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Rendimiento académico del alumnado con dislexia en Inglés como lengua extranjera: un reto en lectoescritura y lengua oral

Academic performance of students with dyslexia in English as a foreign language: challenges extend beyond literacy to oral skills

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Resumen

El objetivo del presente estudio fue explorar el rendimiento académico del alumnado con dislexia en las clases de inglés como lengua extranjera. Para ello, se compararon las calificaciones de 29 estudiantes con dislexia con las de sus compañeros en las diferentes destrezas lingüísticas del inglés (lectura, escritura, comprensión auditiva y expresión oral), utilizando el rendimiento agregado del aula como grupo de referencia. A su vez, se pidió al profesorado que evaluara a su alumnado con dislexia en distintas esferas de la lengua extranjera (comprensión oral, desarrollo léxico, producción oral, desarrollo fonológico, gramática, comprensión lectora y escritura). Los análisis revelaron que el aprendizaje del inglés representa un desafío para el estudiantado con dislexia, ya que obtienen puntuaciones más bajas que sus compañeros en todas las destrezas analizadas, con mayores dificultades en lectura, escritura y expresión oral, mientras que la comprensión oral emerge como una relativa fortaleza. Las valoraciones del profesorado son coherentes con estos resultados y con la literatura previa, lo que apunta a que requieren apoyos no solo en los aspectos relacionados con la lectoescritura, sino también en actividades de naturaleza oral. Asimismo, parece observarse que las dificultades de los estudiantes con dislexia tienden a mantenerse a lo largo de toda educación primaria y podrían agravarse en los centros bilingües, posiblemente debido al aumento de la demanda lingüística. Estos hallazgos tienen importantes implicaciones psicoeducativas respecto a las necesidades educativas de esta población para aprender inglés.

Palabras clave: *dislexia; inglés como lengua extranjera; L2; bilingüismo; adaptaciones educativas; logopedia.*

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Abstract

The aim of the present study was to explore the academic performance of students with dyslexia learning English as a foreign language. To this end, the grades of 29 students with dyslexia were compared with those of their peers across different English language skills (reading, writing, listening comprehension, and speaking), using the class's aggregated performance as the reference group. In addition, teachers were asked to evaluate the performance of students with dyslexia in several areas of English language learning (listening comprehension, lexical development, oral production, phonological development, grammar, reading comprehension, and writing). The analyses revealed that foreign language learning poses a challenge for students with dyslexia, as they obtained lower scores than their peers across all the skills analyzed, with greater difficulties in reading, writing, and speaking, while listening comprehension emerged as a relative strength. Teachers' evaluations were consistent with these findings and with previous literature, suggesting that students with dyslexia may require curricular adaptations not only in areas related to literacy, but also in orally based activities. Furthermore, this vulnerability appears to persist throughout primary education and may be exacerbated in bilingual schools, possibly due to increased linguistic demands. The findings have important psychoeducational implications for supporting this population in learning English.

Keywords: *dyslexia; English as a foreign language; L2; bilingualism; psycho-educational adaptations; speech therapy.*

Introduction

Developmental dyslexia is a neurobiological condition characterized by specific and pronounced difficulties in reading and writing acquisition (Carroll et al., 2025). However, a growing body of research suggests that these challenges extend beyond literacy skills to other areas of language, including oral production (Helland & Kaasa, 2005; Maurer et al., 2021; Price et al., 2022) and language comprehension (Reis et al., 2020; Robertson & Joanisse, 2010). In this context, it is essential not only to assess the impact of dyslexia on literacy but also to recognize the broader linguistic difficulties that individuals with dyslexia may experience. These linguistic limitations become even more pronounced in the context of learning a foreign language, since, among others, it is particularly demanding on working memory (Masoura & Gathercole, 2005; Sehlström et al., 2022). Nevertheless, despite the growing recognition of dyslexia's impact on language, research on its struggles in foreign language learning beyond literacy-related issues remains limited (Łockiewicz &Jaskulska, 2016).

To fill this gap, the present study aims to explore the overall language difficulties, both in written and oral communication that Spanish-speaking (L1) children with dyslexia face when learning English as a foreign language (EFL). Previous research on EFL learning in children with dyslexia has predominantly focused on experimental literacy tasks targeting isolated skills (Álvarez-Cañizo et al., 2023; Andreou & Baseki, 2012; Palladino et al., 2013; Sehlström et al., 2022) which may only partially capture the complexity of learning demands in real school settings. Therefore, the scientific literature has yet to specifically examine the needs of this population within regular instructional contexts. In this context, rather than relying on decontextualized experimental tasks, we adopt an ecologically oriented approach by analyzing students' academic performance in English, as reflected in school-based assessment outcomes. In addressing this issue, we aim to identify the needs of children with dyslexia when facing English learning, which may help to reflect on potential psychoeducational strategies to support them.

Literature review

Oral language difficulties in children with dyslexia

Research has shown that individuals with dyslexia often struggle with several cognitive skills, including phonological awareness, the ability to recognize and manipulate sounds in spoken words (García et al., 2010), phonological memory, which involves temporarily storing speech sounds,

assessed through nonword repetition tasks (Melby-Lervåg & Lervåg, 2012), and working memory, responsible for holding and processing information (Beneventi et al., 2010; Bogdanowicz et al., 2014). These difficulties may underlie the oral comprehension limitations of this population described in Georgiou et al.'s, (2022) meta-analysis.

