International Journal of Technology in Education and Science

www.ijtes.net

Reading Reinvented: The Role of LLMs in Developing EFL Students' Reading Skills

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Article Info

Article History

Received:
3 July 2025

Revised:
26 October 2025

Accepted:
14 November 2025

Published:
1 January 2026

Keywords

LLMs
Reading skills
Perceptions
EFL teachers

Abstract

Large Language Models (LLMs) have infiltrated every single sector worldwide, especially education. LLM-based tools have become commonplace, primarily among students. The trend over the past three years has been to explore how these revolutionary tools can be most effectively utilized to advance education and address the implications of their use. This study investigates the role of LLMs in enhancing English as a foreign language students' (EFL) reading skills. It draws on data from 38 EFL teachers in middle and high schools in Taourirt, Morocco by focusing on their perceptions of using LLMs as instructional tools. A qualitative analysis reveals that most teachers view LLMs positively. The majority of teachers believe that the foregoing tools can generate diverse, contextually relevant reading materials, personalize learning experiences, and foster engagement through interactive content. Despite these benefits, teachers also noted a number of challenges. By examining the merits and demerits of LLMs in reading instruction, this study provides insights for educators and policymakers on integrating AI-driven tools, specifically in reading instruction.

Citation: Dahia, I., Belbacha, M., & Yousfi, M. (2026). Reading reinvented: The role of LLMs in developing EFL students' reading skills. *International Journal of Technology in Education and Science (IJTES), 10*(1), 71-83. https://doi.org/10.46328/ijtes.5247

Introduction

The educational sector has experienced a profound paradigm shift in recent decades due to the rapid advancement of technological innovations (Selwyn, 2016). This digital transformation has not only redefined and reconsidered conventional pedagogical approaches but has also broadened access to a plethora of educational resources, thus blurring the distinctions between formal and informal learning environments (Crompton et al., 2022). Among these technological advancements, artificial intelligence (AI) has emerged as a particularly salient force, presenting unprecedented avenues for the personalization of learning experiences and enhancement of educational outcomes (Holmes et al., 2021). Notably, the advent of AI-generated content has garnered considerable attention within scholarly discourse for its capability to generate dynamic learning materials and facilitate increased accessibility to educational opportunities (Feng & Law, 2021). This enhanced accessibility is especially pertinent in the field of foreign language acquisition, wherein personalized and engaging resources are paramount to student success.

Research Aim

Stemming from the findings of my previous investigation (Dahia, 2024), this study sets out to explore the specific perceptions of EFL educators regarding the integration of LLMs, such as ChatGPT and Deepseek, within their instructional practices. This research also seeks to investigate how these educators perceive the integration of AI-driven tools to augment reading comprehension skills in the EFL classroom, while concurrently examining the challenges associated with the implementation of such technologies.

Research Gap and Research Questions

While there is a large body of research that acknowledges the transformative power of artificial intelligence (AI) in education, the specific impact of AI-driven tools on reading comprehension, particularly within the EFL context, is still under-researched (Hwang et al., 2022; Holmes et al., 2021). Despite a growing body of research exploring AI's general applications in language learning (Crompton et al., 2022), studies focusing specifically on reading instruction, especially within the Moroccan educational context, are notably scarce.

Furthermore, existing investigations within the Moroccan context have primarily focused on traditional pedagogical approaches or other technology-driven solutions, while neglecting the substantial role these tools might have in improving reading instruction and learning (Lamtara, 2014). This gap is particularly concerning given the documented low levels of reading literacy within the Moroccan educational system (PIRLS, 2021) and highlights the need for empirical research examining how these AI-based tools can be effectively used to address this critical challenge. Hence, it is the author's view that the effective integration of LLMs into reading instruction can greatly revolutionize teaching paradigms, as it could facilitate the creation of personalized learning experiences, accessible resources, and dynamic content that could help in bridging the reading literacy gap in Morocco. Therefore, the current study aims to address the following research questions:

- What are Moroccan EFL teachers' overall perceptions of the use of LLMs as instructional tools for

enhancing reading skills?

