ISSN: 2386-9658 DOI: https://doi.org/10.21071/arf.v36i.17657

Revisiting Phonics Instruction: Integrating SDGs through AI into English Literacy

(Revisando la formación en Phonics: la integración de los ODS a través de la IA en la lectoescritura del inglés)

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Fecha de recepción: 21 de octubre de 2024
Fecha de aceptación: 3 de diciembre de 2024

Abstract: This paper explores the plausible enhancement of Phonics in the context of English literacy instruction for Spanish speakers. It emphasizes the need for an eclectic strategy to tackle the unique challenges faced by Spanish-speaking learners, particularly, as regards the pronunciation of the 44 sounds of English, the extremely complex grapheme-phoneme correspondences, blending, and segmenting. By proposing an AI-enhanced Phonics framework, this study aligns with the Sustainable Development Goals (SDGs), promoting inclusivity and equitable learning experiences. The integration of AI tools is presented as a means for teachers to personalize Phonics exercises and resources to better suit the needs of their students, fostering collaboration and lifelong learning. The proposal includes the use of AI to create songs and choreographies, which will aid students to produce and memorize sounds and vocabulary, as well as customized decodable stories to reinforce sounds and semantic sets. Ultimately, this paper contributes to the ongoing debate on improving literacy outcomes for Spanish-speaking learners through innovative approaches.

Keywords: Phonics. Literacy. SDGs. AI. EFL.

Resumen: Este artículo explora la posible mejora de Phonics en el contexto de la adquisición de la lectoescritura del inglés en entornos hispanohablantes.

Enfatiza la necesidad de una estrategia ecléctica para abordar los desafíos únicos que enfrentan las y los estudiantes hispanohablantes, particularmente en lo que respecta a la pronunciación de los 44 sonidos del inglés, las extremadamente complejas correspondencias grafema-fonema, la combinación y el segmentado de los sonidos que forman las palabras inglesas. Al proponer un marco de Phonics mejorado por Inteligancia Artificial (IA), este estudio se alinea con los Objetivos de Desarrollo Sostenible (ODS), promoviendo la inclusión y las experiencias de aprendizaje equitativas. La integración de herramientas de IA se presenta como un medio para que el profesorado personalice los ejercicios de Phonics para adaptarlos mejor a las necesidades de sus estudiantes, fomentando la colaboración y el aprendizaje permanente. La propuesta incluye el uso de IA para crear canciones y coreografías, lo que ayudará al estudiantado a producir y recordar sonidos y vocabulario, así como historias decodificables personalizadas para reforzar sonidos y conjuntos semánticos. En última instancia, esta propuesta contribuye al debate en curso sobre cómo mejorar los resultados de alfabetización del estudiantado hispanohablante a través de enfoques innovadores.

Palabras clave: Phonics. Lectoescritura. ODS. IA. Inglés como lengua extranjera/adicional.

1. Context and Background

English literacy instruction worldwide has evolved significantly over the past few decades, influenced by a plethora of theories and practices. There is common agreement by scholars that Phonics, in particular, plays a pivotal role in English literacy instruction (Andúgar Soto and Cortina Pérez 2020; Antropova et al. 2023; Buckingham 2020; Ehri 2022; Fletcher et al. 2020). Phonics provides essential strategies for encoding and decoding words (blending and segmenting, two of the core competencies of the methodology, according to modern nomenclature) and understanding spelling rules (grapheme-phoneme correspondence, the third key skill), which are fundamental for developing reading abilities. While historically the debate between Phonics and Whole Language approaches has dominated discussions in literacy education (Reinking et al. 2023; Wyse and Bradbury 2022), recent trends indicate a shift toward more integrated frameworks that consider sociocultural and socio-economic factors (Jones et al. 2019; Snell and Cushing 2022). Yet, many existing Phonics programmes lack the flexibility to adapt to the diverse needs of learners, particularly non-native English speakers. In parallel, there is a growing recognition of the demand for

more holistic approaches, as well as to adapt Phonics to the specifics of Spanish-speaking learners (López Cirugeda and López Campillo 2016; Rendón et al. 2019; Rendón et al. 2021; Todd 2021). As these complexities are addressed, it becomes crucial to explore the most plausible and suitable adaptations to existing Phonics programmes to better support the educational objectives of the current paradigm, epitomized by the Agenda 2030.