Regarding the oral production skills of children with dyslexia, the extent of their difficulties remains somewhat unclear. Research indicates that they often struggle with word retrieval, leading to frequent "tip-of-the-tongue" moments (Faust et al., 2003; Hanly & Vandenberg, 2010; (AUTOCITA)). In addition, these children often have a history of early language delay (Price et al., 2022) which results in a lower productive and expressive vocabulary (Chen et al., 2017; Ramus et al., 2013; Van Viersen et al., 2017). On the contrary, other studies show that children with dyslexia produce oral narratives comparable to those of chronologically age-matched controls in terms of lexical measures (types, tokens, and lexical diversity), richness of the ideas, and coherence (Sumner et al., 2016). Similarly, they do not appear to exhibit higher rates of speech dysfluency than their typically developing peers (Pistono et al., 2024).

In any case, current research increasingly critiques approaches to diversity that focus primarily on identifying student deficits (Knight, 2025). Equally important is examining the challenges faced by the educational system in adapting to the needs of learners with dyslexia (Ademolu, 2025). Thus, studies should move beyond describing what children with dyslexia cannot do and instead focus on what can be done in the classroom to mitigate these difficulties and support their learning. As we can see, further research is needed to understand the complexity of how dyslexia affects language development and how educational practices can be adapted to foster the strengths of these learners.

Learning English as a foreign language in Spanish children

In Spain, learning EFL is mandatory throughout primary and secondary education (ages 6 to 16)(Real Decreto 132, 2010), though informal exposure often begins as early as age 3 in preschool. During the mandatory period, students receive approximately three to four hours of EFL instruction per week.

“Bilingual” education is very widespread in Spain, with up to 46.6 % of primary school children enrolled in such programs (Ministerio de Educación y Formación Profesional, 2023). These schools follow the CLIL (Content and Language Integrated Learning) approach, a language immersion method in which a foreign language serves as the medium of instruction for certain academic subjects (Eurydice, 2006; Pérez-Cañado, 2012). In these settings, approximately 50 % of the academic content—typically in science, but sometimes also in the arts or physical education—is taught in English. There is not much research that addresses the impact of this methodology on the population of people with dyslexia. A study conducted in Belgian CLIL schools showed that foreign language proficiency appeared to be comparable between children with and without dyslexia (Parmentier et al., 2024). However, the linguistic context of these two countries is different, as in Belgium, unlike in Spain, students have a more similar level of L1 and foreign language. Therefore, it is difficult to extrapolate the results to the Spanish population. Given the central role of English in the curriculum, it is important to understand the obstacles it poses for students with learning disabilities, particularly those with dyslexia. However, the specific impact of bilingual education on this population has not been addressed.

English as a foreign language in children with dyslexia

Literacy difficulties in EFL learners with dyslexia have been widely reported in research. Learning to read in an opaque orthography like English is more than twice as slow as in shallow orthographies (Seymour et al., 2003). This process becomes even more complex when English is learned as a foreign language, particularly for students with dyslexia (Álvarez-Cañizo et al., 2023; Andreou & Baseki, 2012, 2012; Martínez-García et al., 2024; Palladino et al., 2013; Sehlström et al., 2022).

Experimental studies conducted in populations with shallow L1 orthographies have revealed mixed findings regarding the reading competence of children with dyslexia in EFL. Most studies report that these learners produce more reading errors and exhibit slower reading rates than their

typically developing peers (Martínez-García et al., 2024; Palladino et al., 2013). However, Łockiewicz and colleagues (2019) found that Polish students with and without dyslexia performed at comparable levels across several EFL reading tasks. On this basis, the authors concluded that low overall proficiency in EFL may mask the effects of dyslexia, at least during the early stages of foreign language literacy learning.

They also perform worse on other reading-related tasks, such as visual lexical decision-making (Martínez-García et al., 2024) and semantic categorization (Suárez-Coalla et al., 2020). Their reading performance remains below that of children without dyslexia, likely due to the inherent difficulty of the English alphabetic code (Suárez-Coalla et al., 2020). Moreover, while typically developing children benefit from rime consistency when reading in English, children with dyslexia do not show evidence of having acquired these reading patterns, suggesting a deficit in the development of larger linguistic units (Martínez-García et al., 2024). This suggests that children with dyslexia have difficulty grasping decoding patterns and developing orthographic representations beyond the level of graphemes (Martínez-García et al., 2024). Less research has been conducted on reading comprehension in EFL. Studies of adults with dyslexia have shown that they score lower on tasks involving reading a text and answering questions (Pérez-Litago et al., 2025). However, this may be age-related, as the characteristics of individuals with dyslexia evolve over time (Brèthes et al., 2022; León Lopa, 2019).

As for spelling performance, it seems to pose another significant challenge in EFL learning for students with dyslexia (Álvarez-Cañizo et al., 2023; Helland & Kaasa, 2005; Martínez-García et al., 2024). This population faces specific difficulties in the acquisition of writing patterns (Andreou & Baseki, 2012; Martínez-García et al., 2024). That's why, especially when the L1 is a transparent language, students often over-rely on a "spelling-by-ear" strategy, which results in correctly pronounced words but unconventional spellings (Andreou & Baseki, 2012). Nevertheless, errors in text production are not limited to word spelling. It has been found that Swedish students with dyslexia perform poorly in spelling when writing in their L1, while they perform poorly in cohesion, language use, spelling, and punctuation when writing in EFL (Sehlström et al., 2022). This emphasizes that the use of a foreign language increases the difficulties of this population in writing tasks.

