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INTEGRATING GENAI INTO EVIDENCE-BASED READING PRACTICES FOR DYSLEXIA: INSIGHTS FROM A CLASSROOM CASE STUDY IN GREEK EFL EDUCATION

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Abstract:
Learning to read in a foreign language can present additional challenges for learners with dyslexia, particularly when the orthographic structure of the second language differs significantly from that of the learner's first language. Greek is considered a relatively transparent orthography, whereas English represents a deep orthography characterized by inconsistent grapheme-phoneme correspondences. This cross-linguistic difference may create additional barriers for Greek learners with dyslexia when learning English as a foreign language. The present study examines the reading difficulties of a Greek learner with dyslexia and explores the potential impact of a structured instructional intervention supported by generative artificial intelligence (GenAI) tools. The study employed a qualitative classroom-based case study design with a pre-post intervention component. The participant was a thirteen-year-old Greek learner of English diagnosed with dyslexia. Data were collected through oral reading assessments, miscue analysis, and systematic classroom observations. The intervention integrated multisensory phonological instruction, repeated reading activities, and GenAI-assisted development of adapted reading materials. Findings indicate improvements in decoding accuracy, reading fluency, and self-monitoring behaviour following the intervention. The learner produced fewer pronunciation errors, increased reading stability, and greater independence when encountering unfamiliar words. The results suggest that structured literacy approaches combined with GenAI-assisted material design may support the development of reading skills for dyslexic learners in English as a foreign language contexts. Although the findings are limited to a single case, the study shows the potential of combining evidence-based reading instruction with emerging educational technologies to support inclusive language education.

Keywords: Dyslexia, EFL, Greek, reading, generative artificial intelligence

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1. Introduction

Learning to read and write is strongly influenced by the linguistic characteristics of the language being learned. Languages differ considerably in the complexity of their phonological, orthographic, and grammatical systems, and these differences shape how literacy skills develop in both typically developing learners and students with reading difficulties such as dyslexia. One important linguistic factor influencing reading and spelling acquisition is the degree of consistency in the relationship between graphemes and phonemes within a writing system (Daniels & Share, 2018). Orthographies vary in their degree of transparency. In transparent orthographic systems, each grapheme consistently corresponds to a specific phoneme, allowing readers to apply stable decoding rules when encountering unfamiliar words. Such systems minimize ambiguity and enable learners to rely on phonological decoding strategies. In contrast, deep orthographies involve irregular and inconsistent sound–letter correspondences, requiring readers to rely more heavily on orthographic memory and lexical knowledge during reading. These cross-linguistic differences influence both literacy development and the manifestation of dyslexia (Carioti *et al.*, 2021).

Research in cross-linguistic literacy development has shown that orthographic transparency plays a crucial role in how reading skills develop and how dyslexia manifests across languages. In languages with transparent orthographies, dyslexic readers often achieve relatively accurate decoding by applying systematic phonological rules, although their reading may remain slow and effortful. Comparative studies across languages such as German, Italian, Turkish, French, and Greek have demonstrated that learners reading in more regular orthographic systems typically achieve higher levels of reading accuracy at earlier stages of development (Daniels & Share, 2018; Hatzidaki *et al.*, 2011; Moll *et al.*, 2014).

Greek is widely considered a relatively transparent orthography, particularly in the direction from print to speech. In Greek, most graphemes correspond consistently to particular phonemes, allowing readers to rely on systematic grapheme–phoneme decoding strategies when reading unfamiliar words (Protopapas & Vlahou, 2009). Empirical analyses have demonstrated that grapheme–phoneme correspondences in Greek reach approximately 95.1% consistency in reading and 80.3% in spelling, indicating a high degree of predictability in the decoding process (Protopapas & Vlahou, 2009). Although spelling in Greek can be more challenging because several graphemes may represent the same phoneme, for example, the sound /i/ represented by ι, η, υ, ει, and οι, reading accuracy generally develops relatively quickly among Greek learners (Mavrommati & Miles, 2002).