Despite its importance, research specifically examining Phonics instruction within the Spanish context remains scarce, underscoring a significant gap in the literature (Fernández Molina and Tabuenca Cuevas 2023). Many Spanish-speaking students at all educational levels, including pre-primary and primary, demonstrate a significant lack of proficiency in English at a communicative level (Education First 2023; Tabuenca Cuevas 2016). Research suggests that the overall performance of learners in Spain reflects broader educational challenges that impact their ability to effectively engage with Phonics instruction (Coyle 2020; Fernández Molina and Mateo Guillén 2022; Hernández Tomás 2016). Simultaneously, Phonics, as an approach to literacy, continues to raise concerns among educators. This hesitation accentuates the imperative call for tailored educational interventions that specifically address deficiencies in Phonics-related language skills, such as phonemic awareness, decoding and encoding skills, and understanding the extreme complexity of grapheme-phoneme correspondence in English. Effective and innovative interventions can significantly impact learners' success, reinforcing the need of specifically adapted Phonics programmes to achieve sound English literacy instruction for learners of English as a foreign language (EFL).

This paper aims to propose the feasible integration of Artificial Intelligence (AI) as a tool to incorporate the Sustainable Development Goals (SDGs) into the design of English Phonics instruction within Spanish speaking educational contexts at the Pre-primary and Primary educational stages. In Spain, over 99%-100% of schools teach English as part of the core curriculum (European Commission 2023) while an increasing number of students in Latin America are starting to read in English at earlier ages, for many start learning English currently at kindergarten (Davies 2021; Sayer 2018). Still, research has shown that Phonics, in its current state, requires adaptation to effectively meet the needs of Spanish-speaking learners of an additional or foreign language (Andrade Carrera et al. 2018; Andúgar Soto and Cortina Pérez 2020; Antropova et al. 2023; Fernández Molina and Tabuenca Cuevas 2023; García Marín and Rodríguez Reyes 2017; Hernández Tomás 2016; López Cirugeda and López Campillo 2016; Rendón et al. 2019; Rendón et al. 2021). Hence, the objectives of this paper are:

i. Identify some of the specific challenges and limitations of English literacy instruction.

ii. Propose an integrative framework that incorporates AI tools and aligns with relevant SDGs to enhance Phonics instruction.

iii. Explore potential implications for educators and policymakers to implement Phonics strategies that are responsive to the unique linguistic context of Spanish learners.

2. Key Findings in the Field

The following sub-sections explore the theoretical framework necessary to comprehend the issue of achieving English literacy, as well as unresolved questions. This includes an examination of writing systems and their impact on literacy in a broader sense, the role of phoneme-grapheme relationships, emerging trends in technology and AI, and the controversial gender gap in literacy acquisition. A particular focus has been placed on the fashion AI-driven tailored interventions may address these disparities.

2.1. Introduction to Writing Systems and Literacy

Writing systems and their orthographies significantly influence reading and literacy development. Meaning-weighted languages as Chinese require a larger inventory of graphs compared to phonology-weighted systems, such as European alpha syllabary languages. While the first may facilitate simple early literacy, the latter take longer to reach basic reading levels (Perfetti and Verhoeven 2023). In the research these authors conducted, behavioural and brain data show that reading processes differ based on the mapping levels of writing and factors like visual complexity.