Apart from literacy deficits, some studies have reported that children with dyslexia also struggle with other linguistic domains, including listening and speaking skills. In terms of listening skills, children with dyslexia show lower receptive vocabulary breadth in EFL than their control peers (Geva & Massey-Garrison, 2013; Ho & Fong, 2005; Łockiewicz & Jaskulska, 2016), that is, they have a smaller number of words they can recognize and understand. Similarly, they also perform weaker in EFL tasks requiring sentence comprehension (Helland & Kaasa, 2005), and in answering questions about short paragraphs presented orally, both for answering factual or inferential questions (Geva & Massey-Garrison, 2013).This challenge, which is not observed in the L1, could be due to the increased cognitive demands or the lack of automatization required for listening comprehension in a foreign language (Geva & Massey-Garrison, 2013). Nevertheless, it seems that this limitation could be compensated with age, as in studies with adults, no differences in passage comprehension in EFL were found between the group with dyslexia and control peers (Pérez-Litago et al., 2025).

Finally, speaking in EFL also present notable difficulties for this population. It has been shown that poor readers score lower on EFL productive vocabulary (Maurer et al., 2021). Furthermore, individuals with dyslexia are less proficient than matched controls in sentence construction (Helland & Kaasa, 2005) and syntax tasks, which require students to hold words or phrases in memory, examine context cues, and orally produce syntactically correct sentences in EFL (Geva & Massey-Garrison, 2013). One might think that the poor performance of the dyslexic group would be related to their working memory deficits (Beneventi et al., 2010; Bogdanowicz et al., 2014). However, the group differences in the syntax task did not change when working memory was covaried (Geva & Massey-Garrison, 2013). In this line, the adults with dyslexia were also less proficient in an oral picture description task in EFL (Pérez-Litago et al., 2025). Furthermore, their language use (number of semantic errors, lexical diversity, and sentence complexity) was observed to be worse in the oral than in the written production tasks. This is probably because their working

memory deficits (Beneventi et al., 2010; Bogdanowicz et al., 2014) exacerbate their difficulties in time-limited language tasks (Parrila et al., 2007).

As observed, students with dyslexia struggle to acquire various linguistic domains in EFL. However, educators and Spanish speech therapists rarely assess these difficulties, probably because formal EFL assessments are not available, specific training in EFL testing is lacking (Fernández-Portero, 2022; Suárez-Coalla et al., 2020), and there is a conventional emphasis on L1 prioritization (Helland & Kaasa, 2005). Therefore, there is a need for classroom-based studies that analyze the challenges faced by students with dyslexia in all areas of English learning from a perspective that is close to their everyday reality. For this reason, the present study examines students' grades across different domains of English language learning and collects teachers' perspectives on the difficulties they experience. This new approach will allow us to better understand their needs and reflect on what we can do to make their learning process as effective and fulfilling as possible.

Research questions

This study aimed identify the specific challenges that children with dyslexia face in daily English learning. Specifically, it addresses the following research questions:

RQ1. What is the performance of Spanish-speaking primary education students with dyslexia in the different English language domains (reading, writing, listening, and speaking), compared to their classmates?

RQ2. Which EFL language domains are more challenging for students with dyslexia?

RQ3. Are there differences in the performance of the group with and without dyslexia according to the language of the school curriculum (bilingual and monolingual schools) and according to the age group (first, second, and third cycle)?

RQ4. To what extent do students with dyslexia have limitations in different EFL skills (lexical achievement, grammar, reading comprehension, writing, oral comprehension, oral production, and phonological development) as perceived by their teachers?

According to previous literature, students with dyslexia are expected to perform worse in all English language skills (Geva & Massey-Garrison, 2013; Helland & Kaasa, 2005) but especially in those involving written language (Andreou & Baseki, 2012). It is hypothesized that differences with their classmates will be smaller in the later years of primary education, as some of their difficulties could be compensated with age (Gelbar et al., 2018); and in bilingual schools, where exposure to the foreign language is greater. Regarding teachers' perceptions of the difficulties faced by students with dyslexia, we expect them to primarily identify problems in reading and writing, as these tend to be the main obstacles in such cases. Since difficulties in other language areas are less pronounced (Georgiou et al., 2022), they are likely to be overshadowed by these.

Materials and methods

Participants

The study collected data from children with dyslexia, who constituted the experimental group, and from all classmates in each corresponding classroom. The aggregated classroom performance of these classmates was used as a reference (control) group. Thus, the control group was classroom-based rather than individually matched. Participants were recruited through a convenience sampling procedure: several mainstream primary schools in Asturias (Spain) were contacted and invited to participate, and data were collected from those schools that agreed to take part in the study. The final sample included 29 students with dyslexia (16 boys and 13 girls) and their respective classmates, all enrolled in primary education (M_{age} = 9.38, SD_{age} = 1.8). The control group consisted exclusively of typically developing students. In the dyslexia group, students with any additional known motor, cognitive, or perceptual comorbidities were not included. Data were collected by eleven school counselors and English teachers from different schools.

All the students were monolingual Spanish speakers learning EFL. 9 of the students with dyslexia were enrolled in monolingual schools (1 in Year 1, 2 in Year 2, 4 in Year 3, 1 in Year 5, and 1 in Year 6), while the remaining 20 were enrolled in bilingual schools following CLIL methodology (1 in Year 1, 3 in Year 2, 3 in Year 3, 3 in Year 4, 6 in Year 5, and 4 in Year 6). In non-bilingual schools, the students were only taught the English subject in that language. Of those enrolled in bilingual schools, 18 were taught English and science in English, and 2 were also taught art and physical education in that language.

