon & Yamashita, 2022; Vettori et al., 2024). Because all participants held certified B1-B2 CEFR English proficiency, linguistic threshold barriers were mitigated, enabling higher-order inferential reading skills developed in Spanish to operate effectively during English text processing.

5. Conclusions

- Summary of main findings. L1 reading comprehension skills function as positive observable indicators of EFL reading comprehension. Ecuadorian secondary students displaying elevated levels of Spanish reading literacy demonstrate corresponding competence in English literal and inferential.
- Theoretical significance: The study adds context-specific empirical support to Cummins' linguistic interdependence hypothesis within an EFL secondary education setting in Latin America.
- Pedagogical implications: EFL educators should recognize L1 reading literacy as a valuable resource rather than an impediment. Instructional strategies that develop higher-order reading skills (e.g., inferencing, central idea identification, and text structure analysis) in the native language can facilitate parallel reading comprehension growth in English.

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- Limitations and future directions: due to the non-probability convenience sampling (N=35) in a single private institution, these results provide localized evidence. Future studies should include larger probabilistic samples from public and private educational sectors and apply inferential statistical models to quantify the precise variance contributed by L1 literacy skills.

6. Conflict of interest

The authors declare that there is no conflict of interest in relation to the article presented.

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8. Authors' contribution statement

The authors declare that they have participated equally and substantially in the conduct of this research, under the responsibilities under the CRediT Taxonomy to describe the individual contributions of each author to the work.
Dayana Suggeidy Cuenca Castellano, carried out the conceptualization of the research, organization and execution of the trial, collection and curation of the data, review of the statistical analysis, interpretation of the results, preparation of the original draft, preparation of tables and figures, critical review of the content and approval of the final version of the manuscript.
Sonia Jimena Castro Bungacho, carried out the academic and methodological supervision of the research, provided guidance during the development of the essay, reviewed the analysis and interpretation of the results, carried out the critical review of the manuscript, made the scientific and academic correction and approved the final version for publication.
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