At a European level, cross-language studies indicate that English-speaking children lag behind peers in German, Spanish, French, Greek, and Dutch. After one year of instruction, English children achieved only a 40% accuracy rate in reading words and nonwords, while other European samples exceeded 90% (Verhoeven et al. 2023). Other cross nation studies emphasize the consequence of this situation such as the Education First Report (2023) on English in the world. The report reveals that only one Spanish-speaking country is present in the high proficiency category across the world, with most of the Spanish-speaking regions fall into the moderate proficiency category. Subsequently, literacy, and instructional methods must also be further scrutinized. Bilingual studies suggest that learning English may involve less phonetic reading strategies compared to more transparent orthographies such as Finnish or Spanish (Verhoeven et al. 2023). Thus, effective instruction should focus on teaching the

specific mapping properties of each system, whether syllabic, alphabetic, or other forms. A global perspective on literacy reveals that while all writing systems follow similar principles, their differences shape reading processes and educational challenges (Perfetti and Verhoeven 2023). Ultimately, tailored instruction can support most children's literacy development; a matter tackled in this paper.

2.2. English Phoneme-Grapheme Relationships in Early Literacy

As part of their contribution to the latest research on English literacy instruction, Wyse and Hacking (2024) highlight the critical role of phoneme-grapheme relationships in reading comprehension. Also, they stress the disproportionate focus on reading over writing in early literacy research. Their proposed Double Helix of Reading and Writing integrates these elements, emphasizing the need to teach both aspects of literacy together while accounting for children's backgrounds, motivation, and phonological awareness. This falls in line with Kim (2017, 2020) who presents two models, namely the Reading Rope and the Direct and Indirect Effects Model of Reading (DIER), which explore the associations of reading components, including social-emotional factors. These models represent a significant shift toward a more holistic approach to literacy instruction, calling for empirical studies to validate their effectiveness.

2.3. Emerging Trends and Innovations

As literacy instruction evolves in modern times, there is increasing recognition of the urgency to integrate technology in ways that surpass traditional methods of teaching reading and writing. Pilgrim et al. (2020) stress the importance of expanding the definition of literacy to include multiliteracies, reflecting the various digital, informational, and web-based skills required in today's learning environments. This perspective supports the trend toward personalized learning and AI tools, which could be designed to meet the diverse needs of students by offering tailored literacy experiences.

In their work, Pilgrim et al. (2020) introduce practical frameworks, such as the SAMR (Substitution, Augmentation, Modification, Redefinition) and T3 (Translational, Transformational, Transcendent) models, that educators may use to evaluate and enhance the integration of technology in literacy instruction. These frameworks encourage a shift from simply incorporating technology for efficiency to utilizing it for transformational learning, a key element in modern educational paradigms. The use of AI in literacy education is consistent with these frameworks, since AI has the potential to not only facilitate personalized

Phonics instruction but also foster higher-order thinking skills through learning platforms.

Similarly, a recent chapter by Harvey and Marlatt (2020) titled "That Was Then, This Is Now: Literacy for the 21st Century Student", explores the historical development of literacy practices, deepening into the evolution of texts and the importance of integrating both print and digital formats in the classroom. The authors advocate for a balanced literacy approach that meets the diverse needs of digitally driven learners, reviewing students' habits and attitudes toward various literacies and offering instructional strategies that incorporate new literacies. This perspective reinforces the idea that effective literacy instruction nowadays must adapt to the changing landscape of literacy practices and the sociocultural and economic factors influencing student engagement.

In this context, the study by Christ et al. (2019) in which they analyse the challenges and successes of preservice teachers (PTs) in integrating technology into literacy lessons further accentuates these trends. The study revealed key challenges faced by PTs, including limited access to digital devices, lack of specific training, inadequate support, and time constraints, which often resulted in ineffective teaching methods. Conversely, successes were noted when PTs selected technology that was consistent with lesson objectives and engaged students. These findings draw attention to the critical need for improved teacher training in technology integration and emphasize the significance of understanding PTs' experiences to inform future teacher education programmes. In conclusion, the integration of traditional literacy approaches and current trends in technology must be deemed crucial for effective literacy instruction. Educators need to navigate the evolving landscape of literacy practices, considering both technological innovations as well as existing methods to tackle literacy when creating meaningful learning experiences for all students.