Regarding academic support, 14 students received attention from hearing and speech special teachers and/or therapeutic education teachers. In terms of curricular adaptations, only one student had an Individualized Education Plan (IEP), while 21 students had methodological adaptations. These adaptations included but were not limited to, strategic seating arrangements in the classroom, adapted exams (e.g., questions written in Spanish, key information highlighted, examples provided), and extended time to complete assignments.

Materials and procedure

The materials used in this study included a questionnaire (Appendix I) completed by school counselors and/or English teachers who worked with children with dyslexia. The questionnaire was developed *ad hoc* to collect the specific information required for the study and consisted of a document that professionals completed and returned to the researcher by email. It collected information about the grades that students with dyslexia achieved (or would achieve without curricular accommodation) in each of the four typically assessed language skills (reading, writing, listening, and speaking), as well as the average grades of the rest of the class.

Similarly, to gain deeper insight into the specific difficulties these children faced in learning English, respondents rated the challenges they observed on a scale from 1 (none) to 4 (severe) across various aspects of language development: auditory discrimination, listening comprehension, lexical development (vocabulary), oral production, phonological development (pronunciation), grammar, reading comprehension, and writing. The materials used and all data collected are openly available in the following repository: https://osf.io/bc9k8/?view_only=753b8cfabf494f43a495f82c3587cb8a

The research design was approved by the Research Ethics Committee of the University of Oviedo. The whole process of data collection and processing was carried out in accordance with the principles of the Declaration of Helsinki and the Spanish Personal Data Protection Act (Organic Law 15/1999, of December 13, and 3/2018, of December 5).

Analysis

The study adopted a non-experimental, quantitative, ex post facto comparative design. The data were analyzed using JASP software version 0.18.3 (JASP Team, 2024). Regarding the first research question, an independent samples t-test was conducted to compare the classroom grades of students with dyslexia and the average of their classmates in the different language domains typically assessed in English classes (reading, writing, listening, and speaking). For each variable, a p-value was calculated to determine whether the differences between the groups were statistically significant, with Cohen's d used to measure the effect size. Since multiple independent samples t-tests were performed, the Holm-Bonferroni correction was applied to control for type I errors. This method sequentially adjusts the significance threshold by ordering p-values from smallest to largest and comparing each to an increasingly stringent criterion. All p-values were adjusted to ensure that the probability error remained within the predefined significance level of $p < .05$.

For the second question, ANOVA and Bonferroni post hoc tests were conducted to identify significant differences in grades across the four language domains. In addition, Pearson's correlation (r) was used to analyze the relationships among different language domains.

The third research question examined the impact of curriculum language—hereafter, schools implementing CLIL are referred to as bilingual schools, whereas schools not implementing this methodology are referred to as monolingual schools—and grade level (first, second, and third cycle) on children with dyslexia. In this case, since comparisons were made between small groups, the

Shapiro-Wilk test was then used to analyze whether the data followed a normal distribution, and the Brown-Forsythe test was used to evaluate the homogeneity of variances. As for the bilingual and monolingual comparisons, most of the results were above .05, so it was decided to apply parametric statistics. That's why, p-value and Cohen's d were used to group comparisons. There were few students of last grades of primary education who attended a monolingual school, so in order to equalize the number of subjects per group, only data from students in the first three grades were analyzed. *t*-test was used to confirm that there were no significant differences between the grade levels of the students in the groups with and without dyslexia. For the grade comparisons, the data were not normally distributed, so the Mann-Whitney test (*U*) was used to analyze group differences and the rank biserial correlation (*rb*) was used to examine effect size. Despite including children from different educational stages, the study employed a cross-sectional approach, since data were collected at a single time point and different participants were assessed at each grade level.

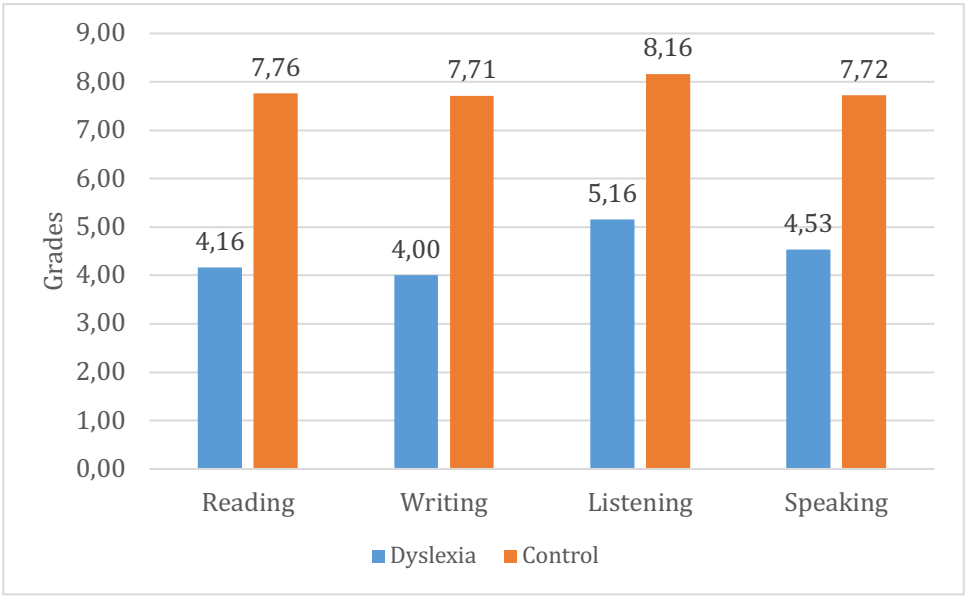
With the last question we wanted to explore the performance of the children with dyslexia in the different English language skills. To do this, the mean and standard deviation of the teacher observation scores were calculated. A one-way ANOVA was also conducted to examine whether there were differences in performance across the different language skills. Finally, Pearson's *r* was used to look at the correlations between language skills and classroom grades.