- What are teachers' anticipated practical challenges with LLMs integration?
- How could LLMs change EFL teachers' role in reading instruction?
- What are teachers' main ethical concerns pertaining to LLMs' use in reading instruction?

Significance of the Study

This study carries substantial significance for English language teaching, particularly in the context of integrating advanced AI tools such as ChatGPT into pedagogical practices relating to reading instruction. By probing into Moroccan EFL teachers' perceptions of LLM-based tools for developing reading skills, this research contributes to the growing body of literature on AI in education, especially within the context of ELT. (Al-khresheh, 2024; Kohnke et al., 2023; Meniado, 2023; Shaikh et al., 2023; Zawacki-Richter et al., 2019)

The exploration of how LLMs could redefine EFL teachers' roles in reading instruction is another critical contribution of this study. As AI tools increasingly automate certain aspects of teaching, the role of educators is likely to shift from knowledge transmitters to facilitators of learning and critical thinking (Celik et al., 2022; Felix, 2020; Kim, 2024). By looking at how EFL teachers view this shift and how they are consequently impacted by it, the study also recommends how a successful integration of AI in ELT is achieved.

Large Language Models in Education

Large Language Models, such as OpenAI's GPT series, Deepseek, Grok, and others, have revolutionized the field of artificial intelligence. Billions of dollars have been invested in the development of these LLM-based tools. Recently, the newly developed Chinese Deepseek has caused a huge upsurge worldwide, with major companies losing up to 500 billion dollars in value. This race about who is going to get hold of the most sophisticated and efficient LLMs is in itself a testimony to the revolutionary nature of these tools.

One must argue, then, that the ubiquity of these LLMs makes them present in almost every single field, especially education. The fact that these models, trained on millions of datasets, can generate human-like text, answer questions, and perform a wide range of language-related tasks (Brown et al., 2020) makes it the center of incredible attention for both educators and policymakers, as they are racing againt time to make the best of these tools. It should be made clear that these concerns stem primarily from LLM's ability to transform education completely, given its unparalleled ability to offer solutions to long-standing problems in both teaching and learning (Holmes and Tuomi, 2022). As Holmes and Tuoni (p.543) put it: "the need for AI literacy, therefore, puts educators at the centre of these new exciting developments that used to be confined to obscure computer-science laboratories. "

Given the multitude of challenges teachers face in addressing the diverse and demanding needs of their students, ranging from attendance management and personalized instruction to content creation, performance tracking, and providing meaningful feedback, AI is increasingly viewed as a viable solution to these issues (Kaplan-Rakowski, 2023). Numerous scholars and researchers have highlighted specific ways in which AI can address the foregoing

challenges (Chen et al., 2023; Goel and Joyner, 2017). For instance, they point to AI-powered chatbots like ChatGPT, Jasper, and Google Bard as tools that offer students real-time assistance. These chatbots engage with learners, provide immediate answers, and help reduce delays in their academic progress.

Also, the rise of educational technology-integrated models such as TEL (Technology-Enhanced Learning) (Deng and Benckendorf, 2020) and ITS (Intelligent Tutoring Systems) (Lin et al., 2023) has aided in finding innovative and cost-effective ways to address incessant educational challenges in the best way possible. For instance, TEL has gained prominence, particularly as remote and hybrid learning models have become essential. Through TEL, students are empowered to learn at their own pace and remain more engaged throughout the learning process. However, it is crucial to ensure that technology is used responsibly (Lin et al, 2023). In their recently published article titled "AI Artifcial intelligence in intelligent tutoring systems toward sustainable education: a systematic review", Lin et al., delve more into how AI can be used at every stage of both learning and teaching starting from analyzing student data and creating personalized learning experiences for each students to providing individualized differentiated instruction to cater for diverse learners. Lin et al. note

> These systems can model students' psychological states, such as motivation, emotion, and cognition, as well as their prior knowledge, skills, and preferences. They can also monitor students' progress, provide feedback, hints, and scaffolding, and select appropriate problems or tasks for students to practice (p.21)