In contrast, English orthography is characterized by a high degree of irregularity and inconsistency. The relationship between graphemes and phonemes in English is complex and often unpredictable. A single grapheme may represent different phonemes depending on the word (e.g., a in cat, cake, call), while the same phoneme may be represented by multiple graphemes (e.g., /iː/ in see, sea, scene, key). English also includes

numerous silent letters and historically preserved spelling patterns that do not directly reflect pronunciation. These characteristics make English a deep orthography, where phonological decoding strategies alone are often insufficient for accurate reading and spelling.

These orthographic differences have important implications for learners with dyslexia. Dyslexia is commonly associated with difficulties in phonological processing and the efficient mapping between phonemes and graphemes. In transparent orthographies such as Greek, the regularity of grapheme–phoneme correspondences often allows learners with dyslexia to achieve relatively accurate decoding, although reading fluency may remain limited (Moll *et al.*, 2014). However, when Greek-speaking learners with dyslexia learn English as a foreign language, they encounter an orthographic system in which previously developed decoding strategies may not transfer effectively. Because of the irregular nature of English spelling, learners must rely more heavily on orthographic memory, vocabulary knowledge, and exposure to written language in order to recognize and produce words accurately (Daniels & Share, 2018). This transition from a relatively transparent orthographic system to a highly irregular one can therefore create additional barriers for Greek learners with dyslexia learning English as a foreign language.

1.1 GenAI, Dyslexia and TPACK

Recent developments in educational technology, particularly GenAI, have generated growing interest in their potential to support neurodivergent learners, including students with dyslexia and other language-related learning differences. GenAI tools are increasingly being explored as educational technologies capable of producing adaptive learning materials, generating simplified texts, and supporting differentiated instruction across diverse learning contexts. A growing body of research suggests that such technologies may help educators address barriers that neurodivergent students often encounter in reading, writing, and academic communication tasks. For example, a scoping review by Ronksley-Pavia *et al.* (2025) concluded that generative AI systems can assist teachers in rapidly generating scaffolded learning materials, simplified texts, and multimodal instructional resources tailored to individual learner needs.

The use of GenAI technologies is also being discussed within the broader framework of inclusive educational design and Universal Design for Learning (UDL). Wallbank (2025) highlights the potential of GenAI to support flexible assessment and learning environments by enabling educators to provide alternative representations of information and individualized scaffolding for learners experiencing difficulties with traditional academic tasks. From the learners' perspective, research has also begun to examine how neurodivergent students experience the use of AI technologies in educational contexts. He, Chen, and Fletcher (2025), for example, found that GenAI tools may enhance learners' autonomy by allowing them to access explanations, simplify complex texts, and obtain additional support during reading and writing activities.

Emerging research has also begun to examine the use of GenAI tools in language learning and inclusive education contexts. Seiradakis (2024) investigated the use of ChatGPT as a learning support tool for migrant students with disabilities in upper secondary vocational education and found that AI systems could assist learners in understanding academic texts, generating explanations for unfamiliar vocabulary, and accessing additional language support during classroom activities. Similarly, Seiradakis (2025) examined the drivers and barriers influencing the use of ChatGPT in English for Academic Purposes among migrant students with learning disabilities, highlighting the potential of AI tools to provide individualized language support while also identifying pedagogical challenges associated with their integration into educational practice.

Within the Greek educational context, several recent studies have also explored the role of artificial intelligence in inclusive education. Rizos, Foykas, and Georgakopoulos (2024), for example, examined the use of GenAI to support mathematics instruction for students with special educational needs and found that AI-assisted tools can facilitate differentiated instructional design and increase student engagement. Giaouri and Charisi (2025) investigated the use of ChatGPT to support special educators in designing Individualized Education Programs (IEPs) in inclusive primary school settings, suggesting that AI tools may assist teachers in generating structured instructional plans and identifying appropriate support strategies. In addition, Damianidou (2025) explored the potential of ChatGPT to support the well-being and communication needs of students with autism spectrum disorder, demonstrating how AI tools may help learners express emotions and reflect on their experiences.