Results

Group comparisons

The analyses revealed that students with dyslexia scored significantly lower than their classmates in all four language domains analyzed (Reading: $t(56) = -15.246$, $p < .001$; $d = -4.004$; Writing: $t(56) = -14.900$, $p < .001$, $d = -3.913$; Listening: $t(56) = -9.998$, $p < .001$, $d = -2.626$; Speaking: $t(56) = -13.017$, $p < .001$, $d = -3.418$) (see Figure 1).

Figure 1
Average Grades of Students With and Without Dyslexia (Out of 10) in all Four Language Domains



Differences and correlations between language domains

The performance of students with dyslexia in the different language domains was analyzed. Results showed that classroom grades depended on the skill assessed ($F(3, 116) = 5.844$, $p < .001$). Bonferroni *post hoc* tests revealed that the results were significantly better in Listening than in

Reading ($p < .01$) and Writing ($p < .001$).In contrast, no significant differences between language domains were observed in the group without dyslexia, indicating a more homogeneous performance profile.

Correlational analyses of the four basic language skills (reading, writing, listening, and speaking) further revealed distinct patterns across groups. For the group with dyslexia, a significant correlation was found between Reading and Writing ($r = .876$, $p < .001$) and between Listening and Speaking ($r = .753$, $p < .001$). However, in the group without dyslexia, significant correlations were found between all language skills: Listening and Reading ($r = .370$, $p < .05$), Listening and Writing ($r = .453$, $p < .05$), Listening and Speaking ($r = .583$, $p < .001$), Reading and Writing ($r = .769$, $p < .001$), Reading and Speaking ($r = .793$, $p < .001$), and Writing and Speaking ($r = .699$, $p < .001$).

Impact of the curricular language and age

Next, the group comparisons were repeated according to whether the schools the students attended were bilingual or not (only in the first three grades). First, we confirmed that there were no divergences between the school years of the students in the bilingual and monolingual school groups ($M_{BI} = 2.29$, $SD_{BI} = 0.73$; $M_{MO} = 2.43$, $SD_{MO} = 0.79$; $t(26) = -0.510$, $p = .614$). The analysis revealed that students with dyslexia consistently obtained lower grades than their peers regardless of curricular context. Importantly, effect sizes indicated that these differences were larger in bilingual schools than in monolingual schools across all domains (bilingual: Reading, $t(12) = -9.511$, $p < .001$; $d = -5.084$; Writing, $t(12) = -8.710$, $p < .001$, $d = -4.656$; Listening, $t(12) = -6.100$, $p < .001$, $d = -3.261$; and Speaking, $t(12) = -8.845$, $p < .001$ $d = -4.728$; monolingual: Reading, $t(12) = -5.039$, $p < .001$, $d = -1.728$; Writing, $t(12) = -5.362$, $p < .001$, $d = -2.866$; Listening, $t(12) = -3.233$, $p = .007$, $d = -1.728$; and Speaking, $t(12) = -3.652$, $p = .006$, $d = -1.952$).

The differences between the students with dyslexia and their classmates were also compared across the different cycles of primary education: first cycle (1st and 2nd school years), second cycle (3rd and 4th school years), and third cycle (5th and 6th school years). We found that dyslexia was associated with significantly lower performance from the first cycle of primary education onward. The magnitude of these differences was already large in the first cycle and remained stable across subsequent cycles (first cycle: Reading, $U(12) = 0.000$, $p = .002$, $rb = -1.000$; Writing, $U(12) = 0.000$, $p = .002$,,$rb = -1.000$; Listening $U(12) = 1.000$,$p = .003$, $rb = -0.959$, and Speaking $U(12) = 0.000$, $p = .002$,$rb = -1.000$; second cycle: Reading $U(18) = 1.000$,$p < .001$,$rb = -0.980$, Writing $U(18) = 2.000$,$p < .001$,$rb = -0.960$, Listening $U(18) = 6.000$,$p < .001$, $rb = -0.880$, and Speaking $U(18) = 2.000$,$p < .001$, $rb = -0.960$; third cycle: Reading $U(22) = 0.000$,$p < .001$, $rb = -1.000$, Writing $U(22) = 0.000$,$p < .001$, $rb = -1.000$, Listening $U(22) = 2.000$, $p < .001$, $rb = -0.972$, and Speaking $U(22) = 0.000$,$p < .001$, $rb = -1.000$).

Performance in English language skills

We wanted to determine how children with dyslexia perform in several English language related skills based on teachers' perceptions. No significant differences in performance were found across the different language skills, as indicated by a one-way ANOVA analysis ($p = .262$) (see Table 1).