What can be inferred from the above quote is that AI's capabilities extend beyond what is technical and can be used as a scaffolding tool to support students at every stage of their learning journey. Another advantage of ITS is alleviating teachers' daily tasks, ranging from grading students' assignments and tests and lesson planning, which takes a great deal of teachers' time and energy. According to Tobarra et al. (2021), the integration of these AI-powered tools means giving more time for teachers to focus on their teaching rather than wasting time on tasks that can be easily and efficiently carried out by the aforementioned tools.

These findings align with our previous work (Dahia, 2024) aimed at exploring Moroccan EFL teachers' perceived benefits of AI-generated content, in which they stress how the integration of these tools, especially concerning EFL content generation, lessens the burden of preparing lessons from scratch. 72.5 (29 out of 40) EFL teachers, including middle and high school teachers, note that the ability of AI to rapidly generate diverse educational materials is especially valuable for educators facing time constraints. By delegating content creation to AI, these teachers believe they can focus more on designing personalized learning experiences and refining instructional methodologies.

Reading Literacy in Morocco

Reading literacy in Morocco has been a focal point of educational reform efforts in recent years, as the country strives to improve learning outcomes and align its education system with global standards. Despite significant investments and initiatives, challenges persist, particularly in ensuring equitable access to quality education and fostering strong foundational literacy skills among students.

According to the Programme for International Student Assessment (PISA) 2018 results, Morocco ranked among the lowest-performing countries in reading literacy, with a significant proportion of students failing to meet basic proficiency levels (OECD, 2019). The report reveals that socioeconomic disparities, limited access to educational resources, and uneven teacher training contribute to these outcomes. In this assessment, only 19% of Moroccan students achieved at least Level 2 proficiency in reading, significantly lower than the OECD average of 74%. Students at Level 2 can identify the main idea in moderately long texts, locate information based on explicit, though sometimes complex, criteria, and reflect on the purpose and form of texts when explicitly prompted. In contrast, the percentage of students reaching at least Level 2 proficiency varied widely among participating countries, from 89% in Singapore to 8% in Cambodia. Furthermore, the assessment revealed that almost no students in Morocco scored at Level 5 or higher in reading, whereas the OECD average stands at 7%. Students performing at Level 5 are capable of understanding lengthy texts, grasping abstract or counterintuitive concepts, and distinguishing between fact and opinion based on implicit cues related to the content or source of the information.

The author of the present study asserts that fostering a strong reading culture, particularly among students, can be facilitated through the implementation of effective reading instruction. It should be noted that reading instruction has been and still is being taught in two ways. The first approach involves having students read a given text and subsequently engage with accompanying comments or respond to comprehension questions. These questions and comments may address various aspects, ranging from the meanings of specific words to the central message of the entire passage. The second approach, however, is more about reading in groups. In this approach, students take turns reading aloud while the teacher assists when they encounter difficulties. Additionally, the teacher may offer comments or pose questions about the text (Collins et al., 1980).

Building upon our previous research (Dahia, 2024), which reveals that 28 educators acknowledged the considerable influence of artificial intelligence in facilitating reading instruction, particularly its capability to produce reading materials customized to individual student levels, a process that would otherwise take significant preparation time, the current study examines in greater depth how an effective integration of AI in reading instruction structure can develop EFL students' reading literacy. It also suggests more innovative approaches to effective reading instruction within the ELT context.

Please embed tables and figures in appropriate areas within the document and center them horizontally. Tables and figures should not exceed the given page margins. Provide captions (maximum length: 6 to 8 words) for each table or figure. Centre the caption above the table and below the figure. Please reference the table or figure in the text (see Table 1). Please do not use vertical lines in tables. For figures, GIF and JPEG (JPG) are the preferred formats.