Despite these promising developments, several important gaps remain in the literature. Most existing studies focus on the use of GenAI in general special education contexts rather than examining its application in foreign language learning environments. In particular, empirical research exploring how GenAI tools can support dyslexia-informed literacy instruction in English as a foreign language remains limited. This gap is particularly relevant for learners whose first language has a relatively transparent orthography, such as Greek, and who must learn English, a language characterized by highly irregular spelling patterns. Furthermore, although previous research highlights the potential of AI technologies to assist educators in generating instructional materials, relatively little research has examined how such tools can be systematically integrated into structured literacy interventions targeting phonological decoding and reading fluency. The effective integration of emerging technologies into educational practice also requires a clear pedagogical framework. The Technological Pedagogical Content Knowledge (TPACK) framework provides a useful conceptual model for understanding how educators can combine technological knowledge, pedagogical knowledge, and content knowledge in order to integrate new technologies effectively into teaching practice (Mishra & Koehler, 2006).

Within dyslexia-informed language instruction, this implies that teachers must not only understand how GenAI tools function but also how these technologies can be aligned with evidence-based literacy practices and inclusive pedagogical strategies. AI

tools may support educators by enabling the rapid creation of simplified reading passages, structured vocabulary exercises, and scaffolded comprehension tasks tailored to the needs of struggling readers. When combined with pedagogical knowledge of dyslexia-informed instruction, including multisensory teaching approaches and repeated reading practices, such technologies may help teachers design more accessible and individualized learning environments.

Given these developments, further research is needed to examine how GenAI-assisted instructional design can support learners with dyslexia in foreign language contexts. The present study addresses this gap by examining the reading difficulties of a Greek learner with dyslexia studying English as a foreign language and by exploring the potential impact of a structured instructional intervention supported by GenAI-assisted material development. Through a classroom-based qualitative case study, the research investigates patterns of decoding difficulties and examines how multisensory phonological instruction, repeated reading practices, and AI-generated instructional materials may contribute to improvements in reading accuracy and fluency.

2. Method

2.1 Research Design

This study employed a qualitative classroom-based case study design with a pre–post intervention component in order to explore the decoding and reading fluency difficulties of a Greek learner of English as a Foreign Language (EFL) diagnosed with dyslexia and to examine the potential impact of a targeted instructional intervention designed to address these difficulties. Case study methodology was selected because it allows for an in-depth examination of learning processes within authentic educational contexts and enables researchers to investigate complex educational phenomena in detail (Yin, 2018; Merriam & Tisdell, 2016). Such an approach is particularly appropriate when investigating complex learning profiles such as dyslexia, where cognitive, linguistic, and instructional factors interact in nuanced ways during language learning (Snowling & Hulme, 2021).

The study followed a two-stage design. In the first stage, the participant's reading performance was assessed through diagnostic miscue analysis. Miscue analysis examines deviations between written text and oral reading output in order to identify underlying decoding processes and comprehension strategies during reading (Goodman *et al.*, 2005). Through this analysis, patterns of grapheme–phoneme difficulties, phonological decoding problems, and weaknesses in reading self-monitoring were identified. In the second stage of the study, an instructional intervention was designed and implemented based on the diagnostic findings. The intervention drew upon principles from multisensory structured literacy approaches, the Fluency Development Lesson framework (Rasinski, 2010), and Universal Design for Learning (CAST, 2018). Following the completion of the instructional period, a second reading assessment was conducted

in order to examine potential changes in reading accuracy, reading fluency, and self-monitoring behaviour.

2.2 Participant and Context

The participant was a thirteen-year-old Greek learner of English as a Foreign Language who had been formally diagnosed with dyslexia through an educational psychological assessment. The learner attended mainstream schooling in Greece while also participating in supplementary English language instruction outside school. Despite several years of English language learning, the student continued to experience persistent difficulties in reading English texts.