Table 1

Means and Standard Deviations of Children with Dyslexia Across EFL Skills, According to Teachers' Perceptions (From 1 "None" to 4 "Severe")

EFL skills	*M* (*SD*)
Lexical development	1.93 (1.02)
Grammar	2.30 (1.06)
Reading comprehension	2.43 (0.97)
Writing	2.47 (1.07)
Oral comprehension	2.13 (0.90)
Oral production	2.27 (1.05)
Phonological development	2.33 (1.06)

Correlations between language skills and classroom grades

Finally, in the group of students with dyslexia, correlations were calculated between EFL skill rates and classroom grades. After adjusting *p*-values, we found that classroom grades were selectively associated with specific EFL-related skills: Reading grades correlated with reading (r = -0.573, p< .001) performance; Writing grades correlated with reading (r = -0.652, p< .001), writing (r = -0.631, p< .001), and grammar (r = -0.578, p < .001) performance; and Listening grades correlated with phonological development (r = -0.508, p = .04).

Discussion

The aim of this study was to investigate the performance of students with dyslexia in the context of mainstream English language teaching. To this end, information was collected from 29 Primary Education pupils by means of a questionnaire completed by their English teachers or school counsellors. Data were obtained on the grades of students with dyslexia in the different English language skills (reading, writing, listening and speaking) and compared with the average grades of their classmates. We also asked teachers to rate the competence of students with dyslexia in different EFL learning skills (oral comprehension, lexical development, oral production, phonological development, grammar, reading comprehension and writing). In this way, we wanted to gain a close insight into the challenges faced by children with dyslexia in their everyday EFL learning.

The first research question aimed to compare how students with dyslexia performed (or would perform without curricular accommodations) relative to their classmates in the different English language skills. The results showed that students with dyslexia experience difficulties acquiring English, as they scored significantly lower than their peers across all four language domains analyzed. The largest difference was in Reading, followed by Writing, Speaking, and finally, Listening. Listening was the only area in which they achieve a passing grade (5.16/10), suggesting that it may be a relative strength in EFL learning.

These findings are consistent with previous scientific literature describing the difficulties of students with dyslexia in acquiring EFL reading (Martínez-García et al., 2024; Nijakowska, 2010; Palladino et al., 2013), writing (Álvarez-Cañizo et al., 2023; Helland & Kaasa, 2005; Maurer et al., 2021; Palladino et al., 2016; Sehlström et al., 2022), and also in listeing (Geva & Massey-Garrison, 2013; Helland & Kaasa, 2005; Ho & Fong, 2005; Łockiewicz & Jaskulska, 2016) and speaking (Helland & Kaasa, 2005; Maurer et al., 2021). The poor performance in literacy was easily expected given the definition of dyslexia (Carroll et al., 2025). However, the present study supports the idea that the underlying difficulties associated with literacy, especially those related to phonological processing, may also affect other language domains (Snowling & Melby-Lervåg, 2016; Wiseheart & Altmann, 2018) in the process of EFL learning.

The poor performance in speaking may be explained by the fact that working memory deficits (Beneventi et al., 2010; Hatcher et al., 2002), which could result in inferior performance in time-limited tasks (Parrila et al., 2007), such as oral production, since it requires spontaneity (Pérez-Litago et al., 2025). Although listening comprehension could be considered a relative strength for students with dyslexia, their scores are lower than those of students without reading difficulties. This could be interpreted as a consequence of a consistent deficit in people with dyslexia that makes their average performance on almost all tests lower (Callens et al., 2012; Hatcher et al., 2002). One might expect this to be exacerbated by the use of a foreign language, which requires large cognitive resources and is particularly demanding on working memory (Masoura & Gathercole, 2005). Nevertheless, these results may be misleading because listening skills are often assessed in school by answering written questions, which is undoubtedly a disadvantage for students with dyslexia. This should prompt us to reflect on how students are assessed, both in research contexts and, more importantly, in educational practice. If the goal is to bring out the best in every learner, it is essential to understand their specific needs and adapt assessment methods to their learning profiles.

In relation to the second research question, the distinct correlational patterns observed between groups suggest differences in how language skills are organized. While typical readers exhibited a highly integrated language profile, students with dyslexia showed a clearer dissociation between literacy-based and oral skills. This finding aligns with conceptualizations of dyslexia as a disorder primarily affecting written language processes, with secondary consequences for other domains (Carroll et al., 2025). On the other hand, in the group with dyslexia, significant differences in competence were found only between the listening and reading domains, probably because of the relative strength in listening mentioned above.

The third research question examined the effects of curriculum language and age group. Regarding the impact of curriculum language, the results showed that in bilingual schools (where they follow a CLIL program), the differences between students with and without dyslexia were greater than in monolingual schools. We can assume that the level of English instruction is higher in bilingual schools. This leads us to hypothesize that an increase in demand leads to greater difficulty for students with dyslexia. However, these results should be interpreted cautiously, given that splitting the sample led to small subgroup sizes.