2.4. Addressing the Gender Gap in Literacy

Research indicates persistent gender differences in early literacy development, with girls often outperforming boys in abilities such as letter recognition, phonemic awareness, and spelling (McTigue and Schwippert 2021). These authors found that while girls outperform boys in these key literacy skills at school entry, boys show a faster growth rate over time, which suggests that early educational interventions can mitigate the gender gap in literacy. This challenges the traditional notion that gender alone is a primary factor in literacy disparities. Most importantly, the researchers emphasize the importance of socioeconomic status, self-regulation, and motivation as critical predictors of literacy achievement. McTigue and Schwippert (2021) advocate for improving the overall

quality of literacy instruction through differentiated teaching strategies that cater to individual needs, which is where the AI should come in. That, undoubtedly, would include an approach to Phonics adapted to the needs and skills of dissimilar students.

In another study, Below et al. (2010) confirmed that while girls outperformed boys in kindergarten, by first grade, no significant gender differences were evident. Hence, boys' early deficits in literacy do not necessarily translate into long-term disadvantages. Rather, early interventions focusing on fluency and motivation are essential for closing the gender gap. Additionally, the study pointed to the need for longitudinal research to better understand reading development patterns and address potential unnoticed effects in current literacy instruction methods.

Similarly, Manu et al. (2023) found that Finnish girls consistently excelled in reading comprehension compared to boys throughout compulsory education. This study highlighted that reading strategies, attitudes, and parental education significantly influenced reading outcomes. Notably, lower educational levels in fathers (but not mothers, quite surprisingly) predicted poorer reading performance in boys, but not in girls, suggesting that targeted interventions should consider these disparities.

To address the gender gap effectively, educational practices should focus on enhancing overall literacy instruction quality, resorting to differentiated teaching strategies that consider individual needs. For instance, studies show that boys often prefer interactive and gamified learning experiences. Further research is needed to explore the manner in which AI can be specifically utilized to develop Phonics instruction tailored to address gender differences in literacy acquisition. Understanding these dynamics can guide the design of more effective educational interventions which include the SDGs.

3. An AI-enhanced integrative framework

3.1. Connecting the SDGs to Phonics

The process of successfully implementing AI-enhanced Phonics instruction that considers United Nations' SDGs requires collaborative efforts among all members of the educational community, from teachers to policymakers, families, even technology developers, matching SDG17 (Partnerships for the Goals). This collaboration reflects the interconnected nature of the SDGs, where multiple stakeholders must work together to innovate and improve educational practices (Owoc et al. 2021). The proposal in this paper not only aims at enhancing sound Phonics instruction beyond the traditional approaches, but also supports the SDG's vision of achieving sustainable development through collective efforts.

The SDG 4 (Quality education) attempts to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This goal pinpoints the necessity of adapting educational practices to meet the diverse needs of learners, particularly in multilingual and increasingly more multicultural contexts such as the Spanish classrooms (Pradas et al. 2022). Suggesting the adaptation of Phonics instruction to Spanish learners of English aligns directly with this emphasis on inclusivity, addressing the challenges these students face, while promoting a more equitable learning environment. In this line, research indicates that Phonics instruction should accommodate the linguistic particulars of students, especially in non-native English settings. By means of a tailored Phonics approach, the AI may not only support the mastery of Phonics, but also foster a deeper understanding of English literacy as a whole, contributing to improved educational outcomes. Effective Phonics instruction contributes to the foundation of learners' literacy skills that will be essential throughout their lives, aligning with the broader aim of promoting lifelong learning opportunities (World Economic Forum 2023).

In addition to SDG 4, this paper's proposal lines up with several other critical SDGs. In this sense, the relevance of SDG 5 (Gender Equality) cannot be overlooked. The gender disparities exposed in literacy outcomes underscore the necessity of providing equal access to effective Phonics training for all genders, fostering a more balanced educational environment. This, undoubtedly could be more easily achieved by AI-tailored activities and methodologies.