These difficulties included slow decoding of unfamiliar words, frequent substitutions during oral reading, and limited reading fluency. The learner also demonstrated reduced confidence when asked to read aloud and often relied heavily on teacher support when encountering unfamiliar vocabulary. Previous educational evaluations indicated that the student's difficulties were primarily associated with weaknesses in phonological processing and grapheme–phoneme correspondence, which are widely recognized as core characteristics of dyslexia (Snowling & Hulme, 2021; Shaywitz, 2020). The study was conducted at a private language school where the first author was also the students' instructor. Conducting the research within an authentic classroom context allowed instructional strategies to be implemented naturally as part of the learner's regular English language lessons. Prior to the beginning of the study, parental consent was obtained, and the ethical principles of confidentiality and anonymity were respected throughout the research process in accordance with established educational research guidelines (Creswell & Creswell, 2018). For this reason, the student's identity is protected, and the participant is referred to using a pseudonym.

2.3 Data Collection and Analysis

Multiple data collection instruments were employed in order to examine the learner's reading performance and to monitor changes throughout the intervention period. The primary assessment instrument consisted of an oral reading task administered both before and after the instructional intervention. During this task, the learner was asked to read an unfamiliar English text aloud for approximately two minutes. This task allowed the researcher to examine reading accuracy, decoding behaviour, and reading fluency under comparable assessment conditions.

The texts used in the pre-intervention and post-intervention assessments were designed to be of comparable linguistic difficulty. Particular attention was given to including orthographic patterns frequently associated with decoding challenges for learners with dyslexia, including vowel digraphs, consonant clusters, and multisyllabic words (Shaywitz, 2020). Reading performance was analysed using miscue analysis, a method widely used in reading research to identify patterns of decoding errors during oral reading (Goodman *et al.*, 2005).

During the reading task, miscues were documented using structured observation sheets that recorded deviations between the written text and the learner's oral production. These deviations were later categorized according to their type, including substitutions, omissions, insertions, hesitations, and instances of self-correction. Analysing these miscues enabled the researchers to identify recurring decoding difficulties and to examine how the learner processed grapheme–phoneme correspondences while reading. In addition to the reading assessments, systematic classroom observations were conducted throughout the instructional intervention. Observational notes documented the learner's engagement during instructional activities, the strategies used when encountering unfamiliar words, the frequency of self-corrections, and the learner's responses to instructional support. These observations provided qualitative insight into changes in the learner's reading confidence, decoding strategies, and level of independence during reading tasks.

2.4 Data Analysis

The data were analyzed using a combination of miscue analysis and qualitative observation analysis. Miscue analysis was employed to examine deviations between the written text and the learner's oral reading in order to identify underlying decoding processes and reading strategies (Goodman, Watson, & Burke, 2005). During both reading assessments, the learner's oral reading was documented, and each deviation from the written text was recorded and categorized into substitutions, omissions, insertions, hesitations, and self-corrections. In addition, descriptive indicators of reading performance were calculated, including the number of words read, the number of errors, the reading accuracy rate, and the words per minute. Classroom observation notes collected throughout the instructional intervention were analyzed qualitatively in order to identify changes in the learners' decoding strategies, engagement, and self-monitoring behaviour. Observational analysis focused on patterns of strategy use, levels of independence during reading tasks, and responses to instructional support. The use of multiple sources of evidence, including reading assessments and classroom observations, allowed for a richer understanding of the learner's reading development within the case study context (Merriam & Tisdell, 2016; Yin, 2018).

2.5 Instructional Materials

The instructional phase of the study employed a range of multisensory materials designed to support the development of phonological awareness and decoding skills. Multisensory approaches to reading instruction are widely recommended for learners with dyslexia because they support the integration of visual, auditory, and kinesthetic learning channels, thereby strengthening connections between orthographic patterns and phonological representations (Birsh & Carreker, 2018).