Method

This study employs a mixed-methods approach, using both qualitative and quantitative methods to better understand EFL teachers' perceptions of the use of LLMs and how they can capitalize on these tools' strengths to

advance reading instruction and proficiency. A questionnaire was used as the main data collection method.
The questionnaire included both closed-ended and open-ended questions, aiming to gain an in-depth understanding of how AI can be best used to advance the learning and teaching of reading within EFL classrooms. The questions focused on various aspects, including teachers' perceptions of AI in reading instruction, the effectiveness of AI tools in enhancing reading comprehension, a new method of teaching reading that integrates LLMs, and the challenges and limitations associated with AI in reading education. Additionally, the questionnaire explored the role of AI in fostering critical thinking and engagement, as well as the preferred AI tools and features for reading instruction. Lastly, it examined how AI-assisted reading strategies compare to traditional methods in terms of student engagement and outcomes.

Aim of the Study

The current study sets out to scrutinize EFL teachers' perceptions toward AI integration in teaching and learning reading. It also seeks to make recommendations on how AI can be best integrated for a more effective and efficient reading instruction.

Sampling Procedures and Participants

Given the fact that it is empirically and practically impossible to work on the entire Moroccan EFL teacher population, the current study uses purposive sampling, as it is the most appropriate sampling method for these kinds of studies (Campbell et al., 2020). As Table 1 shows, 38 EFL teachers, including middle school and high school teachers, teaching in the directorate of Taourirt, in the Oriental region, Morocco, were selected. The sample includes the following: 26 high school teachers and middle school teachers. It should be noted that the entire Taouriti EFL teacher population does not exceed 45 teachers. It is, then, believed that this number of teachers, with their varying experiences, can help us get a glimpse into how teaching reading can be reapproached and re-conceptualized.

Results and Discussion

The preliminary findings indicate a balanced gender distribution among the 38 participants, with 42.11% female and 57.89% male. In terms of teaching experience, Table 1 shows that 31.58% reported having less than 5 years, 31.57% had between 5 and 10 years, 18.42% had 11 to 20 years, and 5.26% had more than 20 years of experience. Regarding educational qualifications, a significant majority, 57%, held a Bachelor's degree, while 20% had a Master's degree. Notably, 2.5% of the participants possessed doctoral degrees.

Table 1. Distribution of Gender and School

Gender	Middle school	High school	Total
Female	6	10	16
Male	6	16	22
Total	12	26	38

The Use of LLMs in Teaching

To accurately assess teachers' attitudes toward the effectiveness of LLMs in teaching and learning reading, we must first understand their familiarity and frequency of use. Therefore, it's essential to identify and describe the number of teachers who have already used LLMs in their teaching practices. As Figure 1 shows, a staggering 97.36 % of teachers admit to using LLMs one way or the other in their teaching, while 2.64 % (one teacher) states that they have never used any LLM-based tool.

What the above high percentage of teachers using AI tells us is that LLMs are uniquely embedded in English language teaching in Morocco, as is evidenced by previous research (Bekou et al., 2024; Benali and Mak, 2024; Maryam and Jamaa, 2025). These numbers also undeniably reveal teachers to be independently motivated to integrate LLMs, at least in part, in their teaching. It should be noted that while the data show that almost all teachers make use of AI, this does not, however, indicate whether these teachers perceive these tools to be effective and paramount in teaching.