SDG 10 (Reduced Inequality) emphasizes the importance of addressing disparities in education, making it imperative to fit Phonics instruction to the diverse linguistic backgrounds of Spanish speakers learning English, where regardless of their origin, different educational laws are applied in monolingual and bilingual regions across the globe. By doing so, the framework suggested in this paper promotes educational equity, ensuring that all students have the opportunity to achieve English literacy, regardless of their starting point and socio-economic status.

Additionally, the proposal's potential to improve literacy outcomes connects to SDG 8 (Decent Work and Economic Growth), as proficient literacy skills are essential for equipping students with the competencies needed for future employment (Education First 2023). Finally, the enhancement of literacy through effective Phonics training contributes to SDG 3 (Good Health and Well-being) by empowering learners with the knowledge and skills that foster informed decision-making and personal development. Table 1, next, summarizes the suggested contribution of an AI-enhanced tailored Phonics approach to the global discourse on sustainable education:

Sustainable Development Goal (SDG)	Key Focus	Connection to Phonics Instruction
SDG 3: Good Health and Well-being	Ensure health and well-being	Effective Phonics instruction leads to successful literacy, which ultimately empowers learners with skills that foster informed decision-making and personal growth
SDG 4: Quality Education	Ensure inclusive and equitable quality education	Adapting Phonics training to meet diverse linguistic challenges across Spanish-speaking countries (monolingual vs bilingual regions) will promote educational equity and inclusivity
SDG 5: Gender Equality	Achieve gender equality in education	Highlighting the need for equal access to effective Phonics instruction for all genders will foster a balanced environment
SDG 8: Decent Work and Economic Growth	Promote sustained economic growth	Improving literacy skills will equip students with competencies necessary for future employment
SDG 10: Reduced Inequality	Address disparities in education	Tailoring Phonics education for Spanish speakers learning English will ensure that all students have the opportunity to achieve literacy
SDG 17: Partnerships for the Goals	Collaboration among stakeholders	Emphasizing collaboration among educators, policymakers, and technology developers will enhance Phonics knowledge

Table 1: A proposal for the incorporation of the SDGs to an AI-driven Phonics Instruction

3.2. Resorting to the AI to create Phonics materials and resources

Incorporating AI-enhanced technology into Phonics activities and resources may offer exciting opportunities for a more personalized and effective literacy instruction. Below are three key suggestions for utilizing AI in developing Phonics materials, with a particular focus on non-native English learners, such as Spanish-speaking students.

3.2.1. AI-Generated Songs and Choreography for Phonics Sounds

All existing Phonics programmes rely on mnemonic techniques with which students memorize the 44 sounds of English through songs, each paired with a

specific choreography. These techniques help learners associate the sound, movement, and song, reinforcing memory and pronunciation skills. For non-native English learners, this approach is even more valuable, as mastering pronunciation is a primary challenge that should be tackled specifically. Some English sounds are familiar to Spanish speakers, while others, are quite distinct and demand extra practice (Fernández Molina 2024). In this regard, the AI can be employed to create customized songs tailored to the unique needs of Spanish speakers learning English. For instance, AI could generate songs that emphasize sounds particularly challenging for Spanish speakers, such as /w/ in water and week, /dʒ/ in justice and George, and /v/ in very and vice. Additionally, it could focus on specific phonemes that closely resemble Spanish sounds, such as /t/ and /d/ in duty, or differ significantly, such as /ɔ:/ and /ɜ:/ in door and church, respectively, which are commonly mispronounced by Spanish speakers. Even, when deemed so, the order in which sounds are introduced, in a tailored Phonics programme could similarly be modified, which, in turn would require dissimilar songs to the existing ones. This adaptability would ensure that learners receive targeted pronunciation practice, facilitating more effective learning.