The materials used in the intervention included phonics flashcards illustrating common grapheme–phoneme correspondences, colour-coded word cards highlighting vowel patterns and syllable boundaries, and structured word lists targeting specific

phonological and orthographic patterns. Short reading passages were also used to facilitate repeated reading activities intended to improve reading fluency. To enhance learner engagement and support multisensory processing, tactile activities were incorporated into the intervention. These included the manipulation of movable word cards as well as syllable segmentation tasks, such as clapping syllables while reading words. Such activities are commonly used in structured literacy approaches to support phonological awareness and decoding development among learners with dyslexia (Birsh & Carreker, 2018). Short comprehension questions and guided discussion prompts accompanied the reading activities in order to maintain a meaningful connection between decoding practice and text comprehension. This ensured that reading instruction addressed both word-level decoding and overall comprehension processes.

2.6 GenAI-Assisted Material Development

GenAI tools were used to assist in the development and adaptation of instructional materials employed during both the diagnostic and intervention phases of the study. AI-supported educational technologies have increasingly been recognized as tools that can assist educators in designing differentiated materials and adapting instructional resources to meet diverse learning needs (Luckin et al., 2016; Holmes & Tuomi, 2022). Several AI-based tools were used to support the creation of reading materials tailored to the learner's decoding needs. ChatGPT (OpenAI) was used to generate short reading passages and structured vocabulary lists targeting specific orthographic and phonological patterns known to present difficulties for learners with dyslexia, including consonant clusters, vowel digraphs, and multisyllabic words. The system was also used to generate comprehension questions and guided prompts accompanying the reading activities. The generated texts were subsequently reviewed and pedagogically adapted by the researchers in order to ensure alignment with the learner's proficiency level and instructional goals.

MagicSchool AI, an educational AI platform designed to assist teachers in lesson planning and material development, was used to generate differentiated vocabulary activities and comprehension tasks tailored to the learner's reading level. Such tools allow teachers to rapidly produce scaffolded instructional materials that can support individualized learning needs. In addition, Diffit for Teachers, an AI-supported text adaptation platform, was used to simplify reading materials by adjusting lexical difficulty and sentence structure. This tool enabled the researchers to generate controlled reading texts with shorter sentences and clearer vocabulary, which are recommended for learners experiencing decoding difficulties. Finally, the AI music generation tool Suno was used to create short rhythm-based audio segments that supported phonological awareness activities during the intervention. These audio resources were used in syllable segmentation and rhythm-based reading activities designed to reinforce phonological patterns through auditory repetition. All AI-generated materials were carefully reviewed and pedagogically adapted by the researchers prior to their use in the instructional sessions.

2.7 Intervention

The instructional intervention was implemented over a four-week period and consisted of two instructional sessions per week. Each session lasted approximately forty-five minutes, corresponding to the typical duration of the learner's English language lessons. The design of the intervention was informed by the Fluency Development Lesson framework, which integrates guided oral reading, repeated reading, and vocabulary development in order to improve reading fluency (Rasinski, 2010). In addition, the instructional design incorporated principles from Universal Design for Learning, which emphasize the provision of multiple means of representation, engagement, and expression in order to support diverse learners (CAST, 2018).

Each instructional session followed a structured sequence of activities designed to gradually develop the learner's decoding and reading fluency skills. At the beginning of each session, the learner engaged in activities aimed at strengthening phonological awareness and decoding ability. These activities included identifying target sounds, practicing grapheme–phoneme correspondences, and breaking multisyllabic words into smaller phonological units. Syllable segmentation tasks were frequently used during this stage, as such activities are known to support phonological processing among learners with dyslexia (Snowling & Hulme, 2021). Following these activities, the learner completed word recognition tasks involving structured word lists emphasizing particular spelling patterns. During these tasks, word cards were used so that the learner could physically manipulate and organize words according to phonological or orthographic similarities, thereby reinforcing pattern recognition.