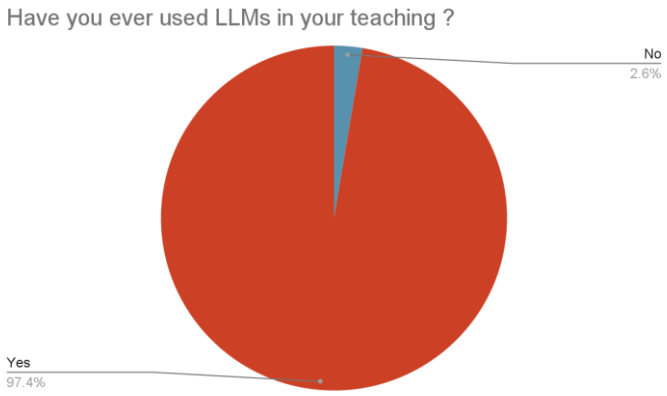

Figure 1. LLMs in Teaching

Perceived Benefits of LLMs in Teaching

The responses from all participants indicate unanimous agreement on the effectiveness of AI in enhancing reading instruction. The data reveals a strong consensus regarding the various benefits of AI-driven reading instruction. It should be noted that while this research does not focus on the effectiveness and use of a specific LLM, most teachers mention ChatGPT when asked about LLMs in general. In our previous study (Dahia, 2024), the findings reveal that the majority of teachers lean toward the use of ChatGPT, especially since other LLM-based tools were limited in number as opposed to today, as the number of these tools is increasing exponentially. This is also consistent with other similar studies done within the Moroccan context (Bekou et al., 2024; Benali and Mak, 2024)

All teachers, without any exception, stress the importance of AI (ChatGPT) in generating diverse reading materials for their students. They point out that it has eased their teaching of reading as they were burdened with the unnecessary task of finding the appropriate text for the appropriate level, a task they deem overwhelming. It is noteworthy that teachers also mention how the generated reading content can be used in teaching other language

components, such as grammar, vocabulary, and listening. According to them, these tools help address the common challenge of limited textbook content, which they always have to adapt, and sometimes replace with more suitable content, especially in reading.

Another important perceived benefit of LLMs is their ability to personalize reading instruction. By using generative AI, participants strongly believe that promoting differentiated instruction has become easier than ever before. The fact that they can easily generate and manipulate any reading material to cater to different students' needs has made teaching and learning more fun. They no longer have to spend hours and hours finding a suitable text for students and generating questions accordingly. This suggests that teachers trust LLMs' ability to scaffold learning by designing questions that range from basic factual recall to more complex inferential reasoning, something that is instrumental in learning (Van de Pol et al., 2010). The automation of question generation is believed to reduce, to a large extent, teachers' workload while at the same time guaranteeing a well-structured reading assessment process.

Engagement is another critical factor in effective reading instruction. More than 80% of participants strongly agree that LLMs enhance student engagement through interactive content. This may be attributed to the tool's ability to create gamified reading exercises, interactive discussions, and AI-generated dialogues that make reading more engaging. The dynamic nature of AI-generated prompts can also encourage students to engage with texts more actively, rather than passively consuming information.

The above findings show an overwhelming approval on teachers' part of how LLMs- tools can make reading instruction easy and fun. It stands to reason that there is an overall consensus about the effectiveness and efficiency of LLMs in the context of reading instruction.

Key Reading Sub-Skills Through LLMs

When asked about LLMs' ability to help students develop reading sub-skills such as summarizing, skimming, scanning, and inferring, the majority of participants praise the ability of these tools to develop the foregoing sub-skills. One obvious example is guiding students through effective summarization. Summarization is a higher-order reading skill that requires students to condense information while keeping essential points. The participants point out that LLMs, ChatGPT in particular, excel in guiding students through this process by generating different versions of summaries. They note that students can compare their summaries with AI-generated ones while simultaneously receiving immediate feedback on missing or redundant information. Furthermore, they stress these models' ability to produce summaries in various formats (e.g., bullet points, paragraph form, keyword-based), thus helping learners explore different summarization techniques.

Another important sub-skill highlighted by participants is LLMs' help concerning understanding an author's intent and tone. Determining an author's intent and tone requires an understanding of textual cues, rhetorical devices, and word choice. Teachers strongly believe that LLMs support this sub-skill by breaking down passages, identifying persuasive techniques, and explaining the emotional or logical appeals used by authors. For them, this

can be achieved by engaging students in comparative exercises where they analyze different tones across multiple texts or rewrite a passage in various tones to deepen their awareness of different styles.

However, some teachers allow students to immerse themselves in LLMs can be counterproductive, as, instead of helping them build up on their skills, they will end up being over-reliant on these technologies. They also point out that it will be difficult to tell students' work and that of LLMs. For them, these tools are problematic for teachers, let alone students.