3.2.2. AI-Enhanced Vocabulary and Sound Integration

Another plausible application of AI technology could resort to its ability to create Phonics songs that integrate the sounds taught up to each moment with vocabulary that fits in specific curriculum goals. For instance, a teacher could input the desired vocabulary or grammatical structures, whether it is from a regional curriculum or the teacher's own lesson plans, into an AI tool. The AI-enhanced technology could then generate songs or exercises that incorporate a particular semantic set, allowing for Phonics instruction to be reinforced in alignment with the curriculum. This would allow teachers to use AI not only to teach the 44 sounds of English but also to introduce vocabulary and sentence structures that complement the Phonics content. Ambitious as it may seem, no conclusions can be drawn about the usability of this approach unless it is tested. This integration would support a more comprehensive literacy training, where students practice decoding and blending sounds in context, reinforcing both Phonics skills and general language acquisition.

3.2.3. AI-Created Decodable Stories for Sound and Vocabulary Reinforcement

In addition to songs, current Phonics programmes introduce sounds through often simple, even absurd short stories known as decodables. These stories are

carefully designed to resort to only the phonemes that students have already learned, helping them practice their decoding skills in a meaningful context. Decodable texts may also include previously learned vocabulary, providing opportunities to blend Phonics learning with language comprehension. AI tools can be used to generate engaging, personalized stories that reflect the students' current level of learning. Teachers could input the sounds and vocabulary covered in every stage, and the AI could create decodable stories that are not only educational but also engaging and enjoyable for students. These stories could be adjusted for difficulty, themes, or cultural relevance, in line with the SDGs and the 2030 agenda, making them more accessible and motivating for Spanish speakers learning English.

3.2.4. Suggested AI-Enhanced Tools and Apps for Phonics

To facilitate the suggestions proposed in this paper, AI-powered apps and platforms, such as interactive storytelling tools, AI-based song writing apps, or adaptive Phonics platforms, could be utilized. For instance, apps such as Kahoot or Quizlet, which is common-use EdTech in many classrooms nowadays, could incorporate AI-generated songs and stories into their interactive learning environments. Additionally, platforms like Speechify or Sirius that specialize in speech recognition could help monitor pronunciation accuracy and provide real-time feedback to learners, allowing for precise and immediate adjustments in non-native learners' phoneme articulation. Further, AI-driven personalization tools, such as Smart Sparrow or DreamBox, can offer tailored Phonics lessons that adjust to students' progress, learning preferences, and specific needs. This adaptability would ensure that each learner, regardless of their native language or languages, receives a customized learning experience that addresses their individual challenges and strengths.

By leveraging AI to create customized songs, vocabulary-based exercises, and decodable stories, educators can enhance Phonics instruction in ways that better support the unique needs of non-native English learners. AI's ability to personalize content, adapt to student progress, and integrate curriculum-based vocabulary will surely make it an invaluable aid in forthcoming literacy instruction.

Table 2 below outlines the three suggested means with which AI-enhanced technology can be utilized to support the integration of AI in Phonics instruction, namely generating custom Phonics songs, incorporating vocabulary and sound integration, and creating decodable stories tailored to the expertise of the Phonics teacher. The chart also provides examples of AI tools and platforms that can facilitate these processes.