The central component of each session consisted of guided oral reading of short texts. During this stage, the learner read aloud while the instructor provided feedback and support when decoding difficulties occurred. Rather than directly supplying the correct pronunciation of unfamiliar words, the instructor encouraged the learner to apply decoding strategies independently. When errors occurred, the learner was prompted to reconsider the word and attempt alternative decoding strategies. Repeated reading activities were incorporated to promote reading automaticity. Selected passages were read multiple times, allowing the learner to gradually reduce the cognitive effort required for word recognition. Repeated reading also supported the development of a more natural reading rhythm and improved prosody by encouraging smoother phrasing during oral reading. Each instructional session concluded with short comprehension questions or discussion activities related to the text that had been read. These activities ensured that reading tasks remained connected to meaning construction and comprehension rather than focusing exclusively on decoding accuracy.

3. Findings

The pre-intervention assessment revealed several recurring decoding difficulties during the oral reading task. The learner read 162 words in two minutes, of which 15 were inaccurate, resulting in an overall reading accuracy of 90.7%. The reading rate was

approximately 72 words per minute, indicating slow and effortful decoding.The analysis of miscues showed that the majority of errors were phonological decoding errors, particularly incorrect grapheme–phoneme correspondences. For example, the learner pronounced lives as /livz/ instead of /laɪvz/ and other as /oθɛr/ instead of /ʌðər/. Similarly, separate was read as /sipɛreit/ rather than /ˈsep.ər.ət/ and discover as /diskover/ instead of /dɪˈskʌv.ər/. These errors suggest that the learner attempted to decode unfamiliar words letter by letter, rather than recognizing larger phonological units or orthographic patterns. Several morphological and orthographic errors were also observed. For instance, existed was read as exists, while suggested was produced as /sagest/, indicating difficulty processing morphological endings such as -ed. The learner also produced lexical substitutions, such as replacing blue sweatshirt with blue boys, which altered the meaning of the sentence. In addition, several grapheme-level errors were observed, including the addition of letters (e.g., reading a as at) and incorrect spelling patterns (e.g., babys instead of baby). Two-word omissions were also recorded during the reading task.

3.1 Changes Observed During the Intervention

During the four-week intervention, gradual changes in the learner's reading behaviour were observed across instructional sessions. As the learner engaged in repeated phonological awareness activities and structured decoding practice, the student began to demonstrate greater awareness of syllable structure and grapheme-phoneme correspondences. For example, during syllable segmentation activities, the learner increasingly attempted to break multisyllabic words into smaller phonological units before reading them aloud. Repeated reading activities also contributed to greater reading stability and reduced hesitation. In early sessions, the learner frequently paused when encountering unfamiliar words and relied on teacher support. However, in later sessions, the learner began attempting alternative decoding strategies independently, indicating increasing confidence in applying phonological rules. Another change observed during the intervention was an increase in self-monitoring behaviour. While the learner rarely corrected errors during the initial assessment, later sessions included more frequent self-corrections, suggesting improved awareness of reading accuracy.

3.2 Post-Intervention Performance

A comparison of the learner's performance before and after the intervention suggests measurable improvement in several aspects of reading performance. In the pre-intervention assessment, the learner read 162 words in two minutes, with 15 errors, resulting in a reading accuracy rate of 90.7% and an approximate reading rate of 72 words per minute. Following the four-week intervention, the learner demonstrated improved decoding accuracy and greater reading stability, with fewer pronunciation errors and fewer hesitations during oral reading. Although the reading passages used in the post-assessment differed from the initial text, the overall pattern of performance suggested greater decoding efficiency and increased fluency, as the learner was able to read unfamiliar words more independently and apply previously practiced decoding

strategies. In addition, the learner demonstrated more frequent self-corrections and reduced reliance on teacher prompts, indicating improved metacognitive awareness during reading. Overall, the comparison between the pre- and post-intervention assessments suggests that the instructional intervention contributed to improvements in decoding accuracy, reading fluency, and self-monitoring behaviours, supporting the effectiveness of structured phonological instruction and repeated reading practice for learners with dyslexia in EFL contexts.