AI-Driven Differentiated Reading Circles

The term is a method of teaching reading devised by the author. The concept was explained, and teachers were asked to give their opinion about its applicability in the language classroom. The term simply refers to exploiting AI to promote differentiated instruction of reading. The idea is to divide students into groups and assign a reading text for each. The text, however, should be about the same theme and topic and should address the same issue. The difference lies only in the difficulty level of the assigned texts and their corresponding questions. Before this can be possible, the teacher should have already placed students into different groups depending on their language proficiency. The teacher should also prepare a report about each group, detailing their language problems. S/he, then, provides the reports to any trusted LLM to generate a reading passage and its questions accordingly. This way, all students will be able to engage with the reading passage, and teachers will no longer have to choose one specific text that may create inequalities among students, either by choosing a text that is suitable for high achievers and unsuitable for struggling learners or vice versa. It should be pointed out that the generated passages should not be taken for granted, as teachers will always be required to check for their appropriateness and accuracy. This method allows for equal access to the reading material and ensures that all students are engaged and active.

One might ask: How will students be assessed if taught this way? Instead of static grouping based on initial proficiency levels, teachers can also make use of the same LLM to track student progress over time. The AI can analyze performance on reading tasks and dynamically adjust group assignments to ensure students are always challenged at the right level.

When asked about the AI-driven Differentiated Reading Circles method, the majority of participants show some approval. They show appreciation of the method's ability to tailor reading materials to students' proficiency levels by making sure that all learners are engaged and challenged appropriately. They also note that this approach could reduce frustration among struggling readers and prevent boredom among advanced learners. Participants also commented on the inclusive and equitable nature of the method because they seem to recognize that the method promotes equity via giving students access to reading materials suited to their abilities, rather than adopting a one-size-fits-all approach. This inclusiveness and equity are self-evident, as what teachers generally do is opt for a reading text whose suitability can be judged against the majority's level. If most students, say, are high-achievers, then logically the teacher is more likely to opt for a text that serves this majority and vice versa. This is problematic because it often overlooks the needs of minority groups or struggling students, potentially widening achievement

gaps and leaving some learners disengaged or unsupported in addition to reinforcing existing inequities, as it prioritizes the majority's comfort or proficiency, neglecting the diverse learning needs within the classroom and limiting opportunities for all students to grow. The role of LLMs here is to generate reading materials that, while differing in difficulty, address the same topic being discussed, thus ensuring that all students, regardless of their language ability, are engaged in the lesson and contribute to its success. Hence, the adoption of the AI-driven Differentiated Reading Circles method helps create an inclusive classroom environment where every student can access the content, participate meaningfully, and develop their reading proficiency.

Teachers' Role within AI-driven Differentiated Reading Circles

A myriad of studies have been dedicated to the study of roles assumed by teachers in different teaching contexts (Ben-Peretz et al., 2003; Keller, 2018; Valli and Buese, 2007; Yan, 2012). With the emergence of AI and its inseparability from education, teachers are now required to assume new roles. When asked about the different new roles teachers are now required to have in teaching in general, and in the above reading method in particular, 94.74% of participants opted for 'collaborators with AI'. What can be drawn from this high percentage is that participants strongly believe that teachers are required more than ever to join forces with AI-based tools. The fact that participants acknowledge that they make use of generative AI (GenAI) tools at every stage of their teaching, starting from lesson planning to assessment, is a testimony that LLMs are indispensable teaching partners.

Another role that easily emerges from this AI upsurge is teaching being 'quality controllers'. This role emanates from the necessity of teachers' critical adoption of AI. This is because it would be absurd for teachers to take for granted what has been generated by AI. The constant advent of LLMs requires teachers to be not only consumers but also reviewers and validators of what AI has to offer. Doing so, teachers will ensure that the reading passages meet the standards, including appropriateness of language and level.