Previous studies conducted in CLIL schools in Belgium (where the L1 was French and the target language was Dutch and, to a lesser extent, English) showed that foreign language proficiency appeared to be comparable for typical readers and students with dyslexia (Parmentier et al., 2024). But they also found no measurable linguistic superiority for the CLIL students with dyslexia compared to students with dyslexia in monolingual schools. Other research suggests that the bilingual children with dyslexia were impaired at the same level as their monolingual peers with dyslexia, suggesting that exposure to two languages does not impair their skills (Vender et al., 2021). Based on these findings, the researchers concluded that the fear that exposure to two languages would exacerbate the difficulties experienced by individuals with dyslexia was unfounded (Siegel, 2016; Vender et al., 2021). However, the aforementioned studies have been carried out with populations immersed in contexts of real bilingualism, where children are exposed to more than one language on a daily basis and therefore have similar levels in the L1 and the foreign language. On the contrary, in the case of Spanish children, the context is very different. Spanish children have virtually no exposure to English outside of school or extracurricular instruction, and their EFL level is much lower than their L1 level. This may explain why this study found greater difficulties for students with dyslexia in bilingual CLIL schools than in monolingual schools. We know that the benefits of learning a foreign language are innumerable (Chávez-Zambano et al., 2017; Kormos & Margaret, 2023). And that in no case is it justified to limit students with dyslexia to not learning a foreign language. However, it is unclear whether bilingual CLIL model schools represent an advantage or a disadvantage for the population with dyslexia and more research is needed to analyze this issue in depth.

With regard to the effect of age, in the present study we found that the differences between students with dyslexia and their classmates persisted across all years of primary education and across the four language domains assessed. Previous research has indicated that students with dyslexia show a steady increase in overall L1 reading ability over the course of primary education, but always at a similar distance from their control peers (Zonno et al., 2016). Our findings point in the same direction. Nevertheless, we observed that in the case of EFL learning process, this does not only occur in reading, but the difficulties were also extrapolated to the rest of the EFL skills. It should be noted, however, that we have a small number of participants in each of the subgroups. Therefore, there is a ceiling effect when analyzing the size of the differences between them. The results could indicate that the difficulties of students with dyslexia increase in the last cycle of primary education, but the small sample size makes it impossible to draw conclusions. For this reason, it would be interesting to conduct new longitudinal studies that analyze the evolution of the needs of this population, not using the same experimental tasks at different ages (as Zonno et al., 2016), but analyzing the difficulties in real English classrooms, where the demands increase with age. In any case, the present results should make us think about how to support students with dyslexia. Although they may have compensated for some of their most visible difficulties (e.g., L1 reading) by the by the middle of primary school, they still need support for EFL learning.

The last research question explored whether children with dyslexia perform differently in various aspects of English language skills according to teachers' perceptions. For this purpose, they rated the level of difficulty of the students with dyslexia on a Likert scale. To our surprise, the teachers reported similar difficulties across all language skills, ranging all of them from "quite difficult" to "very difficult". Specifically, they indicated that the skill in which they had the least difficulty was lexical development, followed by oral comprehension, oral production, grammar, phonological development, reading comprehension, and writing. This is consistent with the results of the analysis of classroom grades. Similarly, previous research has also shown that students with dyslexia face the greatest challenges in EFL literacy, although their difficulties extend beyond this domain (Geva & Massey-Garrison, 2013; Helland & Kaasa, 2005; Ho & Fong, 2005; Łockiewicz & Jaskulska, 2016; Maurer et al., 2021). In contrast, studies conducted with Spanish-speaking adults with dyslexia showed that they were less competent in EFL oral production than in writing or reading comprehension (AUTOCITA). This difference may probably be due to the age of the participants, as the needs of this population may evolve with age.

Finally, we examined how the language skills assessed were related to the grades obtained in the four language domains. Reading and writing were related to each other, showing that, as mentioned above, competence in these skills is highly correlated in children with dyslexia. Interestingly, grammar skills were also related to writing, but not to speaking. We might think that this is because grammatical competence is easier to develop in written tasks (where we usually have more time to reflect) than in speaking tasks, which tend to occur on the fly. Moreover, phonological development is closely linked to listening. This supports previous literature that argues for the importance of pronunciation awareness in improving listening comprehension skills (Ak, 2012; Cauldwell, 2013).

Practical implications and specific academic supports for students with dyslexia in English language classroom

As shown by the results of the present study, students with dyslexia experience difficulties across all English language domains, rather than exclusively in literacy-related skills. These learning challenges should not be conceptualized as inherent deficits of learners with dyslexia, but rather as a consequence of educational contexts that are insufficiently adapted to their learning profiles. From this inclusive perspective, the main practical implication of the study is the need to implement systematic and domain-specific academic supports across all English language skills in order to reduce contextual barriers and promote equitable learning opportunities. The following section therefore outlines specific instructional supports for each English language domain, drawing on evidence from the existing scientific literature.

With regard to educational strategies for teaching English to learners with dyslexia, a key reference is the pedagogical manual by Hernández García et al. (2018), which highlights the importance of encouraging multisensory approaches to vocabulary learning—such as visualization, repeated oral practice, and feature-based associations—as well as the use of vocabulary in a variety of contexts (Rosa et al., 2022). It is also recommended to be direct and explicit (Li & Sun, 2024), by breaking down instructions into steps and providing examples. In parallel with these general instructional measures, when focusing on literacy, it is important to remember that words are learned to read and write more quickly when they are previously familiar verbally (Suárez-Coalla et al., 2023). Therefore, it is important to have a good level of oral language before introducing written language. For the teaching of reading, it is recommended to combine synthetic and global methods, to carry out repeated reading activities, and to always use visual support. Also, if the student does not want to read in front of the group, he or she should not be required to do so. Regarding the teaching of writing, specific instructional supports may include explicitly explaining the most common orthographic patterns (Pérez Cañado, 2006), to start with transparent words and gradually introduce more complex words, and to have the student prepare in advance the dictations that will be done in class. Moreover, despite the evident differences between the English and Spanish orthographic systems, the two languages also share numerous similarities. Therefore, it is recommended to highlight these similarities and explicitly examine the connections between both languages (Pérez Cañado, 2005).