Overall, the learner demonstrated fewer pronunciation errors when reading words containing the phonological patterns that had been practiced during the intervention. Words containing vowel digraphs and consonant clusters were read more accurately, and the learner showed greater ability to apply syllable segmentation strategies when encountering unfamiliar multisyllabic words. In addition to improvements in accuracy, the learner's reading pace became more stable and fluent, with fewer pauses and hesitations during oral reading. The repeated reading activities appeared to support the development of reading automaticity, allowing the learner to process words more efficiently. Furthermore, the learner showed greater confidence during oral reading tasks. The student was more willing to attempt unfamiliar words and relied less on teacher assistance compared to the initial assessment. The learner also demonstrated improved engagement with the text, responding more confidently to comprehension questions following the reading activities. Overall, the findings suggest that the combination of multisensory phonological instruction, structured decoding practice, and repeated reading activities, supported by AI-assisted material development, contributed to improvements in the learner's reading accuracy, fluency, and self-monitoring skills.

4. Discussion and Conclusion

The purpose of this study was to provide insights into whether a structured intervention combining phonological awareness training, repeated reading, and multisensory instructional techniques, supported by GenAI-assisted material design, could contribute to improvements in decoding and reading fluency for a Greek learner with dyslexia studying English as a foreign language. The findings from the pre-intervention assessment confirmed patterns that are widely reported in dyslexia research. The learner demonstrated slow decoding, unstable grapheme–phoneme correspondences, and frequent pronunciation errors, particularly when encountering unfamiliar or multisyllabic words. Similar decoding patterns have been documented in learners with dyslexia, who often rely on letter-by-letter decoding strategies and experience difficulties recognizing larger orthographic units (Hall et al., 2022; Toki, 2024). The miscue analysis further showed that many errors occurred in words containing vowel digraphs and complex phonological patterns, which are known to pose challenges for learners with dyslexia, particularly in orthographically deep languages such as English (Ziegler & Goswami, 2005).

Another important observation from the initial assessment was the presence of morphological and orthographic errors, including incorrect verb endings and lexical substitutions. These findings are consistent with research suggesting that learners with dyslexia may experience difficulties not only with phonological decoding but also with morphological processing and orthographic representation, especially when reading in a second language (Nikolopoulos, Goulandris, & Snowling, 2003).

Following the four-week intervention, the learner demonstrated improvements in decoding accuracy, reading fluency, and self-monitoring behaviour. The structured instructional approach, which integrated elements of the Fluency Development Lesson (FDL) framework, appeared to support the gradual development of reading automaticity. Repeated reading activities likely contributed to increased familiarity with orthographic patterns and reduced the cognitive load associated with word recognition. Previous studies have similarly reported that repeated reading can enhance reading fluency, accuracy, and confidence among struggling readers (Rasinski, 2010). The use of multisensory instructional strategies may also have played a significant role in supporting the learner's progress. Activities such as syllable segmentation, word manipulation using physical cards, and phonological awareness exercises allowed the learner to engage with language through multiple sensory channels. Such approaches are widely recommended in dyslexia-focused instruction because they strengthen the connection between phonological processing and orthographic representation (Birsh, 2018).

An additional aspect of the intervention involved the use of GenAI tools to assist in the creation of adapted reading materials. Tools such as ChatGPT and Diffit enabled the development of texts with controlled vocabulary and simplified sentence structures that were better suited to the learner's decoding abilities. While GenAI did not replace instructional design, it supported the rapid development of individualized learning materials, allowing the instructor to tailor reading tasks to the learner's specific difficulties. This finding aligns with emerging research suggesting that AI-assisted tools may help educators design more accessible instructional materials for diverse learners (Holmes & Tuomi, 2022).

Despite these positive developments, it is important to interpret the findings with caution. As this study involved a single participant, the results cannot be generalized to all learners with dyslexia. However, the case study provides valuable insights into how structured reading instruction combined with GenAI-supported material design may contribute to improved reading outcomes in EFL contexts.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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