While the abovementioned comments raise some issues regarding the applicability of the method, these issues can be easily and effectively addressed. It is important to recognize that the inequality, as perceived by students and teachers, is fundamentally different. If students are instructed and objectives, including the use of differentiated assessment methods, are made clear from the very beginning of the school year regarding how they are going to be taught, the different methods of assessment used are less likely to be conceived as creating inequalities but rather as tools to reduce them to a minimum. It might also be a good idea to get some insights from students regarding the implementation of this method and how it can be made more student-friendly. This learner-centered approach positions students as active participants and negotiators by helping them show greater self-confidence and self-esteem.

The most cited role is that of scaffolding and monitoring. Students may generally feel unworthy and discouraged if they are stuck in the group they were first assigned. To make sure students are sufficiently motivated, teachers should take it upon themselves to monitor students' progress at every stage of instruction. Continuous assessment has to take place to ensure that students make the necessary progress needed for them to transition from one level to the next.

Limitations and Recommendations

The positive comments supporting the aforementioned method do not imply it is flawless. Some criticism has been raised; this criticism includes the method's feasibility and applicability within the Moroccan context. One of the questions raised about this method is the issue of assessment and how it should be implemented. Is the teacher going to administer different tests to different students? Is it even ethical for a teacher to test students using different test content and difficulty? The questions raised seem to uncover the potential counter-productiveness of the AI-driven Differentiated Reading Circles method. Initially designed to minimize inequalities by tailoring reading materials to students' language abilities, the method risks backfiring, as high-achieving students may complain about facing more challenging tests.. This perceived inequality could, in turn, compromise the standardization and consistency of the assessment process by undermining its reliability and fairness.

Teachers also made some recommendations on how this method can be best implemented. They suggest conducting small-scale pilot tests of the method in different classrooms to identify possible issues and gather feedback from both teachers and students. After gathering feedback, teachers can then use the results to refine the method before scaling it up.

Conclusion

The current study probes into Moroccan EFL teachers' perceptions of LLMs integration and its impact on reading instruction with a focus on the Taourirt directorate. The study draws upon a previous study on AI-generated content and language teaching/ learning, which has looked at how Taouriti EFL teachers perceive the use of GenAI in their content creation. The findings reveal that the majority of teachers strongly agree that LLMs can aid in reading instruction, especially in promoting a reading culture among Moroccan students, who, according to some reports, have menacingly low reading levels.

The study offers a new framework (AI-driven Differentiated Reading Circles) for reading instruction that takes advantage of LLMs and their ability to aid teachers and students alike in language teaching/ learning. Participants endorsed this framework by explaining how it could potentially help students to read and develop their reading skills. This endorsement emanates from the dual nature of this framework, which combines the advantageous nature of differentiated instruction and the imposing nature of AI, as its use is inevitable.

While the majority of teachers show some consensus concerning this AI-oriented reading instruction framework, the limited number of participants may affect its generalizability. Further research is needed to better judge the effectiveness and efficiency of the foregoing framework and whether it offers an alternative, yet efficient, way of teaching reading, especially within the context of ELT in Morocco. Since weighing up the impact of LLMs integration on Moroccan EFL students' reading literacy and proficiency requires a long-term perspective, a longitudinal study may further give us a clear picture of LLMs' sustained benefits and pedagogical implications for reading instruction.

References

Al-khresheh, M. H. (2024). Bridging technology and pedagogy from a global lens: Teachers' perspectives on integrating ChatGPT in English language teaching. *Computers and Education: Artificial Intelligence*, *6*, 100218.

Bekou, A., Mhamed, M. B., & Assissou, K. (2024). Exploring opportunities and challenges of using ChatGPT in English language teaching (ELT) in Morocco. *Focus on ELT Journal*, *6*(1), 87-106.

Benali, M., & Mak, J. (2024). Perception of preservice Moroccan teachers regarding the adoption of ChatGPT in their teaching practices. In *Artificial Intelligence Applications in K-12* (pp. 112-137). Routledge.