Oral communication should constitute a central component of English language learning, particularly in the early stages of instruction. In fact, during early childhood education and the first and second years of primary education, all activities should be exclusively oral (Hernández García et al., 2018). With regard to the instruction of listening, we must acknowledge its importance and leverage it as a strength for students with dyslexia. It is important to do explicit sound discrimination activities and to implement pre-listening activities before listening to audio, as this will help to activate prior knowledge and thus facilitate comprehension. With regard to oral production, activities should be designed to review what has been learned, for example, using flashcards with vocabulary from previous topics. In addition, it is recommended to avoid activities that require students to respond orally on the spot, as students with dyslexia may experience difficulties with rapid lexical access. Therefore, rather than asking a student directly, it is advisable to present questions in advance and provide sufficient planning time before responding. Overall, the findings of the present study indicate that English language learning tasks often involve an additional cognitive effort for students with dyslexia, which should be acknowledged within the classroom context and addressed through positive reinforcement and integrative instructional practices (Hernández García et al., 2018). Finally, as we have seen in the present study, these learning supports should be implemented in all cycles of primary education. This is particularly important in bilingual schools, where difficulties are more evident, presumably due to the increased linguistic demands.

Limitations and future directions

Some limitations of the present study are worth mentioning. In fact, one of the positive points of this work is also a limitation to be consider. With this research, we wanted to specifically investigate the needs of the population with dyslexia within regular English classroom activities. That's why, instead of using artificial experimental tasks, data collection was based on students' grades and a description of the difficulties that teachers of these students observe on a daily basis. This has allowed us to collect enormously interesting information, but at the same time, the results may be biased by the teachers' viewpoints. On the other hand, the sample size is limited (n = 29), so the results should be treated with caution when making comparisons between subgroups (bilingual/monolingual school or age groups). Finally, in line with much of the existing literature, the present study has primarily focused on identifying the difficulties associated with dyslexia. However, frameworks grounded in inclusive education and neurodiversity emphasize that such difficulties arise from the interaction between learners and their educational contexts, not just from individual characteristics. Consequently, further research is needed to examine how clinical and educational practices can be adapted to better support and enhance the strengths of this population(see, for example, Eden & Shmila, 2023; Tribushinina et al., 2022). Nevertheless, the present findings provide a valuable starting point for such work.

Conclusions

We found that children with dyslexia experience considerable challenges when learning EFL, with their performance consistently lagging behind that of their peers in all language domains. These results align with teachers' subjective observations. Therefore, specific instructional support should be adopted for teaching not only English reading and writing (Fombella Pedrero & Solís García, 2020; Hernández García et al., 2018), but also the spoken language. This support is particularly important in bilingual schools, where the difficulties (probably due to increased demands) are more pronounced.

Ethical considerations regarding research

The research design was approved by the Research Ethics Committee of the University of Oviedo. The whole process of data collection and processing was carried out in accordance with the principles of the Declaration of Helsinki and the Spanish Personal Data Protection Act (Organic Law 15/1999, of December 13, and 3/2018, of December 5).

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Conflict of interest

The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analysis, or interpretation of the data; in the writing of the manuscript; or in the decision to publish the results.

Authors' contributions

Conceptualisation, R.I.M. and P.S.-C.; methodology, R.I.M, U.P.-L. and P.S.-C.; formal analysis, U.P.-L.; research, R.I.M, U.P.-L. and P.S.-C.; resources, P.S.-C.; drafting of the original manuscript, U.P.-L.; writing, reviewing and editing, U.P.-L. and P.S.-C.

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Appendixes

Appendix 1. Questionnaire

QUESTIONNAIRE FOR ENGLISH LANGUAGE TEACHERS AND SCHOOL COUNSELS WHO WORK WITH STUDENTS WITH DYSLEXIA IN PRIMARY EDUCATION

- Student's grade:

- Repeated grade (indicate yes/no and grade repeated):

- Gender:

- Date of birth:

- Data from PROLEC-R, PROESC or other literacy assessment batteries (if available):

- Mother tongue:

- Other languages spoken at home:

- Bilingual school (indicate yes/no):

- If the school is bilingual, indicate the subjects taught in English:

- Number of English lessons per week:

- Methodology of teaching English (explain what is emphasized):

- Indicate if the student has educational support (speech and language teacher, therapeutic pedagogy teacher, etc.):

- Indicate if the student has curricular adaptations in English language learning. If yes, specify the type of adaptations.

- Rate the difficulties (if any) that the student has in English (1: no or little difficulty, 2: quite a lot of difficulty, 3: great difficulty, 4: enormous difficulty):

Language skills	**1**	**2**	**3**	**4**
Auditory discrimination				
Oral comprehension				
Lexical development (vocabulary)				
Oral production				
Phonological development (pronunciation)				

Grammar				
Reading comprehension				
Writing				

-What grade does the student receive or would receive (if the student did not have curriculum adaptations) in...?

Language skills	**Grade (from 1 to 10)**
Listening	
Reading	
Writing	
Speaking	

-What is the average grade of this student's classmates in...?

Language skills	**Grade (from 1 to 10)**
Listening	
Reading	
Writing	
Speaking	

-Other observations about the student, class, school, etc.