Proposed AI Use	Description of AI-Enhanced Technology	AI contribution to Phonics
AI-Generated Phonics Songs with Choreography	AI song writing tools to create personalized songs with choreography: - Aiva - Amper Music - Boomy - Magic School - Soundraw	- Create custom songs for each of the 44 English sounds, specifically tailored for Spanish speakers learning English. - Include choreography to reinforce pronunciation. - Adapt the songs to emphasize challenging English phonemes for Spanish speakers.
AI-Enhanced Vocabulary and Sound Integration	AI platforms that could adapt Phonics songs and content with specific vocabulary: - LyricStudio - Quizlet AI - Smart Sparrow - Socratic - Story.com - ReadTheory - Twee	- Generate Phonics songs that integrate newly learned vocabulary based on teacher-selected input or curriculum requirements. - Align Phonics content with broader language learning, including grammatical structures or regional curriculum goals.
AI-Created Decodable Stories for Phonics Practice	AI storytelling platforms that could generate stories with specific sound patterns: - ChatGPT - ClassPoint AI - HeyGen - Megaprofe - NovelAI - Pictory - Plotagon - Sirius - Story.com - Storybird - Twee - Veed	- Produce decodable stories using only sounds and vocabulary students have studied. - Adjust story difficulty and themes to suit learners' needs, maintaining engagement while reinforcing decoding skills. - AI platforms that support video generation can complement Phonics-based stories by allowing language changes or generating avatars, adding multimodal elements.

Table 2: Platform description and proposed use

Conclusion

This paper explores relevant aspects of English literacy instruction, emphasizing Phonics as a key method for teaching essential literacy skills such as word decoding, blending, and grapheme-phoneme correspondence. It

acknowledges the historical debate between Phonics and Whole Language approaches while highlighting a modern trend toward integrating cognitive and sociocultural factors into literacy education. Despite its widespread use, existing Phonics programmes often fail to adapt to the needs of non-native English speakers, particularly in Spanish speaking countries, where research on Phonics is limited. Significant challenges faced by Spanish speakers learning English include difficulties with pronunciation, decoding, and spelling due to the complexities of English orthography. The paper aims to expound the manner AI could address these challenges and proposes a framework aligned with the SDGs.

Various AI tools have been suggested, for they could facilitate innovative approaches to literacy training. Integrating AI into Phonics programmes could significantly enhance literacy instruction for non-native English learners by offering personalized exercises, songs, and decodable stories. These advancements would promote inclusivity and equity in education, aligning with the SDGs. The proposed AI-enhanced Phonics instruction framework specifically coincides with SDG 4 (Quality Education), as it promotes inclusivity and equitable education for Spanish speakers learning English. By personalising Phonics exercises, AI tools can effectively improve literacy and support lifelong learning. Also, the framework connects with other SDGs, including SDG 5 (Gender Equality), SDG 10 (Reduced Inequality), and SDG 17 (Partnerships for the Goals), by fostering collaboration among stakeholders to ensure that all learners have access to effective literacy resources.

The insights from Luckin et al. (2016) and Holmes and Miao (2023), who are among the most influential in discussing the possibilities and drawbacks of the use of AI in Education, reinforce the proposed AI-enhanced Phonics framework. AI's ability to personalise learning and relieve educators of administrative tasks supports the focus on creativity and empathy in teaching. Additionally, the tools proposed could enhance collaborative learning and provide real-time guidance in Phonics instruction. Both authors emphasise the importance of training teachers in AI systems and adhering to ethical standards, lining up with the framework's collaborative and responsible approach to AI in education.

In sum, this paper advocates for an eclectic approach to literacy education, drawing support from leading scholars in both the English-speaking world and Spanish-speaking countries (Andúgar Soto and Cortina Pérez 2020; Antropova et al. 2023; Hernández Tomás 2016; López Cirugeda and López Campillo 2016; Rendón et al. 2019; Rendón et al. 2021). This perspective pinpoints the necessity for Phonics instruction that is specifically tailored to meet the unique needs of Spanish-speaking learners of English, particularly in terms of pronunciation

(Fernández Molina and Tabuenca Cuevas 2023). By linking AI advancements with the distinct requirements of Phonics, this paper contributes to a broader discourse on improving literacy outcomes for diverse learners, a growing reality across classrooms, ultimately aligning with the overarching goals of the Sustainable Development Goals.

Acknowledgment
This publication is part of the project I+D+i "LEy-LA" (Ref. PID2021-123055NB-100) funded by MCIN/AEI/10.13039/501100011033 and by the European Union Next-Generation EU/PRTR

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