Benali, M., El Bouhali, C., & Naciri, A. (2020). Literacy challenges in rural Morocco: A case study of educational disparities. *Journal of Educational Research in Africa*, 12(3), 45-60.

Ben-Peretz, M. et al. (2003). How teachers in different educational contexts view their roles. *Teaching and Teacher Education*, *19*(2), 277-290.

Bouhlal, F. (2019). Teacher training and literacy development in Morocco: Challenges and opportunities. *International Journal of Teacher Education*, 7(2), 112-125.

Campbell, S et al. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of research in Nursing*, *25*(8), 652-661.

Celik, I., Dindar, M., Muukkonen, H., & Järvelä, S. (2022). The promises and challenges of artificial intelligence for teachers: A systematic review of research. *TechTrends*, *66*(4), 616-630.

Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: the state of the field. *International Journal of Educational Technology in Higher Education*, *20*(1), 22.

Dahia, I. (2024). Moroccan EFL teachers' perceptions of AI-generated content: Impact, effectiveness, and challenges in language learning. *Frontiers in English Language and Linguistics, 1*(1), 22–34. https://doi.org/10.32996/fell

El Messaoudi, A. (2021). Digital transformation in Moroccan education: Opportunities for literacy improvement. *Moroccan Journal of Educational Technology*, 9(1), 23-37.

Errihani, M. (2018). Bilingualism and literacy in Morocco: A sociolinguistic perspective. *Journal of North African Studies*, 23(4), 567-582.

Felix, C. V. (2020). The role of the teacher and AI in education. In *International perspectives on the role of technology in humanizing higher education* (pp. 33-48). Emerald Publishing Limited.

Feng, S., & Law, N. (2021). Mapping artificial intelligence in education research: A network-based keyword analysis. *International Journal of Artificial Intelligence in Education*, *31*(2), 277-303.

Holmes, W., & Tuomi, I. (2022). State of the art and practice in AI in education. *European Journal of Education*, 57, 542–570. https://doi.org/10.1111/ejed.12533

Hwang, G. J., & Chien, S. Y. (2022). Definition, roles, and potential research issues of the metaverse in education: An artificial intelligence perspective. *Computers and Education: Artificial Intelligence*, *3*, 100082.

Keiler, L. S. (2018). Teachers' roles and identities in student-centered classrooms. *International journal of STEM education*, *5*, 1-20.

Kohnke, L. et al. (2023). ChatGPT for language teaching and learning. *Relc Journal*, *54*(2), 537-550.

Lamtara, S. (2014). Teachers' ICT practices: A case study of a Moroccan EFL teacher. *Arab World English*

Journal, *5*(4).

Maryam, F. H., & Jamaa, O. (2025). An empirical assessment of Moroccan EFL teachers' use of generative AI for EFL formal assessment: An intervention study. *Social Sciences, 14*(1), 8–21.

Meniado, J. C. (2023). The impact of ChatGPT on English language teaching, learning, and assessment: A rapid review of literature. *Arab World English Journal, 14*(4). https://doi.org/10.24093/awej/vol14no4

Mullis, I. V. S., & Martin, M. O. (Eds.). (2021). *PIRLS 2021 encyclopedia: Education policy and curriculum in reading*. TIMSS & PIRLS International Study Center, Boston College.

OECD. (2019). *PISA 2018 results: What students know and can do*. OECD Publishing. https://doi.org/10.1787/5f07c754-en

Selwyn, N. (2016). Digital downsides: Exploring university students' negative engagements with digital technology. *Teaching in Higher Education*, *21*(8), 1006-1021.

Valli, L., & Buese, D. (2007). The changing roles of teachers in an era of high-stakes accountability. *American educational research journal*, *44*(3), 519-558.

Van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher–student interaction: A decade of research. *Educational psychology review*, *22*, 271-296.

Yan, S. (2012). Teachers' roles in autonomous learning. *Journal of Sociological Research*, *3*(2), 557-562.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education–where are the educators?. *International Journal of Educational Technology in Higher Education*, *16*(1), 1-27.